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Studia Numismatica Upsaliensia

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STUDIA NUMISMATICA UPSALIENSIA

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The Coinage of Akragas c. 510–406 BC

Text and Plates

ULLA WESTERMARK

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UPPSALA
UNIVERSITET

STUDIA NUMISMATICA UPSALIENSIA

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Author's foreword

The material for a monograph on Akragas was largely collected by the late Karl-Ludwig Grabow, Berlin. Following Grabow's untimely death in 1965, Professor Peter R. Franke, Saarbrücken, secured the transfer of the material to the German Archaeological Institute (Berlin). At Professor Franke's suggestion, the Institute subsequently entrusted me with responsibility for the project.

Grabow's material, supplemented by later additions, is now in the Royal Coin Cabinet, Stockholm (inv. no. 104 147). Only the casts of the Gela hoard (= Hoard 15) have been transferred to Professor Christof Boehringer, Göttingen, who has also secured duplicates for the Centro (CINS) in Naples. Most of the work was finished long ago, and few references to newer numismatic literature have been added. It is entirely thanks to the editorial committee at the Uppsala Coin Cabinet that the project could finally be completed.

My warmest thanks to all colleagues and coin dealers who have supplied casts and photographs from museums, numismatic institutions, collections and auction sales catalogues and who have helped in various ways. I would like especially to thank the following:

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Ulla Westermark

Editors' foreword

Ever since Ulla Westermark mentioned that the series in which she had planned to publish her book on *The Coinage of Akragas* had ceased publication and agreed to make it available to our series in Uppsala, we have experienced warm support from colleagues and friends all over the world.

As Ulla Westermark writes in her foreword, she had finished the work on her text by 2004, and the text we received from her was clear, logical and complete. There were, of course, a number of technical problems to deal with. As Ulla herself pointed out, many photos needed to be replaced by better versions and some had to be ordered from museums and coin dealers or rescanned. It is a pleasure for us here to express our sincere thanks for generous help with this matter to the following: Arturo Russo (Numismatica Ars Classica, London), Martin Hirsch (Staatliche Münzsammlung, München), and Ulrika Bornestaf (Royal Coin Cabinet, Stockholm).

The technical aspects of producing a book with text and pictures today are quite different from in the 1960s when Ulla Westermark started to prepare the manuscript. She presented a correct text typed on a computer but following standards that changed completely long ago. We are deeply indebted to Elin Klingstedt, who literally line by line skilfully reformatted and edited the files into a new version that could be used for the layout process.

We would also like to thank Magnus Wijk, who produced the layout of the book and put enormous effort into the plates that had been assembled over so many decades from different sources.

The editors have spent some time determining the order of the chapters and assembling Ulla Westermark's very logical but rather concise bibliography, and footnote references that would have been quite enough for those well versed in the field but sometimes rather obscure for readers who had not attended all the conferences over the past few decades whose published proceedings are well known to the specialist under various elegant titles. We express our sincere thanks to Brita Alroth who patiently devoted much time to preparing the final version of the bibliography and to Carina Bergman who helped us to find many obscure titles and articles. Finally, we express our warm gratitude to Martin Högvall, who helped us through the production process of this publication with his customary skill.

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Hendrik Mäkeler – Harald Nilsson

INTRODUCTION

Historical summary

Akragas had in Antiquity a reputation for wealth and splendor. Pindaros calls it the most beautiful of all cities (*Pyth. ode* 12.1–5). Polybios (IX.27) gives, in his account of the Roman conquest of Akragas in 210 B.C., an interesting description of the city from that late period of its existence. Akragas, he says, was distinguished by its large size and the magnificence of the site. It was built on steep rocks which served as a natural defence reinforced by long walls. On two sides it was surrounded by rivers; on the east side was the river Akragas (modern S. Biago), on the west side the river Hypsas (modern S. Anna). The high acropolis in the northeast dominated the city. On its top stood the Temple of Athena and Zeus Atabyrios. The city was also embellished by a great number of other temples and stoas. The largest temple dedicated to the Olympian Zeus remained unfinished. Today ancient Akragas is one of the most impressive archaeological areas in Sicily.¹ The rocky site at some distance from the sea with a row of Doric temples lining the walls is unique in the Greek world.² In this way the temples were confined to the unfertile area.³ The plan and early execution of the extensive circuit was probably due to the tyrant of Phalaris, but the defensive system was renewed in Timoleon's time and much of the existing work dates from the fourth century.⁴ The area within the walls was very large, larger than any Greek city in Sicily except Syracuse.

The number of people who lived in the city has given rise to much controversy. Diodoros' (XIII.84) figures of 20 000 citizens and a total of 200 000 (including women, slaves and other non-citizens) are the most frequently quoted. But at least the latter figure is probably much too high and a total of 20 000 inhabitants has been suggested as more reasonable.⁵ Another controversial problem is the location of the ancient acropolis.⁶ Of

¹ For the site and the city see de Waele, pp. 1–5; Di Vita, pp. 294–296.

² Gruben, p. 298; Mertens, pp. 333–334.

³ Di Vita, p. 294.

⁴ Dunbabin, p. 312 ff; Waters, p. 10; Talbert, pp. 158–159.

⁵ de Waele, Appendix 1, pp. 211–216; for the city area also Akragas, *RE* I, 1894 (Hülsem).

⁶ The problem is thoroughly discussed by de Waele in his Appendix 2, pp. 217–222. It is his opinion that the eastern hill was the most likely place for the ancient akropolis. So also De Vita, p. 294; contra:

the two steep hills in the northern part of the city the western hill (Colle di Girgenti, c. 330 m) has most frequently been regarded as the old acropolis. It is now covered by the present city of Agrigento, dating back to the Middle Ages. Polybios, however, clearly states that the acropolis was on the eastern hill (Rupe Atenea), which is also the highest point (c. 350 m). It thus seems the most likely location, though the area has not yet been thoroughly investigated.⁷

The wealth of Akragas came from agricultural products such as wine and olives, horse-breeding and trade. The two rivers Akragas and Hypsas join south of the city and the trading centre was at the estuary of the river. There was no good natural harbour, but ancient merchant-ships were small and did not require a large harbour. The only important land route going straight across Sicily to the Tyrrhenian Sea in the north started here.⁸

The ancient history of Akragas has been treated in a large number of books and articles.⁹ Only a short summary of the main events needs to be given here as background to the monetary history. Akragas was the last of the major Greek settlements in Sicily, founded c. 580 (Thuc. VI.4).¹⁰ The colonists came from Gela, founded a hundred years earlier, and included a Rhodian element. The oecists were Aristonous and Pystilos, of whom one may have been from Gela and the other from Rhodes.¹¹ The foundation was prepared by the establishment of trading-posts, Palma di Montechiaro and others, along the coast to the west of the South Himera river during the second half of the sixth century, but there is no evidence that there should have been a trading-post on the spot

Gruben, p. 298 and city map p. 297.

⁷ For a summary of the archaeological investigations see de Waele, pp. 17–21; Gruben, pp. 298–299. The first official excavations of the city area began in the mid-18th century and were carried out in the rough manner of the period with not always happy results. For instance, blocks from the Olympieion were used to build docks at Porto Empédocle. In addition, there were clandestine diggings going on. During Paolo Orsi's time as superintendente the first modern excavations began in 1925 under the guidance of P. Marconi and have continued to the present day.

⁸ Schubring, p. 30; Lehmann-Hartleben, *Hafenanlagen*, p. 48; Waters, pp. 5–8; de Waele, p. 6; Di Vita, p. 294.

⁹ See bibliography in de Waele, pp. XI–XXVI and *DNP*, vol. 1, 1996, cols. 407–408.

¹⁰ Bérard, pp. 251–55; *DNP*, vol. 1, 1996, col. 406 (“wohl um etwa 20 J. hinaufzurücken”).

¹¹ Dunbabin, p. 310; de Waele, p. 101.

or in the immediate neighbourhood of Akragas before the actual colonization.¹² The expansion of the territory which belonged to the city and was necessary for its support must have begun soon after the foundation and is connected with the half mythical tyrant Phalaris.¹³ He came to power *c.* 570 and reigned some twenty years. In the history tradition (Polyainos V.1,3) he is credited with having enlarged the city's territory by fighting the indigenous people, the Sicans.¹⁴ The exact extension of the territory which was dominated by Akragas is not known, but it was the land between the rivers South Himera (modern Salso) in the east, which was also the border between Akragas and Gela, and Halykos (modern Platani) in the west. In the process the occupied areas and their population were hellenized.¹⁵ Archaeological explorations have confirmed that indigenous places like Monte Sabbucina, Gibil-Gabil and Vasallaggi in the interior, S. Angelo Muxano on the river Halykos and Mussomeli on the route to Himera were hellenized in the sixth and fifth centuries.¹⁶ There was much rivalries between the Greek colonies. Akragas soon surpassed her mother-city Gela in power, but it is doubtful if that led to a war of independence against Gela, as suggested by Dunbabin.¹⁷ A serious conflict over Herakleia Minoia around 500 became fatal for the future. Minoia had been founded from Selinous at the mouth of the river Halykos around the mid-sixth century, probably with the intension to prevent Akragas from penetrating further to the west.¹⁸ It has been suggested that it was Akragas' capture of the new colony and her aggressive policy that gave the Selinuntines reason to side with Carthage in the battle of Himera.¹⁹

The late sixth and early fifth century was the period of the most important Sicilian tyrants. Thucydides (1.17) says that no great action ever came out of the tyrants except in Sicily

¹² De Miro, pp. 122–123, 138–140 contra Dunbabin, pp. 137, 310. For the few traces of indigenous settlements in the area, see de Waele, pp. 78–80. Mycenaean and Cypriot pottery has been found near Akragas and along the Platani River, Vagnetti, *Western Greeks*, p. 110.

¹³ Murray, *ASG*, pp. 47–59; Waters, p. 1.

¹⁴ Ancient sources mention a number of different peoples in Sicily, among them the Sikels, who are said to have come from Italy and have settled down in eastern Sicily, and the Sikans who lived in the western part. The river Gelas was the boundary between the two peoples, who are not distinguishable geographically in historical time, Dunbabin, pp. 40, 112, 135; de Waele, pp. 68–9, 77–8.

¹⁵ De Miro, pp. 122–152.

¹⁶ Dunbabin, pp. 139–41; De Miro, pp. 143–144; Adamesteanu, *RA*, p. 173.

¹⁷ Dunbabin, pp. 317–318; Jenkins, Gela, p. 2; *cf.* de Waele, pp. 105–106.

¹⁸ De Miro, pp. 144–146.

¹⁹ de Waele, p. 108.

where they rose to great power. Gelon of Gela (490–478) was the most remarkable of all Sicilian tyrants. From 485 he was also in the possession of Syracuse, which from now on took the first place. After Phalaris there is hardly any information about the rulers of Akragas in the early period except the names of the otherwise unknown Alkamenes and Alkander.²⁰ In c. 488 Theron of the Emmenid family made himself tyrant. He belonged to one of the important oligarchic families, but how he came to power is uncertain.²¹ Theron and Gelon formed a military alliance and were also united by family ties.²² Their common policy was expansive and anti-Carthaginian. Carthage had during the late sixth century began to impose its supremacy on the smaller Phoenician colonies in Sicily and Sardinia.²³ It was the leader of the anti-Greek powers and allied with the Etruscans. An early conflict between Carthage and the Greek cities is connected with an expedition led by Dorieus from Sparta and the foundation (c. 510) of the shortlived colony Herakleia near Mount Eryx in north-western Sicily which had long been dominated by the Phoenicians. Herakleia was soon destroyed (Diodoros IV.23.3).²⁴ Serious hostilities began with Theron's conquest of Himera in c. 483/2.²⁵ The tyrant of Himera, Terillos, was expelled and fled to his son-in-law Anaxilas at Rhegion and together they called upon Carthage for help. After long preparations Carthage sent a military force to Sicily. The campaign ended with a victory for Syracuse and Akragas and a disastrous defeat for the Carthaginians in the battle of Himera in 480. A great number of prisoners were taken by the Greeks and were made slaves (Diodoros XI.25.2–4). Slave labour enabled the Akragantines to start a new building program, which included a system of water conduits constructed by Phaiax with the famous *kolymbethra*, the enormous Olympieion and other temples on the south wall, which all date from after 480 except Temple A (so-called Herakles temple), which is the oldest and was built around 500.

²⁰ de Waele, p. 166; Musti, *ASG*, p. 29 with note 10.

²¹ Compernelle, pp. 67–75. The author demonstrates that the ancient genealogy of the Emmenid family is only an artificial reconstruction.

²² Gelon was married to Theron's daughter, the famous Demarete.

²³ Moscati, p. 154; Garbini, p. 130.

²⁴ Moscati, pp. 154–156; Dunbabin, p. 351; Lacroix, *Monnaies et colonisation*, p. 69.

²⁵ For this period de Waele, pp. 52, 109–115; *Western Greeks*, esp. pp. 294–296 (Mertens/Greco); Gruben, pp. 303–305 (Temple A).

The conquest of Himera was a following up of the city's aggressive policy and was important to secure Akragas' position as the strongest power of western Sicily. It now extended across the island and blocked out Syracuse's expansion toward the west.²⁶ The balance of power was maintained between Gelon and Theron, but did not continue under Gelon's successor Hieron (478–467). Theron's and his son Trasysdaios' aggressive policy at Himera led to a revolt in which Hieron got involved. The Himerean opponents called upon him for help, but Hieron betrayed them and abandoned them to Theron's revenge in 476 (Diodoros X.28.3; XI. 48.6–8). In spite of all, Diodoros (X.28.3, XI.53.2) regards Theron as a good tyrant, who enjoyed great favour among his countrymen, whereas Thrasydaios is said to have been violent and murderous. After Theron's death in 472 and with Thrasydaios as sole tyrant of both Akragas and Himera serious conflicts with Syracuse broke out which finally led to the fall of the Emmenid dynasty. Thrasydaios gathered many soldiers, but Hieron was in advance of him and marched upon Akragas with a formidable army (Diodoros XI.53.3–4). Akragas was defeated and Thrasydaios expelled. He fled to Megara Nisaia in Greece, where he was condemned to death. The overthrow of tyranny was thus not an act of local liberation but a result of foreign intervention.²⁷ The Akragantines 'recovered their democratic form of government' and made peace with Hieron. Diodoros (XI.53) places all these events including the formation of a new government within the year of Theron's death 472/1 BC, but such a compressed chronology is not convincing. It has been argued elsewhere that these events might cover a somewhat longer period down to *c.* 470, a date which has been adopted in the present work for the end of the didrachm coinage.²⁸

The period following the transition from tyranny to 'democracy' at Akragas is obscure and poorly documented in the sources. A normal use of the term democracy was that it signified freedom in contrast to tyranny, and in this case it would mean that Akragas recovered not democracy but freedom from tyranny and a new regime led by the old aristocracy. The political role of the famous philosopher Empedokles (*c.* 484–423) is elusive and has been differently judged. He belonged to an aristocratic and wealthy

²⁶ Compennolle, p. 74; Pugliese Carratelli, p. 154; Musti, *Lo stile severo*, p. 4.

²⁷ Asheri, p. 97.

²⁸ Westermarck, *Himera 2*, pp. 425–428.

family but is sometimes seen as a promotor of a democratic case. This is questionable and on the whole there is no evidence for a democratic movement at Akragas as there was at Syracuse.²⁹

In the years following the fall of tyranny at Syracuse resettlements of people who had been expelled from their home cities by the tyrants took place. In their turn they expelled the mercenaries who had ‘wrongfully’ seized their land. Diodoros (XI.76.4) speaks in general terms of these events stating that inhabitants of Gela, Akragas and Himera were involved. Little is known of how such resettlements affected the people of Akragas.³⁰

The most important military event of the post 466-period in which Akragas got seriously involved was the Sikel movement under their leader Duketios.³¹ He is first mentioned by Diodoros (XI.76.3) in the year 461 when he led an army against the inhabitants of Katana ‘because they had robbed the Siceli of their land’. In this campaign the Syracusans came to the aid of the sikels, but the conflict ended with no advantage for them. The Akragantines were not involved. To strengthen his power Duketios strived to form a Sikel federation (Diodoros XI.88.6). The war was resumed in 451 (Diodoros XI.91.1–4). After having seized Aitna-Inessa he invaded Akragantine territory and besieged Motyon, which was held by an Akragantine garrison. Armies from Akragas and Syracuse were beaten by Duketios. Only in the following winter the Syracusans defeated Duketios at Nomae and the Akragantines reconquered Motyon. Duketios fled to Syracuse and became a suppliant of the city (Diodoros XI.92.1–2). The Syracusans sent him to Corinth ordering him to stay there. Later he returned to Sicily, where he founded a new city, Kalé Akté on the north coast (Diodoros XII.8.1). These events caused the fragile balance of power between Akragas and Syracuse to collapse, but the main reason was probably the old rivalry between the leading powers. The Akragantines obviously felt themselves mistreated because the Syracusans had not consulted them when they let Duketios go free. ‘The cities of Sicily were divided’ says Diodoros (XII.8.4), some took side with Akragas, others with Syracuse. In a battle at the South Himera river the Akragantines were seriously defeated. The disaster put an end to Akragas’ political ambitions to be equal to Syracuse and left Syracuse as the unrivalled power in Sycily.

²⁹ Asheri, pp. 95–109; Musti, *Lo stile severo*, p. 16.

³⁰ de Waele pp. 45–46, 116–117.

³¹ Adamesteanu, *Kokalos*; de Waele, pp. 117–121.

It is uncertain how grave the consequences were for Akragas, as the city is thereafter not mentioned in the sources for many years. One result which seems serious enough was that in the aftermath of the war the eagle-crab tetradrachms ceased to be minted and the whole coinage of Period II came to an end and was followed by an interval in the production.

Akragas' attitude during the first Athenian expedition to Sicily in 427 and the peace congress at Gela in 424 is unknown. In the renewed conflict between Syracuse and Leontinoi some years later the Athenian envoy Phaiax tried to form an alliance against Syracuse and managed to win over the people of Kamarina and Akragas (Thuc.V.4), but his efforts came to nothing and Phaiax left Sicily.³²

The great Athenian invasion of 415–413 involved almost all Greek cities on the island except Akragas, which was neutral and took no part in the war according to Thucydides (VII.33, VII.58).³³ The Akragantines did not even allow the Syracusan allies to pass through their territory (Thuc.VII.32). However, at an early phase of the war Akragas had together with Naxos allied herself to Athens (Diodoros XIII.4.2). The population of the city seems to have been mainly pro-Athens, but there was also a pro-Syracuse party supported by Syracusan intervention (Thuc.VII.46). Grave internal conflicts between the political parties broke out. In the end the pro-Syracusan fraction was banished into exile (Thuc.VII.50) and the city remained neutral.

After the Athenian war the old rivalry between Akragas and Syracuse probably became less oppressive. Syracuse had won much prestige by its victory over Athens but had also suffered heavy losses, whereas Akragas had benefitted by her passive attitude. A well known passage in Diodoros (XIII.81.4–84.7; 90.3) gives a long account of the legendary wealth which Akragas enjoyed in this period.³⁴ This eulogy, however, relates only to the high society and does not tell us anything about the conditions for the lower classes and the slaves.³⁵

³² Meister, *ASG*, p. 115.

³³ For the following period: de Waele, pp. 121–131; Meister, *ASG*, pp. 115–120; Meister, *Diodor*, pp. 79–82.

³⁴ Meister, pp. 38–42.

³⁵ This point stressed by Meister, *ASG*, p. 118.

The period of peace in Sicily lasted only a few years until a conflict between Selinous and Segesta led to the Punic invasion of 409/8 ending with the conquest of Selinous and Himera. A troop from Syracuse, Akragas and Gela for the defence of Selinous arrived too late (Diodoros XIII.59.1). In the spring of 406 the Carthaginians returned, landed their forces at Motya and set out for Akragas, which was the first target of the second campaign. The Punic armies under the command of Hannibal, Hamilcon and Hamilcar encamped on both sides of the city. The siege which lasted for eight months is described in detail by Diodoros (XIII.80–90). Mercenary troops from various parts of the Greek world were hired for the defence of the city led by the Spartan officer Dexippos and his troop. A large army sent from Syracuse, consisting of Greeks from Sicily and South Italy and other places under the command of Daphnaios, offered the strongest armed resistance and was victorious in battle. It seems likely that the gold coins and the dekadrachms were intended for the payment of mercenaries and supplies during the siege.

The Carthaginians had varying success in the field. They suffered heavy losses in a plague which also took Hannibal's life. Unfortunately the trying conditions in the besieged city led to severe internal disputes. Accusations of treachery were put forward and four generals were stoned to death. When the Syracusan ships bringing provisions for the maintenance of the population and the soldiers were seized by the Punic forces the situation became precarious. The lack of proviant and generous bribes from Carthage caused the allied troops to leave the city. Without defence the city had to be given up to Hamilcar in December 406.³⁶ The majority of the inhabitants had by then been evacuated first to Gela and from there to Leontinoi but the many who remained were slaughtered and the rich city was sacked.

Following the peace treaty between Carthage and Syracuse in 405 (Diodoros XIII.114.1) the people of Akragas was allowed to return to their city but were forced to demolish the walls and to pay a heavy war indemnity to Carthage. The flourishing trade came to an end. In the period of Dionysios little is known about Akragas, but the city seems to have tried to maintain her neutrality in the renewed conflicts between Carthage and Syracuse.

³⁶ Schubring, p. 191 points out that Akragas was never taken by assault, not by the Carthaginians nor by the Romans.

THE COIN TYPES

A city's coinage was a decision of the local authorities and the coin types served to identify the *polis*.³⁷ The characteristic emblems of Akragas are the eagle and the crab, related to local cults, and these types remain remarkably stable down to the end of the fifth century.³⁸ From an artistic point of view the representation of the eagle reaches its height with the appearance of the magnificent pair of eagles on the decadrachms and tetradrachms in the last part of the century (Period III). The standing eagle on the earlier tetradrachms (Period II) and the archaic didrachms (Period I) has still much of the admirable simplicity of the severe style. On the abundant didrachms the eagle occasionally looks less impressive due to the smaller size of the flans and to the more varying artistic quality of the numerous dies forming this large output, but mostly the bird is easily recognizable as an eagle with a sharply bent beak, feathery legs and strong claws.

The obverse eagle

The identification of the eagle species represented on the coins of Akragas is problematical. O. Keller, the great expert on the fauna of the Ancient World, wrote that what the Greeks meant by *aetos* (lat. *aquila*) was the *Aquila fulva* (*chrysaetus*, golden eagle), represented on the coins of Akragas and Elis.³⁹ O. Bernhard, who has given a fascinating account of his youth as eagle hunter in the Alps, pointed out that the huge eagles differ little except in size and colour. In his opinion it is therefore almost impossible to distinguish one from the other when pictured on coins and gems.⁴⁰ The eagles which Aristotle describes most accurately are the *haliaetoi*, sea-eagles (or white-tailed eagles) 'Their neck is large

³⁷ Martin, pp. 262, 267, 281; Rutter, *pour Denyse*, p. 183.

³⁸ This has been remarked many times, e.g. by Holm III, p. 566, who says that 'Die Prägung von Akragas hat... durch die Wiederholung derselben Typen etwas Einförmiges, allerdings wesentlich gemildert durch die grosse Mannigfaltigkeit der Details' and by Marconi, p. 225, 'Soprattutto, troviamo Akragas scarsa di inventiva, disposta a conservare i primi simboli'. Marconi, p. 226, adds that there are dies of a 'nitida finezza degni di ammirazione'.

³⁹ Keller, *Antike Tierwelt* II, p. 1. *Chrysaetus* (golden) is used for light coloured birds (see Bernhard, p. 102).

⁴⁰ Bernhard, part 2, p. 102.

and thick, feathers curved, rump broad. They dwell by sea and by coastal headlands' (*HA* VIII.32, 619a5). Dr. Carl Edelstam, Museum of Natural History, Stockholm, whom I consulted long ago, was convinced that the eagles on the coins of Akragas, which are best executed with characteristic details and therefore possible to identify, are sea-eagles (*Haliaeetus albicilla*).⁴¹ The large size of the beak, the rich feathering of the upper part of the legs and the bare lower part are typical features for these species. The sea-eagles catch preys from both land and sea, or as Aristotle (*HA* VII.3, 593b25) puts it 'the crook-taloned birds take any other animal that they can overcome including birds, except that they do not eat each other...'. This identification is supported by silver coins and numerous bronzes of Period III, on which the eagle is represented as a bird of prey clutching a small animal or a big fish in its claws. On a few rare bronze coins the eagle is carrying a snake. In these cases it may be a *Circaëtus gallicus*, a species that catches snakes.⁴²

Animal types are particularly common in the archaic period. In Sicily such types are characteristic for the early mints in the western and northern parts of the island (Akragas, Himera, Zankle/Messana, Rhegion). There can be no doubt that these animal types are associated with gods and have a religious meaning connected with local cults.⁴³ Birds played a major part in Greek myth. They were messengers of the gods, who revealed their will by sending favourable or bad omens through their sacred birds. No other bird equalled the eagle in strength and beauty. The eagle was the sacred bird of Zeus and more than an attribute. It was his animal counterpart and an actual embodiment of the god.⁴⁴ The Akragantine coins bear witness of Zeus' predominant status in the city, where he was worshipped under several epithets: Atabyrios, Polieus, Olympios⁴⁵ and on later coins Soter, Hellanios.⁴⁶ The cult of Zeus Atabyrios is attested by Polybios

⁴¹ Letter of 11.3.1977; also Westermarck, *Le origini*, p. 7; cf. Mirone, *Numismatik*, pp. 37–78.

⁴² Dr. Edelstam writes in a letter of 14.4.1977 that the *Circaëtus Gallicus* is the only species that catches snakes. Bernhard, p. 98, however, insists that he has seen with his own eyes 'der Steinadler' (= *Acquila fulva*) catch everything from hares to snakes.

⁴³ Cf. Gardner, *Types*, p. 42; Gardner, *NC*, p. 33.

⁴⁴ Cook, II.1, p. 752; Pollard, pp. 116–118, 141.

⁴⁵ Cook, I, pp. 117–123; p. 643; II.2, pp. 910–915; Ciaceri, pp. 64–66; de Waele, pp. 186–188.

⁴⁶ Zeus Soter = *BMC* 146 ff.; Zeus Hellanios = Calciati I, p. 211 no. 124. For a specimen with a clear obverse legend see Triton III, 1999, no. 161. For Zeus Soter and his occurrence on Sicilian coins see

(9.27.7), who says that the god shared a temple with Athena on the Akropolis. It is an ancient mountain cult of probably eastern origin and was brought to Akragas with the early immigrants from Rhodes. On Rhodes the god was originally worshipped in the shape of a bull on Atabyrion, the highest mountain of the island. Small bronze bulls and reliefs with bulls, which had served as votive offerings to the god, have been found on the site at various occasions and also in the excavations carried out in 1927.⁴⁷ The notorious bronze bull of the Akragantine tyrant Phalaris, in which he is said to have roasted his enemies to death (Pindar, *Pyth.*I.95; Diod.XIII.90), is probably to be connected with this bull cult, though the tale as such is a myth, perhaps related to the Cretan myth of Minos and Pasiphae.⁴⁸ Zeus Atabyrios is probably to be identified with Zeus Polieus. Ancient tradition (Polyainos V 1.1) connects Phalaris with the plans for a temple to Zeus Polieus on the Akropolis already around the mid sixth century BC, but no certain remains of such a temple have been found on the site of Rupe Atenea or Colle Girgenti.⁴⁹ It has been calculated that it took at least a generation or more to undertake a large-scale building program,⁵⁰ and it seems unlikely that the newly founded Akragas could have had resources for the building of a large temple at this early time.⁵¹ If nothing certain is known of the temple(s) dedicated to Zeus Atabyrios/ Polieus, remains of the enormous temple to Zeus Olympios (Diod. XIII.82) still form an impressive pile of blocks close to the main gate of the ancient city, the Porta Aurea.⁵² Zeus Olympios was like Zeus Atabyrios a mountain and sky god, widely worshipped throughout the Greek world. ‘The climax of the outstanding ability of the colonies at the peak of their development – the end of the Archaic and start of the Classical periods – is represented by the two colossal temples of Selinous (Temple G) and the *olympieion* or Temple to

Manganaro, *SNR*, pp. 5–8.

⁴⁷ Cook, I, p. 643 with fig. 502; de Waele, p. 187.

⁴⁸ Cook, I, p. 643 with fig. 502; Murray, *ASG*, pp. 51–52.

⁴⁹ See the discussion in de Waele, pp. 186, 217–222; Cook, I, p. 122, II.2, p. 910; Gruben, pp. 296–297. The temple for the joint gods Zeus and Athena which Polybios mentions was probably of a post-406 date (de Waele, p. 221).

⁵⁰ Mertens, p. 315.

⁵¹ For traces of activity on Rupe Atenea *cf.* De Miro, *ASG*, pp. 152–153 and de Waele, pp. 103–104.

⁵² Gruben, pp. 305–309.

Zeus Olympus at Acragas'.⁵³ The building of the temple was begun after the victory over the Carthagians at Himera in 480, perhaps as a victory monument for Theron, and was never completely finished.

In the numismatic material of the fifth century the various cults of Zeus cannot be distinguished.⁵⁴

Eagle types

The eagle exists in three varieties on archaic coins, mainly from the East: standing, flying or as an eagle's head. All variants appear as obverse types on fractional elektron coins of an uncertain date and attribution and on better known silver coinages. The long coin series of Akragas are the most outstanding manifestation of the standing eagle. This type is otherwise rare in the archaic period and the later fifth century. Some rare issues in elektron and silver with a standing eagle are attributed to Abydos in Troas (pl. 1.1.1–3). The attribution rests on later, inscribed issues of the city with an eagle as principal type,⁵⁵ (pl. 1.5) but remains uncertain. The minute elektron fractions show a fat and clumsy eagle standing left with head reverted. The silver coins with a similar rugged and fat bird in varying positions, are known only in small, uncertain denominations of an irregular weight.⁵⁶ A few are documented from hoards: two from the archaic hoard reconstructed by Otto Mørkholm (*IGCH* 1165)⁵⁷ (pl. 1.2), and one from the Asyut hoard (no. 613). Mørkholm thought that these coins might antedate the destruction of Abydos by Darius in 512, but they could also be after that date since Herodotos (V.117) mentions the city as existing at the outbreak of the Ionian revolt in 499. An eagle with head reverted (pl. 1.3) is again found on elektron staters of Milesian standard, which form part of a group associated with the Ionian revolt (499–494). This group consists of elektron coins

⁵³ Mertens, p. 327.

⁵⁴ Contrast the inscribed heads on coins of the 3rd century (note 46 above).

⁵⁵ Six, pp. 236–237. For the later inscribed coinage see *BMC* (Troas), pl. I.3–5; Robinson, *ANSCent*, p. 593; *Gulbenkian* II, 594.

⁵⁶ *SNG Aulock* 1439 (1.83g); Munich, *SNG*, part 19, 2 (1.20g).

⁵⁷ Mørkholm, *SNR*, nos. 46–47, pl. 27. In London (1.52g) and Copenhagen, *SNG*, Troas 1 (1.41g). Mørkholm regards them as Aeginetic trihemibols.

of which some have regular types of Lampsakos, Klazomenai, Chios, Samos, while others are uncertain but usually attributed to Priene (Athena head), Dardanos (cock), Kyme (horse), Methymna (sow) and Abydos (eagle).⁵⁸ On the eagle staters the bird is either standing on a support with a hare in its claws (pl. 1.3), or without prey, or with a dolphin in the left field.⁵⁹

The motif picturing an eagle with open wings attacking a prey, which was adopted at Akragas only in Period III, appears much earlier on coins from the East. A silver drachm in Boston has a strangely executed motif: a thin eagle with an awkwardly lifted wing attacks a stag of the same size as the eagle itself (pl. 1.6).⁶⁰ The richly varied elektron coinage of Kyzikos includes some eagle motifs which are related to similar themes on later bronze coins of Akragas. On a stater from von Fritze's Group II the civic emblem, the tunny, serves as an eagle's prey on which he is standing and picking at with lowered head (pl. 1.7).⁶¹ The theme is also frequent in vase painting. An interesting parallel with a human prey is the famous kylix in the Vatican Museum showing an oversize eagle standing on Prometheus' body devouring his liver (pl. 2.B). On later Cyzicenes the eagle motif returns. One of the most remarkable is the stater showing two eagles perching on the Delphic omphalos (pl. 1.8).⁶²

An eagle's head occurs on rare elektron fractions of an uncertain attribution (pl. 1.9).⁶³ The type was also adopted as reverse type on two important archaic silver coinages:

⁵⁸ Gardner, *JHS*, pl. 7; Babelon, *Traité* II.1, cols. 193–200, pl. 8; Kraay, *ACGC*, p. 30. Five of these types were represented in the Vourla hoard (*IGCH* 1167), published by Jameson, *RN*, pl. 1–2. Two of them (with obv. Athena head and sow walking r.) are now in *Gulbenkian* II, 726 and 728. For a third piece with obv. cock (Dardanos?) from the same hoard see *Kunstfreund*, p. 11, no. 4 with further references. A common mint for these issues has been suggested (Seltman, *GC*, p. 88), but see the critical remarks in *Gulbenkian* II, p. 83.

⁵⁹ *BMC Ionia*, p. 7.33, pl. 1.23 (on hare = Kraay, *ACGC*, pl. 4.61); Babelon, *Traité* II.1, 348, pl. 8.16 (on hare); Munich, *SNG*, part 19, 1 (with dolphin = Head, *NC*, p. 265, pl. 7.7 = Babelon, *Traité* II.1, 350 = Gardner, *Types*, pl. 4.11); Boston, Baldwin Brett 1808, pl. 84 (standing on line).

⁶⁰ Boston, Baldwin Brett 2314, pl. 111.

⁶¹ von Fritze, pl. III.13 = Boston, Baldwin Brett 1454.

⁶² von Fritze, Group IV, pl. 6.32; Babelon, *Traité* II.1, pl. 177.24. Jenkins, in *Gulbenkian* II.643 (c. 450–400), noted that this type must be placed earlier than it is in von Fritze's sequence, since it is included in the Vourla 1875 hoard (*IGCH* 1194, buried c. 410–400).

⁶³ *Rosen* 270 (1/12 Milesian stater, ex. MMAG list 194, 1959, 20, where it is tentatively attributed to Ialysos): same type/irregular incuse: *Rosen* 331 (1/24 Phocaic stater, ex. *NFA* 8, 1980, 238).

the Cypriot double sigloi with obverse bull l., attributed to Paphos (pl. 1.10)⁶⁴ and the staters and smaller denominations from Ialysos on Rhodes with obverse winged boar (pl. 1.11). Both issues are known from archaic hoards, which are among the earliest of all documented hoards and datable to the late sixth century. A 'Paphos' coin of the early issue with inscription Ba–A on the obverse was in the Persepolis deposit (*IGCH* 1789).⁶⁵ The inscribed, trilingual tablets which sealed the deposit have been much discussed and differently dated, but most numismatists accept a date for the tablets and the coins before Darius' annexation of Thace between 514 and 511.⁶⁶ The archaic 1990 hoard from the eastern Mediterranean, published by Kagan,⁶⁷ was deposited before the end of the sixth century. One of the hitherto unknown coins in the hoard was a stater of the first, anepigraphic issue of Ialysos. The archaic silver coinage of Ialysos has recently been studied by Weiss and Hurter,⁶⁸ who date the issues with ethnic IEΛΥΣΙΟ or IAAΥΣΙΟΝ to c. 510–480 and the initial, unepigraphic issue, so far represented by the single specimen from the 1990 hoard (no. 22), shortly before that date.⁶⁹ The coins of 'Paphos' and Ialysos with their closely similar eagle types ought to be contemporary and are among the earliest issues with two types. They served as prototypes for coins with related eagle head types from Kyrene and Lycia.⁷⁰ Kraay and Kagan have both underlined the remarkably early and vigorous development of the archaic coinage on Cyprus.⁷¹ Of the five silver coins in the Persepolis deposit, the 'Paphos' coin and another Cypriot coin attributed to Lapethos, are the only ones with double types, and it seems

⁶⁴ *BMC*, p. 36 no. 6, pl. 7 no. 6; Babelon, *Traité* II.781; Kraay, *ACGC*, p. 309, pl. 64 no. 1089–1090. Subsequently the initial issue with rev. eagle's head was changed to an eagle in flight or a standing eagle (pl. 1.4)

⁶⁵ Kraay, *ACGC*, p. 302; Kagan, p. 37 (Persepolis 38, pl. 6C). The reverse type was earlier identified as a ram's head (cf. *Asyut hoard*), but Kraay, *ACGC*, p. 206, note 2, and Kagan, p. 29, 37, have shown that the Persepolis coin shares the same obverse die with a better preserved 'Paphos' coin in Paris. (Waddington) with clear types and inscription (Kagan, pl. 6B).

⁶⁶ Root, pp. 1–2 and the recent discussion by Kagan, pp. 36–42 with references. Also Le Rider, 1998, p. 664.

⁶⁷ Kagan, pp. 17–52, pls. 1–9. Burial date discussed on pp. 49–50.

⁶⁸ Weiss & Hurter, pp. 5–15, pls. 1–4.

⁶⁹ Weiss & Hurter, p. 7 no. 1, pl. 1 no. 1.

⁷⁰ Weiss & Hurter, p. 10, pl. 3 no. I–J; *BMC* Cyrenaica, pl. 3 no. 4; *Asyut hoard* 808 and 762–764. For the ties between Rhodes, Cyprus and Kyrenaika also Bresson, pp. 224–225.

⁷¹ Kraay, *ACGC*, p. 305; Kagan, pp. 38–39.

reasonable to assign the first appearance of developed reverse types to the period around 520.⁷²

The eagle's head on the coins of Ialysos⁷³ and the standing eagle at Akragas both refer to the cult of the Rhodian Zeus Atabyrios, whose cult was brought to Akragas from Rhodes, as stated above. The fact that Akragas adopted double types from the beginning of her coinage is probably due to influences from this eastern area.

In contrast to the well executed eagle heads on the coins of 'Paphos' and Ialysos a curiously rough and primitive variant is met with on the archaic drachms of Sinope (pl. 1.12). The presence of one of these primitive eagle head drachms in the Antilibanon 1978 hoard (*CH* 6.4; *CH* 8.45, buried *c.* 475) supports the view that the series began in the early fifth century and preceeds the later one with a realistic eagle's head, datable after the mid-century onwards⁷⁴ (pl. 1.13). On these coins only the front part of the eagle's head is rendered emphasizing the eye and the hooked beak. In contrast the hemiobols of Kyme in Aiolis display an impressive eagle head where also the bird's feathery neck is included (pl. 1.14).⁷⁵ The high point of the eagle's head type is the famous stater of Elis-Olympia and the rare drachm belonging to the same issue (pl. 1.15–16).⁷⁶

The flying eagle is the most common type, frequently pictured in black-figure vase painting (pl. 2. B). On coins one of the oldest representations is found on a so far unique elektron hekte of uncertain attribution (pl. 1.17).⁷⁷ Early silver coins with a flying eagle on the obverse come from the island of Siphnos (pl. 1.18) and from Chalkis on Euboea (pl. 1.19–20). The Aeginetic staters of Siphnos have a primitive looking, roughly executed eagle combined with a square incuse on the reverse. These staters

⁷² Cf. Kraay, *NC* 1956, p. 60; Wallace, pp. 38–41; Alföldi, *AN I*, p. 80; Kagan, excursus A, pp. 34–43.

⁷³ Weiss & Hurter, p. 10. For the controversy over the classification of the bird's head, *ibid.*, p. 6, note 9.

⁷⁴ Hurter & Pászthory, pp. 111–125; pls. 14–17. Sinope = no. 42, p. 118. For a discussion of the eagle series of Sinope see Hind, *NC* 1976, pp. 1–6.

⁷⁵ *SNG Aulock* 1623; Mørkholm, *JNG*, pl. 4 no. 10, attributed a hemiobol with the same obv. and a varying rev. with inscription HPAK to a new mint, Herakleia by Sipylos.

⁷⁶ Seltman, *Olympia*, pp. 153–154, 161, pl. 5; Hirmer pl. 157 no. 500 (stater); Leu 90, 2004, 77–78, 82–83.

⁷⁷ Waggoner, *Rosen* 315 (ex. Pozzi 2372 and Leu 15, 1976, 293). The earlier tentative attribution to Siphnos is rejected.

were represented in the Cyclades 1887 hoard (*IGCH* 6) containing early coins from Aegina and the Cycladic Islands⁷⁸ and in the Santorini hoard from 1821 (*IGCH* 7).⁷⁹ Hoard evidence places these coins well before 500, but the upper limit is uncertain. The primitive style of the Siphnian staters and their presence in the Cyclades hoard, which contained also Aeginetan staters from the beginning of the Aeginetan series⁸⁰ and a stater attributed to Kos with obverse crab and an early type of reverse incuses, justifies the early date, which is usually given them.⁸¹

The flying eagle on the archaic coinage (tetradrachms, didrachms and smaller denominations) of Chalkis on Euboea is of superior quality compared with those of Siphnos. The bird is rendered in a similar stylized pattern with flat widespred wings and tail and body in profile (pl. 1.19–20). There are two variants: the earlier series has an eagle without prey and the later an eagle carrying in his beak and talons a long snake that entwines his body. Both have reverse type wheel, placed in a triangular or square incuse, first anepigraphic and later with ethnic XAA.⁸² Like the rare tetradrachms with types Boeotian shield/wheel, commemorating an alliance between Chalkis and Thebes,⁸³ the eagle/wheel series have been associated with the military events of 506 BC, when Chalkis and Thebes ravaged Attica but were defeated by Athens (Herodotos V.74f.). Earlier writers regarded these events as the lower limit for the entire archaic coinage

⁷⁸ There were four Siphnos staters in the hoard, two mentioned by Greenwell, p. 17, weights 12.38 g, 12.32 g, pl. II.13. A third piece from the hoard (12.29 g) is in Boston, Baldwin Brett 1294.

⁷⁹ Published by Wroth, pp. 275–276, pl. 12 no. 8; Wroth, *BMC (Crete)*, pp. 42–43. The Siphnos stater is now in London, *BM Guide* (1965), pl. 5 no. 47; Kraay, *ACGC*, pl. 6 no. 119. Wroth attributed the coin to Siphnos rejecting Borrell's earlier attribution to Sicyon (Borrell, p. 132). For the Santorini hoard, see also *Asyut hoard*, p. 17; Kagan, p. 23; Nicolet-Pierre, *NG*, pp. 138–139. Another coin of uncertain attribution with a similar eagle comes from the Sakha hoard (*IGCH* 1639, Cyclades uncertain). For the weight standard of this piece cf. Leu 15, 1976, note to 293.

⁸⁰ Holloway, pp. 9–12.

⁸¹ Kraay, *ACGC*, p. 45, pl. 6 no. 119, c. 540.

⁸² Babelon, *Traité* II.1, cols. 667–670. Babelon's series 2 with eagle carrying snake but without legend must be the initial issue of the later group. Some of the early issues (Kraay, *ACGC*, pl. 15 no. 264) have the type of primitive wheel with two cross spokes, which is found also on other archaic coins, e.g. Wappenmünzen (Seltman, pl. 1 no. A16) and Thraco-Macedonian Tribes (Derrones, *Kunstfreund* no. 38). For further examples see the list in Zancani Montuoro, p. 286, note 2B.

⁸³ Babelon, *Corolla Head*, p. 6; Wallace, p. 38, note 2 and p. 40; Kraay, *ACGC*, pl. 15 no. 266.

of Chalkis, but Chantraine⁸⁴ reexamined the historical sources and argued convincingly that the city was restored *c.* 490; thus there is no reason why the coinage should not have been resumed after 490/80 continuing down to *c.* 465. The stylistic difference between the two series is considerable and makes an interval seem plausible. Hoard evidence for the early coins of Chalkis is scarce, but does not contradict a distribution of the coins into an earlier and a later phase. A dispersed find from Euboia *c.* 1935 (*IGCH* 3) is said to have contained four specimens of the type without snake and with reverse wheel within triangular incuse (as Babelon, *Traité* II.1, 1047) together with two *Wappenmünzen* didrachms. The content points to a pre-500 date. A tetradrachm of the early type without snake was in the Asyut hoard (no. 253), and a fragment of the later variant with eagle holding a snake was in the part of the Benha el Asl hoard (*IGCH* 1640) which was acquired by the British Museum.⁸⁵ The burial date of this hoard is placed *c.* 485, which tallies well with a resumption of the Chalkidian coinage some time after 490.

Seltman noted the close resemblance in type and style between the early staters of Elis/Olympia (pl. 1.21–22) and Chalkis.⁸⁶ It is not the earliest primitive looking eagle type at Chalkis without prey that resembles the Elean eagle, but the later more compact and detailed eagle carrying a snake. Seltman's initial date (*c.* 510) for the coinage of the Eleans was dependent of the then prevailing chronology for Chalkis. Now most writers⁸⁷ support the earlier opinion that the coinage started only after the foundation of the city of Elis in 471.

The Elean eagle is no mere copy of the Chalkis prototype but shows a more developed style. The broad wings are closer to the body and the feathering is rendered in a different,

⁸⁴ Chantraine, *JNG* 9, 1958, pp. 7–17. Chantraine, p. 7, discusses the earlier chronology.

⁸⁵ Robinson, *NC*, pp. 68–71, no. 9. Lambros, p. 217 no. 1–2, published two coins found in Chalcis. No. 2 is now in Berlin = Babelon 1048; no. 1 is mentioned by Babelon under no. 1051.

⁸⁶ Seltman, *Olympia*, pp. 1–2.

⁸⁷ Kraay, *ACGC*, p. 104 following Head, *HN²*, p. 419. Recently Walker, Introduction to Leu 90, 2004 (unpaginated). Cf. *Kunstfreund*, p. 41 no. 28. Kraay adds (p. 104, note 1) that 'the earliest Elean issue has no snake so that the beginning of Elean coinage should be about contemporary with the addition of the snake to the Chalcidian type'. That is however contrary to the evidence of the Benha el Asl hoard (*IGCH* 1640, buried *c.* 485), which contained a Chalkidian coin of the type with snake.

more elaborate pattern. Already from Seltman's Series III the eagle's prey is a hare alternating with the snake. The bird is rendered in flight, first in the old scheme with spread wings, later with wings folded over its body. The later coinage of Elis displays a rich variety of eagle designs of which some have interesting parallels on the coins of Akragas from Period III, as will be discussed below.

At Kroton the eagle is not a regular standard type, but nevertheless Kroton is, apart from Akragas, the only important mint in the West where various eagle motifs are found on the coins. The flying eagle appears for the first time in the series with incuse reverse (pl. 1.23), where it alternates with incuse tripod.⁸⁸ The series initiates the phase of medium size flans (c. 500 onwards). The eagle at Kroton is more strongly stylized and decorative than its eastern counterparts. The feathering is rendered in a pattern of dots and lines similar to the treatment that was used at Akragas. The same archaic scheme of rendering a bird in flight persists on later issues with the eagle in relief. In the last quarter of the fifth century Kroton adopted a new eagle type. The old flying eagle was then replaced by an eagle standing on an Ionic capital⁸⁹ (pl. 1.24), a motif which undoubtedly owed its origin to Akragas.

This survey of eagle types shows that only the flying eagle was fairly common on early coins. The standing eagle with raised head and looking straight ahead that appears on the archaic didrachms of Akragas has no really close parallels on other coinages and must be regarded as an independently invented type for the new coinage. The Akragantine mint retained the same principal types with only few, minor changes for a long time (Periods I–II). The most essential addition to the standard obverse is the Ionic capital in Period II (nos. 408 ff.). Akragas seems to be the first mint to use this particular type of support, which was later adopted at Kroton and at Elis/ Olympia.

Zeus was worshipped under many epithets at the places mentioned in the above survey. Ialysos and Akragas shared the cult of Zeus *Atabyrios*. For Siphnos the cult of Zeus *Epibemios* (on the step) is known from Hesychios. Cook interprets the name as probably

⁸⁸ *HN³* (Italy), 2084, pl. 35; Kraay, *ACGC*, p. 167, pl. 35 no. 620; Kraay, *NC* 1960, pp. 59–60; Garraffo, *Studi Breglia*, p. 113.

⁸⁹ Kraay, *ACGC*, pl. 36 no. 630.

referring to a statue of the god standing on the orator's platform.⁹⁰ A dedication to Zeus *Meilichios* (the Kindly One), an underworld power, who could appear in the guise of an enormous snake, is recorded from Chalkis.⁹¹ The snake entwining the eagle's body is a characteristic detail of the coins, and it may in this case be not a prey but an attribute of the god.⁹² At Olympia the worship of Zeus was predominant. Zeus *Olympios* was the patron of the Olympic games and the site, and the god was also venerated under numerous other names.⁹³ One of the most curious cults was that of Zeus *Apomyios* (Averter of Flies), which is also documented on coins.⁹⁴

The reverse crab

The crab on the coins of Akragas has long been recognized as a freshwater species. Dr. R. W. Ingle, Museum of Natural History, London, who – many years ago – examined a large selection of photographs of coins from Akragas found that the majority of the crabs belong to different species of the *Potamonidae* family (the most common being *Potamon fluviatile fluviatile* occurring in Italy, Greece and the Balkans).⁹⁵ He found also that some coins (e.g. didrachm no. 154 in Group III and tetradrachm no. 349) probably show a marine crab, the Shore or Harbour crab (*Carcinus maenas* of the *Portunidae* family) which is typical for the Mediterranean area. Finally Dr. Ingle stated that several crabs, including practically the whole Group II, are too stylized or eccentric to place into a family.

⁹⁰ Cook, II.2, p. 897 note 3 and p. 1180 note 4.

⁹¹ Cook, II.2, p. 1157, figs. 944–6. The snake is also associated with other Zeus cults, cf. Cook, II, pp. 282–283, 1059–1061.

⁹² Cf. Leu 15, 1976, 291, elektron *hekte* with head of Zeus/snake (interpreted as Zeus Meilichios).

⁹³ Cook, II, pp. 80, 116, 706, 722, 783; Pausanias 5.14.7.

⁹⁴ Seltman, *Olympia*, p. 44, 52. Rev. of no. 143 (Group E)

⁹⁵ Personal interview at the Museum of Natural History, London, in 1975. Dr. Ingle kindly wrote down his observations on photographs of coins from the British Museum which had been provided by Kenneth Jenkins.

The interpretation of the crab emblem⁹⁶ has been more controversial than the unambiguous eagle type. Holm believed with other earlier authorities⁹⁷ that the crab was a marine species, associated with Poseidon and together with the eagle signifying land and sea. Schubring was the first to suggest a connection between the crab and the river-god, but he was undecided in his opinion. He first stated that the river-god Akragas was represented on the coins in several shapes, either as a young nude (dekadrachms) or as a youthful head (bronze coins) or in the shape of a crab or fish, and at the same time he maintained that the crab was a symbol of Poseidon, alluding also to navigation and commerce.⁹⁸ Head supported already in the first edition of *HN* the view that the crab was most likely a fresh-water crab representing the river Akragas.⁹⁹ The cult of the river-god Akragas, the eponymous founder of the city, is attested by Ailianos (*Varia Hist.* II.33) and by Stephanos of Byzantium (s.v. *akragantes*), who call him a son of Zeus and the Oceanid nymph Asterope.¹⁰⁰ The discrepancy expressed by Schubring was commented upon by Caruso Lanza,¹⁰¹ who argued at length that the crab can only be the emblem of the river-god. He regarded as final proof the famous drachm (no. 604), first published by Salinas,¹⁰² with the carapace transformed into a human face, which might be seen as a combination of the old crab type and a humanized version. The river-god in his human shape is not often found on Akragantine coins. His youthful, horned head bound with tainia is best known from a fine series of bronze coins of a notoriously uncertain date but possibly datable to the early fourth century (pl. 2.36), and from a few other later bronze series.¹⁰³

⁹⁶ In general: Deonna; Carroccio, *NAC/QT* 25, pp. 11–48 with 4 pls.

⁹⁷ Holm, p. 566; Torremuzza p. 5, tab. IV; Leake, *NH*, *Insular Greece*, p. 48.

⁹⁸ Schubring, pp. 30, 114, 188–189.

⁹⁹ Head, *HN*¹, p. 104; Head, *HN*², p. 120. Cf. E.S.G. Robinson, in *Gulbenkian I*, p. 58, who thinks that it is ‘too much of a refinement to identify, with some, the crab as a fresh water variety’ retaining the opinion that the types signify land and sea.

¹⁰⁰ Ciaceri, pp. 253–254.

¹⁰¹ Lanza, 1902, pp. 457–481.

¹⁰² Salinas 182, pl. 8 no. 1; Lanza, 1902, p. 467.

¹⁰³ *LIMC I*, p. 447, ‘Akragas’ (Arnold-Biucchi). For small silver and bronze coins from Akragas and Gela with a rare bearded river-god type see Jenkins, *Gela*, p. 173.

The most common form for river-gods in Sicily and Magna Graecia is the man-faced bull.¹⁰⁴ Its first occurrence is on rare incuse silver coins of Rhegion and Laos,¹⁰⁵ which are, according to current chronology, more or less contemporary with the earliest didrachms of Akragas. In Sicily it was introduced a little later with the striking reverse type of the Gela didrachms¹⁰⁶ (from c. 490/85 onwards) and at Katane with the man-faced bull/Nike series (c. 464–450),¹⁰⁷ which closely follows the prototype of Rhegion. One may wonder why Akragas did not adopt this type. It is however evident that at the time when Akragas initiated her coinage the man-faced bull was not yet well established on coins but was just beginning to appear. River-gods are local deities for whom local emblems seem appropriate. It was very likely the abundance of crabs in the small rivers encircling the city that gave reason for choosing them as the *parasemon* of the river and the city.¹⁰⁸

In the early coinages of Sicily there is no other example of a river-god represented by a crab, and the man-faced bull shape was for quite a long time seen only on the coins of Gela. Were there other symbols for local river-gods? Selinous and Segesta have been discussed in this respect. At Selinous the selinon plant grew abundantly along the river. The leaf is the city badge and a constant symbol with both Selinuntine river-gods on later

¹⁰⁴ Survey in Jenkins, *Gela*, pp. 165–175; Weiss, *Flussgottheiten*; Carroccio, *NAC/QT* 29, 2000, pp. 47–58.

¹⁰⁵ *HN*³ (Italy), 2468 (Rhegion); 2270 (Laos); Gorini, *Monetazione incusa*, pp. 33 no. 1, 221–225; pp. 13 no. 4, 116–117; Caltabiano, *Messana*, pp. 13–14. In the East the most remarkable man-headed bull is on a Cypriot coin struck in the name of Siromos, traditionally attributed to Paphos, Troxell, 1978, pp. 31–33; Masson & Amandry, pp. 29–31 with further references.

¹⁰⁶ Jenkins, *Gela*, pp. 29ff., pl. 1ff. The identification of the type is controversial. Jenkins discusses Isler's opinion that the man-faced bull always represents Acheloos and not the local river-god Gelas. Cf. also *LIMC* I, pp. 12–13, 'Acheloos' (Isler), where no clear preference for the one or the other interpretation is expressed. Weiss, *Flussgottheiten*, pp. 51–55, *LIMC* IV, pp. 139–148, 'Fluvii' (Weiss), and *LIMC* IV, pp. 177–179, 'Gelas' (Cahn), p. 178, support the opinion that the river-god Gelas is represented on the coins. Cahn emphasizes the simultaneous occurrence of the bulltype and the humanized version, '...in Gela stehen beide Versionen..., durch Vorderseitenstempel verbunden, nebeneinander'.

¹⁰⁷ Arnold-Biucchi, *Randazzo*, pls. 3–4.

¹⁰⁸ Lanza, 1902, p. 481; de Waele, p. 11, note 48, writes that the crabs are still common in the river Fiume di S. Leone (ancient river Akragas) 'trotz seiner schrecklichen Verschmutzung'. The Akragantines seem to have venerated also the bull-shaped river god Gelas and had a statue of him. According to Timaios it was brought to Carthage in 406 but was returned to Akragas by Scipio in 146 (de Waele, pp. 54–55, notes 257–262).

coins, when they appear in their human shape or – more rarely – in the shape of a man-faced bull (as on the litra with seated nymph).¹⁰⁹ Lacroix regards the sole selinon leaf also as an emblem of the river-gods seeing here a parallel to Akragas, ‘le crab joue sur les monnaies d’Agrigente le même rôle que la feuille d’ache sur celles de Sélinonte’.¹¹⁰ In mythology the founder of Segesta, Aigestes, was the son of the river-god Krimisos who coupled himself with the nymph Aigeste in the shape of a dog.¹¹¹ A standing dog is the constant reverse type of the didrachms of Segesta and is often interpreted as representing the river-god Krimisos.¹¹² This identification was put forward already by Fr. Creuzer and quoted by Salinas,¹¹³ who was the first to publish a later tetradrachm in the de Luynes collection (no. 1121) showing the humanized river-god pictured as a horned young hunter in the company of a dog (Hirmer pl. 71).

When the humanized version of river-gods became common on coins from the later fifth century onwards it did not efface the man-faced bull or other earlier types. Crabs are found associated with humanized river-gods and waterborn deities on later coin series, especially from South Italy, e.g. Bruttium, Brettii (local goddess in crab-hat/crab); Consentia (river-god/crab); Terina (nymph/crab).¹¹⁴ In Sicily there is Motya with the important series which imitates the Akragantine eagle/crab tetradrachms (pl. 2.37) followed by imitations of Syracusan heads on the obverse and a crab on the reverse.¹¹⁵

The crab is used on Greek coins either as the principle type or as a symbol. In both cases its meaning is often elusive. It is, however, not exclusively associated with river-gods and other lesser deities but is found also in connection with greater gods. Like the eagle, the crab appears at an early date on archaic coins of Asia Minor. Elektron fractions of this

¹⁰⁹ Head, *HN*², p. 169; Hill, *Ancient Sicily*, pl. 6 no. 5; SNG Lloyd 1270.

¹¹⁰ Lacroix, *RBN*, pp. 9–10.

¹¹¹ Hurter, *Segesta*, p. 13; Caltabiano, Krimisos.

¹¹² Hurter, *Segesta*, p. 21 with note 36; Hill, *Ancient Sicily*, p. 87; Lacroix, *RBN*, pp. 9–10; Jenkins, *Gela*, pp. 171–172; Rutter, *pour Denyse*, p. 180.

¹¹³ Salinas, 1871, pp. 51–53. Whether the same hunter type with or without horns also represents the river-god has been much discussed. Lacroix, *Monnaies et colonisation*, pp. 62–63 identifies him as Pan.

¹¹⁴ Brettii: *HN*³ (Italy), 1944; Carroccio, *NAC/QT* 25, pp. 12–17, pl. 1 no. 1–2; Imhoof-Blumer, *Fluss- und Meergötter*, p. 182 no. 22, pl. 1 no. 21; Consentia: *HN*³, 2072(b); Imhoof-Blumer, *Fluss- und Meergötter*, p. 183 no. 25, pl. 1 no. 24; Terina: *HN*³, 2646; Holloway & Jenkins, p. 57, figs. 119, 121.

¹¹⁵ Jenkins, *CPS* I, Motya III, pp. 31–33, pl. 5 (c. 405–397). For minor series see, *ibid.*, pl. 23.

type (pl. 2.25) seem to be unusually common and were better represented than any other type in the Hellespont 1969 hoard (*IGCH* 1161, *CH* I, 2).¹¹⁶ A much discussed silver series with crab emblem, consisting of a stater and smaller denominations (Aeginetic standard), is commonly attributed to the island of Kos (pl. 2.26–27).¹¹⁷ The coins are well represented in archaic hoards. Most important is the Cyklades 1889 hoard (*IGCH* 6),¹¹⁸ which contained several staters with crab type and also staters of Siphnos with the flying eagle as mentioned above. Two trihemioiobols of the same series come from the Delta (*IGCH* 1638) and the Demanhur hoards (*IGCH* 1637)¹¹⁹ and one of the rare hemioiobols (= London, *BMC* 5) from the Western Asia Minor hoard (*IGCH* 1165).¹²⁰ The crab stater belongs to a group of early silver coins, which have different obverse emblems but a common reverse type with one large and one small incuse square, recalling the reverses of early elektron coins.¹²¹ The attribution of the crab type to Kos has been widely accepted¹²² but also refuted. Kraay found that the use of the Aeginetan standard pointed to the Carian area in general and suggested that the whole group might be the product of a single (not named) mint.¹²³ Recently K.A. Sheedy¹²⁴ has discovered a reverse die-link between staters with obverse two dolphins and seated sphinx, and that is undoubtedly a strong, further argument in support of the opinion that at least these two types and possibly some of the others should be assigned to a common mint.

¹¹⁶ Oeconomides, *ADelt* 1971, pp. 10–11; Oeconomides, *ADelt* 1972, p. 7; Oeconomides, *AAA*, p. 176–180. The hoard consists of 49 electrum fractions, now at Athens, of which 20 have the crab type (1/48 stater = 4 ex.; 1/96 stater = 16 ex.) and two the eagle head (1/24 and 1/48 stater). Of the additional lot in MMAG list 308, 1970, 1–24 (some or all?), no. 13 is of the crab type (1/48 stater).

¹¹⁷ Waggoner, *Rosen*, nos. 642–643.

¹¹⁸ Greenwell mentioned four crab staters, gave the weights of two (12.34, 12.15) and illustrated one, p. 19, pl. 2 no. 16 (= Waggoner, *Rosen*, no. 641?). One of the staters from the hoard is now in Boston (Baldwin Brett 2013, 12.31 g).

¹¹⁹ Greenwell, p. 5, pl. 1 no. 18 (1.43 g); Dressel & Regling, pl. 2 no. 113 (1.65).

¹²⁰ Mørkholm, *SNR*, no. 57, pl. 27 (0.68).

¹²¹ For this group of early silver coins see Seltman, *NC* 1926, pp. 149–150, pl. 8 nos. 10–13 and Kraay, *ACGC*, p. 34, pl. 4 nos. 86–90. Kraay assigns the group to Caria (?).

¹²² Babelon, *Traité* II.1, p. 439 ‘...du crab qui demeura l’emblème heraldique de l’île...’; Ingvaldsen is inclined to accept the attribution. The series falls outside the scope of Ingvaldsen’s thesis, but he gives a summary of it on pp. 2–5.

¹²³ Kraay, *ACGC*, pp. 34–5.

¹²⁴ Sheedy, *Studies Price*, pp. 321–5.

An argument for retaining the early crab series for Kos is the fact that Akragas and Kos are the only two mints where the crab is continuously used on coins over long periods. Manganaro connected the assumed common crab type on the early coins of Kos and Akragas with the origin of the mythical tyrant Phalaris, who is said to have come from Astypalaia (on Kos), and regarded this as evidence of a strong tie between the two places at an early date.¹²⁵ The immigrants at Akragas might not have come exclusively from Rhodes and Gela but also from Kos, though nothing is known about Koan participation in the founding of colonies. The crab staters, whether attributed to Kos or to some other mint, are undoubtedly earlier than the first didrachms of Akragas, and the parallel coin type is certainly of great interest. The ‘Koan’ crab, however, is of a more primitive execution and does not offer any stylistic resemblance to Akragas. It is therefore difficult to assume a direct influence, but the occurrence of crabs on these early coins shows that this coin type, like the eagle, derives from the east.

On the first two-sided Koan coinage, the crab is relegated to the reverse. On the obverse appears at first the famous *diskobolos* (pl. 2.32), dating from the early fifth century,¹²⁶ and after a long interval Herakles became the main obverse type from 366 BC onwards.¹²⁷ The tetradrachms with head of Herakles (pl. 2.33) are the most common from Kos, and the crab is therefore often associated with that god.¹²⁸ Brett and more recently Ingvaldsen do not find this convincing as the crab appears on the coins long before Herakles.¹²⁹ In fact it seems more likely that the crab – at least on the earlier coin series before 366 BC – is connected with Apollo. The *diskobolos* with a tripod at his side is thought to refer to the festival of Apollo at the Triopion by Knidos.¹³⁰ Kos belonged to the Doric hexapolis (Herodot I.144.3) and their common principal god was Apollo.¹³¹ A similar

¹²⁵ Manganaro, *ASG*, pp. 212–213.

¹²⁶ Barron, pp. 75–89; Cahn, *Knidos*, p. 164, n. 462; *Asyut hoard*, pp. 93–94; Ingvaldsen, pp. 5–7.

¹²⁷ For the coinage of the Late Classical and Hellenistic periods see now Ingvaldsen. The author places the introduction of the Herakles/crab tetradrachms to c. 390, pp. 84–90.

¹²⁸ *BMC Caria*, p. xv; Deonna, pp. 55–56; Carroccio, *NAC/QT* 25, p. 30, sees a clear connection with Herakles in his role as patron of fresh water areas.

¹²⁹ Boston, Baldwin Brett comment on no. 2013; Ingvaldsen, p. 77.

¹³⁰ Barron, p. 76.

¹³¹ Cahn, *Knidos*, p. 197. For the localisation of the Triopion, p. 11; see also D. Berges, *Nürnberger Blätter zur Archäologie*, Heft 12, 1995/96, pp. 103–120 (I thank C. Boehringer for this reference). The

relation between tripod and crab is found at Kroton, where a crab is a frequent symbol next to the tripod (pl. 2.34).¹³² Another mint, where the crab is associated with Apollo, is Amphipolis (pl. 2.35). A crab appears half hidden in Apollo's long hair on Lorber's types B (second state of O3) and C.¹³³ No other symbol is placed on the obverse in a similar way, and the crab must here be a sign of the close connection between Apollo and the river-god Strymon, with whom he is known to have shared his temple. Similar associations between Apollo and river-gods exist in eastern Sicily, e.g. at Katane where crab and fish are frequent symbols.¹³⁴

Other early crabs are found on elektron coins of Kyzikos showing a crab with a head of a tunnyfish in its claws (pl. 2.28),¹³⁵ a type which recalls the didrachms of Kyme (Cumae) in the West (pl. 2.29).¹³⁶ In Lycia there are silver staters with either a crab on both sides or a sitting sphinx on the obverse. The rather extraordinary crab-crab staters (pl. 2.30–31) were unknown until they turned up in hoards from the 1970s together with other rare Lykian coins attributed to uncertain dynasts and dated to the early fifth century. Some of the crab-crab coins have Lykian names or letters.¹³⁷ The sphinx has connections with Apollo. On the coins of Chios the obverse sphinx is usually associated with Dionysos but Oinopion, son of Dionysos, and Apollo who had several cult centres on the island, are other possibilities.¹³⁸

cult of Apollo Pythios at Kos was important. The Asklepieion was built on the site of a former temple of Apollo (Ingvaldsen, pp. 71–75).

¹³² *SNG ANS* 3, 244–247, 251, 279–82.

¹³³ Lorber, *Amphipolis*, pl. 16, figs. 79–80.

¹³⁴ Lorber, *Amphipolis*, p. 11 with note 108, p. 83. For Katane see *Gulbenkian* I, 182, 184–194.

¹³⁵ von Fritze, Group II, elektron stater and fractions, pl. 1 no. 37–38; *Gulbenkian* II, 605.

¹³⁶ Rutter, *Campanian Coinages*, p. 125, nos. 29–31, pl. 2.

¹³⁷ *CH* 2, 1976, hoard 18 = *CH* 5, 1979, hoard 3; *CH* 4, 1978, hoards 9 and 12, figs. 1–2. It is uncertain whether the lots come from different finds or from only one larger hoard. Two coins from the lot listed in *CH* 2 are in Copenhagen and were published by Mørkholm & Neumann, M13–M14. A second coin like M18 in Leu 42, 1987, 318. For another coin from these finds with an uncertain sign, see Troxell, 1977, pp. 16–17. For the types, Vismara, *Lycia* II, type XII: Sphinx/crab, p. 94: 51–54; typ XIII: Crab/crab, p. 99: 55–57 (Collection W.F.).

¹³⁸ Hardwick, Chios, p. 211 with note 4.

The crab may seem an insignificant creature compared with the fierce eagle, but it is in fact associated also with the mighty Zeus. In Caria the god was worshipped in two principal shapes: Zeus Labraundos equipped with double axe and spear and often a kalathos on his head and Zeus Osogoa holding an eagle and a trident, either resting on a crab or with a crab on top of it.¹³⁹ The double axe has a connection with crabs. Cook records that the settlers of Tenedos called themselves Asteroi, and at a place called Asterion on the island of Tenedos there were river-crabs marked with a double axe.¹⁴⁰ Presumably on Tenedos as in Karia they belonged to some local deity identified with Zeus. Cook sees here a parallel with the Akragantine crabs with various designs in the shell, a phenomenon which must have been noted at many places, though for Akragas there is no ancient source referring to any specific pattern. The connection between Zeus and crabs seems to be restricted to the Carian area and to the god who had the double axe as his main attribute.

On the later coins of Akragas from the fourth century onwards the crab disappears. The eagle types remain but are relegated to the reverse. As principal obverse types the heads of Zeus and Apollo appear. The river-god pictured as a young, horned head crowned with reeds or very rarely as a bearded head with reeds in hair, occurs only in a few series. By far the most common series has the head of Apollo on the obverse and the old eagle pair on the reverse.¹⁴¹ It is thus not the river-god in his human form that replaces the crab but Apollo. The cult of Apollo can of course have superseded older cults, but one may wonder whether the river-god at Akragas was not from early times closely associated with Apollo as he was at other places mentioned above.

¹³⁹ A tetradrachm struck by Maussollos and showing both gods, was published for the first time in Leu 25, 1980, 160 (now in the BM, London). The fusion of these two gods appears in Hellenistic times as Zenoposeidon, Cook, II, pp. 576–582.

¹⁴⁰ Cook, II, pp. 663, 666–667.

¹⁴¹ Calciati I, pp. 211–23; *SNG Agrigento* 309–398.





A



B



PLATES 1–2

1. Troas, Abydos? Milesian elektron 1/48 staters, 0.30, *c.* 550–500. *Rosen* 297, x2.
2. Troas, Abydos? Aeginetan trihemiobol, 1.52, *c.* 500. London (ex. Lambros), x2.
3. Troas, Abydos? Milesian elektron stater, early fifth century. London, *BMC* pl. I.23.
4. Cyprus, 'Paphos', stater, 11.16, *c.* 450. *Gulbenkian* II, 809.
5. Troas, Abydos, drachm *c.* 450. Hirsch 13, 1905, 3373.
6. Uncertain mint, drachm, 3.65, early fifth century? Boston, Brett 2314.
7. Mysia, Kyzikos, Phocaic elektron stater, 15.94, early fifth century. Boston, Brett 1454.
8. Mysia, Kyzikos, Phocaic elektron stater, 16.09, *c.* 450–400. *Gulbenkian* 643.
9. Uncertain mint, Phocaic 1/24 stater, 0.69, *c.* 550–500. *Rosen* 331. x2.
10. Cyprus, "Paphos", stater, 10.64, *c.* 520–510 BC, ex. Larnaca hoard. Nicosia, Cyprus Museum.
11. Rhodes, Ialysos, stater, 14.84, *c.* 500 BC. Weiss & Hurter pl. 1.5. Berlin.
12. Paphlagonia, Sinope, Aeginetan drachm, 6.14, early fifth century. Stockholm, *SNG Forbat* 447.
13. Paphlagonia, Sinope, Aeginetan drachm, 5.99, *c.* 450–400. Stockholm, *SNG Forbat* 445.
14. Aiolis, Kyme, hemiobol, 0.36, *c.* 480–450. Copenhagen, *SNG* 31, x2.
15. Elis-Olympia, Aeginetan stater, *c.* 408. Formerly Gillet coll.
16. Elis-Olympia, Aeginetan drachm, 5.85, *c.* 400. Leu 90, 2004, 83; formerly Gillet coll. (= *Kunstfreund* 154) and Abecassis.
17. Uncertain mint, Phocaic 1/6 el stater, 2.58, *c.* 550–500. *Rosen* 315.
- 17a. Enlarged.
18. Aegean islands, Siphnos, Aeginetan stater, 11.51, late sixth century. Stockholm, *SNG Forbat* 439.

19. Euboea, Chalcis, tetradrachm, 17.32, *c.* 510–500. Leu 15, 1976, 220.
20. Euboea, Chalcis, tetradrachm, 16.67, *c.* 480–465. Formerly Gillet coll. (= *Kunstfreund* 30).
21. Elis-Olympia, stater, 12.11, *c.* 470–460, Seltman 5 var.; Leu 90, 2004, 5; dito. 15, 1976, 250.
22. Elis-Olympia, stater, 12.10, *c.* 450, Seltman –. Stockholm, *SNG Forbat* 419.
23. Bruttium, Kroton, stater, 7.52, *c.* 500. Stockholm, *SNG Forbat* 81.
24. Bruttium, Kroton, stater, *c.* 420. Formerly Gillet coll.
25. Uncertain mint, Milesian elektron 1/48 stater, ex. Hellespont 1969 hoard. MMAG list 308, 1970, 13.
26. Uncertain mint (attributed to Kos), Aeginetan stater, 12.11, *c.* 550–500. *Rosen* 641.
27. Uncertain mint (attributed to Kos), Aeginetan trihemionbol, 1.48, *c.* 550–500, *Rosen* 643.
28. Mysia, Kyzikos, Phocaic 1/12 el stater, 1.30, *c.* 550–500. *Gulbenkian* II, 605.
29. Campania, Cumae, didrachm, 8.30, *c.* 470–460, Rutter, *Campanian Coinages*, p. 125.29. *Gulbenkian* I, 8.
30. Lycia, stater, 10.63, early fifth century. Leu 42, 1987, 318.
31. Lycia, stater, early fifth century. London, BM.
32. Carian islands, Kos, triple siglos, 16.48. Leu 36, 1985, 165 (= *Kunstfreund* 165).
33. Carian islands, Kos, Rhodian tetradrachm, 14.91, *c.* 390–380, Ingvaldsen, issue I. 12a. Helsinki, *SNG Keckman* I. 285.
34. Bruttium, Kroton, stater, 7.57, *c.* 500–460. Stockholm, *SNG Forbat* 79.
35. Macedonia, Amphipolis, tetradrachm, 14.33, *c.* 369/8, Lorber 6c. *SNG Lockett* 1299.
36. Akragas, AE hemilitron, early fourth cent. (?). Virzi 636.
37. Motya, Jenkins, *CPS* 39 (b), period III, *c.* 405–397, Munich.
- A. Black-figured hydria. Louvre, Paris.
- B. Black-figured kylix. Vatican, Rome.

PERIOD I

Didrachms

The coinage of Akragas begins with a long series of didrachms. There are no fractions. The didrachms and all later silver coins of the fifth century follow the Attic weight standard.¹⁴²

The Sicilian version of the Attic standard tends to be heavy if compared with the coins of Athens.¹⁴³ This is clearly noticeable at Akragas and Selinous, where the weight of the early didrachms centres around 8.70 g.¹⁴⁴ At Akragas the weight does not remain quite stable throughout the groups. In Group I there is a clear concentration of weights at 8.61–8.80 (medium 8.70) with a large number of coins above 8.81 and none below 8.01. Group II has a more varied distribution of weights with a large number of coins both above and below the peak at 8.50–8.70 g. The highest recorded weight for any didrachm, 11.26 g,¹⁴⁵ is found in this group. In Group III there is a clear attempt to restore the weight standard around 8.70 with a large portion of coins also above that point. The final Group IV again shows a tendency to a falling standard. The peaks move downwards with most coins centering between 8.41–8.70 g, a larger number of light weights below 8.40 and none above 9.00 g.

To do a reliable metrological study of the didrachms would require that all the coins could be weighed on the same balance.¹⁴⁶ In this case, however, the weights at our disposal derive from very miscellaneous sources. It is well known that weights in old auction sale catalogues suffer from a lack of accuracy. In addition to this many coins

¹⁴² Elsen; *Elsen list* 218, 2001, pp. 18–34 with bibliography. For the discrepancy in Athens between the heavier commercial weight standard (drachm c. 4.52 g) and the lighter coin standard (drachm c. 4.30 g) see Le Rider, 2001, pp. 258–259, 272.

¹⁴³ Jenkins, *Gela*, pp. 126–127. Already Queipo, vol. 1 (1859), p. 434, remarked that Sicilian coins have ‘un poids un peu plus fort que celles d’Athènes’.

¹⁴⁴ For Selinus, Arnold-Biucchi, *Selinus Hoard*, p. 8.

¹⁴⁵ To Head, *HN*², p. 120, n. 1, this high weight proved that Akragas ‘also issued coins of the Aeginetan standard’. Giesecke, p. 18, n. 2 correctly realized that it is a single, odd weight.

¹⁴⁶ Mørkholm, p. 7.

are corroded or heavily cleaned or much worn. In spite of such uncertainty, the weight figures obtained may be regarded as fairly reliable thanks to the large number of coins representing each group with reservation for the fact that the peaks obtained by the frequency tables give only an approximate original weight.¹⁴⁷ If one percent is added to the weight peak, as recommended by Hill,¹⁴⁸ to allow for the wear of the coins, the figure 8.78 g is obtained for Groups I and III of Akragas. This figure multiplied by two (17.56 g) coincides in fact with an archaic weight from Akrai giving the standard of a tetradrachm.¹⁴⁹ In view of the many specimens in Group I weighing above 8.80 g, it seems likely that this figure (8.78) comes close to the originally intended standard, even if it is not possible to fix it exactly.

The main sequence of the coins has long been known.¹⁵⁰ It follows a technical development from broad flat flans to smaller, more compact flans. In his monograph on Gela Kenneth Jenkins contributed a preliminary study of the early didrachms of Akragas.¹⁵¹ He divided for the first time the material into four distinct groups, an arrangement which has been adopted in the present work.

Group I

Flans, dies and die sequences

At the beginning of Group I the coins are struck on large, flat flans varying in size from *c.* 21 to 25 mm, but already in the later part of the group the flans become smaller and thicker. The majority shrink to *c.* 20 mm, but the size varies and a few flans are as large as in the early phase of the coinage, that is *c.* 25 mm (e.g. no. 46.7 and 48.3). The shape is often irregular all through the group. There is no border on either face of the coins. The

¹⁴⁷ Mørkholm, *Studia Naster*, p. 142.

¹⁴⁸ Hill, *NC*, 76–85.

¹⁴⁹ Jenkins, *Gela*, p. 127.

¹⁵⁰ Salinas described and illustrated some important material. The arrangement of didrachms on his plates 4.1–15; 6.12–26; 7.1–15 is roughly correct except that he places coins from Group IV (pl. 6.13–25) before those of Group III (pl. 7.1–12).

¹⁵¹ Jenkins, *Gela*, pp. 162–164, pl. 37. Jenkins' sub-groups have been omitted, as they do not fit in with the die-links, e.g. Jenkins' sub-groups 1a–1b belong to the same die-chain.

pattern of production is made up from several longer and shorter die-chains. Nos. 1–9 (O1–O4) form a short sequence with a pronounced archaic look, indicating that these fine dies with their large, clear legend may initiate the coinage.¹⁵² Then follow two long die-chains formed by O5–O22 (nos. 10–45) and O23–O30 (nos. 46–73). Most reverse dies are combined with two, three or four obverse dies which were in use simultaneously. Thus R6 is first linked with O5, then with O6, O7 and O9. The interlinkage of dies points to a period of dense minting. From no. 74 (O31) the die-plan becomes simpler and the production must have decreased. Only O32–O34 (nos. 76–82) form links. The remaining obverse dies, O31, O35–O37, are not linked but are closely similar in style to O32–O34. At first both anvil and punch dies must have been large in relation to the blanks, as no lines indicating the border of the die can be seen on the coins. On R19–R21 the reverse crab is for the first time placed in a circular incuse, revealing the round shape of the reverse die. The distinct round incuse then disappears, but many later coins have a shallow reverse with traces of a circular incuse. For the group as a whole may be said that both types and especially the reverse crab are often not well centered and partly off the flan, a feature which contributes to the somewhat primitive appearance of these early coins.

Ethnic¹⁵³

The ethnic is, with few exceptions, the genitive singular of the name of the eponymous river god as well as the city, AKRACANTOΣ. The shorter nominative form AKRACAΣ occurs in one instance (O13) and two later dies have the abbreviated forms AKRAC (O24) and AKRA (O28). On O26 the ethnic is fragmentary: only the later part of it can be seen in spite of several good preserved specimens. The legend is normally written *boustrophedon*, starting above on the right side, at first in large letters, but later on the letters become smaller and not as distinct as on the early coins. Apart from the normal disposition there are several odd variants. Sometimes the legend is written upside-down

¹⁵² Salinas placed no 28 (O13–R13) with legend *Akragas* first on his pl. 4.1; so also Babelon, *Traité*, pl. 72.1 and Jeffery, p. 274. The links marked on Salinas' plates are rarely die-links but refer to combinations of types. *E.g.* his pls. 4.1–4.2 (= nos. 28.5 and 29.1) shows a *rev.* die-link (R13), but there is no die-link between his pl. 4.2 (= no. 29.1) and pl. 4.3–4 (= no. 19.11).

¹⁵³ In general: Gauthier, pp. 165–179, for *Akragas* especially p. 167.

on the right (O8, O10, O12), or it starts below on the right side (O35–O37), or below on left side (O21–O22). The so called false *boustrophedon*, beginning above on the left side, is used on O25. In one instance only (O37) the engraver made a mistake and left out the second A in the ethnic (see catalogue no. 88).

The Dorian cities of Sicily used similar scripts on their early coins.¹⁵⁴ Most letter-forms at Akragas are normal for the period. The round *gamma* (C) was used on all archaic didrachms and on the following eagle/crab tetradrachms. The change to the square *gamma* (Γ) did not occur until the last quarter of the fifth century in several mints, e.g. Akragas, Gela, Segesta, Rhegion.¹⁵⁵ Its first appearance at Akragas is on the tetradrachms with the large fish (nos. 529–530), at Gela in Jenkins' Group VII (c. 425–420). The angular *gamma* (⋈) which was occasionally used in the earlier coin groups of Gela (Groups II and IV) is not found at all at Akragas. The letter A with a dot in the middle is an unusual form, which was used frequently in Group I, first on O5 and then on most obverse dies at the end of the group: O25–O26, O29–O30, O31, O37. Later on it occurs at Gela, Kamarina and other places.¹⁵⁶ The letter *sigma* occurs in two variants: the three-barred form (Ϝ) and an open, softly curved four-barred form (Ϝ), both typical for the early coins of Akragas.¹⁵⁷ The die-linked, initial dies O1–O4 all have the three-barred *sigma* as well as O5, O13–O14, O21–O23 and O27. Die-combinations show that not all dies with the three-barred *sigma* can be placed in a sequence in the early part of the group, but the two forms alternate down to the end. This form of *sigma* is however confined to Group I. At Syracuse the three-barred *sigma* was used only in Boehringer's Group I, series 2–3.¹⁵⁸ At Gela the only examples of this letter form are R18–R19 early in Jenkins' Group I.¹⁵⁹ The use of the three-barred *sigma* can thus be seen as a chronological indicator at the Doric mints, where it is found only down to c. 485. The letter *rho* had two normal forms

¹⁵⁴ Jeffery, p. 273. For the false boustrophedon see p. 263. For the letter forms also Gardner, *NC*, pp. 38–9. Cf. plates with legends.

¹⁵⁵ For Rhegion see Boehringer, Ognina, p. 138.

¹⁵⁶ For the occurrence of the letters *gamma* and *alpha* see Jenkins, *Gela*, p. 59 with note 21, pp. 47, 81–2.

¹⁵⁷ Jeffery, p. 34, *sigma* types 2–3; Gardner, *NC*, p. 43.

¹⁵⁸ Boehringer, *Syrakus*, pp. 110–16.

¹⁵⁹ Jenkins, *Gela*, pp. 37–38.

in the archaic period, with and without tail.¹⁶⁰ At Akragas the long-tailed *rho* (R) was used throughout the didrachm coinage except on a single die (O89) in Group IV, which has a clear P without tail.

Eagle and crab

In the issue (nos. 1–9), which has been placed at the beginning of the coinage, the eagle, standing left, looks like a strong, powerful bird, well shaped with a broad, rounded body. The feathering is rendered in a simple but effective way by a pattern of parallel striations. In contrast to the fine eagle the crab looks primitive. It has a small, shapeless body composed of several small shell segments, long legs and thick claws. In the following sequence (nos. 10–45) the eagle is still standing left. The type does not change but the quality of the individual dies varies. The feathering is sometimes rendered exclusively by long lines and dots. On other dies, such as the fine O7, a more elaborate pattern begins to appear. Here the feathers of the body and wing are differentiated and the wing-feathers rendered by large dots above and two rows of parallel lines below, a pattern which gradually becomes standard. The reverse crabs of this sequence are very varied. The majority has a small, round body with long legs, others are square or heart-shaped with short and small pincers (R20) or with curiously bent legs (R21). The most unusual crab types are confined to the die sequence nos. 29–45 (O14–O22 – R13–20). The carapace of R16 is described in the Nanteuil collection no. 252 (=31.4) as resembling a human face or a lion's mask. A similar fanciful modelling of the crab's shell is not unusual and will be observed on several later didrachm and tetradrachm reverses.

In the latter part of the group (nos. 46–89) some obverse dies such as O23–O24, O28 are inferior in style and technical standard. On two obverse dies (O25–O26) the eagle is for the first time turned right. At the end of the group (nos. 74–89) the eagle stands in a horizontal position. The crab type is again primitive looking and standardized with a small, round body, thick, short claws and long legs; only the lowest pair of legs are short and bent inwards.

¹⁶⁰ Jeffery, p. 34; Guarducci, p. 475.

In spite of the somewhat uneven artistic quality of the obverse coin type, there are, especially in the earlier part of Group I, some very fine and impressive eagles, which are hardly surpassed in any of the later groups (O2, O8, O9–O11, O13). C. Seltman¹⁶¹ expressed his appreciation of the archaic coins of Akragas and other Sicilian cities, writing that they ‘have a peculiar charm of their own, which they owe both to their artistic quality and to the technical excellence of their production’. Everyone who shares this view must necessarily disagree with P. Gardner,¹⁶² who speaks of the eagle on O16 as being “rudely drawn... wanting in spirit and meaning”. In fact it is in the first didrachm group that the eagle is best represented as a fierce bird of prey, whereas in the later groups he tends to become tamer.¹⁶³

Group II

Ethnic, flans and die-sequences

Nos. 90–99 (O38–O41), which have been placed at the beginning of Group II, form a transition from the previous group. These obverses still have the long ethnic AKRACANTOΣ (O38–O39, O41) or AKRACAΣ (O40) as in Group I. O41 with the long legend links over to O42 with the shorter legend AKRA, which from now on becomes the standard legend in the new group and also, with few exceptions, in the following Groups III–IV. The letters are strikingly large in relation to the small bird.

There is a distinct difference in types and flans between Groups I and II. The coins of Group II have a new kind of flan: small, compact and less irregular than before. The reverse die is clearly smaller than the obverse.¹⁶⁴ A round incuse was exceptionally found on a few reverse dies of Group I (R19–R21); now the crab is throughout set within a round shallow incuse often with bulging or sometimes flattened edges. Occasionally

¹⁶¹ Seltman, *GC*, p. 105.

¹⁶² Gardner, *NC*, p. 34; Gardner, *Types*, p. 109, where he makes a similar statement; Salinas, p. 13, nos. 67–79, found that the engraving, especially of the reverse dies, was with few exceptions very careless.

¹⁶³ Cf. Lee, *NC* 1999, p. 17, note 66, who correctly remarks that the eagle often resembles a pigeon or a dove.

¹⁶⁴ Salinas, p. 13, nos. 82–87.

there is also a circular border (O54–O55). The size of the flan reaches *c.* 20 mm in the early phase down to no 116 (O48), but from there onwards it shrinks to *c.* 17–18 mm in most cases, though occasionally larger and more irregular flans occur (nos. 92, 97, 116, 139).

The die plan is simple and made up of fairly short die-chains, O39–O42; O43–O46; O49–O52; O54–O57. Most reverse dies are combined with only one or two obverses; only one reverse (R64) is linked with three different obverse dies. A few die-pairs which do not form links (O60–O64, R97–R100, nos. 149–153) have been placed at the end of Group II. Nos. 149–150 certainly belong to this group, as the obverses have the same characteristic type of eagle. Nos. 151–153 may be best included here, though their position remains uncertain. The die-plan shows that coin production was now more sparse and sporadic than in the first period of minting.

Eagle and crab

Except for the very beginning the artistic quality of Group II is lower than in any other group. Only the first obverse dies have a small but fine eagle. On O38 it is similar to the last eagles of Group I (O36–O37). The bird on O39–O41 is unusual in so far that it has a very long wing and the tail is not visible. A fine eagle is found on O45, a long-legged bird with an impressive head, a large eye and a strongly hooked beak. The feathering is here rendered in a varied pattern. But soon the eagle becomes less impressive with small features and a rough feathering, not much like a fierce bird of prey. The standard type (from O48 onwards) does not show much variation, and the obverse dies cannot easily be distinguished one from the other.

The crab type of Group II is the most untrue to nature. The typical crabs of the later part of the group (from R72 onwards) have a tiny, round body, long claws and thick, sometimes ‘drooping’ pincers. Those of the early part are even more extraordinary: some have legs that are very long and ‘drooping’ (R64), others that are radiating and strangely bent (R65, R71); others have shells with an elaborate pattern (R66–R70). O48 forms a link between the two parts.

Signatures

A new feature in Group II is that a few obverse dies with the longer legend are combined with reverses with individual names or abbreviations. There is one full name EXAKEΣTOΣ (retrograde) in the field above the crab from right to left. It occurs on a single die R54 (no.90), known in only three specimens.¹⁶⁵ The shorter AXΞ on R55–R57 (nos. 91–94) is probably an abbreviation of the same name and helps to reconstruct the full name which is not clearly legible on any of the three coins. The abbreviation EY is written on R65–R68 (nos. 105–111). Long before the real name of Exakestos had been deciphered, K.-F. Kinch expanded the letters EXA as Exainetos and nominated him the grandfather of the Olympic winner in 412 with the same name, who is well-known from Diodoros (XIII.34, 82).¹⁶⁶ An even more fanciful explanation of the signature AXΞ was given by E.J. Seltman,¹⁶⁷ who took it to be an allusion to a festival of the river-god Acheloos. One of the rare coins inscribed with the full name Exakestos is now in the collection of the ANS and was published by Margaret Thompson soon after it had been acquired.¹⁶⁸ She raised the question whether the name should be identified with a die cutter or with a magistrate who had something to do with the minting, and she found that in this case the argument for an engraver seems stronger than that for a magistrate, as the practice of using personal names is sporadic and occurs only in a few instances. That is correct with regard to the didrachm coinage. On the other hand artists' signatures are known only from much later periods. They are inscribed on dies of a high artistic standard, normally but not always in minute letters, sometimes even half hidden and difficult to discover. The names in Group II are written in fairly large letters and on reverse dies of no artistic distinction. The signature EY is found on four reverses with different crab types (R65–R68), which do not seem to be the work of the same engraver. Therefore we must regard the signatures of Group II as so called magistrates' names which are thought to stand for mint-officials, though the significance of this function and the responsibilities connected with it remain uncertain.¹⁶⁹

¹⁶⁵ The coin in Palermo was first published by Gàbrici, *NC*, p. 73, pl. 5.9.

¹⁶⁶ Kinch, p. 483.

¹⁶⁷ Quoted by Cook, II.1, p. 667, note 3, fig. 606. The drawing illustrates the *rev.* of a coin said to be in the Seltman collection. It does not seem to be identical with any of the coins listed in my catalogue.

¹⁶⁸ *ANSMN* 12, 1966, pp. 6–7, pl. 1.10. For the difficulty of distinguishing an engraver's signature from a magistrate's name, cf. Holm, p. 88 and Kraay, *ACGC*, p. 221.

¹⁶⁹ Cf. Jenkins, *Gela* p. 35; Alföldi, *AN*, vol. I, pp. 125–126; Furtwängler, pp. 5–13; Kinns, p. 1; Babelon,

The sporadic use of individual names on coins goes back to the early electrum coinage,¹⁷⁰ but on a large scale moneyers' names are first documented from Abdera in Thrace, where abbreviated signatures appear in May's period II from c. 500 BC. The first full names at Abdera belong to May's Period III (c. 480–460) to become a constant feature in Period IV after 460.¹⁷¹ A close parallel to Akragas is provided by Abdera's neighbour city Maroneia, where the full magisterial name of Archembrotos (with proposition ΕΠΙ) appears on a short series of didrachms usually dated to 495/90 or a little later¹⁷² and thus more or less contemporary with Akragas Group II. Abbreviated names and monograms occur also on other early coinages from northern Greece, e.g. on oktodrachms of the Bisaltai and on the staters formerly attributed to Aigai.¹⁷³ The use of magisterial names may be seen as another sign of the strong northern Greek influence on Sicilian coinage at this period.¹⁷⁴ The Akragantine Exakestos is not without parallels in Sicily. At Himera the full name *Tychon* occurs, together with the abbreviated form TV, in Kraay's Group VII, which is roughly contemporary with Akragas II. There are also the initials ΛV or Λ in Kraay's earlier Groups IVc–VIb and ΣΟΓ on a fraction belonging to Group VI (around 500).¹⁷⁵ As at Akragas the Himerean coins with signatures are concentrated within certain die sequences. With the exception of these early magisterial names at Himera and Akragas, such signatures are very rare on Sicilian coins. At Gela the only example is the signature ΦΙ in Jenkins' Group I no 6.¹⁷⁶ A letter A occurs again in Akragas Group IV. Thereafter no personal names or signatures are known until the last quarter of the fifth century when the two magistrates ΣΙΛΑΝΟΣ and ΣΤΡΑΤΩΝ appear on silver and gold coins of Akragas.

Traité II.1, p. 1547, no. 2338, regarded EXA as a mark of value, 'c'est sans doute la marque de valeur siciliote pour le nombre six (εξα)'.

¹⁷⁰ Weidauer, pp. 59–64.

¹⁷¹ May, *Abdera*, pp. 45–46. For the chronology see Price, BAR 343, p. 45. A new signature, 'Apol', appeared in the Elmalı 1984 hoard, see Fried, p. 3. The same hoard yielded also new abbreviations for Terone, Fried, p. 4 and Hardwick, *Studies Price*, p. 121.

¹⁷² May, *NC*, pp. 44–50 (c. 495/490); Schönert-Geiss, p. 122, nos. 27–29 (same date as May); Kraay, *ACGC*, p. 154, pl. 31.545 (c. 485).

¹⁷³ Lorber, *pour Denyse*, pp. 113–133.

¹⁷⁴ Cahn, *Essays Thompson*, pp. 47–52.

¹⁷⁵ Kraay, *Himera*, pp. 51ff., 77, 80 no. 233; p. 92 no. 290. Kraay demonstrated (p. 17) that the name *Soter* or *laton* does not exist but is a misinterpreted reading of TV↓ON.

¹⁷⁶ Jenkins, *Gela*, p. 35. These letters were added in the recut version of Jenkins' O3.

Group III

Ethnic, flans, die-sequences

There is no clear borderline between Groups II and III. As mentioned above nos. 151–153, placed at the end of Group II, represent odd dies which might belong to either group. From no. 154 onwards both coin types display the higher artistic standard which is characteristic for the new group. The first four obverse dies (O65–O68) have the longer ethnic AKRACAN, not found in any of the earlier groups. Through R113–R114 O68 links over to O69 with the shorter legend AKRA, which then prevails down to the end of Group III. The legend is normally written in minute or very thin letters which easily wear off, with the result that it is often indistinct or illegible even on otherwise well preserved coins.

The flans are compact and round in shape as in the previous Group II. The reverse crab is placed within an incuse, often with broad, smoothly flattened edges. The size of the flans is around 20 mm.

With Group III minting activity was greatly increased. The fairly low number of obverse dies (18) are combined with a high number of reverse dies (59), forming a complex pattern of die-linkage. One obverse can be linked with up to eight or nine reverses (O69, O75). A number of reverse dies form links with two or three obverses, showing that several obverse dies were in use simultaneously. The majority of the die combinations are represented in the Gela hoard, sometimes in large numbers.

The major part of the group consists of a single long die-chain starting with O67 and ending with O76 (nos. 158–218). It is followed by a small issue made up by O77–O78 (nos. 219–225) which again have a longer ethnic, AKRACAΣ, a form already found on one die in Group I (O13, no. 29) and one in Group II (O40, nos. 93–97). Its place in the die sequence at this point towards the end of the series seems certain for several reasons. R149 (no.224 with O78) has a helmet as symbol and symbols occur only in the latter part of Group III. More important is that the Gela hoard comes to an abrupt end with nos. 220–221 (O77–R146, R147; 34+2 ex.). The last die-combination of O77 with R148, O78 (nos. 222–226) and the following dies O79–O82 (nos. 227–237) are not represented

in the hoard. The last short issue (nos. 227–237) seems to be the work of a new engraver and displays a special style. The legend is again AKRA in minute letters. On O79 the legend is exceptionally placed in front of the eagle, looking right. One of the reverse dies (R160) links over to Group IV.

Eagle and crab

The characteristic slender and well-proportioned eagle of Group III may not give the impression of being a strong and wild bird of prey, but it is of fine artistic quality throughout with small variations in style. The feathering is often rendered in great detail according to the standard scheme: small dots on the body, larger dots on the upper wing and two rows of parallel lines on the lower part of the wing (e.g. O76). On the final obverses the eagle is long-legged with a heavy tail and a stiff pose.

The normal crab of Group III has a broad upper part with finely curved sides. The round or drop-shaped eyes are set in shallow recesses, the legs are thin and angular. Some crabs differ from the standard scheme, such as the square crab of R127 and the round crabs with strongly bent legs and big round eyes set in deep recesses on R111–R112, R114, R116, R122. The carapace of R111, linked with O68 (no. 164), is another example of an elaborate modelling which makes the shell resemble a face,¹⁷⁷ a device which, with greater effect, is used also on the later tetradrachm (no. 349). On the last reverses the crabs are very varied. Some have a bulging and broad upper part and stiff legs stretched out horizontally. R160 which links over to Group 4 has already the characteristic shape of the new group.

Symbols

A striking new feature in Group III is the addition of symbols on some of the reverses: bird, corn-grain and Corinthian helmet facing right or left. None of the symbols are integral to the principal type but are adjunct symbols with no clear connection to the ordinary crab. Changing symbols are usually thought to be official controls connected with the magistrates.¹⁷⁸ Like the personal names in Group II, the symbols in Group III

¹⁷⁷ Imhoof-Blumer, *MG*, p. 14 no. 1. Cf. Group I.31.

¹⁷⁸ Head, *HN²*, p. lx; Gardner, *Types*, pp. 53–55; Lorber, *Amphipolis*, pp. 23–24; cf. Kraay, *ACGC*, p. 5.

were used sporadically. Most frequent is the Corinthian helmet, which occurs on five reverse dies. All symbols belong to the latter part of the group from no.184 onwards, and it is perhaps possible to see a certain pattern in how they occur. Bird and corn-grain come first. They occur on R129 and R130 linked with O70–O72. Helmet left is found on R135–137, 143 linked with obverses O73–O76. In this latter part of the long die-sequence O67–O76 the die-links become most numerous. It means that the output must have increased, and there might have been a need for control-marks. It is however difficult to explain the symbols in that way since they appear only on a limited number of reverse dies. A merely decorative purpose cannot be excluded. However that may be, the appearance of symbols in Group III is an unusual feature on Sicilian coins of this early period. The only comparable example is the similar helmet, which occurs on the first group of the slightly earlier diobols of the Samian period at Zankle (*c.* 494/493–*c.* 488).¹⁷⁹

Group IV

Ethnic, die sequence

The last didrachm group is easy to distinguish from the others by its legend which is now divided in two parts: AK above the eagle's back and RA or PA (O89) below. Only in one case (O91) is the legend differently disposed, beginning with A above the eagle's chest, continuing above the eagle's back with KR and ending below with A followed by a dot.¹⁸⁰ In some cases (R175, R177, R178–179, R192) the obverse legend AK/RA continues on the reverse with CAΣ, forming *Akragas* in the nominative case. Legends divided in this way on both sides of the coin are not common but do occur at other places.¹⁸¹

¹⁷⁹ Schwabacher, *Wandlungen*, connected the helmet symbol at Zankle with the tyrant Hippokrates of Gela and regarded it as his personal signet. Clain-Stefanelli, p. 49, following Schwabacher, accepted the group of diobols with helmet symbol as a commemorative or victory issue. Such an interpretation of an adjunct symbol, which occurs at different mints, is not convincing.

¹⁸⁰ The legend is discussed by Vismara, *Koinon* 5, p. 224.

¹⁸¹ Babelon, *Traité* II.1, p. 1547, mentions coins of Aigai (Achaia) and Laos (Lucania) as other examples of legends divided on both sides. In Sicily a good example is the litra of Abakainon with ABAKA/NINON, see Bertino, p. 113, pls. 12.3 and 14.1.

Group IV is small, comprising 12 obverse dies and 41 reverse dies. There are ten obverse dies forming links and two odd dies which do not form links (O85, O94). Both may be ancient imitations but have been tentatively included in the group owing to their good style. R160 carries over from the previous Group III and appears with both obverses of the closely interlinked initial issue (O83–O84, nos. 238–239) of the new group. The remaining dies (eight obverses and 28 reverses) form a dense pattern of die linkage, where most obverse dies are combined with a large number of reverse dies. O90 forms links with no less than four other obverses (O88, O91, O92, O93) and eight reverses. The die pattern indicates a large output, increasing towards the end of the group, where several obverses were in use simultaneously.

Eagle and crab

In Groups I–III the eagle is normally, but not always, turned left, but in Group IV the position of the eagle varies and it is turned now to the left, now to the right. The obverse dies resemble each other and are of good artistic quality. The eagle is tame rather than wild but well shaped, slender and long-necked. The typical crab of the last group has an angular shape, a square section between the eyes set in deep recesses, radiating legs and fairly small pincers. It is distinctly different from the broad crabs which are most frequent in Group III.

Symbols

The use of symbols continues in Group IV. On the two reverses R161–R162, combined with the very first obverse die O83, there is a minute letter A.¹⁸² Whether this letter has the same function as the pictorial emblems is uncertain. The pattern of how the symbols were applied is similar to that in the earlier group. They are concentrated in the latter part of the group, where production must have increased as shown by the die-plan. The corn-grain was taken over from the previous Group III, whereas the two types of small heads are new.

¹⁸² For letter A in Syracuse, see Boehringer, *Syrakus*, p. 65.

The closely similar heads on R178, R187, R189 are usually but not always described as young, male heads. In two cases (R178–179) the head is placed between the letters CAΣ, continuing the obverse legend AKRA and thus forming the full name *Akragas*. It refers, of course, to the city but at the same time it is the name of the river god, who was the eponymous founder of the city. Aelianus says (II.33) that he was represented as a handsome youth in an ivory statue which the people of Akragas dedicated to Apollo at Delphi.¹⁸³ Therefore it might be tempting to see the little heads on the coins as a picture of the river god, but such an interpretation would be problematic. The coin legend *Akragas* occurs also without the head symbol (R175, R177, R192). The normal way of representing a river god in this period is by an emblem, in the case of Akragas a crab, or in the shape of a bull with human face as on the coins of Gela. The first humanized river-gods on Sicilian coins are the full-length figures of Selinous and Hypsas on the coins of Selinous, and they are considerably later (c. 440).¹⁸⁴ As to the dedication at Delphi we do not know its date. The sculptural art from Akragas in the time of Theron is, however, well documented by the famous marble statue, known as the kouros or ephebe of Akragas, a fine representative of the severe style and dated to c. 480.¹⁸⁵ The statue is of great interest in connection with the coins, since the head of the statue compares well with the little heads on the coins. The hair of the statue is rendered in long, smooth parallel lines from the top of the head downwards. It is rolled over the front and in the neck and bound with a taenia. The neck is very thick. The heads on the coins have similar features and hairstyle and also a heavy neck. They closely reflect the style of the kouros and at first sight one gets the impression that they might be small scale replicas of the marble head. However, the enlargements (pl. 20) show that the heads are not exactly similar. On R178 the neck hair is rolled over a taenia, but on R187, R189 the hairstyle is a little simpler and there is no taenia. More important is that at least two of the heads (R178 and R187) wear a plain necklace, placed high up on the neck. Therefore

¹⁸³ A limestone basis in the Delphi Museum may have belonged to this statue: see de Waele, pp. 39–40, pl. 10.1.

¹⁸⁴ Arnold-Biucchi, *Studies Clain-Stefanelli*, p. 19; Boehringer, *SNR* 1997, p. 18; Schwabacher, *Selinunt*, pp. 30 ff.; Lacroix, *Monnaies et colonisation*, pp. 26–30; Jenkins, *Gela*, p. 71.

¹⁸⁵ Agrigento, Museo Archeologico inv. C1853; De Miro, *Western Greeks*, pp. 413–415 with fig. p. 414, catalogue p. 661.1 with bibliography.

it seems safer to regard them as female in spite of their rather masculine look.¹⁸⁶ The head on R189 is coarser in style and more problematic as to its sex. It is cut off by a thick line and there are no clear traces of a necklace. It looks like a male head but cannot be regarded as such for certain. Together these little heads are good parallels in style and masculine appearance to the somewhat later ‘Satyra’ heads on the coins of Taras.¹⁸⁷ The head on R198 is distinctly different and is usually described as female, sometimes as head of a nymph, probably due to its more feminine hairstyle.¹⁸⁸ The hair is rolled up in a bun high in the neck with a little brush of hair sticking out at the top. Like the others, this head has rather masculine, coarse features and a thick neck, but the hairstyle is feminine and there are also in this case traces of a thin neck-band. Thus all the small heads, or at least three of them, might best be described as female. At the Akragas mint, where animal emblems predominate, these small heads are the only human element on the coins until the end of the century. The symbols of Group III–IV contribute a lightening of the monotony of the standard types and make them more vivid. They are remarkable in so far as they are, apart from the helmet on the diobols of Zankle, the only additional symbols on any Sicilian coins of this period.

Recut and damaged dies, doublestriking

The number of recut dies is small compared with Gela.¹⁸⁹ In Group I the most drastic example is O2¹. In the recut version the eagle has lost nearly half of its volume. Other dies (O7, O11, O12, R50, O84, O87, O93) show a smaller degree of alteration which is explained in the catalogue.

¹⁸⁶ In *SNG Lloyd* no.797 (=275.1, R189) Robinson describes the head as male, but the one on no. 796 (=259.52, R178) as female; so also in some other places, e.g. Winterthur, Bloesch 572 (=259.58) who writes ‘weiblicher Kopf’ and Berk 113, 2000, 101 (=259.41), where it is called ‘head of Arethusa’, which may be rather strange, but it shows that the author regards it as female. In *SNG Munich*, 59–62, all heads are described as female.

¹⁸⁷ Cahn, *Essays Robinson*, p. 70; Fischer-Bossert, *Tarent*, Group 5, pl. 6.91–103. For a similar hairstyle worn by a young girl, cf. the relief in Copenhagen, Ny Carlsberg 23, c. 490 (= Boardman, *Greek Sculpture*, fig. 254).

¹⁸⁸ E.g. Rizzo, p. 87, pl. I.10 (=294.5); Jenkins, *Gela*, p. 164, pl. 37.19 (=294.2); *SNG Munich* 59; CNG 39, 1996, 259 (294.6). The standing nymph on the later tetradrachms of Himera has a similar hairstyle, cf. Gutmann & Schwabacher, pls. VIII–IX.

¹⁸⁹ Jenkins, *Gela*, p. 120–124.

There are several examples of drastic double striking: On 46.2 (Group I) half of a second crab is visible in the field to the left and also traces of a third crab below. The flan of this coin is extremely large but there are no visible traces of overstriking. Another example is 236.1 (Group III) with the lower part of the same crab at the left edge. On 253.16 (Group IV) there are double types on both sides. In both cases the flans have become irregular and much flattened out in the process of striking.

More curious is O83 (nos. 238–242, Group IV), on which traces of a crab appear in negative on a rounded elevation below the eagle. This negative impression can be seen on all specimens on which the eagle's feet and the field below have come out, and it is therefore obvious that the damage is in the die. The traces of the crab's feet and claw correspond to the reverse die R161 and the elevation to a part of the round incuse of the die. The explanation must be that a section of the reverse die by mistake has struck the obverse die without a blank and caused a relief mark in the die which then gives a negative impression on the coins.¹⁹⁰

Chronology

The chronology of the later didrachms, Groups III–IV, has already been considered in the light of some important, much discussed hoards,¹⁹¹ for which the burial dates now seem to be well established by common consent: Gela 1956 (Hoard 15), Passo di Piazza 1934 (Hoard 28), Monte Bubbonia 1910 (Hoard 23), Comiso 1970 (Hoard 12), Casulla 1933 (Hoard 7).

Jenkins gave the first full account of the content of the Gela hoard in *Gela* and was the first to discuss its importance for the chronology of Sicilian coinages of the early

¹⁹⁰ For a similar case on a Corinthian stater, cf. Ravel, *NC*, pp. 319–320. On that coin an incuse profile of the Athena head appears above the Pegasus on the obverse. For this technical problem, see the recent discussion by Fischer-Bossert, *Tarent*, p. 406, who also deals with the opposite and more complicated case: an obverse die of Taras (Fischer-Bossert, *Tarent*, V255) which has traces of a reverse type in *relief*.

¹⁹¹ Westermarck, *Overstrikes*, pp. 289–290; Westermarck, *Himera 2*, pp. 425–428; for further references, see hoard section.

fifth century.¹⁹² Jenkins placed the burial date of the hoard at *c.* 485. His date was based mainly on the then still current chronology for the coins of Syracuse and other Sicilian mints. However, almost contemporaneously with the publication of Jenkins' corpus C. Boehringer¹⁹³ proposed the later, now commonly accepted burial date at *c.* 480 which is a consequence of the revised, lowered chronology for Syracuse, which he and C. Kraay¹⁹⁴ outlined independently of each other at this time. The transition from Boehringer's Group II (Series 4–5) to Group III (Series 6–12, massive issues) is connected with the change from *qoppa* to *kappa* in the ethnic of the coins. It occurred within Boehringer's Series 4–5 and was completed within a short time. C. Boehringer dealt with this important epigraphic evidence and it has later been studied in great detail by D. Knoepfler.¹⁹⁵ Both authors underline the sudden and official character of the change. *Qoppa* was still used in the inscription on the base for the tripod, which Gelon dedicated at Delphi to commemorate the battle of Himera in 480. This implies that the transition from Boehringer's Series 4–5 (with both letters) to series 6 (with only *kappa*) occurred some time after 480. In the Gela hoard the latest five Syracusan coins belong to series 4, B38, B39 (3 ex.) and B46. They have all letter *qoppa* and were struck from V26–R22, V26–R23 and V27–R30. Boehringer himself pointed out that V26 and V27 were used simultaneously, and that R30 was the first reverse to be combined with V27.¹⁹⁶ These five coins thus belong to the very beginning of Series 4 and fit in with a date around 480, whereas the later part of Series 4–5 must have continued thereafter into the 470s. To this point it may be added that the large number of Athenian tetradrachms in the Gela hoard, which include most of the 'unwreathed' groups and which Jenkins had rejected as an argument for dating the deposit, were regarded by Price and Waggoner as support for the lower burial date.¹⁹⁷

¹⁹² Jenkins, *Gela*, p. 150, hoard 10, pp. 20–26.

¹⁹³ Boehringer, *JNG*, p. 95.

¹⁹⁴ Boehringer, *JNG*, pp. 67–98; *IGCH*, pp. 19–42.

¹⁹⁵ Boehringer, *JNG*, p. 92; Knoepfler, pp. 12 ff.; Rutter, *Studies Price*, pp. 311–312.

¹⁹⁶ Boehringer, *Syrakus*, p. 15; Scharmer, table, p. 98; also Knoepfler, p. 40.

¹⁹⁷ Jenkins, *Gela*, p. 20; *Asyut hoard*, pp. 20, 62. Seltman, Group C (=Asyut Va) is included in the hoard; Seltman Group E (barbarous style) and the preceding, small group F (=Asyut Vb) are absent. The authors date Asyut V (=Seltman C and F) to 482–480. The one stater of Rhegion is also post 485. It belongs to Caltabiano's serie I.B, dated to 485/83–481 (Caltabiano, *Messana*, pp. 28, 342).

The largest portion of the Gela hoard consists of didrachms of Gela (251 ex) and Akragas (404 ex). The Gela didrachms, Jenkins Group I (nos. 1–100), were struck from 30 obverse dies and 55 reverse dies. In the Gela hoard much less than half the group is represented. The latest coin is Jenkins no. 40 (=O13¹–R15). The major part of the Gela didrachms, or 17 obverse dies and 40 reverse dies, have yet not been struck. In addition, the first tetradrachm dies (Jenkins 101–103) also belong to Group I. The production of these numerous dies must have required some time after the burial of the hoard (c. 480), and consequently the end of the didrachms (including the rare first tetradrachms) has to be brought down to at least the lower limit which Jenkins discussed for his Group I or c. 475.¹⁹⁸ In the Passo di Piazza hoard the Gela didrachms have progressed to Jenkins 82 (O25–R41), thus 12 obverse and 26 reverse dies further than the Gela hoard. This implies that the terminal date for Jenkins' Group I cannot be placed earlier than c. 475, but rather somewhat later. The Comiso hoard¹⁹⁹ buried towards 470 is the first to contain Gela didrachms down to the end of Group I and also two tetradrachms (Jenkins no. 110) belonging to the early part of Jenkins' Group II.

Thanks to the efforts of K.-L. Grabow and C. Boehringer 401 out of 404 didrachms of Akragas from the Gela hoard could be documented and included in the present catalogue.²⁰⁰ 81 coins belong to Group I, 61 to Group II and no less than 258 to Group III. One is a barbaric imitation, B1. The strong concentration on Group III indicates that these coins were the most recent when the hoard was formed. The die sequence O66–O77, comprising 12 obverse dies combined with 37 reverse dies, is in full represented. The hoard material breaks off abruptly with O77–R146+R147, of which there are 36 ex. The last die combination O77–R148 and the following five obverse dies O78–O82 of Group III are not included. This shows that Group III continued for a fairly short time after the burial of the Gela hoard. Consequently the following Group IV can only have started some time between 480–478. The evidence of the later hoards Monte Bubbonia,

¹⁹⁸ Jenkins, *Gela*, pp. 24–25 for a discussion of the date. Group I (c. 490/480–480/475).

¹⁹⁹ Hoard 12.

²⁰⁰ Grabow secured photographs and a large number of casts of 404 Akragas didrachms already in the 1950s. Three remains unidentified. C. Boehringer has very generously provided me with casts, photographs, weights and inventory numbers of the 266 didrachms, which were recovered after the theft in 1973. See further Hoard 15.

Comiso and Casulla shows that Akragas Group IV to a large extent runs parallel with Gela and with the Himera didrachms of Akragantine type with a crab on the reverse, which were minted during the period of Akragantine dominance following Theron's conquest in the late 480s. The chronology and related typology of Akragas IV and Himera have been discussed elsewhere and need not be repeated here.²⁰¹ The absence of Himera didrachms in the Gela hoard supports an initial date around 480 rather than *c.* 482 for that series. The terminal date for Akragas IV and Himera towards 470 is in all probability connected with the fall of the Emmenid dynasty.

If the lower limit of Akragas Group III can thus be well established with help of the Gela hoard, the upper limit is more uncertain. With group III several new features can be observed in the coinage in addition to those which were discussed above. The ratio of reverse to obverse becomes much higher. Group III has a fairly low number of obverse dies (18) but a high number of reverse dies (59) and of die-combinations (84). At the same time the weight standard is restored, the artistic quality improves compared with Group II, and the production gradually becomes richer, with several obverse dies in operation simultaneously. This 'reorganization' of the mint is best attributed to the tyrant Theron, who came to power *c.* 488. The initial date for Group III may be placed early in his reign extending down to 480/478, when Group IV begins.

The chronology of the two earliest groups cannot in the same way be established with the help of hoard evidence but must be estimated from a combination of judgements: volume of output, style, comparison with other archaic coinages and overstrikes.²⁰² In more recent numismatic literature the initial date for the didrachm coinage is commonly placed between *c.* 520 and *c.* 510,²⁰³ and though the beginning cannot be fixed with certainty the higher date can be ruled out on the evidence of overstriking, and a date

²⁰¹ Westermark, *Himera* 2.

²⁰² Cf Kraay, *ACGC*, pp. 204–205.

²⁰³ Franke & Hirmer, p. 61 (*c.* 520–510); Kraay & Hirmer, p. 296 (about 520); Kraay, *ACGC*, p. 208 (about 510 or earlier); Jenkins, *Gela*, p. 162 (the last decade or two of the sixth century or *c.* 510–480 for all groups); Stazio, *Sikanie*, p. 90, also places the terminal date at *c.* 480; Westermark & Jenkins, *Kamarina*, p. 58 (*c.* 520–475); Garraffo, *Riconiazioni*, p. 139 note 7 (*c.* 520/15); Boehringer, *Kokalos*, p. 122 (*c.* 510–towards 470); Arnold-Biucchi, *Randazzo*, p. 19 (*c.* 510). The initial date current earlier, *c.* 550 BC (Head, *HN*², p. 120), can still be found in later auction sale catalogues, e.g. Vinchon 26.4.1999, nos. 43–4.

around the lower figure (c. 510) cannot be far from right. Akragas began to strike coins considerably later than Himera and Selinous. The initial date of most archaic coin series is notoriously uncertain.²⁰⁴ For the two earliest Sicilian mints it is placed in the period 550–525.²⁰⁵ The early issues cover a long period. At Himera the archaic drachms go down to the 480s, when Himera was conquered by Theron. For Selinous the terminal date is more uncertain. It was earlier assumed that the didrachms came to an end c.480 after the battle of Himera, in which Selinous sided with Carthage, but C. Boehringer and C. Arnold-Biucchi have pointed out that hoard evidence supports a lower date in the 470s,²⁰⁶ thus roughly at the same time as the didrachms of Akragas and Gela came to an end. Both Himera and Selinous had a surprisingly large production. 152 obverse dies have been documented for the archaic Himera, and the preliminary figure for Selinous is 165 obverses.²⁰⁷ By comparison the size of the output of Akragas with 94 obverse dies is considerably smaller and tallies with a shorter period of minting. More important for the chronology is that Akragas, like Naxos and Syracuse (with one exception), had from the beginning types on both sides of the coin. The influence of Corinth on the introduction and development of reverse types in Sicily must have been considerable. The presence of Corinthian coins in Sicily in the late sixth century had long been known through overstrikes, but there were no actual coin finds until the appearance of the Selinous 1985 hoard,²⁰⁸ which contained a considerable number of Corinthian coins both with a plain incuse reverse and with the new Athena head as reverse type. Kraay placed the introduction of the Athena head at Corinth around 515, while a somewhat later date towards 500 seemed more probable to the authors of the Asyut hoard.²⁰⁹ The team who published the Selinous hoard tended to regard the earlier date as more in accordance

²⁰⁴ Cf. Kagan, pp. 49–50.

²⁰⁵ For a survey of the early Sicilian coinages and their chronology, see Boehringer, *Kokalos*, pp. 103–125, pls. 10–14 and Rutter, *Italy and Sicily*. For Selinus and Himera see also Arnold-Biucchi, *Selinus Hoard*, pp. 7–13 and Arnold-Biucchi, *Studia Westermarck*, pp. 17–18; Kraay, *Himera*, p. 16. Kraay hesitated between a higher initial date about 550/540 and a later one around 525. Nicolet-Pierre, *NG*, p. 145 discusses this point and supports the lower date; Hurter, *Segesta*, p. 21 ‘um 530’.

²⁰⁶ Boehringer, *Kokalos*, pp. 118–119; Arnold-Biucchi, *Selinus Hoard*, p. 12.

²⁰⁷ Kraay, *Himera*, p. 11. The catalogue ends with O149, but there are some additional numbers; For Selinus, Arnold-Biucchi, *Selinus Hoard*, p. 12.

²⁰⁸ Arnold-Biucchi, *Selinus Hoard*, pp. 1–35, pls. 1–12; burial date p. 35.

²⁰⁹ *Asyut hoard*, p. 78. Kraay, *ACGC*, p. 208. See also the discussion by Garraffo, *Atti*;

with the content of the hoard.²¹⁰ Only incuse, large flan coins of Sybaris, Metapontion and Poseidonia, Group I of Selinous with an incuse square on the reverse, one drachm of Himera also with plain incuse reverse, were represented in the hoard together with a large number of Aeginetan staters, many of them die-linked and datable down to the end of the century. Of the 39 Corinthian coins, the majority or 23 coins belong to the early phase of Ravel's Period II, Class I,²¹¹ where the Athena head was introduced as reverse type and placed within a linear border. In Ravel's corpus this initial phase comprises 16 obverse and 24 reverse dies (Ravel 96–124, P66–P81, T68–T91). In Coupar's corpus,²¹² including more specimens, the linear border phase has 17 obverses and 40 reverses, of which the first seven obverse and nine reverse dies are included in the hoard (Coupar nos. 142–159, O89–O95, R95–R102, R105). The dense pattern of die linkage and very fresh state of preservation of the double sided Corinthian coins made the authors of the Selinous hoard conclude that the coins had arrived in Sicily together soon after they had been struck and shortly before the concealment of the deposit, which they placed in the last decade of the sixth century.

That the double-relief coinage at Selinous and Himera was dependent on Corinth seems well attested by the similar progression to a reverse type placed within a neat, sharply cut incuse. At these mints the new reverse fashion cannot have been introduced until the last decade of the fifth century at the earliest. At Akragas the reverse type is not set within a square incuse, but it is round and flat. In that respect it resembles Naxos and Taras, but the nature of the flans is completely different. Influences may have come from different parts of the ancient world, but it does not seem likely that any of the few Sicilian mints that were active at the end of sixth century could have introduced double types until they were established at leading mints in the East and in mainland Greece.

The influence of Corinth on the early coinage of Akragas is elusive but is attested by overstrikes.²¹³ All didrachm overstrikes of Akragas known so far are on coins of Corinth.

²¹⁰ Arnold-Biucchi, *Selinus Hoard*, p. 26.

²¹¹ Ravel, *Corinthe*, vol. I, p. 57.

²¹² Coupar.

²¹³ For the importance of imported coins from mainland Greece as a source of silver at the early Sicilian mints, see Rutter, *Italy and Sicily*, p. 105.

Important in this respect is a didrachm that comes at the end of Group I (no. 79.1, Pl 74) and is overstruck on a double-sided Corinthian stater of Ravel's Period 2, Class I, with the new Athena head on the reverse. Garraffo realized the importance of this piece and treated it at length in his corpus of overstrikes.²¹⁴ He accepted the identification of the undertype as Ravel 133 (O84–R100), which had already been put forward in MMAG 52, 1975, 61, stating that in any case 'il nominale corinzio che è stato riutilizzato con ogni probabilità non appartiene alle serie iniziali della suddetta classe'. Ravel 133 comes into the later part of Ravel's Class I, comprising in all 38 obverse and 64 reverse dies (Ravel 96–169) (corresponding to Coupar nos. 142–244, 40 obverse and 82 reverse dies). Garraffo, following Kraay's date for the introduction of the Athena head (c. 515) and an equally early beginning of the Akragas didrachm coinage, found that both the undertype and the overstrike would be shortly before 500 rather than after that date. That does not seem to be the case. The whole of Ravel's Class I (=Coupar nos. 142–244) is represented in the Asyut hoard and its lower limit is commonly placed around 480.²¹⁵ If an initial date around 515 is accepted, Ravel 133 comes in the middle of Class I, that is to say around 500 and can only have been overstruck after that date. Consequently Akragas Group I must have continued into the 490s, which seems likely also with regard to the large number of dies in this group.

In her corpus already mentioned above, S.-A. Coupar²¹⁶ has come to a different conclusion about this Akragantine overstrike. Contrary to the earlier view she identifies the reverse undertype with a die that comes at the beginning of the linear border phase, her R99 (=Ravel T79). This die has, like some of the others in the early phase, no linear border. Coupar supports the low chronology for the introduction of the reverse type at Corinth placing it shortly before 500 (p. 196). The early R99 would then be dated around 500 and overstruck after that date. Also in such a case the overstriking would be datable to the 490s. However, Coupar's R99 (=Ravel T79) is closely similar to T100 (Ravel 133) and the details visible on the overstruck coin are hardly clear enough to enable an unquestionable identification, but Coupar's suggestion seems doubtful for

²¹⁴ Garraffo, *Riconiazioni*, p. 133.1a, pp. 138–139.

²¹⁵ *Asyut hoard*, p. 78; *CH* 5, 1979, p. 19; Arnold-Biucchi, *Selinus Hoard*, p. 25.

²¹⁶ Coupar, p. 194.

another reason. Her R99 is combined with O92 (=Ravel P73) with Pegasus r., but the overstrike has clear traces of a Pegasus flying l. like P84, the obverse of Ravel 133, which thus remains the more likely identification.

Later Garraffo published a similar Akragas overstrike on Corinth, but unlike the one discussed above it belongs to the very first part of Akragas Group I (no. 4.2).²¹⁷ The author believes that the undertype might be found at the end of the linear border phase, perhaps Ravel 120 or thereafter. In this case the traces of the undertypes are utterly faint and more uncertain than for Akragas Group I, 79.1, but the place of the overstruck didrachm in the earliest phase of Akragas Group I is a proof of the priority of the double sided Corinthian staters. They must have been struck and reached Sicily before Akragas began to strike coins. Thus a low chronology for the introduction of the Athena head reverse in Corinth around 500 causes difficulties. It implies a use of double sided coins at Akragas before Corinth, which is impossible with regard to the last mentioned overstrike. It also implies a lowering of the burial date for the Selinous hoard, and, as already mentioned above, the presence of early Corinthian staters with reverse type in the Selinous hoard was regarded by the authors as a support for Kraay's earlier date. Irrespective of the evidence of the overstrikes it does not seem likely that Akragas, in adopting a novelty and using double sided coins from the start, would have been able to do so before the well established mints in mainland Greece with a longer tradition.

Another important overstrike is an incuse stater of Poseidonia struck on an Akragas didrachm of Group I (Pl. 71). The coin belonged to the Lloyd collection and is now in the British Museum. The overstriking was correctly identified by Robinson in the *SNG Lloyd* (no. 428). S.P. Noe²¹⁸ included the coin in his important article of 1957, in which he listed the then known overstrikes from Magna Graecia and Sicily. Noe seems to have been a little uncertain about the under type as he placed the coin in his first group (p.19, If) with the heading 'Incuse over Double (?) Relief' and described the under type as 'Agrigentum or Metapontum'. It is difficult to understand why he was thinking of Metapontum, all the more as he does not develop this idea in his comments where he

²¹⁷ Garraffo, *Studi Ernesto De Miro*, pp. 354–355, pl. I.7. The author here adopts the lower initial date c. 510.

²¹⁸ Noe, *ANSMN*, pp. 13–42, pls. 5–14; Garraffo, *Riconiazioni*, p. 83.4a, pl. 7.25.

correctly refers to ‘one of the earliest flat types of Agrigentum’ (p. 21). There can in fact be no doubt about the undertype. It is perfectly certain: the lower parts of an eagle’s legs are clearly visible behind the standing Poseidon’s right leg. Since so little of the eagle has survived the dies cannot be identified, but it is probably one of the early obverse dies with thick feathering on the legs (cf. O2).

There is no comprehensive study of the fine archaic coinage of Poseidonia,²¹⁹ the last of the important incuse coinages. The current chronology is *c.* 525–500. The spread fabric was never reduced to medium flans, a change which took place around 500, but the flans shrink a little in the later part of the series from *c.* 29–28 mm to *c.* 26–25 mm. Within the series there are also several stylistic changes in the rendering of Poseidon and his posture, his hairstyle and the ornamentation of the trident. The cloak draped over Poseidon’s back and arms at first has tasselled ends, but later the ends are cut straight off. The Lloyd coin, which has the somewhat reduced diameter (26 mm) and a cloak with straight edges, belongs to the end of the series towards 500. This overstrike thus demonstrates that the initial date for the didrachm coinage of Akragas ought to be placed not later than *c.* 510 BC in order to allow an interval between the production of the undertype and its overstriking at Poseidonia.

Group I with a total of 90 dies (39 obverses and 53 reverses) is the largest of the groups, and it would seem likely that it extended over more than ten years. There is much variation within the group, the flans change from broad to more compact, several types of crab occur and the die-plan seems to indicate that the output was at times plentiful and at other times sparse. The overstrikes discussed above shows that Group I is likely to have continued into the 490s. It is hardly possible to place the end of the first group at a certain year, though for practical reasons *c.* 495 may be suggested. Group II has the same structure as Group I. The proportion of reverse to obverse dies is very much the same, but the total number of obverse and reverse dies (75) is lower. It was argued above that Group III which has almost the same total number of dies (77) as Group II, though the proportion of obverse to reverse dies is different, was initiated in the years after the accession of Theron. The intervening period (*c.* 495–*c.* 488) would seem long enough for the minting of Group II.

²¹⁹ Kraay, *ACGC*, pp. 69–170; Rutter, *Italy and Sicily*, pp. 31–32.

The chronology as put forward in the foregoing discussion is but a slight revision of earlier proposals. The revision does not so much effect the beginning and the end of the didrachm coinage but more the relative length of the groups. Group I has been distributed over a longer period of time, Group II–III have been given a more compressed chronology, and the beginning of Group IV has been lowered in accordance with the burial date of the Gela hoard.

Synopsis of didrachm hoards

Coins of Akragas

| | Gela 1956 | Passo di P. | Comiso | Monte B. | Casulla |
|---------------------|------------------|--------------------|---------------|-----------------|----------------|
| Group I | 81 | 1 | 17 | 20 | |
| Group II | 61 | 1 | 10 | 14 | 3 |
| Group III | 258 | 1 | 34 | 28 | 6 |
| Group IV | | 3 | 31 | 14 | 15 |
| Imitations | 1 | | 1 | 2 | |
| <i>Total</i> | <i>401</i> | <i>6</i> | <i>93</i> | <i>78</i> | <i>24</i> |

PERIOD II

Tetradrachms Eagle/crab

The characteristic coin types of the didrachms continue unchanged on the first tetradrachms. The eagle, always facing left, undergoes little stylistic development. The reverse dies with the crab display more variation. The ethnic has always the long form AKRACANTOΣ and is written boustrophedon from right to left, throughout with round *gamma* and R with tail. A single obverse die, O15, differs from the norm in so far as the ethnic starts on the left side below. The four-barred sigma has the normal shape Σ or the soft, curved form which was common on the earlier didrachms. The lettering is small on the first dies, especially on O1, but from O7 onwards it becomes large and thin. On the reverse the crab is placed within a slightly concave, round incuse which sometimes fills out the whole flan or is framed with bulging or flattened edges. The average size of the flan is 23–25 mm, but occasionally larger or smaller flans occur.

The weight of the tetradrachms centres round 17.40–17.20 in Group 1 with a peak at 17.30–17.20, a standard which tallies well with the earlier didrachms. The larger Groups 2–3 have a more widespread distribution of weights but the same peak as Group 1. In the last group there is a slight tendency to a falling standard.

The tetradrachms form an almost unbroken chain of die linkages. Only a few obverses do not form links in the early output. The dense pattern of die-links indicates a continuous period of minting without detectable intervals in the output, but nevertheless the material can be divided into three groups: Group 1 (nos. 298–330) showing the eagle without support on the obverse and on the reverse a tri-lobed crab; Group 2 (nos. 331–381) with the eagle standing on a wavy line formed by his feet with the addition, from no. 357 onwards of a dotted line below and on the reverse a large, triangular crab and finally Group 3 (nos. 382–440) in which the eagle stands on a support, first a dotted line as before and then on a Ionic capital, and with symbols added on the majority but not all of the reverse dies. The first two groups without

reverse symbols make up about two thirds of the coinage and consequently cover a longer period of time than the final shorter phase with added symbols.²²⁰

Group I

The first obverse die O1 is linked with no less than ten reverse dies (R1–R10) of which seven are shared with O2–O3. These three obverses and the reverses they share must have been in contemporary use and form a dense first issue. None of the dies show any heavy degree of wear. Thanks to the high number of reverse dies there are many die-combinations, most of them documented by only a few coins. As mentioned above there is no link between O3 and O4, but it seems certain that O4 comes in here since the reverse dies R11–R16 all have the tri-lobed crab and the somewhat stiff obverse eagle is closely similar to O5. Through R12 and R21 the obverses O4–O6 form a simple die-sequence (nos. 317–327). The number of coins from each die-combination in this issue is considerably higher than before.

The most distinctive feature of the early tetradrachms is the large, tri-lobed crab on the reverse (R1–R21). This crab type is characteristic of the didrachms of Himera of Akragantine type and forms a stylistic connection with the earlier period (cf. below). It has drop-shaped eyes and claws of a moderate size. One peculiar feature which appears already here and recurs on later dies is that the upper part of the shell sometimes has a pearled outline (R3, R14, R21). On certain dies (R7–R10) the crab is of a considerable size and too large for the flans with the result that part of it is off the flan.

The eagle of the first group has slender proportions and long legs. It is standing in the air without support. The long toes spread out both forwards and backwards but are quite often cut off by the lower border of the flan. The feathers are rendered by small dots on the body and legs, and by larger dots and two layers of dense lines on the wing. On O4–O5 the eagle is especially long-legged and high-chested, and the wing feathers have a stiff pattern like a band.

²²⁰ Lee, *NC* 1999, p. 12, has suggested a different grouping: 1) tetradrachms without symbols, 2) with flower symbols and 3) with miscellaneous symbols. However, the die-pattern shows that all symbols belong to the latest phase and flower symbols are linked with other symbols through common obverse dies.

O6, the last obverse of the early phase, is linked with four reverses (R12, R 14, R21–R22). One of these (R22) does not have the tri-lobed crab, but the ordinary crab type which from here onwards becomes predominate.

Group II

Through this reverse (R22) the first group links over to the next group (nos. 331–381, O7–O12), in which the tri-lobed crab disappears, and the shape of the crab becomes much varied. It is sometimes round with curved sides, sometimes very large with a broad upper part. Many crabs in this group have sharp, pointed pincers with ‘teeth’ or as already in Group I a dense pattern of dots indicating hairs which gives a furry effect, as remarked by Robinson (R23–R24, R32).²²¹ The most notable crab is R35 (no. 349) on which the shell is modelled to resemble a human or animal face. The simpler pattern on R30 has been thought to represent a bull’s head.²²² A fanciful shell pattern is a natural feature in many crab species.²²³ Talented Greek engravers intentionally took advantage of this feature to create fantastic faces on coins. The most remarkable one is found on the much later, well-known didrachm no.604.

On the obverse the eagle now seems to be standing on a wavy line, but it is in fact not a real support but his own feet and toes which are in an exaggerated way stretched out sideways. The eagle is slender, long-legged and well shaped. The head with a round eye set in round eye set in a shallow recess is usually slightly lifted. The rendering of the feathers is basically the same as before but can vary a little. On O8 all feathers are indicated only by dense lines and no dots. O11–O12 have an eagle of a heavy and compact shape with short neck and legs. It is now placed on a dotted line which is added below the wavy line formed by his feet.

²²¹ SNG Lloyd 803.

²²² Robinson, in *Gulbenkian I*, p. 59 noted that nos. 157, 158 and 159 (= 431–R91; 337–R27; 340–R30) bear a likeness to a bucranium and no.161 (= 349–R35) to a lion’s mask. For a bucranium or bull’s head see also Cook, II.1, p. 667, fig. 604 (=340–R30). Bodenstedt, p. 86, pl. 61, mentions Leu 7, 1973, 47 (=349–R35) as an example of a puzzle picture.

²²³ Keller, II, p. 485.

In Group 2 from O7 onwards the die-sequence becomes more complex. O7 is linked with four other obverses, O10 with five and O9, O11, O12 with three obverses each. The die-combinations are therefore numerous and some are represented by a large number of coins (e.g. nos 337, 349, 352, 364, 373). The number of reverses is high. O10–O12 are linked with 10, 11 and 14 reverse dies. O8 is in a fresh state when combined with R27 (no. 337), but thereafter the die shows an increasing amount of wear and the letters of the legend tend to disappear. O10 never shows any large die flaws but from 349c onwards the die is in a worn state and the letters of the ethnic become much enlarged and damaged by die cracks. In this worn state it was used with seven more reverse dies (nos. 350–356). O11–O12 are not only found in a worn state, but they also develop heavy die flaws at the eagle's back extending into the upper field (nos. 365–67; 373–381). None of these disfiguring flaws were repaired, and both dies were in use to the end of their durability. Among the reverses R29 (no. 339) is known only in a damaged state with a lot of dotted flaws in the lower field, and other reverses have slighter die breaks (R27, R33). R35 (no. 349) is one of the few reverse dies which has been repaired. In 349c the large flaw at the border below has been removed.

Group III

R 48 links over from the previous group. The most striking feature of sub-group 3 is the appearance of symbols on the reverse below the crab. The eagle is of the same compact, robust shape as before. The dotted line under the eagle's feet which first appeared on O11 in the previous group continues on O13–O14. On O15 it is replaced by a very thin Ionic capital shaped as a long line with very small volutes at the ends. It is mostly off the flan and only noticeable on well preserved coins. On O16–O18 the capital is a little improved with larger volutes. On O20 the shape is further improved by the addition of the echinos.

In group 3 the obverse dies are no longer used with heavy die flaws. Two obverses, O13–O14, were repaired by recutting. O13 is combined with as many as ten reverses. The die is in good condition in nos 382–386 (five combinations). In the following 387–391 (five combinations) the die is worn, the letters blurred and elongated by die-cracks,

especially the third A of the legend; the eagle's legs and feet are recut and the claws are more bent. O14 is remarkable in so far as it is combined with no fewer than sixteen reverses, the largest number of all. It is not surprising that the die had to be repaired after being used with seven reverse dies (nos. 392–398) in order to last longer. On 396–398 it is considerably worn, the letters are faint, the details of the feathering are blurred and have not come out in the striking. On no. 399 onwards the feathering on the eagle's body has been improved by recutting, but the letters are still very weak and cracked and are hardly visible even on good specimens.²²⁴

The eagle on an Ionic capital is an important renewal of an old motif and is here introduced perhaps for the first time on coins. At Akragas the eagle on capital is found also on the pentalitra (nos. 444–447), litrai (nos. 448–514) and pentonkia (nos. 515–519) and on the reverse of the later bronze series with *Head of young river-god* on the obverse. On the silver coins the eagle's support is a thin capital. On the later bronze series a real column is rendered with the upper part of the shaft also visible. In its developed form the motif is well known also from other mints. At Kroton it appears as a new type in the last quarter of the fifth century,²²⁵ at Elis it becomes the standard motif in Seltman's Group G, series XX onwards, datable to the period after c. 360, when the Eleans had resumed control of the mint after the Arcadian invasion (365–363).²²⁶

The eagle is always placed on a Ionic column, and that may seem puzzling as Akragas was a Dorian city. All temples and other monuments of which there are remains today, are Doric.²²⁷ But the coin type does not of course reflect an architectural component. Eagles and other sacred creatures on columns are known from various sources. In his description of the sanctuary of Zeus Lykaeos on Mount Lykaeos in Arcadia, Pausanias (8.38.7) tells us that before the altar there were two columns crowned by gilded eagles facing the sun-rise. Two large bases and a marble drum discovered in 1897 indicate that

²²⁴ Salinas, p. 15, made a similar remark for his nos. 112–114 (belonging to O14¹).

²²⁵ Kraay, *ACGC*, p. 181, pl. 36.630.

²²⁶ Seltman, *Olympia*, p. 57, pl. 6 ff.; Kraay, *ACGC*, p. 106.

²²⁷ *ASG*, pp. 157 ff. (de Waele). For the Ionic order in the Achaean colonies of Magna Graecia and the Ionic temple in Samian style built by the Syracusans in the late archaic period, see Gruben, pp. 254, 270 and Mertens, pp. 322, 330; Lanza, 1904, pp. 27–28, tried to explain the motif as a symbol of Ionian influence at Akragas in the time of Timoleon.

the columns were Doric.²²⁸ On the Panathenaic amphoras Athena is standing between two columns surmounted by cocks. In most cases the columns are Doric, but also Ionic columns are represented.²²⁹ The most splendid archaeological monument of this sort is the Naxian sphinx on a Ionic column at Delphi.²³⁰ The same motif is well known from vase painting.²³¹ Cult images of the gods themselves could be placed on all kinds of high bases and columns.²³² The eagle-on-capital motif recalls also Zeus' eagle-tipped sceptre, often represented on coins,²³³ and other related versions such as the eagle perched on a pine-tree on the tetradrachm of Aitna or on a lituus on gold staters of Kyrene.²³⁴ In the Alexander coinage two eagles are occasionally placed on the high poles of the back of Zeus' throne.²³⁵

Symbols

The addition of symbols on the majority of the reverse dies makes Group 3 more varied than the others. The corn-grain and bird occur already in the didrachm Groups III–IV, but the other symbols, dolphin, simple and double spiral, rose-bud with tendrils and Nike, are new.

The hovering Nike figure exists in three variants on R85, R91, R95. The first two are very similar, though R85 is the artistically finer. Nike is rendered in natural flight with spread wings and her body slightly curved. The head is upright and her hair is close to the neck; on R91 it falls down her back. Over her dress she wears a short cloak with pointed ends, and she carries a wreath and a long taenia in her outstretched hands. It

²²⁸ Cook, I, p. 66, p. 83.

²²⁹ Beazley, pp. 88–100 (Panathenaic Amphorae); for a panathenaic amphora with Ionic columns by the Nikoxenos Painter see Boardman, *ARFV*, p. 111 and p. 115, fig. 162.

²³⁰ Gruben, p. 73, fig. 59.

²³¹ Boardman, *ARFV*, fig. 301.2, showing Oedipus and the Sphinx (cup in the Vatican Museums, Rome).

²³² Alroth, pp. 9–46.

²³³ Phidias famous cult statue at Olympia had an eagle-tipped sceptre (Pausanias V.10.9). An early numismatic example are the litrai of Galaria (c. 460) showing Zeus enthroned with a sceptre surmounted by a huge eagle, Jenkins, *Centri siculi*, p. 84, pl. 5.a–g.

²³⁴ Hirmer pl. 11.33 (Aitna); *BMC Cyrenaica*, pl. XIII.19–20.

²³⁵ Price, *Alexander*, nos. 756 (Messene), 3977 (Memphis).

seems certain that the Nike symbol was taken over from Syracuse. Robinson compared our Nike on R91 (no.431) with Syracuse Boehringer Series 4, V26 (his pl.2.38) but they are in fact quite different.²³⁶ The Syracusan Nike is shown in a half upright position and wears a thin semi-transparent dress with very long ends. Only one large wing is shown in profile and only her left arm is outstretched. The spread wings on our Nike figures R85 and R91 cannot be regarded as an archaic feature. On the contrary they are features that remain in use long after the archaic period and down to the end of the century.²³⁷ Spread wings are common e.g. in Boehringer's Series 9 (V81 ff), Series 11 (V112 ff), Series 12 (V164 ff.) and these later figures, dressed in a peplos and carrying a wreath, are more similar to our Nike than the early figure of Boehringer's Series 4.

Our third Nike on R95 wears the same type of dress and a cloak with pointed ends as before, but her floating attitude is softer and her dress billows up over her legs. The wing is now shown in profile. She lifts the wreath high in her outstretched left hand and holds the long fillet in her right hand below. The closest parallel to this Nike is a similar figure holding wreath and fillet on the contemporary tetradrachms of Gela, nos. 341–451 (O66–O67) of Jenkins Group IV. Jenkins writes that there is no specific historical reason for the Nike at Gela or Katane and the same must be said about her appearance at Akragas.²³⁸ The Akragantine Nike is not crowning anyone or anything. She has therefore no connection with the main type but is just a reverse symbol among others. There are no parallels to a Nike used in this way as an adjunct symbol and placed in the exergue, but it is evident that the motif here, like similar other figures which became popular after c. 460,²³⁹ mirror the fashion of the period and the influence of Syracuse.

The dolphin (R58, R64, R67) is the first marine symbol on the coins of Akragas and a forerunner of the many spectacular marine creatures which appear on the later silver

²³⁶ *Gulbenkian* I, 157 (= 431, R91).

²³⁷ Cf. Westermarck & Jenkins, *Kamarina*, pp. 73–77.

²³⁸ *Gela*, p. 58.

²³⁹ At Gela Nike appears in Jenkins Group III, 218 onwards. For Katane, see e.g. Arnold-Biucchi, *Randazzo* nos. 70–73; Himera, Arnold-Biucchi's Group II, *NAC* 17, 1988, p. 89, pl. 1, fig. 6 (mid-fifth century). At Messina a Nike figure was added from Caltabiano's Series VI onwards (pl. 20). Nike was the most popular deity on Attic vases imported to Sicily in the second quarter of the fifth century. On this subject see Giudice, p. 120.

and bronze coins of the city. Spiral scrolls exist in two versions, a simple one on R59 and double volute spirals with floral ornaments at the ends on R79–R80, R83–R84, R89–R90. The ornaments are somewhat differently shaped, some are like a bud with three petals, others are simpler, but all have a central spike characteristic of the stylized lotus.²⁴⁰ Interlaced palmette-lotus borders are common decorations on Greek vases from the archaic period onwards and are often combined with spirals. The lotus is associated with Zeus.²⁴¹ The lotiform thunderbolt and the lotiform sceptre are well known from the coins of Elis/Olympia and from other mints.²⁴² The thunderbolt can also take the shape of a double spiral with rays of lotus petals.²⁴³

The most common symbol is a larger flower bud which occurs in eleven variants on R65, R71–R77, R81, R94. It is distinctly different from the stiff and stylized lotus and is best identified as a rose-bud, decorated with short or long spiral tendrils, which do not belong to the plant.²⁴⁴ The buds have indented sepals between which the petals are visible. On R81 and R94 the flower is more developed; the bud begins to open, the petals are more visible but still covered with three indented sepals, one in the middle and one on each side. This larger version of the flower recalls the later principle coin type of Rhodes.²⁴⁵ Akragas had strong ties with Rhodes. The ruling family, the Emmenids, boasted of their

²⁴⁰ Boardman, *ARFV*, p. 214.

²⁴¹ For a fine bronze eagle from Janina perched on a large lotus bud, see Pollard, pl.II, fig. 3.

²⁴² Seltman, *Olympia*, pl. 1 ff; Hirmer, pl. 15.45 (Katane); the lotiform sceptre is frequent on the tetradrachms of Alexander the Great, Price, *Alexander*, cover (= 3038a Tarsos); pl. 25.215; pl. 28.445; pls. 34–35 and so on.

²⁴³ Cook, II.1, p. 776, fig. 740; Boardman, *ARFV*, p. 63, fig. 55.1.

²⁴⁴ The flower symbol was discussed by Lee, *NC* 1999, pp. 16–26, who identified the flower as an anemone, ‘the flower of Adonis’. However, the expert whom I have consulted (professor Kåre Bremer, formerly Department of Systematic Botany, Uppsala University) informed me that the flower might not be very true to nature but is most likely a rose-bud, though the smallest buds with long sepals look rather more like a thistle. It is not a lotus, which has occasionally been suggested. Professor Bremer also pointed out that the spiral tendrils do not belong to the plant but are to be seen as decorations. This is evident from the coins of Rhodes, where the tendrils often have a bunch of grapes on one side or on both (Hirmer, pl. 189.644, 646). In numismatic literature the Akragantine flower has most commonly been identified as a rose or rose-bud but other suggestions occur (lotus, thistle, pomegranate, lily-like). For these various suggestions see Lee’s list, *NC* 1999, p. 24.2

²⁴⁵ Bérend, *SNR*, pls. 1–2. Another link between the coinages of Rhodes and Akragas is the eagle which is used as symbol on Bérend’s second issue, p. 9.

Rhodian origin.²⁴⁶ But whether the Akragantine rose-bud may be regarded as a Rhodian emblem at this early stage, long before it was adopted as the coin type of the newly founded Rhodes, remains doubtful.

Chronology

In contrast to the archaic didrachms which are frequently referred to as one of the important early coinages of Sicily, the eagle/crab tetradrachms and their chronology have not attracted the same attention. There is no direct evidence for the initial date of the tetradrachms except that they do not appear in hoards until after the middle of the fifth century. The traditional chronology places the introduction in *c.* 472 after the death of Theron and the fall of the tyranny, and the lower limit at an uncertain date around 420.²⁴⁷ But many varying dates can be found also in fairly recent literature, and the earlier common opinion that tetradrachms and didrachms overlap still persists. One of the tetradrachms in the Gulbenkian collection (no 157) is dated as early as *c.* 480, and even earlier dates up to *c.* 510–500 occur in auction catalogues.²⁴⁸ Kraay was in *ACGC* unusually vague in his statement 'sometime during the fifth century', and other modern standard works omit them.²⁴⁹

It was the appearance of the Randazzo 1980 hoard which gave the clue to a lowered and more compressed chronology.²⁵⁰ Hoard evidence and other arguments in support of the revised chronology will be discussed below.

²⁴⁶ Musti, *ASG*, p. 33.

²⁴⁷ Head, *HN²*, p. 120 (*c.* 472–413); Kraay, *ACGC*, p. 226 (end *c.* 420); Dewing collection, *ACNAC* 6, p. 36 (*c.* 470–420 BC); Rutter, *Italy and Sicily*, p. 149 (end *c.* 415).

²⁴⁸ *E.g.* MMAG 88, 1999, 58 (480–460); CNG 41, 1997, 160; CNG 42, 1997, 100 (510–500); NAC 7, 1994, 182 follows Robinson, in *Gulbenkian I*, p. 59 in placing the symbol 'archaic' Nike at the beginning of the tetradrachm coinage, regarding it as a compact output datable to the years *c.* 480–472. In Salinas the tetradrachms (pls 5–6) are placed between early didrachms of Groups I–II (pl. 4) and later didrachms of Groups IV and III (pls. 6–7). A similar arrangement also in other catalogues, *e.g.* *SNG Lockett II*, pl. 13. Also Seltman, *GC*, p. 135, thought that tetradrachms and didrachms overlapped.

²⁴⁹ *ACGC*, p. 226; *cf.* Kraay & Hirmer, p. 296 'perhaps already within the reign of Theron tetradrachms were added'. In his review of Jenkins' *Gela*, *NC* 1971, p. 337, Kraay suggests that there may have been an interval in the coinage of Akragas after the fall of the tyranny, which shows that he was then considering a post-472 date for the beginning of the tetradrachms. The tetradrachms are not mentioned by Jenkins in *ACG* or in *CGS*.

²⁵⁰ Arnold-Biucchi, *Randazzo*, pp. 19–20, 39. Thanks to the author's friendly co-operation I had the opportunity to discuss the Akragas coins in the hoard with her while she was preparing the publication.

The coin types of Akragas with their concentration on animal emblems are distinct from those found at other contemporary mints. This makes a stylistic comparison difficult,²⁵¹ but instead certain technical details give more help with regard to chronology. The average size of the flans is 23–25 mm. Both in size and appearance the flans are similar to Gela Group III. The coins of that group, which follows after a gap in production, are noticeable larger than those of the previous Group II.²⁵² The reverse bull is now placed in a shallow circular incuse and the edges swell out less. A change toward larger and less compact flans occurs simultaneously at other mints; at Syracuse it begins with Boehringer Series 12d (Demareteion group) to become a standard feature of Boehringer Series 13 (Group IV) onwards; at Leontinoi with the second series distinguished by a running lion in the exergue (quadriga/female head, followed by quadriga/Apollo head with leaf) and roughly contemporary or slightly later than the Demareteion group.²⁵³ Katane's first coinage (man-headed bull/Nike) had like Akragas the broader flan from the beginning as did the new tetradrachms of Naxos and Himera.²⁵⁴ On the revised chronology for Sicily all these series are to be placed in the 460s, and the beginning of the Akragas tetradrachms can undoubtedly best be dated within the same decade. The absence of Akragas tetradrachms from the large hoards containing didrachms in great numbers, and especially from the Monte Bubbonia hoard in which Group II tetradrachms of Gela are already represented, rules out any overlapping with the didrachms. The didrachm coinage came to an end with the fall of the tyranny. It was argued above that a somewhat lower date around 470 for that event should be accepted. Even if the more exact date remains uncertain, it is generally agreed that the tyrants were expelled earlier at Akragas and Gela than at Syracuse, since forces from these cities together with Selinous, Himera and the Sikel cities dispatched aid to liberate Syracuse in c. 466/5.²⁵⁵ After the overthrow of the tyranny the Akragantines established a new democratic form of government,

²⁵¹ Cf Tudeer, p. 254, 'In Akragas sind stilistische Übereinstimmungen der Münzen mit denjenigen anderer Städte ... schwer festzustellen'.

²⁵² Jenkins, *Gela*, p. 55.

²⁵³ Boehringer, *Studies Price*, pp. 45–46, pl. 11.25–29.

²⁵⁴ Katana: Arnold-Biucchi, *Randazzo*, nos. 48–76; Rutter, *Italy and Sicily*, pp. 136–137, fig. 139; Cahn, *Naxos*, pp. 114–117; Himera: Arnold-Biucchi, *NAC/QT*.

²⁵⁵ Diodoros XI. 68.1; Barrett, p. 29; Jenkins, *Gela*, p. 11; Waele, *Akragas Graeca*, p. 116.

led by the old aristocracy.²⁵⁶ Under these turbulent conditions it seems likely that some time elapsed before the beginning of the new tetradrachm coinage in the 460s, but the continuity of types allows only for a fairly short interval, probably contemporary with the short break in the coinage of Gela between Jenkins' Group II and Group III.

During the period of Akragantine domination Himera had issued didrachms with the crab of Akragas as reverse type, which undoubtedly formed part of the Emmenid coinage.²⁵⁷ The later group of these didrachms, Jenkins' Group II, has a characteristic tri-lobed crab which does not occur on the didrachms of Akragas. But when Akragas introduced the new tetradrachms, it was the tri-lobed crab of Himera which was adopted as reverse type on the first dies (Group 1) and not the 'square' crab of the city's own last group of didrachms (Akragas IV). The political status of Himera after the fall of the tyranny at Akragas is obscure. Barrett has argued that independence from Akragas was followed by Syracusan domination for some years.²⁵⁸ But as mentioned above, Himera seems to have been free some time before Syracuse, since she had been able to join the other cities in sending aid to Syracuse. The adoption of the trilobed crab on the early tetradrachms cannot be a sign that Akragas strove to keep her influence over Himera. The crab was of course always the badge of Akragas and as such alien to Himera and used there only under compulsion. When Himera was able to begin a new tetradrachm coinage the break with the traditional types was complete, whereas Akragas continued with the old types from the time of the tyrants. The reorganized coinage at both mints may have started at about the same time. The ties between the two cities were not broken off but seem to have remained strong.²⁵⁹

²⁵⁶ Diodoros XI.53.3–5; Asheri, pp. 98–99.

²⁵⁷ Jenkins, Himera, pp. 21–33; Westermark, Himera 2, p. 425; Stazio, *Sikanie*, pp. 93–94.

²⁵⁸ Barrett, pp. 29, 31.

²⁵⁹ Cf. Bonacasa, *ASG*, p. 148. For overstrikes, see the later bronze coinage.

Proportion of reverse to obverse dies

The eagle/crab tetradrachms give the impression of being a somewhat static but well executed and plentiful coinage.²⁶⁰ The tetradrachm coinage is however unusual in several respects. The number of die combinations is high (144), but the number of obverse dies is small and the proportion of dies, 20 obverse and 96 reverse dies, is exceptional. It gives an average of nearly five reverse dies for each obverse. The unusually high proportion of reverse dies can only be compared with the Himera didrachms of Akragantine type, where the average is 4:1 in Group I and about 6:1 in Group II.²⁶¹ No other Sicilian coinage of the fifth century displays such a high proportion of reverse to obverse, and it is a characteristic feature of Akragas and of Himera under Akragantine domination. The high number of die combination indicates that each obverse die lasted a long time. The compact and uncomplicated coin type, the standing eagle, may have helped to maintain the obverse dies in good conditions. At the same time it is evident that the coinage cannot extend over a long period of time. The dies form a practically unbroken chain of die-links, the number of obverse dies is low and the coin types, especially on the obverse, display only slight stylistic variation.

It is of course hazardous to calculate the duration of a coin series by the number of dies that were used. There was much disparity in the output from mint to mint, but it is certain that there was a general decrease in the rate of production at several leading mints after c.465. At Gela Jenkins Group II (c. 475–465) has 19 obverse dies and 49 reverse dies, whereas his Groups III–IV, covering a considerably longer time (c. 465–440), have 22 obverses and 40 reverses.²⁶² A similar sharp decrease is noticeable at Syracuse with Boehringer Series 13²⁶³ and at Messana with Caltabiano Series VI, the first with a Nike added above the quadriga (c. 460 onwards).²⁶⁴ Thus the moderate number of obverse dies at Akragas has parallels in this period. It was suggested above that the initial date for the Akragas tetradrachms coincides more or less with Gela Group III around or after

²⁶⁰ Franke & Hirmer, p. 61 „eine ausgedehnte Münzprägung ... deren Stücke im ganzen Mittelmeerbereich umliefen“.

²⁶¹ Jenkins, Himera, p. 32.

²⁶² Jenkins, *Gela*, Table of statistics on p. 141.

²⁶³ Mattingly, *NC*, p. 187; Rutter, *Studies Price*, p. 311.

²⁶⁴ Caltabiano, *Messana*, p. 69. Series VI (460–456 BC) has 8 *obv.* and 10 *rev.* dies, whereas Ser. IIB has 23 *obv.* and 20 *rev.* dies (p. 45).

the mid 460s. Jenkins calculated that in his later groups each obverse die lasted, on an average, about a year.²⁶⁵ In his Groups III–IV (c. 465–440) twenty-two obverse dies were used. By comparison the Akragas tetradrachms can hardly cover more than twenty years or c. 465/460–445/440, a calculation which is in line with the evidence of hoards.

Hoards

The tetradrachms are not frequent in hoards, and some of the hoards which contain coins of Akragas are much too late to be relevant for the chronology. But two important hoards, Randazzo 1980 and Villabate 1893 (Hoards 32, 41) support the chronology suggested above and exclude a terminal date later than the 440s. Arnold-Biucchi's excellent publication of the Randazzo hoard was met with great approval, though it was argued already by H.B. Mattingly in his review of the book that the burial date, which Arnold-Biucchi placed at c. 450, was a little too early and should be lowered to c. 445.²⁶⁶ In her discussion of the burial date (or termination date) the author gives in fact a wider frame, stating that a date before 455 is out of the question for several reasons and a date after 445 implausible since coins of Messana with the four-bar sigma are not represented in the hoard.²⁶⁷ It seems certain that the lower limit is the more credible. The latest coin of Messana is C 354 and comes towards the end of Caltabiano's Series VIII (c. 450–446) just before the introduction of the four-bar sigma c. 445 onwards. The tetradrachms of Rhegion end with four specimens of Herzfelder's Group I, no. 1.²⁶⁸ Herzfelder's chronology for his first group (461–445) was reconsidered by Kraay, who lowered the initial date to c. 450.²⁶⁹ This lower date has been widely accepted.²⁷⁰ Of the four coins of Rhegion in the hoard (nos. 7–10) the first is very fresh, and the others are struck from a worn die-pair with heavy flaws on the reverse. The fact that only the very first die-pair is represented with four coins supports the lower initial date, as pointed out by D. Bérend.²⁷¹

²⁶⁵ Jenkins, *Gela*, p. 52.

²⁶⁶ Mattingly, *NC*.

²⁶⁷ Arnold-Biucchi, *Randazzo*, p. 39 with note 173.

²⁶⁸ Herzfelder, pp. 46–49.

²⁶⁹ Kraay, *Moneta ateniese*, pp. 147–148.

²⁷⁰ Garraffo, *Riconiazioni*, pp. 125–127 with further arguments; Mattingly, *NC*, p. 189; Caltabiano, *Messana*, p. 72.

²⁷¹ Bérend, *RN*, p. 251.

The find-spot of the Randazzo hoard is in northeastern Sicily and smaller mints like Naxos and Katane of the eastern area are also well represented. Gela and Akragas are the westernmost mints. There are considerably more coins of Gela (29) than of Akragas (8). The Gela coins are evenly spread out over Jenkins' Groups II–III ending with J. 234 toward the end of Group III (c. 465–450). There is a concentration of late coins, and the latest Gela die O62 is represented by three specimens of which two are from a new reverse die (Randazzo nos. 45–46). The eight tetradrachms of Akragas are distributed over the three groups, and also in this case there is a concentration at the end: the fairly rare O19 is represented by two coins. This die is never in a very good condition, and the latest of the two coins (Randazzo 18) is struck from the obverse die in a worn state. O19 is the second last obverse die of the entire tetradrachm coinage. Arnold-Biucchi correctly assumed that the latest issues of Rhegion, Messina, Naxos, Katane, Gela and Akragas in the hoard should be roughly contemporary and terminate at about the same time.²⁷² This applies also to the latest coins of Syracuse, belonging to Boehringer Series 14a.²⁷³ The presence of very late coins of Akragas in the hoard supports the lower burial date (c. 445) and is accordant with the evidence of the Villabate hoard.

The Villabate 1893 hoard is somewhat later than the Randazzo hoard. The burial date, which was earlier thought to be around 450, is now placed towards 440.²⁷⁴ The hoard contained at least one and possibly several coins of Messina with the four-bar sigma, an issue which like the single coin of Rhegion (Herzfelder 5c) was sometimes overstruck on Athenian tetradrachms to be dated in the 440s.²⁷⁵ The latest tetradrachm of Himera is Gutmann & Schwabacher 6 and confirms Arnold-Biucchi's chronology for her Group II (=Gutmann & Schwabacher, Group I) around and after 450/440.²⁷⁶ Gela goes down

²⁷² Arnold-Biucchi, *Randazzo*, p. 40.

²⁷³ Knoepfler, pp. 8–9, pointed out that Arnold-Biucchi's discussion of the Syracusan coins in the hoard is somewhat vacillating. However, on p. 47 she dates the coins of Boehringer Series 14a, the latest in the hoard, to just before 450 BC, which brings them down to almost the same level as most other mints represented in the hoard. Cf. Boehringer, *SNR* 1992, pp. 206, 208. Leontinoi ends with Group II c. 460, but here an interval followed in the production, see Boehringer, *Studies Price*, pp. 45–46.

²⁷⁴ Kraay, *Coins and History*, pp. 35–36.

²⁷⁵ For the Athenian overstrikes see Kraay, *Moneta ateniese*, pp. 147–148, and Caltabiano, *Messana*, pp. 68–69.

²⁷⁶ Arnold-Biucchi, *NAC/QT*, 17, 1988, table p. 89.

to Jenkins 350 which belongs to the earlier half of his Group IV (c. 450–440) and Syracuse to Boehringer 535, Series 15. There were eighteen tetradrachms of Akragas in the hoard. From Evans' description it is clear that they all belonged to the latter part of the tetradrachm series (O12–O20).²⁷⁷ The only coin he illustrated (on his plate 7.10=440.4) was fortunately acquired for the British Museum in 1955. It is an important piece and represents the very last obverse die O20 combined with the last reverse, R96, with symbol big star. The Villabate hoard thus confirms that the tetradrachms must have terminated in the 440s and not later.

Some later hoards which contain both didrachms of Groups I–IV and Eagle/crab tetradrachms do not add anything of chronological interest for Akragas but confirm that there are no further tetradrachm dies of this type. The 1923 Selinunte hoard (Hoard 37) was re-examined by C. Boehringer.²⁷⁸ The coins of Selinous form the most important part of the content. Boehringer gives a detailed description of 25 tetradrachms (Schwabacher Group I) and 50 didrachms, which had been only briefly summarized by Lloyd in his original publication.²⁷⁹ Boehringer shows that the coins form a compact and closely die-linked output, which must have been minted during a fairly short time before the concealment of the hoard, which he places at c. 435–430. Most of the other coin series which are represented in the hoard have progressed further compared with the Randazzo and the Villabate hoards. Thus Gela has progressed from Jenkins' Group III to Jenkins' Group V (after c.440). This is however not the case with the few tetradrachms of Akragas. They belong to the lot which was acquired by Lloyd (*SNG* 800, 801, 808) and are spread out over the groups O8 (337.32), O13 (386.8), O17(421.5). The latest piece with the large volute is the best preserved of the three and in very fine condition.

Among the many dispersed coins in the Selinunte hoard which Lloyd never saw were a large number of archaic didrachms: 88 of Akragas, 70 of Gela and two of Himera. They were all 'too badly corroded to be of value'. Their poor state of preservation is not surprising since they were old at the time of the burial. It is interesting to note that

²⁷⁷ Evans, *NC* 1894, p. 209.

²⁷⁸ Boehringer, *SNR* 1997, pp. 5–19, pls. 1–4.

²⁷⁹ Lloyd, *NC* 1925, pp. 277–300, pls. 10–14.

these old didrachms were still in circulation. Lloyd described the deposit as ‘the stock-in-trade of a banker or dealer’ and in such a case the owner would accept all coins of outside mints as bullion.²⁸⁰

In the Monteraci di Ragusa hoard (Hoard 24) old didrachms also were mingled with tetradrachms. The coins were found in lots of 16+5+2+10 coins at a private property. Together they must be regarded as a late deposit datable to the very end of the fifth century. However, the content seems to consist of an earlier and a later lot. The early lot consists of mainly didrachms: Akragas, 9 didr, 1 Eagle/crab tetradrachm; Himera, 2 didr. of Akragantine type; Gela, 3 didr.; Syracuse, 1 didr. Boehringer 98, 1 tetradr. Boehringer 255 (Series 11). The content is similar to that of several other hoards consisting of mainly didrachms and buried around or after 470 (Comiso, Monte Bubbonia, Casulla), but the addition of an early Akragas tetradrachm (no.306.1) points to a somewhat later burial date towards 460 for this lot. Then there is a later lot formed mainly by tetradrachms datable after 440 from Leontinoi, Messina, Selinous and Syracuse but none from Akragas. The find circumstances show that the two lots were not found together on the same spot or on the same day, and it seems possible that they in fact belong to two different deposits buried within the same area.

Didrachms and Eagle/crab tetradrachms are still found with or without later tetradrachms of Akragas Period III and coins from various mints in some late hoards from the end of the fifth century or the fourth century such as Ognina (Hoard 26), Himera 1984 (Hoard 17), Contessa (Hoard 13), Vito Superiore (Hoard 42) and Reggio Chiesa Pepe (Hoard 33).

Smaller denominations of Period II

The picture of the existence and quantity of small denominations in many early silver coinages has altered in recent years thanks to new studies.²⁸¹ In Sicily, the Chalcidic mints Himera, Zankle, Naxos and Rhegion all issued a considerable number of small denominations probably from the beginning of their coinages or shortly after. However,

²⁸⁰ Lloyd, pp. 278, 293, 297.

²⁸¹ Kim, *passim*. For Sicily also Robinson, *JHS*, pp. 14–19; Parise, *Monetazione arcaica*; Bérend, *Studies Mildenberg*, pp. 10–12, 18–21; Clain-Stefanelli, pp. 39–65.

for the large Dorian mints, Syracuse, Gela and Akragas, Kraay's observation that many mints issued exclusively large denominations and no or few fractions in their early minting still holds true.²⁸² The first coinage of Akragas consists of didrachms, and no smaller denominations can be assigned to the same period. In contrast the eagle/crab tetradrachms are accompanied by a whole range of smaller coins including also tiny fractions. The mint was, however, slow to adopt the use of smaller denominations, since it is evident for reasons explained below that none of them belongs with the early tetradrachms but must be placed with the middle and later part of the tetradrachm coinage around and after the mid-century.

It was noted above that the tetradrachms have an unusually high proportion of reverse to obverse dies. This is not the case for the smaller denominations. Jenkins observed that there is a tendency for the numbers of obverse and reverse dies to be more equal for small coins than for larger, and there may even be more obverse than reverse dies in such series.²⁸³ This is true for the litrai of Gela, Syracuse, Messana and also for Akragas. The proportion of dies in many different coin series, mainly from the Hellenistic period but also earlier, has recently been studied by F. de Callataÿ.²⁸⁴ He underlines the correctness of Jenkins' observation stating that there is an indisputable correlation between the weight (and probably the diameter) of a coin and the proportion of reverse to obverse dies being used. The simplest and most attractive explanation he offers is that one blow of the hammer was enough to strike a small coin and the lifetime of the dies was therefore more equal.

Didrachms

The small group of didrachms nos. 441–443, comprising one obverse and three reverse dies, is clearly distinguishable from the archaic didrachms and is instead related to some of the tetradrachms. The long ethnic AKRAΓANTO is the same as on all tetradrachms;

²⁸² Kraay, *JHS*, esp. p. 87; Kim, p. 49. Most of the new material which has been published by Manganaro, *JNG*, pp. 11–39, pls. 2–5 and Manganaro, *Travaux Le Rider*, pp. 239–255, pls. 22–24, belongs to later periods.

²⁸³ Jenkins, *Gela*, p. 60.

²⁸⁴ Callataÿ, pp. 91–102.

the eagle is standing on a dotted line as on tetradrachms of O11–O14 (nos. 357–407). The last reverse (R3) has a unique symbol, two laurel branches, below the crab. In the tetradrachm series the first symbols appear on reverses linked with O13. The reverse crabs of the didrachms have large claws with long pincers. The same type of crab occurs on tetradrachm reverses combined with O11–O14, such as R64. Thus it seems evident that this little issue of didrachms should be placed with the middle part of the tetradrachms and dated within the years *c.* 455–450 BC.

The only abundant post-470 didrachm coinage in Sicily is that of Segesta, which seems to have started shortly after the time when other mints abandoned that denomination as their standard piece.²⁸⁵ Otherwise didrachms are not common in Sicily in this period. The liberated Himera started her new tetradrachm coinage more or less contemporaneously with Akragas. On Arnold-Biucchi's chronology the first two groups (*c.* 464–460 and *c.* 455–440) cover about the same period of time as the tetradrachms of Akragas' period II.²⁸⁶ In her Group I (Pelops group) a single didrachm and a single drachm are known, in her second group (=Gutmann & Schwabacher Group I) there is only one rare didrachm.²⁸⁷ At Syracuse there is a single didrachm in mid-century in Boehringer's Reihe 14b (no. 497). Somewhat later there are occasional issues in Boehringer's Series 15 (no. 548) and at Messana in Caltabiano's Series IX.384 (*c.* 445–439), but only from *c.* 440 onwards there is again an important didrachm coinage at Selinous.²⁸⁸

The weights of the didrachms are irregular and spread over a wide range but give a peak by frequency of 8.60. The standard is slightly lower than that of the tetradrachms (17.30), which is normal,²⁸⁹ and is thus fairly well adjusted to the larger denomination. At the same time this small group of didrachms has a decidedly lower weight than the heavy didrachms of period I (*c.* 8.70).

²⁸⁵ Kraay, *ACGC*, p. 220, placed the initial date around 470. Hurter, *Segesta*, pp. 7, 21 gives the date 475/470.

²⁸⁶ Arnold-Biucchi, *NAC/QT*, pp. 88–89 with note 10.

²⁸⁷ Both coins are illustrated by de Ciccio, *NCirc* 1931, cols. 281–283, figs. 1 and 5 and by Schwabacher, "Pelops", pl. 6.25–26. Gutmann & Schwabacher, p. 16, no. 1, pp. 132–133, pl. 9, didr. 1.

²⁸⁸ The tetradrachms and accompanying didrachms of Selinus, which were earlier thought to have begun *c.* 460/450 (Schwabacher, *Selinunt*, p. 5 ff.; Jenkins, *Gela*, p. 171; Kraay, *ACGC*, p. 220) have now been brought down to *c.* 440 on the evidence of the 1923 Selinunte hoard (Arnold-Biucchi, *Studies Clain-Stefanelli*, p.19; Boehringer, *SNR* 1997, p. 18).

²⁸⁹ Cf. Boehringer, *Syrakus*, p. 279 (Durchschnittsgewicht).

Pentalitra (drachms)

Pentalitra (drachms) are known under that name only from Akragas. The obverse dies are inscribed ΠΙΕΝ above the eagle's back. Salinas was the first to realize that these letters stand for *pentalitron*.²⁹⁰ The coin is mentioned by Pollux (IV.173), who says that the writers of comedy used the word *litra* for a stater and that the Sicilian Sosikrates in his play *Deposit* calls a five-stater (*pentastater*) a pentalitron.²⁹¹ The pentalitra form a small issue, consisting of two obverse and two reverse dies (nos. 444–447). The die-sequence is simple. The first obverse is linked with both reverses, which have a fine crab with small claws. The first reverse has no ethnic but a rosebud with tendrils below the crab; on R2 the rosebud has been replaced by the ethnic AKRA.²⁹² The two extant specimens of no. 444 are both struck on larger flans (c.16 mm) than the following coins. The reverse die is in this case larger than the obverse die. R2 is reduced in size to match the obverse and the flans shrink to 14 mm. No. 447, known in a single specimen, was struck from O2 and R2 in a worn state when the letters were distorted by cracks in the die, which caused Salinas to interpret them as a different legend, ΑΙΝ retrograde (see catalogue). Such a legend would however be meaningless, whereas cracked and partly effaced letters occur frequently in other series too.

A stylistic comparison with the tetradrachms leads to the conclusion that the pentalitra are later than the didrachms. The obverse dies of the pentalitra show a slender, finely shaped eagle with short legs and a long, pointed wing seated on a fairly thick Ionic capital with a dotted line below, indicating the kymation on the echinus. In the tetradrachm series a similar capital is found only on the last obverse die O20. The beautifully rendered rosebud with spiral tendrils on R1 also connects the pentalitra with the late tetradrachms, on which the same symbol occurs (cf. R75–R76, R78), and with the *litra* series A with their similar details. The pentalitra, *litrai* and their fractions must therefore be placed with the final phase of the tetradrachm coinage around and after the middle of the century.

²⁹⁰ Salinas, *RN*, p. 342.

²⁹¹ Melville Jones, p. 434:651; *RE* vol. 37, col. 508 (Schwabacher).

²⁹² The fact that O1 is linked both with R1 with symbol rose and R2 with ethnic shows that it is by no means an "anonymous" issue as Lee, *NC* 1999, p. 13, calls it, and there is no reason why it should be a joint issue with Eryx, *loc.cit.* note 52.

Drachms are hardly more common than didrachms at other mints, where the tetradrachm was now the standard piece.²⁹³ Syracuse has a few drachms like Gela, Himera, Messana, and Leontinoi.²⁹⁴ Only Naxos has more drachm dies than tetradrachm dies. The drachms of Cahn's Group III (nos. 55–59) represent four obverses and five reverses, whereas the famous tetradrachm (Cahn 54) was struck from a single die-pair, which might have been regarded as irreplaceable due to its exceptional artistic quality.²⁹⁵

It is well known that small denominations (obols, litrai) and their fractions are normally struck underweight and must, like the bronze coins, be regarded as fiduciary tokens.²⁹⁶ Also drachms are often exposed to weight reductions. The *pentalitron* is a drachm of a considerably reduced weight with a peak at 4.15, corresponding to a litra of 0.83–0.82. It is however not lighter than drachms struck at other mints. The Syracusan drachms of Series 12d have a weight peak at 4.20–4.25, those of Messana of Caltabiano's Series VII vary widely; most of them are between 3.80–4.25. The five Gela drachms of Jenkins' Group IId have low weights ranging from 4.00 to 4.15, whereas the more frequent drachms of Naxos have a better standard with a clear peak at 4.25.²⁹⁷ The reduced weight of the pentalitron is thus normal for the period. At Akragas the drachm is a new denomination. The value mark IIEN inscribed on the coin emphasizes its connection with the equally new litra, which now appears for the first time.

Litrai²⁹⁸

The transition from obol to litra occurred in the 460s and can be followed at several Sicilian mints, e.g. Syracuse, Aitna, Gela, Leontinoi, Messana.²⁹⁹ As Akragas began to

²⁹³ Boehringer, *Essays Thompson*, p. 15: "Drachmen attischen Gewichts sind auf Sizilien stets nur selten geprägt worden".

²⁹⁴ Boehringer, *Studies Price*, p. 48, pl. 12.48, 54.

²⁹⁵ Cahn, *Naxos*, p. 42.

²⁹⁶ Cahn, *Naxos*, pp. 82–83; Westermarck & Jenkins, *NAC/QT*, p. 49; Clain-Stefanelli, pp. 41–42.

²⁹⁷ Syracuse: Boehringer, p. 281; Messana: Caltabiano, *Messana*, p. 188; Gela: Jenkins, p. 132; Naxos: Cahn, *Naxos*, p. 81.

²⁹⁸ For the litra and its fraction: Parise, *Le origini*, p. 293–304.

²⁹⁹ Boehringer, *JNG*, pp. 77–78, 94; Boehringer, *Kataneische Probleme*, pp. 72–78; Boehringer, *Studies Price*, pp. 46–47; Jenkins, *Gela*, pp. 49, 58; Caltabiano, *Messana*, pp. 26–27, 31, uses the term litra for the principal silver fraction all through, but Clain-Stefanelli, pp. 52–53, is probably right in seeing a

strike small denominations only around the mid-fifth century obols were never issued, only litrai. Smaller mints which began abundant issues of litrai about this time without any previous minting of obols are Kamarina, Katane and the Sikel town Abakainon.³⁰⁰ Other Sikel settlements such as Enna, Galaria and Morgantina issued sporadic but interesting litrai which reflect Greek prototypes.³⁰¹

The Akragantine litrai fall into two series:

- A. Heavy litrai of good weight.
- B. Light litrai of reduced weight.

Series A

The weights of the litrai of this first series have a peak at 0.81–0.85 with a number of specimens above that interval. The weight standard is fairly well adjusted to the reduced pentalitra (c. $0.83 \times 5 = 4.15$). It is a small series of four obverse and three reverse dies, all forming links. The obverse with legend AK/RA shows a finely shaped eagle standing l. on an Ionic capital, rendered by a thin line with spirals at the ends. The reverse crab has long pincers, drooping legs and a floral ornament below. The flower has three stiff sepals but no petals or tendrils. It is closely similar to the flowers placed at the ends of the double volute spirals on some of the tetradrachms and must, like those, be a lotus. The obverse type, eagle on capital, the reverse crab with long sharp claws and the lotus symbol as well as the weight standard indicate that the first litra Series A belongs with the late tetradrachms and the pentalitra after the middle of the century.³⁰²

shift from obol to litra with the introduction of the wreath around the reverse inscription in Caltabiano's Series VI, nos. 308–317, pl. 20 (c. 460–456). So also Manganaro, *Travaux Le Rider*, p. 243. The size of the wreathed litrai are slightly larger, but according to Caltabiano's weight tables on pp. 186–187 the weight remains the same. At Syracuse (Boehringer, pp. 281–282) there is a clear difference in weight of the obols of Series XIIe (medium 0.65) and the litrai of Series XIIIa (medium 0.77). For a recent discussion of obol/litra and new material see Manganaro, *Travaux Le Rider*, pp. 239–255 with plates 22–24.

³⁰⁰ Kamarina: Westermarck & Jenkins, *Kamarina*, pp. 24–38, pls. 2–8; Katana: Boehringer, *Kataneische Probleme*, pp. 72–75, pl. 6; Abakainon: Bertino, pp. 105–126, pls. 12–17.

³⁰¹ Enna, Galaria: Jenkins, *Centri siculi*, pp. 78–87; Morgantina: Erim, *Centri siculi*, pp. 67–77 and Erim, *Morgantina*, pp. 4–7.

³⁰² That was also the opinion of Salinas, *RN*, p. 342. He included also the smallest fractions, which in my

Series B

It has not been possible to record this series with the same accuracy as the previous one as a number of the available coins both from public collections and from auction sale catalogues are poorly preserved or poorly illustrated and must be left unconsidered.³⁰³ Even if the recorded material represents only a portion of the original dies, it is evident that Series B is much more abundant than the small Series A. Due to the insufficient material there are many specimens which do not form links. The artistic quality is good on the whole, but uneven. The obverse eagle is standing on a capital as before, but the shape of the capital is often muddled. Below the crab on the reverse there are two letter AI (nos. 454–504) or IA retrograde (nos. 505–513) denoting a litra, a value mark which is found only on Series B and on the Akragantine imitations of Eryx. A unique piece in Berlin, published long ago by Imhoof-Blumer,³⁰⁴ has the exceptional inscription TIA and differs from the normal types also in some details: the eagle is turned right and the obverse has legend AKP instead of the normal, divided legend AK/RA. The Berlin litra may initiate the new series or it may be an issue of its own or even an imitation in spite of the good style.³⁰⁵ In spite of certain pieces of good weight the standard of Series B is much reduced. Coins from the same die-pair can vary much in weight, e.g. no.494 with weights varying from 0.75 to 0.47.³⁰⁶ The average weight by frequency does not attain more than 0.61–0.65 with no correspondence to the drachm standard represented by the pentalitra. The reduction is noticeable also in the size of the flans and in the poorer technical quality of the coins. Some pieces are tiny in size and fragile.

The weight reduction of the litra at Akragas is sudden and sharp and does not decline gradually as at some other mints. A more moderately reduced litra standard of c.0.75 is normal at Syracuse (Series 13a), Gela (Group III) and Katane (C. Boehringer Series I–II) or a little lower (c. 0.75–0.65) at Messana (Series VI) and Naxos (Group III).³⁰⁷ At

opinion belong with series B.

³⁰³ Cf. Jenkins, *Gela*, p. 58 and Boehringer, *Syrakus*, p. 193.430a.

³⁰⁴ Imhoof-Blumer, *MG*, p. 14 no. 3.

³⁰⁵ The eagle turned right is otherwise known only from imitations.

³⁰⁶ It is thus not possible to place all pieces of good weight at the head of the series. Cf. Lee, *NC* 1999, p. 13 note 53.

³⁰⁷ Boehringer, *Syrakus*, p. 283; Jenkins, *Gela*, p. 133; Caltabiano, *Messana*, p. 187; Cahn, *Naxos*, p. 81;

Kamarina, which had an abundant issue of litrae covering a fairly long period from *c.* 460 to *c.* 440/35, a gradual weight reduction can be followed from 0.75 (Series 2A) to 0.70 (Series 2B–2C), a sharper decline to 0.55 (Series 2D) and finally to 0.50 (2E).³⁰⁸ At Gela the later litrai of Jenkins' Group VI (*c.* 430–420) sink to similar low weights, the majority ranging between 0.70–0.50.³⁰⁹

The low weight of Series B makes the letters AI or IA understandable. It may have been necessary to explain to the customers that the coin was still a litra like the heavier litrai of Series A in a similar way as the reduced drachms/pentalitra were inscribed with their value connecting them with the litra. Owing to the difference in weight it would be reasonable to postulate a gap between the two series, though it cannot be proved. It was suggested above that the heavy litrai of Series A belong with the pentalitra at the end of the tetradrachms. Series B and the fractions (pentonkia and dionkia) may have continued as minor silver denominations even some time after the cessation of the major silver coins until these fragile pieces were replaced by the new bronze coinage of period II.

Pentonkia and dionkia/hexantes

The names of the fractional coins hemilitron, pentonkion and hexas (hexantion) are known from fragments of a play by the Sicilian comedy writer Epicharmos.³¹⁰ The pentonkion with a norm-weight of 0.36 was related to the litra system (5/12 litra) but corresponded also to the obol system as the equivalent of a half Attic obol. The norm-weight of the hexas or dionkion (2/12 litra, 0.14) formed a link between the Attic obol (0.72) and the litra (0.87). In the Chalcidic standard the dionkion corresponds closely in weight to the hemitetartemoron (1/8 obol, 0.12).³¹¹

Boehringer, *Kataneische Probleme*.

³⁰⁸ Westermarck & Jenkins, *Kamarina*, p. 25.

³⁰⁹ Jenkins, *Gela*, pp. 77–8, 135.

³¹⁰ Melville Jones, p. 448–450 = Pollux IX.82. Hexas is known also from Hesychios, *TN*, pp. 468–469, no. 722. In order to distinguish the silver coin from the later bronze hexas the name dionkion for the silver seems more practical; cf. Willers, p. 355 (Zweionkienstück) and Clain-Stefanelli, p. 44.

³¹¹ Parise, pp. 297–298; Jenkins, *Gela*, pp. 49–50; Clain-Stefanelli, pp. 44–45; Caltabiano, *Messana*, pp. 26–27.

It has not been possible to carry out a die study of these fractions owing to their minute size, poor state of preservation and the lack of a pictorial reverse type.³¹² The obverse type of the pentonkia is the same as on the litrae: an eagle standing left or right on an Ionic capital with the ethnic divided AK/RA. The normal reverse has five pellets denoting the value, but a few have, in spite of their small size, a more elaborate reverse type showing a minute eagle's head in the middle surrounded by five circles (no. 515). It seems likely that this type came first and that it was soon replaced by the simpler reverse with pellets only.

The Akragantine pentonkia and dionkia are all struck below the norm-weight, which is normal also at other mints. The output of pentonkia was more extensive at Akragas than at any other city. For Syracuse Boehringer recorded a few of these fractions in Series 12d (371–372) and Series 13a (431, 433). They are also found at Messana in Caltabiano's Series II, at Leontinoi, and Kamarina.³¹³ Akragas' neighbour city Gela had a copious striking of litrai in Group III but very few smaller fractions. A few pentonkia have come to light since the publication of Jenkins' corpus.³¹⁴ Jenkins placed the dionkia known to him with the obols at the end of Group II,³¹⁵ but Manganaro is undoubtedly right in assigning both them and the new, rare pentonkia to Jenkins' Group III.³¹⁶ He rightly points out that the little horse head on the fractions corresponds to the standing horse of the new litrae, which were introduced in Group III.

There is no real evidence that the onkia was ever minted in silver,³¹⁷ and the dionkion or hexas is thus the smallest of the coined silver fractions. At Akragas the dionkion is a rare fraction, less frequent than the pentonkion. The two denominations are related

³¹² Kim, p. 10 notes these difficulties which often prevents formal studies of small coins.

³¹³ Leontinoi: Boehringer, *Studies Price*, p. 46. Kamarina: Westermarck & Jenkins, *Kamarina*, pp. 39, 174–175 and Westermarck & Jenkins, *NAC/QT*, pp. 48–52.

³¹⁴ First published by K  thmann, p. 209, no. 4. Manganaro, *JNG*, p. 26, pl. 4.36–37 adds a second piece in a private collection.

³¹⁵ Jenkins, *Gela*, p. 49, nos. 199–202.

³¹⁶ Manganaro, *JNG*, p. 26, pl. 4.36–37.

³¹⁷ A few pieces of Katane (Boehringer, *Kataneische Probleme*, pp. 73, 76–77) and Messana (Caltabiano, *Messana*, p. 31 [with hesitation], nos. 207–208); MMAG list 373, no. 17 have been thought to be onkia but cf. Clain-Stefanelli, p. 51 and Manganaro, *Travaux Le Rider*, pp. 240, 243.

in type; the small eagle's head on the reverse of the first pentonkion (no. 515) appears as the obverse type on the dionkia. The ethnic is abbreviated to a single letter A. The reverse has two small pellets in a plain field except for a unique piece in the Manganaro collection (no. 521), on which the tiny central dots are flanked by semi circles, which recall the circles on the first pentonkion.

None of the preserved dionkia comes close to the norm-weight of 0.14, and in fact the actual weight of struck pieces, ranging between 0.11 and 0.06, hardly exceeds that of an onkia (0.07). The weights of the pentonkia and the hexantes correspond to a litra standard of *c.* 0.60, thus close to the light litra Series B. As the fractions were always stuck underweight, their low weights do not exclude a connection with the heavy litra of Series A, but it seems preferable to assign the fractions to the more abundant light Series B at the very end of period II.

Cast bronze coinage

There are two series of cast bronze coins:³¹⁸ a small issue of round coins (A) without legend and mark of value, representing a single denomination, and a more numerous issue (B) in four denominations: trias, tetras, hexas and onkia. The first three denominations are cast in the shape of a cone, all with pellets on the flat top indicating the value. The smallest denomination, the onkia, is flat and almond-shaped and has no mark of value. The unusual shape of these pieces still causes uncertainty as to whether they are really coins or rather weights or lumps of bronze with a monetary use.³¹⁹ As argued long ago there does not seem to be any good reason why they should not be regarded as coins.³²⁰ They cannot be weights since a weight must be of a fixed standard and the cast pieces vary in weight. The orientation of the types shows that they were not intended to stand on the flat side. Bronze had long functioned as a means of payment, but when it was first thought of as a medium for real coins with civic types, no one could have had a clear idea of what such bronze coins should look like, and there is no particular reason why

³¹⁸ In general: Gàbrici, pp. 29–30, 113; Price, *Essays Robinson*, pp. 95–96; Westermarck, *Le origini*, pp. 3–6; Calciati I, pp. 143–7; Caltabiano, *La moneta fusa*, pp. 17–53.

³¹⁹ For references, see Westermarck, *Le origini*, p. 3, note 3, and Rutter, *Italy and Sicily*, p. 142.

³²⁰ Ridgeway, p. 350; Gàbrici, p. 29; Westermarck, *Le origini*, p. 4.

they should be exactly like silver coins. It is obvious that cast coins represent a period of experimentation with various forms, round and oblong as well as cones, before the striking technique and a regular shape were adopted also for bronzes.

All cast coins both from Akragas and from other mints look crude and primitive at first sight, but H. Cahn, C. Arnold-Biucchi and A. Tusa Cutroni have pointed out that the coins are not clumsy in style, but that their rough appearance is mainly an effect of later corrosion and also of an unskilled casting process.³²¹ Since the Greeks were skilled in working bronze since early times,³²² this shortcoming may seem strange, but bronze was after all a new medium for coins. The source of the metal may have been Etruria.³²³

It is difficult to be sure which of the two Akragantine series is the oldest. The most commonly suggested chronological order is to place the round pieces after the cones and regard them as a transition to the later, struck coins.³²⁴ However, a number of points favour the precedence of the round coin: the technical quality which seems to be poorer than that of the cones, the lack of legend and above all the lack of value marks. The coins are very scarce. The conical pieces are more numerous and technically more satisfying with partly new types, and it would be strange if, after establishing a full series of denominations with value marks and legend, the mint issued a more primitive coin in a single denomination. When the weight and the uncertain denomination of series A are also taken into consideration, it seems most sensible to regard that series as the earlier one (cf below).

Owing to corrosion, lack of distinct details and poor illustrations it has not been possible to establish a sequence of 'moulds' or type varieties for the cast series. The round coins, without legend, have adopted the traditional types, the eagle and the crab from the silver, but the execution is poor. The tail of the eagle is always more or less missing, an unsatisfying outcome which seems to be a result of an inadequate casting technique. The crab on the reverse has a few more details and is more varied.

³²¹ Cahn, *Le origini*, p. 86; Arnold-Biucchi, *Studies Clain-Stefanelli*, p. 9; Tusa Cutroni, *Le origini*, p. 346.

³²² Richter, *Greek Art*, pp. 47, 193–209.

³²³ Dunbabin, pp. 253–254; Pliny, *NH* 34.II.2, mentions the occurrence of copper in Campania, North Italy and Cyprus.

³²⁴ Price, *Essays Robinson*, p. 95; Boehringer, *SM* 1978, p. 51, note 3; Calciati I, note 1.

In the principal series B it is equally difficult to distinguish any particular details. The trias is the most common denomination, and the majority have an eagle standing left; only a few have an eagle facing right. The shape of the eagle is rather vague. Some are more long-legged or highchested than the standard type. The ordinary crab is broad and triangular with curved sides and a knob between the eyes which are not visible. Another crab type has a longish, rectangular body, with more height than breadth. On some pieces the letters AK can be seen, more or less clearly, above on the right side of the eagle's head, or one letter above and one below the tail (525: A.3–4).

Calciati singles out a 'boat-shaped' type as a special morphological variety,³²⁵ but the compressed shape of these few pieces is, in my view, only an effect of casting in a somewhat defective mould. Another defect to be found on some pieces is that the number of pellets is incorrect: no. 525.36 has five pellets instead of four, and no. 526.1 only two instead of three. The pellets are of course often unclear or worn away, but that does not seem to be the case here. The addition or omission of pellets must be due to a mistake.

The triangular shape of the tetrantes is adjusted to the new type of obverse, showing two eagles' heads back to back, separated by a vertical edge. It is the only coin type in this series which has no parallel on the silver. The reverse is rounded and shows the ordinary crab. The singular obverse is an interesting renewal of the traditional standing eagle but cannot be said to be artistically successful in this medium. In most cases the eagles' heads are blurred, and the birds look rather like ducks. When there is a legible legend it has the longer form AK/RA, placed on both sides of the coin. A rare symbol, a kerykeion, occurs once on no. 526.1 and also once on a hexas (no. 527.19).

The hexantes are similar in type and shape to the triantes, but the cones are smaller, narrower and more pointed. The eagle is always facing left. There are few pieces with a legible legend. When letters can be distinguished they are placed on both sides of the coin, forming AK/RA as on the tetrantes.

³²⁵ Calciati I, 2CT, 5CT (=525.70; 525.85).

It is impossible to say to what extent the larger denominations (trias, tetras, hexas) were originally inscribed with an ethnic. As mentioned above, owing to wear and oxydation letters are now visible only on a few specimens. The only notable letter is *rho*, which occurs both in the normal archaic form with tail R and in the later form P. There was an early example of P without tail already in the didrachm group IV (O89, nos. 269–274). The existence of a legend on the cast coins shows that they were official issues of the city.

The onkia is the second most common denomination. It is distinguished from the larger coins by the lack of letters and marks of value, by the flat shape and the different types, an eagle's head and a crab's claw. The eagle's head may be taken over from the smallest silver fractions, the first pentonkion (no. 515) and the few dionkia (nos. 521–523). The impressive eagle's head on the onkia makes it the most successful coin in the series from an artistic point of view.³²⁶

Weights

The heaviest denomination, the trias (1/3 litra), is distributed over a rather wide range of weights with a peak around 15.50–15.00, implying a litra of *c.* 46g. The tetras (1/4 litra, *c.* 12.00) and the hexas (1/6 litra, *c.* 7.00) correspond quite well to the trias though a little on the low side. However, the irregular weight of the trias, the principal denomination, and the existence of some really heavy pieces over 21 makes it seem likely that the original litra standard was in fact somewhat higher. The weight of the onkia points in the same direction. The onkia (1/12 litra) is heavy in relation to the other denominations and has a remarkably stable weight concentrated between 5.00–4.00, implying a litra well over 50g. There is a tendency for small denominations to be on the heavy side,³²⁷ but at the same time the stable weight of the onkia may be the most reliable. The weight pattern of the denominations taken together hardly suggests a gradual reduction of the litra standard, though many pieces may be below the intended standard.

³²⁶ Jongkees, p. 70, and de Waele, p. 24, note 115, found that the Akragantine onkiai were influenced by the famous stater of Elis-Olympia with an eagle's head (Hirmer, pl. 157.500) which of course is impossible as the Elean coin is considerably later.

³²⁷ Arnold-Biucchi, *Studies Clain-Stefanelli*, p. 17, noted the same discrepancy at Selinus.

The weight of the round cast coin (series A) is around 9.00. Gàbrici suggested that it might be either an onkia of a heavy litra weighing *c.* 108g or a hexas of a reduced litra of *c.* 54g.³²⁸ Both these suggestions are worth considering. Bronze coins corresponding to the full Sicilian litra standard of 108/109g are documented only from Lipara.³²⁹ The heavy litra standard represented by the early Gorgoneia of Himera was above 70g.³³⁰ The two cast bronze series of Akragas are undoubtedly among the earliest bronze coinages of Sicily. Assuming that series A precedes series B, it may not be surprising if it started on a heavy standard. The silver onkia was never minted, and if regarded as an onkia the round bronze piece could have served as supplement in bronze to the smallest silver fraction, the dionkion. An onkia might have been the most necessary value to add to the existing silver fractions as long as these were still being minted. The bronze onkiai of series B are plentiful and show that the onkia was in fact an important minute fraction. There are common characteristics between the onkia of series B and the round cast piece: both have a flat shape and lack marks of value and legend. There is also a relation in weight, as the weight of the round piece is the double of the other. If both coins are onkiai, the standard of the later series B had been reduced to half of the original litra weight.

If identified as a hexas the round coin would be considerably heavier than the hexas of series B (*c.* 7) and imply a litra of *c.* 54g. However, as argued above, the original litra standard of series B may in fact have been of the same size. As a bronze hexas the round coin would have been equivalent to the smallest struck silver fraction, the dionkion. If the here suggested order of the series is retained, its purpose could then be explained as an attempt to supplement this minute silver piece by bronze during an intervening period, before series B with its full range of small denominations replaced the silver fractions altogether.

³²⁸ Gàbrici, p. 30. Calciati I, p. 144, tentatively connects it with a strange cast 'tetras' published by Brunetti, pp. 23–28, which certainly is a forgery.

³²⁹ For the bronze litra: Willers, pp. 348–353; Parise, *Le origini*, pp. 303–304. For Lipara: Willers, p. 355; Gàbrici, p. 26; Manganaro, *Le origini*.

³³⁰ Gàbrici, p. 23–27; Kraay, *Le origini*, p. 29.

It has also been suggested that the round piece could be a tetras, chronologically later than the cones (series B).³³¹ It is true that in later, struck bronze series the tetras becomes important, often the most important denomination, and such a value would therefore seem more suitable as a single piece than a hexas or an onkia. But that may not have been the case at this early stage. In series B the tetras is the least frequent denomination. As a tetras the coin does not seem to fit into the weight pattern. Its weight would imply a litra standard of only *c.* 36g, which is somewhat light if compared with the much heavier standard of series B, and also in relation to the later, struck series, based on a litra standard above 40g. Such a strange development of the litra standard is not convincing, and the identification of the round bronze coin as a hexas seems more likely.

Chronology³³²

That the first, cast bronze coinage of Akragas belongs with period II is evident from the types which reflect those of the silver coins, mainly the standing eagle and crab but also the rarer eagle's head which occurs only in this period and is found both on silver (pentonkion, dionkion) and bronze (onkia). By the end of Period II production of silver coins was decreasing. It was argued above that the tetradrachm coinage came to an end already in the 440's, followed by a fairly large output of litrai of a reduced weight (series 2), accompanied by rare minute fractions (pentonkia and dionkia). It seems likely that the early bronze coins come in here, first as supplementary fractions to the scarce silver fractions, which they gradually replaced.³³³ The appearance of all these fractions in bronze implies a growing demand for small change in the market. Gàbrici thought that the cast coins lasted only a short time and were soon replaced by the plentiful struck bronzes.³³⁴ The casts coins of series B are not so numerous if compared with the later struck issues, yet they exist in a considerable number. At the present stage of

³³¹ Boehringer, *SM* 1978.

³³² Gàbrici, p. 113, suggested a mid-century date for the first bronze coinage of Akragas; Price, *Essays Robinson*, pp. 95–96, the period from *c.* 450 to *c.* 425; Jenkins, *Gela*, p. 102 note 1 (same date); for chronological questions *cf.* Boehringer, *SM* 1978, pp. 49–65, esp. pp. 61–62.

³³³ Price, *Essays Robinson*, p. 96, speculates that there might have been a general shortage of small silver denominations in this period, and that seems to have been the case at Akragas.

³³⁴ Gàbrici, p. 30.

investigation they seem to be much more frequent than those of Selinus. They have also, unlike the cast coins of Selinus, been found at several important archeological sites. It may therefore be assumed that the comparatively plentiful first Akragantine bronze coinage lasted for a number of years and continued into the 430s after the cessation of the silver coinage in the 440s.³³⁵ It would mean that only bronze coins were issued at the final part of period II, a situation similar to that at Selinous.³³⁶ Besides Akragas, Selinous is the only city which had a cast coinage of any considerable size. It seems reasonable that the issues from the two mints should be at least roughly contemporary. The weight standard of the cast coins of Selinus is erratic and lower than that of Akragas, but the flans have some similarities: most of them are round, whereas the hexantes and onkiai have a triangular shape which is similar to Akragas, though the flan is flat and not like a cone. The types of the Selinous coins, especially the large selinon leaf, recall the earlier coinage of the city and have nothing in common with the later silver series, beginning around 440. Thus, Arnold-Biucchi has argued that the comparatively primitive looking cast bronzes should be dated to the decade before the introduction of the fine new silver coinage, a chronology which tallies well with the one here suggested for Akragas. The two mints were the first in Sicily to experiment with a new technique for making coins. The question of precedence between them is hardly important. At both mints the early phase of bronze coinage was followed by long time intervals before the appearance of struck series, with distinctly different types.

Finds

A considerable number of cast bronzes have been found at archeological sites. The presence of two cast triantes in tomb 69 at the necropolis of Megara Hyblaea has caused controversy. In the original excavation report P. Orsi described the various small items of bronze and silver which were found in the tomb together with a great number of small vases.³³⁷ The finds are spread over several periods and Orsi grouped them in two lots:

³³⁵ The much lowered chronology to the late 5th century, suggested by Kraay, *Le origini*, pp. 35–38; Manganaro, *JNG*, p. 17 and Rutter, *Italy and Sicily*, p. 142 seems impossible as the cast bronze coinage undoubtedly belongs with period II.

³³⁶ Arnold-Biucchi, *Studies Clain-Stefanelli*, p. 19.

³³⁷ Orsi, *MonAntLin*, cols. 828–830.

A) the older objects including the cast coins, which he then dated to the period *after* 472 BC and B) the much later vases of the 4th–3rd century BC. He concluded that this is ‘uno di quelli eccezionali sepolcri posteriori alla caduta e desolazione di Megara per opera di Gelone’ and added that the tomb has a unique construction. Much later Orsi came back to the grave finds, and he then made the brief and curious statement that ‘il sepolcro rappresenta una unità compatta’ and that the two ‘pesi monetali agrigentini’ certainly belong to the period immediately before the fall of Megara in *c.* 482.³³⁸ Recently S. Vasallo has insisted that there is no reason to doubt Orsi’s later opinion.³³⁹ However, not only does it contradict Orsi’s earlier and much more detailed report, but it is also contrary to numismatic evidence. Only didrachms were minted in period I, and it would be absurd to assume the existence of low denominations in bronze at a time when the mint had not yet issued any small values in silver. After the destruction of Megara by Gelon the site remained unpopulated for a long time. Thucydides (6.49) says that it was inhabited at the time of the Athenian expedition. New excavations carried out since 1949 by Vallet and Villard have shown that it was re-occupied in the time of Timoleon and continued to develop during the following century.³⁴⁰

The Himera excavations have yielded the most notable finds of cast pieces from Akragas. No less than ten such coins (3 triantes, 1 tetras, 4 hexantes and 2 onkiai) from different areas were documented by A. Tusa Cutroni. One of the hexantes (no. 527.39) was found in a late context, a factory from the IV–III century.³⁴¹ The survival of these pieces shows that the early bronze coins of Akragas spread within a wide area, mostly within the *hinterland* of the city but also as far away as Megara Hyblaea.

³³⁸ Orsi, *AttiMem* 1932, p. 44 with note 4.

³³⁹ Vassallo, p. 30.

³⁴⁰ Vallet & Villard, ‘Le repeuplement du site de Mégara Hyblaea à l’époque de Timoléon’.

³⁴¹ For further finds from archaeological sites, see p. 158.

PERIOD III

The Sicilian coinage of the last quarter of the fifth century is generally and rightly considered the height of Greek monetary art. Syracuse was at the head of the development, and the traditional Syracusan quadriga underwent rapid changes. Akragas, however, was slow to adopt the quadriga type. After a period of inactivity her coinage reopened during this most brilliant phase with two distinctive groups of tetradrachms, which renew the old coin types in a striking way, before the quadriga finally appears as the obverse type on the very last tetradrachms.

Tetradrachms Eagle/Large fish

On the obverse a single eagle with a large hare in his claws is represented at the moment when he has just landed and placed his prey on a pile of rocks. The wings are still open; the head is lowered towards the prey without actually touching it. The feathering on the eagle's body and open wing is rendered in a way that differs from the normal pattern, where the feathers on the open wing are divided into three layers with two shorter sections of shorter feathers above ending in long lines indicating wing quills. Here the feathering is richer and tighter without any clear layers. The tail is of an exaggerated size, the beak comparatively small but has a thin, sharp end (visible only on good specimens), the eye is deeply set and the frightening claws sink deeply into the hare's soft body. The grandeur of this eagle has impressed many. Long ago P.Gardner wrote that the Akragantine eagles 'exhibit some of the finest studies of animal life in existence'.³⁴² He found the single eagle 'more realistic' than the eagle pair. To call it realistic is however hardly correct. The body is too small compared with the wing and tail; in fact the wing covers almost the entire body and it is unclear how the wing is attached to it. The hare is also too large in proportion to the eagle. It may not have been the engraver's intention merely to give a realistic picture of animal life, but rather to show the eagle as an impressive representation of the mighty god. An eagle appearing with a prey in its claws was regarded as a message from the god already in Homer and could be interpreted as a good omen or an ill-omen.³⁴³

³⁴² Gardner, *NC*, p. 34; Gardner, *Types*, p. 130; Seltman, *NC* 1909, pp. 4-5, confessed to a preference for the single eagle rather than the eagle pair.

³⁴³ Pollard, p. 116.

On the rock under the hare a scallop shell and a sea snail are found, details which allude to the sea and are well matched with the new reverse type, the large fish, which occupies the lower part of the flan with the old civic type, the crab, in the upper part. The large fish is one of many creatures from marine fauna that make their appearance on the silver and bronze coins of Akragas in period III. Together they can be seen as a reference to Akragas' sea power, the necessary condition for the overseas trade which helped to produce her legendary wealth (Diodoros XIII.8).

The identification of this remarkable fish has caused some controversy. It has been called a gurnard, *Genus Triglia*,³⁴⁴ a John Dory (?)³⁴⁵ and most often a stone-bass, *Polyprium cernium*,³⁴⁶ a giant sea-perch. The most convincing identification is however that given by F.E.Zeuner,³⁴⁷ who concludes that it is not a cernia but a related sea-perch or mero, *Epinephelus guaza* L., also a very large species, reaching four feet in length. The rounded tail fin is an important distinctive mark of the mero. Both species appear in Aristotle (*HA* VII(VIII) 543b1, 591a11, 598a10, 599b6) under the common name *orphos*. The enormous mouth is shown gaping. Zeuner assumes that the reason for this is that engraver 'did not use a live specimen... but one that had died from suffocation'. That may be the correct explanation, though on the coins the fish does not look dead at all; on the contrary, the open jaws enhance its ferocious look. It is possible that the fish is about to catch a smaller fish. On fish plates these giant fish are sometimes drawn with open mouth when chasing a smaller fish swimming in front of them.³⁴⁸ The mero reappears on some smaller coins of Akragas. It is not known from other Sicilian coinages, but the same or a similar large fish is found on some didrachms of Taras.³⁴⁹

³⁴⁴ E.g. Baldwin Brett, p. 33.235; Cambridge, *McClean*, p. 239.2.

³⁴⁵ E.g. *Gulbenkian* I.164.

³⁴⁶ E.g. Imhoof-Blumer & Keller, p. 44 (identified by E. O. Martens); Hill, *Ancient Sicily* p. 121; Rizzo, pp. 87–88.16; Lacroix, *RBN*, p. 26; *Antikenmuseum Basel* no. 257 and numerous other catalogues.

³⁴⁷ *NCirc* July/August 1963, pp. 142–144.

³⁴⁸ Lacroix, *La faune marine*, pp. 36–42, pl. 18 (plate from Taman).

³⁴⁹ The similar large fish on some didrachms of Taras (Fischer-Bossert, *Tarent*, nos. 255–257) was identified as a mero (*Serranus gigas*) by Vlasto, p. 158. Also Lacroix, *RBN*, p. 26.

Volume of production

The new tetradrachm series consists of only one obverse and two reverse dies. The single obverse die does not display any serious die injuries, but a small die crack between the eagle's wing and the border shows that R1 comes before R2. The two reverse dies are slightly different. On R1 the fish is fatter with a more bulging belly, the upper part of the gaping jaws is a little squashed, the round eye is sharply marked, the crab has a round shape and the cockle shell and sea snail are placed low on either side of the crab's legs. On R2 the crab and fish are wider apart, the crab has a more triangular shape with a broad upper part, the cockle shell and sea snail are placed higher up on either side of the crab's claws. On this die the fish is not quite as dominating, it is a little smaller, the jaws are more pointed and the eye is not so clearly marked. The number of preserved coins from the two die-combinations is fairly large for O1–R2 (23), but small for O1–R1 (6). The first reverse does not show any severe die injuries on the preserved specimens, and there is no obvious reason why it should have been replaced so soon. The figure for the second die-combination (23) becomes less impressive if compared with the famous first tetradrachm of Naxos.³⁵⁰ The minting of the Akragantine tetradrachms cannot – like the tetradrachms of Type 1 from the smaller mint of Naxos – have extended over a large number of years. The output may have been limited to a single year or, considering the amount of extant coins, it may have extended over a few years. The majority of the preserved coins are however much worn and must have seen heavy circulation.³⁵¹

Chronology

In older numismatic literature the Large fish and Skylla tetradrachms were sometimes regarded as later than the Quadriga series and were thus given a late date,³⁵² but already Salinas and later Hill placed the series in the now accepted order. That the tetradrachms

³⁵⁰ Cahn, *Naxos*, pp. 114–117 listed 56 specimens. Since then about twenty further coins have come to light (Arnold-Biucchi, *Randazzo*, p. 36).

³⁵¹ As noted in Leu 81, 2001, p. 31, no. 45.

³⁵² *BMC Sicily* (1876), nos. 59–61, period of finest art (412–345); Head, *HN²*, p. 121 (413–406); *McClellan*, vol. I, p. 239, nos. 2041–2044 (date as Head); Boston, Baldwin Brett pp. 32–33, nos. 231–235 (date as Head); Gardner, *NC*, p. 34, dated the large fish just before the destruction of the city; Salinas, pl. 8.2–4; Hill, *Ancient Sicily*, p. 121.

with the Large fish initiate the new period is in fact evident from the legend and from the resemblance in types between this series and the contemporary bronze coinage. The ethnic has now for the first time the longer form in genitive plural AKRAΓANTINON referring to the city authorities.³⁵³ The letter gamma had formerly always been written in the lunar form C but has here changed to the square form Γ. At the same time the old rho with tail (R) is retained. The same change occurred at other mints. At Gela the square gamma was first used in Jenkins' Group VII,³⁵⁴ where it alternates with the lunar form. In Gela Group VIII onwards only the square gamma is found throughout. The use of letter rho is more irregular. With the exception of an occasional P without tail on a single die (O89) in didrachm Group IV, the form R was current at Akragas throughout Periods I and II on the silver, but on the cast bronze coins both letter forms occur. At Syracuse P appears for the first time on B.505 (Series 15, R361).³⁵⁵ In that series both forms R and P are used, in Series 16–17 only R again. From Series 18 onwards P predominates, but there are occasional revivals of R in Series 19 (R435), 20 (R444–445), 21 (R454), and 23 (R473, R476=B698). The final Series 24–25 of Boehringer's period have only P. The use of R and P was thus intermittent for a long time at Syracuse from its first appearance in Series 15 to series 24. At Kamarina both forms of rho are found only in the last litra series 2E,³⁵⁶ whereas all coins of the final Period 3 have P. At Himera the change from R to P occurred in the beginning of Arnold-Biucchi's Group III (=Gutmann & Schwabacher 10, 14–19).³⁵⁷ At Rhegion the transition from R to P occurred at the same time as the change from the lunar to the square gamma in Herzfelder's Group III.2 (nos. 58A–61), the last group with reverse seated oikist. On Herzfelder's chronology this small group belongs to the years *c.* 425–420, though a later date has been suggested.³⁵⁸ Thus in the decade from *c.* 420 to *c.* 410 Himera, Kamarina and Rhegion had permanently changed the form of *rho* from R to P, and

³⁵³ Gauthier, p. 167.

³⁵⁴ Jenkins, *Gela*, pp. 81–82.

³⁵⁵ Boehringer, *Syrakus*, pp. 52, 56.

³⁵⁶ Westermarck & Jenkins, *Kamarina*, p. 37.

³⁵⁷ *NAC/QT* 17, 1988, p. 89.

³⁵⁸ Herzfelder, pp. 53, 98–100; Kraay, *ACGC*, p. 226; Boehringer, Ognina, p. 138 (*c.* 415 BC). Herzfelder remarked that the introduction of the square gamma at Rhegion, Gela and Akragas seemed to be contemporary.

the square gamma was established at Gela (Jenkins' Groups VII–VIII) and Rhegion. In the same period a similar change proceeding took place at Akragas. The large fish tetradrachms combine the square gamma and the old R, but the next tetradrachm group with Skylla has always the later form P. On the hemidrachms which belong with these higher denominations and comprise a larger number of dies the change of letter forms can be followed in detail. On the bronze coinage, however, the use of letter forms seems to be more unsettled (cf below p. 116).

For a long time a date within the decade c. 420–c. 410 for the Large fish and Skylla groups has been established in modern numismatic literature.³⁵⁹ The Eagle/crab tetradrachms were earlier thought to have continued down to that date, and these two groups then fitted well into the gap before the beginning of the Quadriga series. The fact that the older Eagle/crab tetradrachms finished much earlier towards 490, as argued above (p. 59 sq.), does not affect the chronology for the later groups, which on numismatic evidence seems best anchored to the time suggested above, perhaps most likely to the later part of it.³⁶⁰ Large fish and Skylla tetradrachms occur in some important hoards buried at the end of the 5th century: Himera 1984 (no. 17), Ognina (no. 27), Pacino (no. 26) Contessa (no. 13) and Caltanissetta (no. 5), but the hoard evidence does not help to establish a more precise date for any of the Akragantine coins.

³⁵⁹ E.g. Franke & Hirmer, pp. 61–62, pl. 60.173–175; Jenkins, *AGC*, p. 173, no. 433; Kraay, *ACGC*, p. 226, pl. 46.793; *Kunstfreund*, p.114.78; *Gulbenkian I*, pp. 59–60, nos. 164–166; *Antikenmuseum Basel* nos. 257–258 and numerous other catalogues. A later date is suggested by Boehringer, *SNR* 1985, p. 43 'etwas später, als bisher (um 420) angenommen' and Rutter, *Italy and Sicily*, p. 149 (c. 410). Caltabiano's attempt (Caltabiano, *Messana*, p. 91) to update the large fish is not convincing. She discusses an overstrike in her Series VIII, no. 383.4 and identifies the undertype as a large fish tetradrachm. The overstrike is not illustrated in her corpus and on the picture in catalogue Hirsch 150, 1986, 82 only unclear traces of the underlying coin can be traced. However, the undertype does not seem to be Akragas for reasons which C. Boehringer has already pointed out (*SNR* 78, 1999, p. 181). If the traces of letters visible at the border are correctly identified by Caltabiano as AP, it is a further proof that the overstruck coin cannot be a large fish tetradrachm as they always have a clear R in the legend.

³⁶⁰ For comparison with inscriptions see Mattingly, *JHS*, who dates the Treaty with Chalkis D17, in which the letter forms R and P are used indiscriminately, to the years 424/3; Mattingly, *BCH*, p. 476 'as for R it has recently appeared on a *horos* stone which is fixed in the 420s'.

Engraver

The engraver who cut the dies for the new tetradrachm series must have been an important master of the time. Though the obverse and reverse dies are difficult to compare from a stylistic point of view, it seems likely that both sides are by the same hand; they both are rendered in similar bold, clear forms. The style of this anonymous engraver is reflected on the hemidrachms, but no other die can be attributed to him.

Some authors have thought that the much admired coinage of Elis influenced Akragas to a great extent, but it is rather a question of interchange.³⁶¹ An eagle grasping a prey in its claws and beak is the standard type on the coins of Elis from the beginning, whereas the eagle standing on an Ionic column and other motifs appear first at Akragas. At Elis the eagle with prey is represented in many variants, some of which recall Akragas, e.g. Seltman 96 and 132–133.³⁶² At both mints the prey is most often a hare. Though the basic conception is similar, the style and execution differ, and there is no reason to think that the Akragantine eagles should not have been created by local Sicilian engravers.

Tetradrachms Eagle pair/Skylla

The tetradrachms of this group are the only ones with the ethnic on both sides: ΑΚΡΑΓ on the obverse and ΑΚΡΑΓΑΝΤΙΝΟΝ on the reverse. The letter *rho* has changed from R to P. Whether the new group follows immediately after the large fish or whether there is a gap between them remains uncertain. The output was small, comprising a single obverse die and three reverse dies, and the minting period must have been short. Only the first die-combination O1–R1 is well documented (25 coins), while R2 and R3 are known from a few coins only. The first pair of dies shows a varying state of preservation. None of the dies incurred any serious injuries, but some of the poorly

³⁶¹ Sambon, *RN* 1914, pp. 12–13 and Jongkees, p. 70, thought that Akragas imported engravers from Olympia. As noted above (chapter Cast bronze coinage note 326), de Waele, p. 24, n. 115, mentions the eagle head on the cast onkiai of Akragas and the Elia stater, Hirmer pl. 157.500, with a similar head as a proof of this strong influence, without realizing that the Akragantine bronze coin is much older than the stater of Elis.

³⁶² Seltman, *Olympia*, Series 10, pl. III:AX; Series 13, pl. IV:BK (c. 430–420). Also *Kunstfreund* 152; Hirmer pl. 156.497; Leu 90, 2004, 52–53.

preserved specimens seem to be not only worn but struck from worn dies (e.g. 531.14; 532.3), which had to be cleaned and reworked.³⁶³ When O1 was refurbished the small flaws on the hare's hindleg and tail and the dotted flaw on the border, on the right side, were not removed but can still be seen. O1¹ was first used with the equally renovated R1¹ and R1² and thereafter with two new dies. On R1¹ there are several small but significant changes (see catalogue no. 532); the alterations of R1² affect mostly Skylla's hair. The second reverse die (R2) has been known for a long time. It was in fact published first and was illustrated in Torremuzza (his pl. 5.1), in *BMC* (no. 61) and in Salinas (pl. 8.3). But it tends to be overlooked, and it is sometimes stated that the Skylla tetradrachms were struck from a single pair of dies.³⁶⁴ The third reverse (R3), a slight variation of R2, was unknown until the discovery of the 1984 Himera hoard (no. 17).

The types

The obverse shows, for the first time, the pair of eagles which from now on replaces the single eagle on most silver coins. The eagles are turned to the right; the nearer bird throws its head back, screaming, the one behind lowers its head towards the prey, a hare, that is now airborne and not placed on a support. The ferocious nature of the large birds is nowhere better rendered than on this first die with the new motif. The rough and sprawling feathering on the eagles' bodies and necks contrast with the long lines of the wing quills. The nearer eagle has a large head on a thin neck, the large beak is open with the tongue clearly visible; the farther eagle has a very long, crooked beak. The legs in the middle are skilfully compressed, and it looks natural that the birds have only three legs between them. The way they balance on the hare with their claws deeply sunk into its soft body is rendered with great skill.

On the reverse the crab occupies the upper part of the flan; below there is a large Skylla, swimming left. She is rendered in a perfectly mastered three-quarter view with her head in profile. In her half human form she is pictured as a beautiful young woman, naked to the waist, where the foreparts of two dogs are attached. The lower part of her body is

³⁶³ Cf. chapter 'Die alteration' in Jenkins, *Gela*, pp. 120–124.

³⁶⁴ *Class. Num. Rev.* XX.2, 1995, p. 12; *NAC* 8, 1995, p. 116. Cf. Leu 76, 1999, p. 23 ('two dies are known').

transformed into a long, coiled fish tail with sharp-edged dorsal fins and a broad, thorny tailfin. Her wet hair flutters out freely from her head and she lifts her right hand towards her eyes in the gesture of *aposkopein*.³⁶⁵

This new reverse type exists in only few varieties. The first die (R1) is of outstanding artistic quality and is one of the great masterpieces of Greek coinage.³⁶⁶ The crucial point in the rendering of the strange creature, the transition between Skylla's human body and the dogs and fish tail, is accomplished in a masterful way. After being used, to all appearances, for a considerable length of time this outstanding die was finally replaced by a new reverse which does not have the same artistic merit as the first one. On R2 the crab is large and clumsy and the composition of the Skylla figure has lost its firmness and homogeneity. Above all the transition between Skylla's human body and the animal parts, dogs and tail which was so smooth on the first die, is here not so well handled. The upper part of Skylla's legs are now shown, and the dogs emerge, in an unclear way, from some uncertain part of her hips. Her left arm disappears behind the coiled tail. R3 is very similar to R2. The die sequence shows that R2–R3 come after R1 and they must be regarded as less successful copies of the masterly prototype.

Interpretation of the types

Obverse

The nearer eagle with his head lifted is usually described as shown in a screaming attitude, but some authors prefer the more prosaic explanation that the bird throws back his head in order to swallow the blood better.³⁶⁷ It would imply that the eagles are shown 'in einer zeitbedingten Handlung' actually tearing their prey to pieces. That is, however, not the case. The nearest eagle with lowered head never touches the prey, the other is always shown with beak half-open and never closed, as it would be in order

³⁶⁵ Jucker. Also Belvedere, pp. 54–57.

³⁶⁶ The outstanding quality of R1 becomes even more evident when compared with representations of Skylla in other media. Belvedere, *Quaderno Imerese* 1, 1972, pp. 53–62, pls. 26–28, published a relief from the Himera excavations representing a similar Skylla *aposkopousa* as on the coins, but of poor artistic quality.

³⁶⁷ Evans, *NC* 1926, p. 11, following Sambon, *RN* 1914, p. 2; von Matt, p. 91; M. Bock, p. 405; Hofkees-Brukker, *Bull. s'Gravenhage* 35, 1960, p. 66.

to swallow. This difference is important. The eagles are not represented in a realistic, dramatic moment from daily life but in a timeless, carefully composed attitude suitable for a city emblem.

Reverse

The large size of the fish and the Skylla shows that they must be an integral part of the type and not merely adjunct symbols.³⁶⁸ Fish, usually grey mullets, are often connected with river-gods, for example at Gela, Katane and Kamarina.³⁶⁹ The mero is unique for Akragas, and for some unknown reason it was chosen to accompany the crab rather than a more common species. In a previous article I have tried to interpret her as a friendly but subordinate companion, who makes the gesture of *aposkopein* as a mark of honour directed towards the crab, the symbol of the local river-god.³⁷⁰

The engraver

The renewal of the old obverse, the standing eagle, implies that the eagle theme becomes more dramatized and expressive.³⁷¹ The first step was taken by the engraver who created the single eagle with wide open wings leaning over a hare (nos. 529–530), the next by the master who created the magnificent eagle pair as it first appears on the Skylla tetradrachms (nos. 531–535). It served as prototype for the similar eagle groups on the quadriga tetradrachms and the dekadrachms. The composition of these slightly varied double eagles has been duly admired.³⁷² It is undoubtedly an artistic highlight in the city's coinage and more characteristic of the mint than any of its other first rate coin designs.

³⁶⁸ Hill, *Ancient Sicily*, p. 122, criticizes the artist for not having 'had the courage to reduce the emblem of the city to a suitable size'. The explanation may be that both emblems were equally important.

³⁶⁹ Gela: Jenkins, pp. 82–83, 255, pl. 50; Katane: Hirmer, pl. 13.38–39; Kamarina: Westermarck & Jenkins, *Kamarina*, pp. 65, 79, pl. 25.

³⁷⁰ Westermarck, *Skylla*, pp. 215–221, with a survey of Skyllas on other coins. For a different interpretation of Skylla and the large fish cf. NAC 8, 1995, note to nos. 115–116, where Skylla is seen as the protecting divinity of the island and the fish as a symbol of the Athenian fleet.

³⁷¹ As emphasized in *Antikenmuseum Basel*, no. 258.

³⁷² Gardner, *NC*, p. 34; Gardner, *Types*, p. 130; Hill, *Ancient Sicily*, p. 122; Hill, *SGC*, pp. 22–23; Jenkins, *CGS*, p. 47.

It was Sambon's opinion that Akragas appealed to foreign engravers from Elis to create the new eagle types.³⁷³ The eagle pair, however, does not exist at Elis. It is unique to Akragas and must be considered as an independent and original version of an old coin type with long tradition. Seltman, discussing the engravers of the late tetradrachms and the dekadrachms, found that the eagle-dies arranged themselves easily and could be divided between two engravers.³⁷⁴ The real artist was, according to Seltman, the master signing Poly...(no 587); the other he called 'The Trier' as he was not 'completely successful' but an engraver 'of secondary rank'. To this second-rate artist Seltman attributed not only the least successful eagle dies in the Quadriga series, no.588, R6=S6 and no.590, R8=S11, but also the eagle pair on the Skylla tetradrachms. It is a surprising attribution. Instead of being a 'Trier', the creator of the first eagle group must be regarded as an important master. His prototype (no. 531) has some minor but significant details which are not always found on the following dies: the tongue sticking out from the beak of the nearer eagle, the tail of the farther eagle appearing above the wing of his companion, the lack of support for the hare. The finely curved necks of the birds, the varied pattern of the feathering and the clear sharp outlines of the whole group add to its artistic value.

It seems likely that the same master created also the superior first reverse die with Skylla. The motifs on obverse and reverse are certainly quite different and difficult to compare, but the outstanding artistic quality of both sides justifies such a view. It is also worth noting that the legend which appears on both sides is written with the same large and not quite even letters with a characteristic A. As the finely rendered sea creature is the most conspicuous and unusual detail of these coins, Rizzo's denomination the *Skylla master* may be accepted as the most appropriate for this anonymous artist.³⁷⁵ A stylistic influence from Syracuse or any other Sicilian mint can hardly be traced, because there are so few human figures and heads on the coins of Akragas. The outstanding example is of course the driver on the dekadrachms. His only rival is the half human Skylla, who has a modest companion in the sea god Triton on the bronze hemilitra (*Series 1*). Skylla's profile head has a big nose and firmly modelled traits. It is not a graceful head

³⁷³ Sambon, *RN* 1914, pp. 4–7, 12–13. Sambon was mostly concerned with the engraver Poly.; cf. above, p. 79 note 20.

³⁷⁴ Seltman, *NC* 1948, pp. 6–10, pl. I.ii, I.E, pl. II.H ('Trier').

³⁷⁵ Rizzo, p. 87.

and does not look similar to any of the Syracusan Arethusas. Her loose, flattering hair with a long, trailing curl in front of the ear recalls rather the river-gods at Kamarina, Katane and Piakos.³⁷⁶

Hemidrachms

The Large fish and Skylla tetradrachms are accompanied by hemidrachms which form two series. The first has on its reverse a crab with a fish below, the second has a sea dragon or ketos below the crab. The larger first series has 17 obverse and 22 reverse dies, the smaller second series only 5 obverse and 5 reverse dies. Most die-combinations are well documented, and some are represented by a large number of coins. The chronological sequence is confirmed by the transition from R to P in the ethnic, which occurs in the latter part of the first series. The introduction of a sea dragon, a marine monster closely related to Skylla, in the later series is an interesting novelty. It seems likely that the earlier hemidrachms with crab/fish belong with the large fish tetradrachms, and the later ones with ketos belong with the Skylla tetradrachms.

Series 1

Most obverse dies in Series 1 (nos. 536–575) are combined with more than one reverse die and form frequent die-links. In the latter part of the series the die linkage becomes very tight. Some obverse dies are combined with four or more reverse dies (O7, O11, O12, O15). The die sequence established with the help of die-links coincides with the use of two obverse types that are distinguishable stylistically. At first the eagle is small and compressed, with a broad wing covering his body. On O1 this compact eagle type is rendered in a rather extreme version. The tail is strangely bent towards the eagle's legs, the eagle's legs are very long, forming a sharp angle; the eagle is almost of the same size as the bird. Other dies too (O8–O9) have eagles with a similar broad tail, bent down. On the reverse the fish below the crab is placed either straight or slightly diagonally, pointing upwards. From no. 556 (O10) onwards the eagle, first turned left and then (from no. 562) right, is rendered in a different way. It is now more slender, with

³⁷⁶ Illustrated in Westermarck & Jenkins, *Kamarina* pls. 22 and 28.

a long, straight tail; the body appears under the curved wing and has a finely rendered feathering. On the reverse, the fish is swimming upwards to the left or right. The same fish, a grey mullet (genus *Mugil*), occurs on numerous bronzes of Akragas. It is slender and agile, the tail is deeply incised, and the back has two widely separated dorsal fins with two corresponding fins on the underside.³⁷⁷ The grey mullet is common also on other Sicilian coins, where it is often associated with water nymphs and river gods as on the famous tetradrachm of Gela with the three quarter facing head of Gelas.³⁷⁸

The legend AKRA or AKPA is normally placed on the reverse. There are, however, two exceptions. One die-combination, O1–R1, has the ethnic only on the obverse, and O2 linked with R2 and R3 has a legend on both sides of the coin. It seems likely that O1 with the exceptional obverse legend initiates the series, followed by the die-combinations with inscriptions on both sides. The legend on O1 is somewhat problematic. On all other coins in the earlier part of the first series the longtailed R is used, but in this case the ethnic, written in tiny but clear letters, seems to be AKPA with P. On a few well preserved specimens (Berlin, London) there may be traces of a tail. *BMC* 66 actually gives the reading AKRA, but the letter form remains uncertain. On O2 the letter form is clearly R. Thereafter the legend disappears on the obverse and is found only on the reverse, encircling the crab or placed above on either side of the crab's claws. With the possible exception of O1, the longtailed R is exclusively used down to no. 560 (O11–R16). The tail-less P makes its first appearance on R17 and is found on all following reverse dies except R22 which again has R. The principal dies in the later part of the series, O11, O12, O15 with the largest output, are combined with reverses with both letter forms, which must have alternated for some time.

Series 2

Series 2 (nos. 576–582) comprises only 5 obverse and 5 reverse dies. The number of preserved coins is high pointing to a large output. O22 is combined with two reverses (R26–R27), but otherwise there are no die-links in this series. The reverse legend is

³⁷⁷ Zeuner, p. 142; correct identification in *SNG Cop.* 57–60 and by Lacroix, *RBN*, p. 26, pl. 1.4, 1.7 and p. 27, fig. 3; *BMC* 65 ff. has tunny-fish.

³⁷⁸ Jenkins, *Gela*, no. 465, pl. 50.

A–K–P–A or in one case A–K–P–A–Γ (R25) encircling the type and always with P. The obverse dies are closely similar and display the same eagle type turned right, as in the latter part of series 1, but now with an additional corn grain below the eagle's wing. The eagle's prey is as usual a hare except on the last die, O22, where it is a larger animal. The species can hardly be determined with certainty, but it appears to be a kid with long, thin legs with hooves and an elongated head and a long neck. It has been called a colt,³⁷⁹ a goat kid,³⁸⁰ a donkey or a deer.³⁸¹ On the coins the size of the prey is emphasized and looks disproportionate to the bird. It is well known that eagles can carry off surprisingly large and heavy animals,³⁸² but a colt must be too big. At Elis a great variety of prey are pictured; some are hoofed animals, identified as fallow-deer or fawn.³⁸³ For Akragas a kid of a deer or fawn seem the most plausible suggestions both in appearance and size. The hemidrachms of Series 2 are the first silver coins of Akragas to picture an eagle with prey other than the normal hare, a novelty which was continued on the bronze coins where the prey is often a large fish and on small silver and gold coins at the end of the century showing an eagle fighting a snake.³⁸⁴

On the reverse a ketos turned left (R23–R25) or right (R26–R27) replaces the fish below the crab. The comparatively large size of the sea monster, its coiled tail with sharp fins makes it a good companion for Skylla. It has no parallel on other silver coins but is related to the many marine creatures on the bronze coins.

The hemidrachms not only show an interesting renewal of the coin types, but they are also a new denomination in the monetary history of the mint. There was a revival of smaller silver coins at many Sicilian mints during the last decades of the fifth century. The denominations are variously combined at different mints. Akragas, Syracuse and

³⁷⁹ BMC 64; Hamburg, Postel 31; Vismara, *Koinon* 5, p. 226.

³⁸⁰ Salinas 212.

³⁸¹ SNG Cop. 55; SNG Munich 83.

³⁸² A nice story about an eagle carrying off a five years old dog was told in a Swedish newspaper (*Svenska Dagbladet*) 31.1.2001. The dog fought heroically for its life. After a short flight the eagle and its prey fell to the ground. Both were saved and survived the adventure.

³⁸³ Seltman 97,106 (fawn), Seltman 121 (fallow deer). Other preys are sheep (Seltman 92), young buck (Seltman 103) and lamb (Seltman 111).

³⁸⁴ For a comment on no. 582.13 (O22–R27) see Vismara, *Koinon* 5, p. 226.

Naxos had a substantial production of hemidrachms.³⁸⁵ At mints like Gela, Katane, Leontinoi, Kamarina, Messana and Rhegion hemidrachms seem to have been scarce.³⁸⁶ Selinus had three small issues of hemidrachms, each represented by a single die-pair. All have reverse quadriga and on the obverse a Herakles head seen in profile, in three-quarter facing or frontal view.³⁸⁷ The date of these hemidrachms and the bronze coins with a similar Herakles head is probably post 409/8.³⁸⁸ At Himera there is a fine series of hemidrachms, accompanied by bronze hemilitra with identical types, goat-rider / flying Nike carrying an aphlaston.³⁸⁹

The Akragantine hemidrachms may be the earliest in Western Sicily. They accompany the tetradrachm groups with reverse Large fish and Skylla and belong like the larger coins to the decade *c.* 420–410. They are unusual in that respect that no other smaller silver denomination was struck simultaneously. The scarce didrachms, drachms and litrai (nos. 601–611) form a different group, which belongs to the last years before the capture of the city (*cf.* below).

The hemidrachms have a fairly good and stable weight with a clear peak just above 2.00. Naxos and other mints seem to have the same median weight, whereas the rare hemidrachms of Gela and Selinus tend to be lighter.³⁹⁰

³⁸⁵ Syracuse: Rutter, *Italy and Sicily*, p. 146; *SNG ANS* 304–313 (drachms and hemidrachms); Naxos: Cahn, *Naxos*, p. 65, Group V, 115ff. For the date *cf.* Lee, *NC* 2000, p. 15, who suggests *c.* 412/11 as upper limit.

³⁸⁶ Gela: Jenkins, p. 90, Group VII. 480; Katane: Boehringer, *Kataneische Probleme*, pp. 71–83, pls. 6–8, summary p. 78; Rhegion: Herzfelder, pp. 121–126, Group V (drachms, hemidrachms, litrai, hemilitra), pl. XI; Kamarina: Westermarck & Jenkins, *Kamarina*, pp. 205–210 (drachms, hemidrachm, litrai), pl. 29; Messana: Caltabiano, *Messana*, pp. 124–125, no. 632 (hemidrachm).

³⁸⁷ Evans, *NC* 1891, p. 277; Price, *Le origini*, p. 80, pl. 11.4–6.

³⁸⁸ Boehringer, *SM* 1978, p. 54.

³⁸⁹ *SNG ANS* 170–171 (hemidrachms). For the coin types, Lacroix, *Le origini*, pp. 271–276. For the rare drachms and hemidrachms of Entella, see Lee, *NC* 2000, pp. 1–66.

³⁹⁰ Cahn, *Naxos*, p. 80. For Gela and Selinus, see Jenkins, *Gela*, p. 90, note 3.

Tetradrachms Quadriga/Eagle pair

This final group of tetradrachms is comparatively large, comprising 7 obverse and 16 reverse dies.³⁹¹ It can be divided into two series: nos. 583–588 (O1–O5) with quadriga right and nos. 589–596 (O6–O7) with quadriga left. With the introduction of the quadriga the old obverse type, the eagle(s), was for the first time transferred to the reverse. The old reverse type, the crab, becomes less significant and reduced to an exergue symbol.

The standard reference work on the quadriga tetradrachms is a short article by C. Seltman published in 1948.³⁹² He arranged the coins in an order which he thought was ‘probably the right one’ without discussing any previous attempts to establish a sequence.³⁹³ In fact there are earlier suggestions which deserve attention. Tudeer was convinced that no. 588 (=S6) was the earliest issue considering the style and the shape of the letters.³⁹⁴ This opinion he shared with Salinas, who placed a coin of that die-pair first among the quadriga tetradrachms on his plate 8.7, and with A. Sambon, who distinguished several groups, of which the oldest comprises nos. 588 (=S6) and the then newly discovered coin signed by Polyai... (no. 587=S4) which he was the first to publish.³⁹⁵ After this initial group both Salinas (his pl. 8.8–9) and Sambon placed the coins with symbol Skylla and ketos (nos. 583, 585), followed by the latest issues partly signed by the magistrates Straton and Silanos (nos. 589–596=S11–S16). Rizzo has a very similar arrangement. He placed no. 588 (=S6) and no. 587 (=S4) first and added the rare issue no. 586 (=S5), which Salinas had regarded as a forgery (see catalogue no. 586), before nos. 583–585 (=S3–S1). The arrangement in the *BMC* (1876) begins with nos. 583–584 (=S3, S1) and places no. 588 (=S6) between no. 595 (=S16, Silanos) and no. 589 (=S12, Straton). It is thus evident that the issues with magistrates’ names are uncontroversial and have always been regarded as the latest, whereas the earlier series (nos. 583–588) has been subjected to varying arrangements. The main novelty with Seltman’s order is that he inserted

³⁹¹ I thank Silvia Mani Hurter (†) and Christof Boehringer for sharing their thoughts on the Akragantine quadrigas with me.

³⁹² Seltman, *NC* 1948.

³⁹³ He gives only a reference to the ‘feeble’ arrangement in Rizzo’s plates.

³⁹⁴ Tudeer, p. 255.

³⁹⁵ Sambon, *RN* 1914, pp. 1–13. Sambon’s numbering is reversed and a little confusing.

no. 587 (=S4) and no. 588 (=S6) at the end of the first series and not at the beginning as most earlier scholars had done. Seltman's order has never been seriously questioned, though Jenkins pointed out that 'it is not necessarily the only possible one'.³⁹⁶ In fact it requires a slight revision. It seems most likely that no.583 (=S3) initiates the new quadriga coinage. The obverse with letters MYP above the exergue line is one of only two Akragantine coin dies with an artist's signature. Akragas was slow to adopt the quadriga, and when this finally happened one would assume that an important artist was engaged to engrave the prototype for the new obverse type. Myr... produced a very fine quadriga die following Syracusan models. Seltman claimed that a coin like T57 (V20–R35, pl.40.7) 'was seen...and imitated' at Akragas,³⁹⁷ but Tudeer had already noted that the quadriga by Myr... closely resembles the three similar Syracusan dies V22 (T64–65), V23 (T66) and V25 (T. 68–72, pl. 40.2–3) but is turned in the opposite direction.³⁹⁸ The principal composition, the movement of the horses, the position of their heads, the double neck- and single belly-girdle, the male driver dressed in a long chiton leaving the right shoulder bare, the Nike above holding an open wreath with both hands, correspond to the Syracusan dies, but there are also some slight divergencies. On the Syracusan V25 the rein of the fourth horse is hanging loose and a loose wheel is lying on the ground,³⁹⁹ alluding to the danger of the race.⁴⁰⁰ The Akragas die has a trailing rein but the wheel is omitted. On Tudeer V22 and V25 the reins of the first horse are attached to the chariot. Even this detail seems to be copied on the Akragantine die, though it is not always clear due to the small size of the coins. On the Syracusan dies the horses' hind legs are stiff and strictly symmetrical. At Akragas the horses are heavier in build, the number of hind legs is reduced to seven and they are arranged in a more varied position. On the whole, the artistic quality of the die by Myr... is equal if not superior to the Syracusan models.⁴⁰¹

³⁹⁶ Jenkins, *CPS* II, p. 24.

³⁹⁷ Seltman, *NC* 1948, p. 5. He attributed T57 to Eukleidas though only the reverse head is signed by him. There are in fact no quadriga dies signed by Eukleidas, and the common attribution of such dies to him causes confusion. For Eukleidas and his activity, see Alföldi, *Studia Westermarck*, pp. 357–363.

³⁹⁸ Tudeer, p. 25, pp. 165–166.

³⁹⁹ Euainetos was the first to add such details to his dies: Tudeer V12 (wheel), V14 (trailing rein); cf. Kraay, *ACGC*, pp. 221–222.

⁴⁰⁰ On this theme see e.g. Scheffer, *OpRom*, pp. 47–52.

⁴⁰¹ That was not the opinion of Tudeer, p. 256, who regarded the Akragas die as a 'oberflächlich behandelte Nachahmung'.

The eagle-pair on the reverse closely follows the prototype on the Skylla tetradrachms, though some details are different: the hare is again placed on a support, the tail of the further eagle is seen below the tail of the nearer one and the eagles' legs are now covered in a richer feathering, concealing their number. The ethnic is placed on the reverse and follows the edge of the coin. Symbols appear on most of the reverse dies.

Series 1

Series 1 (nos. 583–588) consists of separate issues formed by five obverse and six reverse dies with a single die-link between nos. 583–584 (O1/R1 and R2). The small Skylla in the exergue of O1, signed by Myr..., connects the new series with the preceding Skylla tetradrachms. The figure is in fact a small scale replica of the larger Skylla. The choice of this exergue symbol, the signature and the lack of a reverse symbol on R1 are the main reasons for regarding no. 583 (O1–R1) as the initial issue. At Syracuse a Skylla occurs only once on the die signed by Euth...(V15, T46–48, pl. 40.21), but there is no relation between the two issues: Both the quadrigas and the Skylla figures are dissimilar.⁴⁰²

O1 is first combined with R1, which has no symbol. On R2 there is a cicada in the left field.⁴⁰³ When combined with R2 the obverse O1 has developed serious flaws, e.g. on the wheel of the chariot, and the little Skylla is disfigured by heavy die breaks. Seltman regarded the die combination O1–R2 as the earlier and Skylla on R1 as re-engraved. That is however not possible considering the poorer condition of O1 when combined with R2 (cf. catalogue). It is also unlikely that the cicada symbol first appears on S1–S2 (=585, 584) and then is removed (S3–S4=583, 587) only to reappear again (S5=586).

The issues no. 585 (O2–R3=S1) and no. 586 (O3–R4=S5) have the same reverse symbol, a cicada, but new exergue symbols on the obverse, a ketos and a crab, respectively. O2 is very similar to O1 but lacks the fine rhythm of the first die. O3 is artistically weaker.

⁴⁰² Forrer, *Signatures*, p. 246 and Forrer, *Dictionary*, vol. 4, 1909, p. 211, mentions Euth... as prototype for Myr..., referring to Weil, p. 9, but Tudeer, p. 256, pointed out that this is due to a misunderstanding. Weil says in fact that the rendering of the horses on the die signed by Myr... recalls the quadrigas of Eukleidas and Euainetos. With 'Eukleidas' he obviously means the signature later identified as Euarchidas, cf. note 414 below. For the Skylla figures in the exergue, cf. Westermarck, *Skylla*, p. 217.

⁴⁰³ For representations of cicadas on coins, see chapter on Dekadrachms, notes 448 and 449.

It seems likely that O2–O3 were copied from the signed prototype.⁴⁰⁴ On O3 there is a little variation in the arrangement of the horses' heads and legs; the head of the fourth horse is more lifted; the tail of the first horse longer. The driver has a different hairstyle and may be female, though the details of the dress and hairstyle are not clear enough to determine the sex with certainty.

The reverses R1–R4 are closely similar and may with greater credibility be attributed to a single engraver. The principal scheme and essential details remain identical. The strongly hooked beak of the nearer eagle is always half open, and the hare is large and fat and placed on a support which is usually interpreted as a rock or stones, but more fanciful suggestions with connections to the marine world occur: shells or fish or a combination of the two.⁴⁰⁵ On R3 there are some minor variations in the feathering of the eagles. The open wing of the eagle behind is rendered in a somewhat different pattern with long lines and not in several layers as on the other dies. On R4 the wings of the eagle behind are finely curved and the cicada is unusually well visible.

The ethnic on the first reverse is unusually clearly legible, ΑΚΡΑΓΑΤΙΝΟΝ, but on the following reverses R2–R5 it is often indistinct or off the flan or only partly legible. On R3 the ethnic is partly reversed, on R4 it is retrograde.

The common obverse crab symbol links nos. 587–588 (O4–R5=S4 and O5–R6= S6) with the preceding issues, but there is no reverse symbol and the style is different.⁴⁰⁶ No. 587 (O4–R5) is a small issue, documented by only three surviving coins. The piece (587.3) which came to the Lloyd collection (*SNG* 819) was published by Sambon in 1914 and remained for a long time unique.⁴⁰⁷ Much later a second specimen appeared in the Hess-Leu sale 31, 1966 (587.2), and thereafter one more coin of unknown provenance

⁴⁰⁴ Seltman, *NC* 1948, p. 7, attributed O1 (signed), O3 and also O4 (pl. III. B, D, C) and probably also O2 (pl. I.A); *MMAG* 25, 1962, 401 attributed O3 to Myr(on), 'qui a signé un tétradrachm d'un style tout à fait comparable'.

⁴⁰⁵ Jameson 510 ('coquillages'); Hess-Leu 16.4.1957, 65 ('Fische'); *Gulbenkian* I, 167 ('shells in a rocky landscape').

⁴⁰⁶ With regard to the crab symbol Seltman inserted no. 587 (=S4, crab upwards) before no. 586 (=S5, crab downwards as on no. 588). Nos. 583–586 are however stylistically similar and cannot be separated.

⁴⁰⁷ *RN* 1914, pp. 1–13.

and not in very good condition has appeared on the market. On 587.2 the ethnic, or part of it, ΑΚΡΑΓ/Α.. could be read for the first time. There are no traces of letters on the right side of the coin, and the full legend remains uncertain.

The quadriga die (O4) has the same main scheme as the previous dies O1–O3, but the die is not in a good condition. On the Lloyd coin the design looks strongly compressed; the head of the second horse is squeezed between those of the first and third horses and appears only as a vertical line. The horses' legs form a rather muddled pattern and several hindlegs touch the ground. There is a rein trailing on the ground, but it is impossible to make out which horse it belongs to. Nike is large and very close to the heads of the horses. She carries an open, disproportionately big wreath in her outstretched hands. The charioteer cannot be seen well on any specimen. The Lloyd coin is struck on a thick, oval and compact flan, much too small for the obverse die, the other coins have broader flans, but in spite of that the charioteer is off the flan or distorted due to poor preservation, and it remains uncertain whether the figure is male or female.⁴⁰⁸

No. 587 is thus a combination of an obverse die which seems artistically somewhat weak and poorly preserved and a highly interesting reverse, remarkable for its eagle group signed by POLYAI..., the only artist's signature known at Akragas besides Myr... Here the eagle pair is turned left. The composition is compressed, the eagles stocky with short necks. The head of the nearer screaming eagle reaches up only to the edge of the wing of the farther eagle, with the result that the two melt together, and on certain photographs they look like only one eagle (on earlier dies the head is sticking out above the wing). The wings are pointed and narrow; the feathering is unusually rough and detailed, the wing quills rendered with long, thick lines. The large hare is placed on a pile of stones as before, with a plant added in front of it. On the lowest wing quill of the nearest eagle the letters Polyai.. are engraved in minute letters. The correct reading was first published in the Hess-Leu catalogue of 1966 (=587.2). The visible part of the signature, POLY.., on the until then unique coin in the Lloyd collection, had earlier been completed as either Polykr.. or Polykl...⁴⁰⁹ Seltman, writing in 1948 and unaware of the

⁴⁰⁸ In Kraay & Hirmer, pl. 61, no. 176; it is described as female.

⁴⁰⁹ Robinson, *SNG Lloyd* 819, read Polykr.; Jongkees, pp. 70–71, doubting Robinson's reading, called him Polykleitos, assuming that he came from Elis and was identical with the engraver signing ΠΙΟ;

correct spelling of the signature, adopted the name Polykrates. He regarded him besides Myr(on) as the great master of the Akragas mint and attributed to him all the finest eagle dies.⁴¹⁰ His attributions, however, are not fully convincing. The eagle pair on the die signed by Polyai... (R5) is of a vigorous and somewhat rough style and stands apart from all others. In my opinion no other eagle die can be attributed to this master, whose activity at the mint may have lasted only a short time.

Unlike the small issues nos. 586–587, no. 588 is known from a large number of extant specimens struck on larger flans of irregular shape. The quadriga die O5 shows a distinct variant in style compared with the previous ones. The head of the nearest horse is now turned back, while the heads of the other horses are pointing forward. The hindlegs form a stiff, parallel row and touch the ground, the forelegs are only slightly lifted, the wheel has modelled spokes and is almost round, rendered in a frontal view. The tail of the nearest horse follows the border of the wheel; those of the farther horses are lifted and visible in the air above the back of the first horse.⁴¹¹ This is a curious detail, which does not occur on any other quadriga of Akragas or Syracuse, but can be found in vase painting.⁴¹² Nothing is visible of the chariot except the nearest wheel. The driver is female.⁴¹³ Many of the coins are worn or damaged in various ways and in such cases the driver is disfigured, but on a few good specimens her female body and hair style are clearly distinguishable. She is dressed in a long chiton with a short cloak over her shoulders that blows out in the wind. She is not taller in proportion than before, but the three-quarter view of the upper body with the right shoulder drawn back and her wind-blown dress make her look broad. Her hair is worn in a top-knot. She holds the reins of first two horses in her right hand and probably those of the third and fourth horses in her outstretched left hand, collecting the ends of them all in her right hand. It is similar to the arrangement on the previous dies, but on O5 the reins are not tight but hang loose in

Sambon, *RN* 1914, p. 1, note 1, was more cautious, stating ‘qu’il faut... renoncer à toute tentative de le compléter’. According to Seltman, *NC* 1948, p. 9, note 13, Forrer claimed to have been the first to observe the signature ‘many years ago’.

⁴¹⁰ Seltman, *NC* 1948, pl. IV = R2, R5, R4, R7, R12 (tetradrachms) and R3, R2 (dekadrachms). For R1 cf. Leu 52, 1991, 10 (=583.1) ‘possibly an unsigned work by the engraver Polyai..’

⁴¹¹ Tudeer, p. 255.

⁴¹² Richter, *Perspective*, fig. 143 (calyx-krater in the British Museum, London).

⁴¹³ Correctly noted in e.g. *BMC* 57; Rizzo, p. 88.1; Kraay & Hirmer no. 178.

a strange way. The driver's right arm drawn back and the loose reins do not correspond well to the movement of the horses. There is no closely similar quadriga die in Syracuse, but several stylistic features recall the Phrygillos-Euarchidas group (T. 49–56).⁴¹⁴ Horses with heads turned backwards and a female charioteer are distinct details on the quadriga dies R30–33 of this group (pl. 40.6). The driver is very large in proportion to the horses and dressed in a long chiton that blows out behind her. As on Akragas O5, no chariot is visible. The Syracusan dies are, however, much more elaborate: the horses heads are turned in various directions, the movement is agitated, the horses' legs form a tangled mass; the wheel is foreshortened and on R31–R33 not only the upper part of the body with the left shoulder drawn back but also the driver's head are rendered in three-quarter view. Only two of the dies (R31, R33) are signed by Euarchidas, but Tudeer attributed also R30, R32 to the same engraver owing to their close stylistic similarity.⁴¹⁵ In Tudeer's following group (T57–T62) the quadriga, once more with female driver, is again on the obverse (V20–V21, pl. 40.7–8). The movement here is much calmer, only the two middle horses turn their heads, one upwards, one sideways, and the hindlegs of the horses are stiff and parallel. In the rendering of the horses and their action, the female driver and details of her dress, the Euarchidas-Phrygillos group and V20–V21 show some affinities with Akragas O5. At the same time there are clear divergencies. On the whole the Akragantine quadriga looks more old-fashioned. The engraver seems to mingle older and new stylistic traits: the action of the horses is slow and heavy, the wheel is almost round and frontal, but the charioteer is partly rendered in a three-quarter view. The engraver O5 may have been influenced by current quadriga types in various media apart from coins, for example, vase painting and reliefs. A quadriga of a similar type as O5 but of a superior artistic execution was adopted for the rare dekadrachms (cf. below).

⁴¹⁴ Tudeer, pp. 151–154. The name of the engraver Euarchidas was first correctly identified by Salinas, *NotSc*, p. 307, pl. 17.25 (=T52, R31). Earlier writers had read his name as Nouklidas or later Eukleidas (see ref. by Evans, *NC* 1890, p. 301, note 36). Though Salinas and Evans had correctly identified also the signed reverse R33 as a work by Euarchidas, the false attribution to Eukleidas persisted: e.g. Sambon, *RN* 1914, p. 4; Sambon, *RIN* 1914, p. 36 with note 2 and p. 38 with note 1; Seltman, *NC* 1948, p. 5; Jenkins, *Gela*, pp. 96–97; Forrer, *Signatures*, pp. 121–122, 141, gives R31 to Euarchidas and R33 to Eukleidas.

⁴¹⁵ Tudeer, p. 152.

The ethnic ΑΚΡΑΓΑΝΤΙΝΩΝ on the reverse (R6) is reversed and retrograde, and the large and sharply cut letters seem to have an unusual shape. That is however an effect of the retrograde position, and if turned the right way round the legend looks normal. The ending is -ΩΝ, the only instance where omega is used on an Akragas tetradrachm. The crab symbol connects no. 588 with nos. 586–587 and shows that this issue belongs with series 1 and cannot be placed after no. 595 at the end of the quadriga tetradrachms. The eagles have compact bodies with big heads on short necks, long tails and large feet clasping an enormous hare. The open wing of the further eagle is strongly curved, and the ends of the other wing sprawl up behind it in a fanlike pattern. The hare is placed on a rock with smaller stones in the foreground. The eagles have stocky features similar to those of the horses, and it seems likely that both sides are by the same artist, who has a style of his own. The quadriga type, the rendering of the eagle pair and the use of omega are dissimilar to all other Akragantine dies, and no other work can be attributed to the same engraver.⁴¹⁶

Series 2

The last tetradrachms nos. 589–596 form a small, closely die-linked series consisting of two obverse and six reverse dies. The obverse motif displays several new features. The chariot is now turned left and is driven by a winged Nike. The ethnic has been moved from the reverse to the obverse. It has the form ΑΚΡΑΑΝΤΙΝΟΝ and is placed either in the exergue (O6) or on a tablet (O7). The order of the two obverse dies is secured by the common R9. When linked with O6 a small die break begins to appear on the first eagle's neck; it has developed further in the later die combination with O7. The eagle pair on the reverses follow the established pattern, differing only in small details. The birds' legs are all clearly visible; the open wings of the further eagle are more strongly curved than in the previous group. All reverse dies have symbols except R11–R12. The sequence of these symbols is secured by the gradual deterioration of the obverse dies. R7 and R11–R12 are signed by the magistrates Straton and Silanos.

⁴¹⁶ Seltman, *NC* 1948, p. 6, pl. I.E, attributed the reverse die (R6) to the engraver whom he called the 'Trier'.

The finest obverse O6 thus comes first. Besides O1 signed by Myr., O6 is the great masterpiece among the Akragantine tetradrachm quadrigas. The horses are moving at full speed but their action is not agitated; the heads are turned in various directions; the legs intersect each other at intervals, some hooves touch the ground line, others are above it. The single horses are unusually clearly visible; the fourth horse advancing in front of the others is about to turn left; the belly and hind-quarters of the second and third horses are visible. Both wheels of the quadriga are here shown for the first time. Nike is of a large, superhuman size and commands the race standing in a chariot with a high antyx. She is leaning forward holding the reins of the fourth horse in her outstretched right hand and the reins of the other horses and a kentron, pointing upwards, in her lowered left hand. She has long open wings with pointed ends reaching up behind her head. When Nike is driving the victorious outcome of the race is self-evident, and the small Nike, who usually is hovering above the horses with a wreath about to crown the charioteer, is omitted and in this case replaced by a long vine branch with a bunch of grapes hanging down over the head of the the second horse. Its purpose seems to be merely decorative.

The last die O7 is similar to O6 but not quite of equal artistic quality. There are some changes in the composition: the horse team is more compressed; the horses rear up higher; no hooves touch the ground line; the number of hindlegs is reduced to six; the position of the horses' heads is simplified; the head of the fourth horse is not turned sideways but is placed parallel with that of the third horse; instead of leaping forward, ready to begin the turn, as on o6, the fourth horse is now the least visible. Nike is standing in the same position as before, but she is smaller and does not dominate the scene as much as in the previous die. As the role of the fourth horse has been reduced Nike holds the reins of all horses in her left hand and only the kentron, pointing straight forwards, in her right hand. The effort to fill the empty field above the horses has not resulted in a fully satisfactory solution. The fine vine branch has been replaced by a tablet inscribed with the ethnic. The tablet recalls the dies which Euainetos cut for Katane⁴¹⁷ and Syracuse (pl. 40.15, 17), but at Akragas it is not carried by Nike but fastened in the empty space with a nail ending in a large knob. The engraver has miscalculated the

⁴¹⁷ *Kunstfreund* 89; Fischer-Bossert, *SNR* 1998, pl. 6.

space, and the three last letters are hanging in the air outside the frame of the tablet. A votive tablet with figure(s) on some rare tetradrachms of Selinus is another variant from the same period.⁴¹⁸

Tudeer found a certain similarity between O6–O7 and Kimon's die R53 (pl. 40.14), one of the two reverse dies that are combined with the famous facing Arethusa head (T78–81).⁴¹⁹ Seltman went further and assumed that the Akragantines must have applied to the 'most celebrated master' himself to cut the new dies for their city.⁴²⁰ That is, however, not a convincing suggestion. Kimon's quadriga die R53 is a stylistic variant of a scheme depicting great speed and dramatic action which had reached its height in the outstanding quadriga which Euainetos created for Katane (pl. 40.15). In Euainetos work the horses are tight together and the driver, leaning forward with his right arm stretched out, is small and in great danger to lose control of his team. This die was obviously much admired and served as prototype for other engravers.⁴²¹ The general design of the horses and the driver on the Akragas dies is certainly similar both to Euainetos' Katane die and to Kimon's die R53 (pl. 40.14–15), but there are also divergencies. The movement is far less agitated, the horses do not rear up, their heads are not in the same position. On Kimon's die the foreshortening of the horses, seen slightly from below with their bellies visible, is rendered in masterly fashion. The same is true of the driver, who is not only leaning forward but also bending over to the left side with his left shoulder exposed. Such a bold attempt at foreshortening is not found on any of the Akragantine dies with their less agitated action. Akragas O6–O7 cannot be said to follow any certain prototype but may be regarded as works of an anonymous engraver who had a rich supply of models to study and was able to create a new variety of a quadriga in the style of the period. There are stylistic affinities with other contemporary mints, e.g. Gela and Kamarina (pl. 40.18–19). An important detail, the Nike charioteer, recalls Gela

⁴¹⁸ Schwabacher, *Selinunt*, nos. 39–40, R30–R31. The tablet is usually described as hanging from the laurel branch carried by the river god (*SNG Lloyd* 1238), but Rizzo, *Intermezzo*, pp. 60–61, argues convincingly that it is in fact hanging in the background on the imaginary wall of the temenos.

⁴¹⁹ Tudeer, pp. 256–257 noting 'das Verdienst der Selbständigkeit' of the engraver at Akragas.

⁴²⁰ Seltman, *NC* 1948, p. 9.

⁴²¹ Fischer-Bossert, *SNR* 1998, pp. 25–34, pls. 5–7.

(pl. 40.18). Akragas and Gela were alone in having Nike as driver on their coins.⁴²² The eagle with spread wings on two of the last tetradrachm dies at Gela (Jenkins O97–O98) is an Akragantine emblem borrowed from the decadrachms.

Of the six reverse dies R7, turned left, and R9, turned right, stand out as being of superior quality. On R7 the feathering of the open wing is rendered in long lines, on R9 the pattern is more detailed, rendered in three layers of small feathers. The eagles of R8 have the same pattern of feathering as R7, but the birds are stocky and short-necked with muddled feet, and the die can only be regarded as a somewhat clumsy copy of R7. R9 served as prototype for the remaining R10–R12. A curious detail on the two last dies (R11–R12) is the broken neck of the hare with its head turned back and the enormously long ear pointing forwards.

The four reverses R7–R10 have a symbol in the field behind the eagle pair, the last reverse dies R11–R12 have no symbol, but the name Silanos. R7 has both the name Straton and a symbol. Straton and Silanos, whose names are written in thin but fairly large letters following the edge on the left side of the coin, are usually regarded as magistrates but have also been thought to be engravers.⁴²³ The signature Stra(ton) is found also on the didrachm (no.601). Though the eagle pair on R7 and the single eagle on the didrachm possibly are works by the same engraver, this master cannot be identified with Straton. The large size of the letters and the way the name is placed along the edge of the coin differ from the minute signatures of the engravers Myr.. and Polyai... This is even more evident in the case of Silanos. He is best known from the gold, where his name appears in a conspicuous way filling out the field below the crab. Silanos and Straton are best regarded as magistrates and have early predecessors in Exakestos and the abbreviated signatures which are found on a few didrachm dies of Group II.

⁴²² *Gela*, p. 93.

⁴²³ Hirmer, *Griechische Münzen*, nos. 42–43 suggests the ‘Künstler Silanos’ as creator of the famous dekadrachm; the tetradrachm Leu 42, 1987, 79 (=599.2) is called a work ‘des Meisters Silanos’. Cahn, *Antikenmuseum Basel*, no 261 (=589.10), writes ‘nicht eindeutig zu klären ist die Frage, ob Straton als Münzbeamter oder als Stempelschneider signierte’; so also Leu 79, 2000, 366. Peus 366, 2000, 28 says ‘signierte Arbeit des Stempelschneiders Straton’.

The crab on O3–O5 (*Series 1*) and the grasshopper on R8 (*Series 2*) both reappear on the dekadrachms. The silver coinage of the final phase is closely interlinked by such common details. The symbols on R9 (lion's head) and R10 (bull's head) occur only in this series and are otherwise alien to the Akragantine coin types. More familiar is the young, horned head on R7, sometimes called Pan but usually interpreted as a head of a river-god.⁴²⁴ It is similar to the river-god Akragas on the later bronzes inscribed with his name, but the small scale version on the tetradrachms has no taenia and the hairstyle is less tidy. The single horn stands out in the locks of the hair on top of the head but is not always clearly visible. If compared with the driver on the dekadrachms, here identified as the river-god Akragas, the two heads have the same fleshy features, big nose and short hair arranged in thick curls, though the charioteer has no horn.

Chronology

The date accepted by Seltman for the Akragantine quadriga series (*c.* 413–406) had in fact been established long before his time. Already in the *BMC* (1876) and in Head's *HN*² all late tetradrachms are placed in the *Period of Finest Art* beginning 413/412. Sambon had concluded that the quadriga tetradrachms following Syracusan prototypes cannot begin before *c.* 412 and must finish in 406,⁴²⁵ whereas Tudeer suggested a slightly earlier initial date in the years of the Athenian war.⁴²⁶ There is, as Kraay says, 'little room here for manoeuvre'.⁴²⁷ Yet Kraay argued that the first quadriga of Akragas 'need be no earlier than 410'. The number of dies, seven obverse and twelve reverse dies, is not high. At the same time the structure of *Series 1*, formed by separate issues without die-links, speaks against a too compressed period of minting. It is hardly possible to fix an exact year, but an initial date around 410 seems to be the most likely, also with regard to the stylistically related quadriga types at Syracuse and other mints which were discussed above (*Series 1*, p. 14–15, 18, *Series 2*, p. 22–23). Tudeer's V22 (pl. 40.2) forms a long

⁴²⁴ Rizzo, 90.1 (Pan?); Franke & Hirmer no. 180 (Pan?, Flussgott?); *BMC* 58 (river-god); so also *BM Guide*, p. 26, no 26; Seltman, *NC* 1948, p. 4, no. 12 (horned god); *LIMC* I, p. 447, 'Akragas' (Arnold-Biucchi), ill. = 589.8.

⁴²⁵ Sambon, *RN* 1914, pp. 5–6.

⁴²⁶ Tudeer, pp. 254–255.

⁴²⁷ Kraay, *Le origini*, p. 36–37.

die-chain with V25 (pl. 40.3), V26–V27 sharing several reverse dies (T63–T77). These issues include the engraver who is called ‘Master of the large head’ (V22–R41; V25–R46–R47) and other reverse dies with similar large heads (R42–R43) which are on the current chronology usually dated to the period *c.* 410–405, a date which tallies quite well with the suggested chronology for Akragas.⁴²⁸

A chronological peg of a different kind came to light with the overstrike of Akragas (no. 585.2, pl. 71) on a Punic tetradrachm, which Kenneth Jenkins published in 1974.⁴²⁹ Jenkins identified the undertype as his die O3. It comes at the beginning of the Carthaginian coinage though it is not one of the very first dies. The overstruck Akragas tetradrachm used to be placed first in the Akragantine series (=S1) but it was shown above that it comes a little later (O2–R3). Jenkins convincingly argued that Carthage initiated its ‘purely military coinage’ as a result of the decision to ‘intervene on behalf of Segesta in 410 BC’.⁴³⁰ It does not mean that the coin production was begun in exactly that year, but it gives an approximate date. A more or less simultaneous start for the two coinages in Carthage and Akragas would make it possible for both the undertype and the overstrike to be produced within a short period of time, provided that the Punic coins were easily available. The location of the Punic mint is therefore of interest. Jenkins found that the revised chronology made it difficult to envisage a Sicilian mint, and he thought that the mint was established at Carthage itself. This proposal was however rejected by Mildenberg, who stressed the Sicilian hoard evidence.⁴³¹

Hoard

Coins of Akragas are quite well represented in hoards with a date of burial in the late fifth or the early fourth centuries (*IGCH* 2092 ff). It is however noticeable that some of these late hoards contain only early didrachms and/or eagle/crab tetradrachms of Akragas and

⁴²⁸ Mildenberg, *Kimón*, p. 117 (*c.* 410–405); *Gulbenkian* I, 285 (=T63g), 287 (=T68 A), 288 (=T69), *c.* 412 ff; *Antikenmuseum Basel*, no. 467 (=T65, V22–R43, *c.* 405); NAC 33, 2006, 94 (=T68A, V25–R42, *c.* 405–400).

⁴²⁹ Jenkins, *CPS* II, p. 24.

⁴³⁰ Jenkins, *CPS* II, p. 25. The same chronology is found in older literature, *e.g.* Ridgeway, p. 288.

⁴³¹ Mildenberg, *Studia Westermarck*. Cf. Lee, *NC* 2000, pp. 36–46, who suggested Entella in western Sicily as the first Carthaginian mint.

no late tetradrachms (Monteracci 1953, Piano Rizzuto, Chiesa Pepa). In the hoards from Ognina, Vito Superiore and the documented part of Himera 1984, the number of early coins is much higher than that of the late ones. It is evident that without the element of earlier coins, the mint of Akragas would be very sparsely represented in comparison with other mints, e.g. Gela. Tetradrachms of Period III are found in the following hoards: Himera 1984, 1 large fish (530.1), 1 Skylla (535.1); Pachino, 1 large fish (530.23, now lost); Contessa, 1 Skylla (531.9); Caltanissetta, 1 Skylla (531.18), 1 quadriga (590.2); Ognina, 1 large fish (530.8), three quadriga tetradrachms (589.1, 593.3, 596.1); Leonforte, 1 quadriga (594.2); Augusta, 1 quadriga (595.11), Vito Superiore, 1 quadriga (596.7). For the quadriga tetradrachms there is a clear difference between the earlier and the later phase. The only hoard provenience for series 1 is the uncertain coin (585.1), which possibly comes from the small Giarre Riposto hoard, whereas all others belong to the second series. The total number is 14 (including the uncertain piece from Giarre Piposto). In the same hoards plus Selinunte 1888 (which has no coins of Akragas), Gela is represented with 29 coins from Jenkins' late groups VII–IX (after *c.* 425). The hoards mirror the fact that the silver coinage of the late period was extremely scarce in relation to the city's status as the second in size and importance in Sicily after Syracuse.

Dekadrachms

Preserved coins

The only dekadrachms of Akragas which are mentioned in numismatic publications of the seventeenth and eighteenth centuries are cast copies.⁴³² A phantom piece in St. Petersburg, which figured in older numismatic literature for a long time, was finally dismissed by M. Bernhart.⁴³³

Eight pieces known at the present day and by common consent acknowledged as genuine can be listed in chronological order according to their provenance as follows: 1)

⁴³² Westermarck, *NAC/QT* 2007.

⁴³³ Holm III, pp. 109–110, note to no. 140; Weil, p. 13; Evans, *NC* 1891, p. 339; Reinach, *L'Histoire*, p. 94 (reprint from *RA* 1894); Mirone, *Aréthuse*, p. 107; Bernhart, *Numismatik* I.1, 1932, p. 10.

Paris I (=597.1) in the collection since 1826, published by Th.Reinach in 1894 and 1902;⁴³⁴ 2) Munich (=599.1), acquired in 1845 from the Longi collection, Messina;⁴³⁵ 3) Harvard, Dewing 562 (=600.2, formerly Pennisi I), published by Salinas in 1867, no.187, pl.8.6;⁴³⁶ 4) Pennisi II (=597.2), in the collection before 1910 and mentioned by Buchenau and Bernhart that year.⁴³⁷ The Naro 1925 hoard yielded two specimens: 5) London, *SNG Lloyd* 817(= 600.1) and 6) Lisbon, *Gulbenkian* 168 (=598.1). After a long interval two more coins appeared on the market: 7) Private collection (=597.3), ex. SBV 1.1977, 37 and 8) Formerly Bunker Hunt collection (=600.3), acquired from NFA before 1983. It seems likely that these two coins come from Sicilian hoards but nothing is known of their provenance.⁴³⁸

In recent years several new dekadrachms are rumoured to exist in private collections. Some are documented by casts and photographs but unfortunately all are without any known provenance. Here one of these new pieces is added on the authority of Silvia Hurter,⁴³⁹ who illustrated the reverse, without comments, in an article. The coin belongs to die-pair O1–R1 (= 597.4).

Authenticity

The authenticity of the dekadrachms has always been much discussed, not least the old specimens. In 1908, A. Sambon denied the authenticity of the four dekadrachms in Munich, Paris I–II and Pennisi II and declared them to be works from the early eighteenth century.⁴⁴⁰ His arguments for such a conclusion were manifold. In fact he

⁴³⁴ Reinach, *L'Histoire*, p. 94.

⁴³⁵ Bernhart, *MBNG*, p. 18; *SNG Munich* I, preface (third page).

⁴³⁶ In a typewritten record at Harvard dated June 26, 1969, A.S. Dewing tells how on January 13, 1945, he acquired the dekadrachm formerly in the Pennisi collection through Jacob Hirsch (New York), who had then had it since 1937 or 1938. Courtesy of Carmen Arnold-Biucchi, Harvard.

⁴³⁷ Bernhart, *Numismatik*, I.1, p. 10 and I.2, pp. 33–34, figs. 6 and 10; Buchenau, col. 4373; for the Naro hoard, Mildenberg, *KME*, pp. 181–189, pl. 44–45.

⁴³⁸ Cf. Hoard G Sicily, 1975 in *CH* 3, 1977, no. 20 and *CH* 4, 1978, no. 23; Jenkins, *CPS* III, 1977, p. 12, note 26. This find (or finds) may have contained some dekadrachms.

⁴³⁹ Hurter, *NomKhron*, pl. 1.4 (rev.); the author is mainly concerned with the grasshopper symbol and does not discuss the Akragas coin as such.

⁴⁴⁰ Sambon, *Le Musée* 1908, pp. 9–10.

found almost everything wrong and unsatisfactory: the absence of an exergue line, the violent action of the horses and the position of the horses' legs, the chariot without ampyx, the legend, the crab. On the reverse he disliked the hare placed on a rock which to him looked like a heap of crushed linen. Sambon's attack gave rise to a discussion which lasted for many years. He was immediately answered by E.J. Seltman, who stated that of the three pieces, which he had studied (Munich and the two in Paris), he had always believed in the authenticity of the one in Munich, but he agreed with Sambon that both coins in Paris were false.⁴⁴¹ One of them (Paris I) was certainly struck but 'of so coarse a fabric that it easily betrays itself as the work of a forger' and the other (Paris II) was a cast with a 'fishy' look and a faulty legend. To prove this he measured the distances between certain points on the Munich coin and Paris II, demonstrating that the Paris coin had 'undergone the inevitable shrinkage'. In an appendix to the Italian version of his article Seltman discussed the two coins in the Pennisi collection, of which he had in the meantime received casts. He found that Pennisi I (now Dewing) was undoubtedly genuine. Contrary to Salinas he did not think that it was restruck (600.2). The other Pennisi dekadrachm (II) he declared to be a forgery like the die-identical Paris I, which he had already rejected due to its supposed coarse fabric.⁴⁴² Thus to E.J. Seltman there were only two genuine pieces: Munich and Pennisi I (=Dewing). H. Buchenau gave a summary in German of Seltman's arguments stressing the technical aspects of the flans.⁴⁴³ After a long interval the discussion was revived by Max Bernhart in two well illustrated articles from 1932.⁴⁴⁴ Bernhart had no doubts about the Munich coin. He had the opportunity to study both specimens in the Pennisi collection and became convinced that both were genuine. Like Salinas but unlike Seltman he thought that Pennisi I (=Dewing) showed traces of overstriking. Bernhart agreed that Paris II is a cast but defended the authenticity of Paris I, which Seltman had condemned. Then Bernhart went on to discuss the two pieces from the Naro hoard, which at the time had recently come on the market and were still in trade. He found that in spite of being struck they were examples of refined forgeries. After a rather complicated interpretation

⁴⁴¹ Seltman, *NC* 1909, pp. 1–8, pl. 30, and Seltman, *RIN* 1910, pp. 3–11, pl. 4.

⁴⁴² Seltman, however, strongly rejected Sambon's strange idea that Pennisi II, which they both regarded as a forgery, might be restruck on a Demareteion dekadrachm.

⁴⁴³ Buchenau, *BfM*. Buchenau seems to have regarded also Pennisi II (his fig. B) as genuine, though he does not expressly say so.

⁴⁴⁴ Bernhart, *Numismatik*.

of the flans, the die-flaws and the letters he stated that his ex. F = Lloyd was a copy of the two originals Pennisi I and Munich and his ex. G = Gulbenkian a copy of Paris I (*obv.*) and Pennisi I (Dewing, *rev.*). The authenticity of the new pieces from the Naro hoard was, however, strongly defended by Robinson in the *SNG* Lloyd (817) and finally by Jongkees, who found that Bernhart's arguments were based on a misconception of the die-flaws.⁴⁴⁵

Order of striking

The dekadrachms are struck from two obverse and three reverse dies forming four die-combinations. Only R2 is combined with both obverse dies. It is known from four coins. The die remains in good condition, but when linked with O2 (no. 600) it has a very thin, long die crack all along the nearest eagle's back (visible on 600.1–2) which does not occur in the previous linkage with O1 (598.1). There are also some minor die-flaws on the finely curved feathers inside the open wing of the second eagle. The die-flaws show that the die-pair O1–R2 comes before O2–R2.⁴⁴⁶ The two obverse quadriga dies develop heavier flaws than the reverse dies. None of them is in perfect condition on any of the coins which have come down to us. The famous Munich decadrachm (599.1) shows O2 in its best state of preservation. It is combined with a new reverse R3, known only from this single coin. Then R2 reappears. On the remaining coins (600.1–3) O2 is deteriorating more and more as the heavy die-flaws progress. The die-combinations indicate that the obverse dies overlap. The new die-pair O2–R3 (Munich) was cut when O1–R2 were still in use, otherwise a new reverse would not have been required for O2. Then O1 disappeared but R2 remained and was combined with O2. The good condition of O2–R3 (Munich) and the poor condition of O2 when combined with R2 (600.1–3) indicates that a large output separates no. 599 and no. 600. The quadriga O2 must have developed these die-flaws gradually (when combined with R3?) before it reached the rather damaged state of 600.1 (Lloyd 817), and the still good reverse die R2 was taken back into production.

⁴⁴⁵ Jongkees, pp. 66–67.

⁴⁴⁶ That 598.1 (*Gulbenkian*) comes before 599.1 (Lloyd) was noted already by Jongkees, p. 67, though some of the 'flaws' which he spotted on Bernhart's photographs do not exist, e.g. a dot behind the leg of the first eagle.

Description

Obverse

Both obverse dies have a slightly curved, fan-like design. The view is diagonal. The omission of the groundline imposes the impression that the quadriga runs through the air, moving towards the spectator. The driver is of superhuman size. His position in a chariot without ampyx, placed over rather than behind the horses, is strange from a realistic point of view but enhances his size and supreme control of the horse team. The two obverse dies make a somewhat different impression in so far as the dramatic speed is much increased in O2. In the earlier version (O1) the horses' legs form an even pattern; the hindlegs are strictly parallel; the hoof of the first horse's foreleg cuts over the hindleg of the farthest horse. The nearest wheel of the chariot is pressed on to the first horse's hind quarters. The driver is standing upright; his cloak billows out behind his shoulders in a loop and in thicker folds behind his back. The way he holds the reins is somewhat indistinct; the four reins in his left hand are not stretched but seem to hang loose. The position of the crab is horizontal. It is thus not in line with the movement of the quadriga but seems to break it. The eagle flies up diagonally over the horses' heads.

In the second version of the quadriga (O2) the impression of furious movement is obtained by the muddled pattern of the horses' legs and the boldly foreshortened, slanting wheel, which is now placed lower and further away from the first horse's hindquarters and tail. Some details are exactly the same as on O1, such as the overcutting of the first horse's foreleg and the farthest horse's hindleg. The oval of the second wheel appears below the horses' hoofs as before, but the symmetry is broken up and the legs are multiplied by double lines. The driver is not quite so large as on the first obverse; he is leaning forward, his hair blows out, the upper part of the drapery is placed lower on his shoulder; the lower folds are shorter. He holds out his right arm over the horses' backs, all reins in both hands are now tightly stretched. The position of the crab and the eagle is reversed; the crab is placed diagonally and in line with the horses' movement and the eagle is more horizontal.

In a now classic study C. Vermeule pursued the development of chariot groups in

sculpture and on coins of the late fifth century.⁴⁴⁷ He distinguished two modes of representation: the profile and the foreshortening methods, the latter starting with Euainetos' famous die with his name on a tablet, Tudeer V14. To Vermeule the quadriga on the Akragantine dekadrachms, especially the second version (O2) is 'the superlative in representing the four-horse chariot group in relief against a surface background' and 'the final culmination' of the efforts to depict this motif. A close parallel in sculpture to the quadriga on the dekadrachm is found on the Lycian sarcophagus in the Archaeological Museum, Istanbul (pl. 40.12). Here the horses, especially the heads, are sculptured in very high relief; the head of the nearest horse is turned back as on the coin. In sculpture the artists had better possibilities than coin engravers to detach the quadriga from the flat surface. The horse team on the sarcophagus is set as if coming out of the background. On tetradrachms depicting fastmoving, foreshortened quadrigas, the straight exergue line does not really harmonize with the movement of the horses. The engraver of the Akragas dekadrachm has eliminated this discord by leaving it out altogether.

Reverse

The three reverse dies are closely similar and differ only in minute details. The magnificent eagle pair on these large coins is a perfection of what was by then a well established type. The feathering is rendered by the characteristic pattern of dots on the birds' bodies, short lines on head, neck and feet and parallel striations on the wings. The closed wing of the first eagle is divided into three sections. The dotted upper part is the highest point of the coin and most exposed to wear. It is worn off on nearly all specimens. The lower part of the eagle's legs is bare; the eagle's hind legs are rendered with double lines. The beak of the nearest eagle with lifted head is open and the thin tongue clearly visible.

In the right field behind the eagles' backs there is a large grasshopper, a symbol which also appears on tetradrachm no. 590 (R8) and is often erroneously called a cicada. The distinction between the two insects is not always clear.⁴⁴⁸ K. Schauenburg, however,

⁴⁴⁷ Vermeule, *JHS*, especially pp. 109–111; interesting observations also in Fischer-Bossert, *SNR* 1998, pp. 25ff.

⁴⁴⁸ Cf. *RN* 1846, p. 395.

has shown that, when pictured in the art, a profile view with long, bent hindlegs is characteristic for the grasshopper, whereas cicadas are rendered with flat wings and seen from above.⁴⁴⁹ In this way grasshoppers and cicadas are drawn on the coins of Akragas and on numerous coins from other mints where these insects occur.⁴⁵⁰

The three reverse dies of the dekadrachms are stylistically closely similar. The small divergences between them are insignificant: on R1 the pile of stones is a little broader; on R3 the head of the second eagle is bent nearer to the hare's forelegs, and the beak of the screaming eagle is shorter and thicker; the antennae of the grasshopper are curved on R1 but straight on R2–R3.

Engravers

C. Seltman attributed the dekadrachms to the only two engravers whose signatures are known from coins of Akragas: the quadriga to Myr.... and the eagle pair to Polyai....⁴⁵¹ Before him Jongkees had already made the same suggestion for the reverse. Jongkees regarded the engraver of the reverse as a master of foreign descent and suggested that Poly.. might be identical with the engraver ΠΟ at Olympia.⁴⁵² The attribution to Myr... and Poly... has been widely accepted and is sometimes regarded as a fact.⁴⁵³ But there is little to support the assumption that these masters are connected with the decadrachms. It seems to emanate mainly from a wish to attribute the most famous coins of Akragas to engravers who can be identified by name.⁴⁵⁴ The quadriga of the decadrachm has no strong resemblance to Myron's type; instead a similar composition is found on the tetradrachm no.588 (O5) in the quadriga series 1. The basic scheme is the same: the

⁴⁴⁹ Schauenburg, p. 113; also Hurter, *NomKhron*, p. 12.

⁴⁵⁰ E.g. Imhoof-Blumer & Keller, pl. 7.32–36, cicada; pl. 7.37–41, grasshopper; Syracuse (Boehringer 726, grasshopper); Messina (Caltbiano, *Messana*, 512, 540, grasshopper and 479–483, cicada).

⁴⁵¹ Seltman, *NC* 1948, pp. 6–10, pls. II–IV.

⁴⁵² Jongkees, p. 70.

⁴⁵³ Franke & Hirmer, p. 62 no. 179; *Kunstfreund* no. 80; Alföldi, *Dekadrachmon*, p. 132; Dewing 562; *NAC* 9, 1996, 135; do. 13, 1998, 260; Triton II, 1998, 150; Lorber, *WealthAW*, p. 182. The engraver is not discussed in Kraay & Hirmer or in *Gulbenkian*.

⁴⁵⁴ Reservation against the attribution expressed in Hess-Leu 31, 1966, 94, where the signatur Polyai... was deciphered. Jenkins accepted Seltman's attribution in Jenkins, *CGS*¹, p. 25, but expressed his doubts in Jenkins, *CGS*², p. 49, where he is inclined to regard the dekadrachms as a work of an unnamed artist.

head of the first horse is turned sideways, the two middle horses look straight ahead and the neck and head of the fourth horse are bent downwards; in both cases the charioteer is of superhuman size and draped in a short cloak. It was argued above that this quadriga type can be compared with Euarchidas' Syracusan dies (Tudeer 49–54, R30–R33) and with the unsigned R34, V20–V21, where the exaggerated movement of the horses' heads has been moderated. The Syracusan dies must have been known to the engravers at Akragas, who created their own variations. The difference in quality between the tetradrachm die O5 (no. 588) and the dekadrachm obverses is considerable, and they cannot be regarded as works by the same hand. The tetradrachm die O5 is of modest artistic quality, whereas on the two larger obverse dies for the dekadrachms the quadriga scheme has been transformed in an amazingly bold way, resulting in one of the great masterpieces of Sicilian coinage. On the whole, the admirable dekadrachms differ in a striking way from all other quadrigas at Akragas or Syracuse or any other Sicilian mint, and since they lack a signature the engraver may be called the Dekadrachm Master. No other quadriga die can with certainty be attributed to him, though it seems possible that he engraved also O6 in the late tetradrachm series (nos. 589–591), a skilfully rendered quadriga at high speed with a driver of large proportions.

The motif with the eagle pair was undoubtedly created by the 'Skylia Master' since it first appears on the Skylia tetradrachms, but it has attracted most admiration in connection with the dekadrachms. It is true that the dekadrachm dies are superior in artistic quality, and the larger size of the flans does justice to the well-balanced composition. The birds have greater volume, the position of the eagles' heads is strictly parallel and the hare's hind-legs stretched out below the eagles' tails. Seltman's attribution of the dekadrachm eagles to Poly...is as little convincing as his attribution of the quadriga to Myron. The only other reverses which have a close stylistic affinity to the dekadrachm reverses are R7 and R9 in the late tetradrachm series nos. 589 and 591. Here too the motif has a strictly triangular shape, and the feathering of the birds is rendered in the same way. It seems justifiable to regard these two dies as works by the same engraver who was responsible for the reverses of the dekadrachms. The last tetradrachm reverses, R10–R12, have a less refined feathering and must be regarded as good copies of R9, which served as their prototype.

The relation between obverse and reverse is problematic. From the signed Syracusan coins we know that talented engravers made both obverse and reverse dies. In some cases like Akragas tetradrachm no. 588 (O5–R6) the style is so uniform that both sides can without hesitation be attributed to the same artist. On the dekadrachms obverse and reverse are more difficult to compare. Both motifs are dramatic, but the obverse is full of movement and the reverse more static and heraldic. However, the supply of first rate engravers must have been limited, and the masterly execution of both sides may be a good reason to regard them as works by the same hand. The works mentioned above from the tetradrachm series, quadriga die O6, eagle dies R7 and R9, reach a similar artistic level.

Estimation of the dekadrachm

The Akragas dekadrachms are now widely recognized as great masterpieces of numismatic art. That this has not always been a unanimous opinion is evident from the discussion related above (authenticity). Sambon not only denied the authenticity of the dekadrachms, but he also discredited their artistic value.⁴⁵⁵ Other early scholars had a finer judgement. To Reinach the Munich dekadrachm was the summit of monetary art.⁴⁵⁶ Weil admired the boldness of the quadriga⁴⁵⁷ and like Gardner he regarded the eagle group as a very fine study of animal life.⁴⁵⁸ Head considered the type of the two eagles to be ‘perhaps superior to any other contemporary Sicilian coin-type’,⁴⁵⁹ whereas E.J. Seltman admired the design of the quadriga but was not ‘much impressed by the artistic merit of the group of eagles’, which in his opinion had been ‘somewhat overrated’.⁴⁶⁰ Jongkees on the other hand thought that the quadriga was ‘a failure’.⁴⁶¹ Obviously, the bolder and more agitated composition of the quadriga has been less successful in attracting the viewer than the harmonious and somewhat stylised study of the magnificent birds.

⁴⁵⁵ Sambon, *Le Musée* 1908, pp. 9–10.

⁴⁵⁶ Reinach, *L'Histoire*, p. 94; so also Hill, *Ancient Sicily*, pp. 119–120.

⁴⁵⁷ Weil, pp. 13–14.

⁴⁵⁸ Gardner, *Types*, p. 130.

⁴⁵⁹ Head, *HN²*, p. 121.

⁴⁶⁰ Seltman, *NC* 1909, pp. 4–5.

⁴⁶¹ Jongkees, p. 71.

Interpretation of the types

The types of the dekadrachms are basically the same as those of the contemporary quadriga tetradrachms, though the obverse is enriched by addition of the traditional city emblems, the eagle and the crab. Garraffo noted the ‘caratteristiche peculiari’ of all dekadrachm issues, such as the wreath on the Demareteion and the eagle and crab symbol on the Akragantine dekadrachms.⁴⁶² M. R.-Alföldi instead stressed rather their resemblance to the ordinary coin series, adding that the larger flan of the dekadrachms enabled the engravers to create something beyond the ordinary, ‘ein elegantes, im wahren Sinne des Wortes schönes Münzbild’.⁴⁶³ The most striking feature of the Akragantine quadriga dies is the almost naked driver of superhuman size, who seems to control the violent speed of his horse team without the slightest effort. It is obvious from the nakedness and the size of the figure that it represents a god or hero, but who? The now most commonly accepted interpretation is that the young charioteer represents Helios driving his horse team over ‘the dome of the sky’.⁴⁶⁴ This opinion was first put forward by C. Seltman in 1948 with reference to Robinson. Seltman stated in short that ‘Akragas was a city founded by Rhodes’ and the driver ‘is assuredly the bright sun-god himself’.⁴⁶⁵ Later Robinson added more subtle arguments, emphasising the lack of a ground-line and the distinct difference between the naked youth and the customary male driver in a long chiton on the preceding tetradrachms.⁴⁶⁶ However, in 1894 Théodore Reinach had recognized the eponymic hero of the city, the river-god Akragas, in the charioteer.⁴⁶⁷ This interpretation was in fact not new at the time, but had been put forward much earlier by Schubring, who regarded the human shape as one of many metamorphoses in which

⁴⁶² Garraffo, *RIN* 1993, pp. 171–172.

⁴⁶³ *Dekadrachmon*, p. 89 (11) ‘die Dekadrachmen fügen sich nahtlos in die Reihe aller anderen Münzen’, p. 86 (8).

⁴⁶⁴ *Gulbenkian I*, p. 81; Franke & Hirmer, no. 179 (Helios?); Kraay, *ACGC*, p. 226; Jenkins, *AGC*, p. 187; Jenkins, *CGS*¹, p. 25; Jenkins, *CGS*², p. 58 with reservation; Alföldi, *Dekadrachmon*, p. 131 (53); *LIMC I*, p. 447, ‘Akragas’ (Arnold-Biucchi); Caltabiano, *Studi Breglia*, p. 128; Lorber, *Wealth AW*, p. 181; *NAC* 9, 1996, 135; Triton II, 1998, 150.

⁴⁶⁵ Seltman, *NC* 1948, p. 8 with note 10. From the wording it seems likely that it was originally Robinson’s idea.

⁴⁶⁶ *Gulbenkian I*, p. 81.

⁴⁶⁷ Reinach, *RA* 1894, reprinted in Reinach, *L’Histoire*, pp. 89–98, pl. 4.

the river god could appear.⁴⁶⁸ It was also, in older literature, the name most commonly given to the charioteer besides neutral descriptions.⁴⁶⁹ In 1982 Léon Lacroix returned to the subject.⁴⁷⁰ He strongly defended Reinach's identification and rejected Seltman's which he found presented 'sans la moindre réserve'. First of all Lacroix opposed to the idea that the quadriga runs through the sky. He correctly points out that it does not ascend as Helios' horse team does when seen in vasepaintings. Already long ago E.J. Seltman had given a very good description of how the charioteer guides the movement of the quadriga by pulling the reins with both hands.⁴⁷¹ The quadriga is rendered in the difficult moment when it is about to turn the post. The artist, E.J. Seltman added, was right to omit the conventional exergue line as it would have weakened the illusion of the turning movement. In fact C. Seltman also described the quadriga as taking part in a race; the driver 'swings it round towards you', but at the same time he saw it as 'hovering between sky and sea'.⁴⁷²

The interpretation of the charioteer involves the legend *Akragas*. Lacroix rejected Seltman's curious opinion that 'the eagle was perhaps a punning type, for the Doric Greek adjective *akragas* means harsh or strong' and is therefore 'a good epithet for an eagle'.⁴⁷³ Instead he agreed with Reinach that the legend reveals the name of the charioteer, who can only be the eponymous deity of the city, the river-god. As mentioned above, this was also the opinion of other earlier scholars, who regarded the river-god as the self-evident representative of the state and its citizens. The legend Ακραγας is known already from the early didrachms, where this form occasionally occurs instead of the normal legends Ακραγαντος or Ακρα. But in the late fifth century coinage the

⁴⁶⁸ Schubring, p. 30. Reinach does not mention Schubring.

⁴⁶⁹ Hill, *Ancient Sicily*, p. 120 'male figure...probably the personification of the river Acragas'; Seltman, *NC* 1909, p. 4 'the figure of Akragas'; Buchenau, *BjM* 1910, col. 4271 'Jüngling, durch die Beischrift Akragas gekennzeichnet'; Head, *HN*², p. 121 only 'male charioteer'.

⁴⁷⁰ Lacroix, *Studia Naster*, pp. 13–20, pl. 1. Cf. Garraffo, *RIN*, p. 183.

⁴⁷¹ Seltman, *NC* 1909, pp. 5–7; Rizzo, p. 89, writes that the omission of the ground-line helps to increase the effect of the speed.

⁴⁷² Seltman, *NC* 1948, p. 7; Seltman, *GC*, p. 136. Cf. Jongkees, p. 71 note 1, 'For Seltman's opinion...that the quadriga moves through the air, there is no ground.'

⁴⁷³ Seltman, *NC* 1948, p. 8; Seltman, *Masterpieces*, p. 102. This strange idea was rejected also by de Waele, p. 10, note 44.

form *akragas* appears only on the dekadrachms and on no other silver coins, which display a variety of longer and shorter legends. As the name of the city and of the river (god) is the same, it is difficult to say whether the legend in this case refers to the city (in the nominative) or to the river-god,⁴⁷⁴ but its appearance *only* on the dekadrachms and on the later bronze coins with a head of the youthful river-god supports the assumption that in both cases the legend stands for the river-god as a personification of the city. Numerous other nymphs and river-gods accompanied by their names are found on Sicilian coins in this period.⁴⁷⁵ At Kamarina the legends *kamarina* and *hipparis* appear on didrachms showing the nymph on a swan and the head of the young the river-god.⁴⁷⁶ At Messana the legend *messana* designates the nymph driving her biga.⁴⁷⁷ The name is placed in the field above the mules' backs in a way that recalls the dekadrachms. Other well-known examples are Hypsas and Selinous at Selinous, Amnenaos at Katana and Assinos at Naxos.⁴⁷⁸

The traditional representation of the river-god Akragas was the crab. It is in line with the artistic development of the period that he should now, at the end of the century, appear in a humanized shape. It might be objected that the Akragantine charioteer lacks the small horns which are commonly found on humanized river gods.⁴⁷⁹ However, river-gods do not always have horns. One and the same river-god personification can appear with or without horns. This is evident from Gela. The famous tetradrachm J.456 shows a horned profile head of Gelas surrounded by three fish, whereas on the tetradrachm J.465 he is rendered three-quarter facing with a fillet around his hair and no horns.⁴⁸⁰ The full-length figures of Selinous and Hypsas wear fillets adorned with an *apex* which stands up from the head above the forehead. It is often mistaken for a small horn, though

⁴⁷⁴ Manganaro, *ASG*, p. 210 insists that the legend is toponymic; so also Alföldi, *Dekadrachmon*, p. 130 (52).

⁴⁷⁵ In general: Imhoof-Blumer, *Fluss- und Meergötter*, pp. 187–213.

⁴⁷⁶ Westermarck & Jenkins, *Kamarina*, nos. 158, 162–166, pls. 21–22.

⁴⁷⁷ Caltabiano, *Messana*, ser. XIV, nos. 508–539, pls. 31–32.

⁴⁷⁸ Imhoof-Blumer, *Fluss- und Meergötter*, nos. 75–79, 87, 90, pl. 3:5–8, 17, 20; Cahn, *Naxos*, pp. 65 ff.

⁴⁷⁹ Manganaro, *ASG*, p. 210, note 1.

⁴⁸⁰ Jenkins, *Gela*, pls. 26 and 50; also Imhoof-Blumer, *Fluss- und Meergötter*, no. 87, pl. 3.8 (Katane).

it has been pointed out by several authors that this is a misinterpretation.⁴⁸¹ The missing horn is therefore no good argument against the identification of the charioteer with the river-god Akragas, which, as we have seen above, has many precedents. A local river-god driving a chariot would seem to be a good parallel to a local nymph driving a mule cart,⁴⁸² whereas it is difficult to see why Helios would suddenly appear in a Sicilian city. There are no traces of a cult of Helios at Akragas or in Sicily. Helios appears rarely on coins and is mainly known from the fine coinage of Rhodes, where, however, the earliest tetradrachms showing the three-quarter facing head of the sun god had hardly begun when the dekadrachms were struck.⁴⁸³

It is easy to interpret the dramatic quadriga driven by a figure of superhuman size as an invocation to a god-saviour in a moment of crisis,⁴⁸⁴ but an interpretation of that kind might be overstated. To see the eagle and crab as indicative of sky and sea is likewise an attractive but perhaps over-subtle idea.⁴⁸⁵ All quadrigas on Sicilian coins are victorious as shown by the small Nike hovering above the horses. When Nike herself is driving the chariot no such figure is necessary. On the dekadrachms the god-charioteer and Zeus' eagle with a prey in his claws replace Nike as a symbol of victory.

Chronology

In early numismatic books the types of the Akragantine dekadrachms were regarded as commemorative of the victory at Himera in 480 in the same way as the Syracusan Demareteion was later on given this explanation.⁴⁸⁶

⁴⁸¹ Correctly identified by Blum, I, p. 275; Lehmann, *Statues*, p. 17; Lacroix, *Monnaies et colonisation*, p. 123.

⁴⁸² Lacroix, *Studia Naster*, p. 17.

⁴⁸³ Bérend, *SNR*, pp. 5–39, pls. 1–10.

⁴⁸⁴ Alföldi, *Dekadrachmon*, p. 135 (57).

⁴⁸⁵ Gulbenkian I, p. 58; Kraay, *ACGC*, p. 226; Jenkins, *AGC*, p. 174; Jenkins, *CGS*, p. 24; Lorber, *Wealth AW*, p. 182; Rutter, *Italy and Sicily*, p. 149. *Contra*: Lacroix, *Studia Naster*, p. 18, who calls it 'une interprétation aventureuse'. For the danger of overstrained interpretations in general, cf. Jones, *Essays Mattingly*, pp. 15, 32.

⁴⁸⁶ Béger, vol. I, p. 375.

In more recent literature there was for a long time a common agreement that the occasion for the creation of the dekadrachms was connected with the Olympic victory won by the Akragantine citizen Exainetos in 412 (Diodoros XIII.82.7).⁴⁸⁷ To give weight to this argument and a special meaning to the quadriga type Exainetos was sometimes said to have won a chariot race,⁴⁸⁸ though he was in fact a runner who won in the stadium.⁴⁸⁹ The dekadrachm was thus regarded as being 'not merely a coin but a commemorative medallion'.⁴⁹⁰ Though the concept of the dekadrachms being 'medallions' was strongly refuted already long ago⁴⁹¹ and repeatedly in more recent numismatic literature,⁴⁹² a propagandistic motif connected with a historical event is still often thought of.⁴⁹³ In contrast, Alföldi emphasized the legal and economic value of all dekadrachms and their use in normal circulation at moments of great financial need.⁴⁹⁴ Regarding Akragas there is nothing to support an interpretation alluding to a historical event. Any connection with Exainetos must be ruled out. A similar explanation was once given to the quadriga type at Kamarina which was thought to be commemorative of an Olympic victory won by Psaumis.⁴⁹⁵ Irrespective of the improbability that a private individual could be honoured in such a way, it is ruled out for chronological reasons. In 412 the tetradrachm series with quadriga obverse had hardly begun, and the dekadrachm does not belong with the earliest tetradrachms. As stated above, the quadriga type links the dekadrachms with no.588 (O5), and the symbols grasshopper and young head link them with the tetradrachm issues nos. 589–590. The period in which the dekadrachms have to be inserted is therefore chronologically closely limited to the last years before the Carthaginian invasion in 406. These stylistic relations were stressed by earlier writers who suggested a similar date.⁴⁹⁶

⁴⁸⁷ Head, *HN*², p. 122; Seltman, *GC*, p. 136; Seltman, *NC* 1948, p. 8; Kraay, *ACGC*, p. 226; Stazio, *Sikanie*, p. 105 and many other publications.

⁴⁸⁸ This point was stressed by Jongkees, p. 69.

⁴⁸⁹ Correct in Mirone, *Aréthuse*, p. 107; de Waele, p. 169, note 854; Lacroix, *Studia Naster*, p. 19.

⁴⁹⁰ *Gulbenkian I*, p. 60.

⁴⁹¹ Lenormant, I, pp. 4–7; Burgon, pp. 101–102.

⁴⁹² Alföldi, *Dekadrachmon*, pp. 86–87; Arnold-Biucchi, *RIN*, p. 243.

⁴⁹³ See the discussion by Garraffo, *RIN*, pp. 167–183.

⁴⁹⁴ Alföldi, *Dekadrachmon*, p. 137.

⁴⁹⁵ Westermarck & Jenkins, *Kamarina*, p. 41.

⁴⁹⁶ Seltman, *NC* 1909, p. 4; Buchenau, *BfM*, col. 4373.

Recent numismatic studies support a low chronology. Alföldi correctly disregarded the long-standing association with Exainetos and underlined instead the financial aspect which connects the outstanding decadrachms with speedy military preparations before the war with Carthage.⁴⁹⁷ The decadrachms of Akragas are exceptionally rare. The five dies (2 obv., 3 rev.) have been known since the nineteenth century, and it does not seem likely that there ever were more dies. This points to a shortlived production which may have been abruptly interrupted before or during the siege of the city. For the defence of the city the Akragantines relied on mercenary forces, a contingent of which came from Gela. A characteristic detail on the dekadrachms, the flying eagle clutching a snake in its claws, forms a chronological link to the coins of Gela, where this unusual motif, as well as the position of the legend in the field above the horses, were adopted on the last quadriga dies Jenkins O98–O99, indicating a contemporaneous output.⁴⁹⁸

Smaller denominations of Period III

On the smaller silver denominations comprising didrachms, a drachm, litrai and a few hemilitrai, the traditional coin motifs, the eagle(s) and the crab, reappear as obverse and reverse types. The eagle and snake is a new variety on silver, closely related to the similar motif on the gold coins. Some details such as the symbol grasshopper and the name of the magistrate Straton are shared with the larger denominations datable to the latest phase preceding the events of 406. The scarcity of the smaller coins point to a brief period of minting. All denominations are remarkable for their high artistic quality.

⁴⁹⁷ *Dekadrachmon*, p. 135; so also Stazio, *ASG*, p. 226 and Rutter, *Italy and Sicily*, pp. 149–150; cf. Miltenberg, *KME*, pp. 186, 188 (c. 410–408). Figueira's suggestion, *Power of Money*, p. 182, that 'rather decadrachms were a means of allocating the booty from the campaign' does not seem to fit in with the situation at Akragas, where the inhabitants lost the campaign and were forced to evacuate the city, which then fell into the hands of the Carthaginians.

⁴⁹⁸ Jenkins, *Gela*, pp. 96–97. The traditional date for the dekadrachm (412/411) does not bring the coinages of the two cities into line with each other.

Didrachms

The didrachms were struck from only two obverse and one reverse dies. The ethnic ΑΚΡΑΓΑΝΤΙΝΟΝ and the abbreviated magistrate name ΣΤΡΑ, both placed on the obverse, link this issue with tetradrachm no.589 (Quadriga series 2). O1 was recut and is best documented in its second state. In the first state of the die the ethnic is arranged in an unusual way in two rows. In the recut version this was changed, and the last letters then follow the border. In both versions the letters are minute and thin, often effaced and legible only on a few specimens.

Both sides of the didrachms strongly recall the tetradrachms with the large fish on the reverse. The obverse has the single eagle, now clutching a snake, and on the reverse a smaller and uglier version of the giant fish, a sea-perch or mero, is seen below the crab.⁴⁹⁹ The didrachms have been regarded as works by the master of the large fish tetradrachms.⁵⁰⁰ The attribution, however, is not fully convincing. The eagle on the didrachms does not have the powerful harshness of the earlier tetradrachms. It is much more refined and stylistically close to the eagles on the late quadriga tetradrachms. It seems more likely that the engraver of the late eagle pairs (nos. 591–594) was responsible also for the masterly version of the single eagle on the didrachms. Here the huge bird is slender; the pattern of the feathering is richly varied; the small feathers of the wing quills are rendered with more refined details than on any other eagle die. The pointed further wing with a dotted pattern appears behind the curved nearer wing in the same way as on the tetradrachms. The large head with short neck is especially impressive; the deep set eye has a fierce look and the oversize, sharply bent beak points directly towards the snake's head. The feet have long, dangerous looking claws, but the legs are strangely short and seem to be drawn in under the body. It may be that the engraver has shortened the eagle's normally long legs in this way in order to give enough space for the long snake below, curled up in fantastic loops. The eagle hovers above the snake without actually touching it. They seem to watch each other. There is more aggression in this picture than in the normal version of the motif, where the prey, a hare or a fish, is dead and carried off in the eagle's claws.

⁴⁹⁹ The fish on the drachm is also called a scorpion-fish (*Scorpaena*) (Zeuner, p. 142; Imhoof-Blumer & Keller, p. 44.2), but Evans pointed out (*NC* 1926, p. 12 with note 14) that it is undoubtedly the same fish as on the larger coins.

⁵⁰⁰ Cahn, *Kunstwerke der Antike*, F51–F54; Schefold, nos. 465–467.

O2 gives a slightly different version of the motif; the eagle is turned r. and the snake curled up in a huge double loop below. The die is known from a single coin which is severely damaged by scratches. Due to this damage the artistic value of the die is difficult to judge. It seems to be good work, if not of the same outstanding quality as O1. The simpler design of O2 reveals a different hand.

On the reverse the crab fills out most of the flan, emphasizing the importance of the city emblem. Unlike the tetradrachms (nos. 529–530) the fish, though undoubtedly representing the same huge and ferocious species, is much reduced in size. Above the crab there is a vine leaf.⁵⁰¹ The same leaf occurs on bronze hemilitra of Series 3 and in a more elaborate version with stem and a bunch of grapes on tetradrachm no.589.

Drachm

The drachm issue is known from a single die-pair. The style of the double eagles on the obverse has a certain harshness if compared with the extremely fine rendering of the eagle on the didrachms. The hare is plump and somewhat squeezed. The triple border, a dotted border encircled by double lines, is not found on any other coin of Akragas. The most extraordinary feature of the drachm is the crab's carapace modelled like a face. A fanciful treatment of the shell was met with already among the early didrachms of Period I and on the eagle/crab tetradrachms of Period II (cf didrachm Group I.31, Group II.147; Group III.164 and tetradrachm 349. Such patterns have been thought to resemble human or animal faces. For the drachm a common suggestion is Gorgoneion or Medusa.⁵⁰² It is true that the Gorgoneion becomes rather mild and humanized at the end of the fifth century, but even when the protruding tongue is lacking, her mouth is broad, grinning and half open.⁵⁰³ On no other coin is the shell's picture more like a human face than in this case and those, who have interpreted it as such, are undoubtedly right.⁵⁰⁴

⁵⁰¹ The leaf is occasionally regarded as a selinon leaf (e.g. by Cahn, *Kunstwerke der Antike*, and Schefold). For a correct description see Baumann, p. 64–65 with fig. 156 (=didrachm 601.1, reverse).

⁵⁰² Cook, II.1, p. 667; Imhoof-Blumer & Keller, p. 50.13; Keller, II, p. 485; Leu 28, 1981, 22. When associated with the Gorgoneion, the crab is sometimes seen as an emblem of the moon: Longpérier; Deonna, p. 58.

⁵⁰³ Cf. Westermarck & Jenkins, *Kamarina*, p. 87–88 with pl. 34.

⁵⁰⁴ Gardner, *Types*, p. 131; Salinas 182; Evans, *NC* 1926, p. 13 "a man's face"; Sternberg 20.1988, 183 and others.

The most acceptable interpretation was given long ago by Lanza,⁵⁰⁵ who regarded the face as a representation of the young river god Akragas. The wide open eyes give the face a demonic look which recalls Euainetos' version of Hipparis at Kamarina.⁵⁰⁶ If the definition is accepted we see here a transition from the river god's old crab form to his humanized shape, a *Mischwesen* appearing simultaneously with the fully human figure on the dekadrachm and the young head symbol on the quadriga tetradrachm no 589.

The reverse with ethnic ΑΚΡΑΓΑΝ has no less than three adjunct symbols, which are also present on other coins: a corn grain as on the hemidrachms, series 2; a grasshopper as on the dekadrachms and tetradrachm no. 590, and below the crab a more detailed and better rendered version of the thin crustacean which can be seen, in a simplified shape, also on the reverses of the bronze hemilitra of series 3–4. The traditional English name for this crustacean both on silver and bronze is crayfish, a designation which is still used but should be rejected in favour of the more accurate term prawn or shrimp, which corresponds to the German *Garnele* and the French *crevette*⁵⁰⁷.

Litrai

The litrai nos. 605–609 form two short issues. The first obverse shows a miniature version of the eagle pair encircled by the long ethnic ΑΚΡΑΓΑΝΤΙΝΟΝ. The rendering of the motif is stylistically close to the reverse dies of the quadriga tetradrachms, series 2, but there is no rock to support the hare. On the reverse the giant fish is seen again below the crab. It retains its ferocious look in spite of the minute size of the picture. R1 links over to a new obverse type showing a single eagle of the same type as on the gold and with the same short legend ΑΚΡΑ above the eagle's back. On O2 the eagle's prey is still a hare of large proportions, whereas on the following O3–O4 the prey is a snake in conformity with the gold coins. The head of the eagle is lowered towards the uplifted head of the snake, but unlike the didrachm, where the eagle and the snake do not touch each other, they are here involved in fighting, and the snake has caught one of the eagle's legs in a firm grip.

⁵⁰⁵ Lanza, 1902, p. 467, pp. 475–479.

⁵⁰⁶ Westermarck & Jenkins, *Kamarina*, pl. 25.

⁵⁰⁷ See the discussion below, hemilitra, p. 151 sq.

All three reverse dies R1–R3 have letter A either above or below the crab; on R3 the fish has disappeared and only A remains. It seems likely that it is a very short version of the ethnic as on the earlier *dionkia* (nos. 521–523).

Hemilitra AR

In later years, a few examples of a hemilitron, a silver denomination not recorded earlier at Akragas, have appeared on the market (nos. 610–611). The obverse is of the same type as the *litrai*, but turned right and with ethnic AKP. The reverse has six pellets below the crab. The weight is low compared with the *litra* standard but the preserved examples are too few to be decisive. The appearance of a silver hemilitron is in fact curious with regard to the rich issue of this denomination in bronze.

The output of smaller silver coins at Akragas in the late fifth century resembles that of other mints. In some western mints didrachms were frequent, especially at Segesta and the Siculo-Punic mints of Motya and Panormos. The *litra* was the most important of the smaller coins.⁵⁰⁸ At Akragas, the *litrai* were somewhat more frequent than the other denominations, which are all extremely rare.

Struck bronze coinage

Hemilitra

The hemilitra have been arranged in five series according to the reverse symbols: 1. Triton, 2. Octopus and shell, 3. Leaf, 4. Shrimp and 5. Hippocamp. The arrangement differs from that used in Calciati's corpus and other recent catalogues, e.g. the *SNG Agrigento*, where the coins are grouped according to the position of the eagle, standing left or right with head lowered or with head lifted.⁵⁰⁹ To follow the reverse symbols seems preferable and gives a better view of the output. The two principal obverse types: a) screaming eagle with head lifted and the long legend AKPAΓATINON and b) eagle

⁵⁰⁸ Manganaro, *JNG*, p. 26.

⁵⁰⁹ Calciati I, p. 151 ff.; *SNG Agrigento*, no. 97 ff. For a preliminary study, see Westermarck, *NAC/QT* 1984, pp. 71–84.

with head lowered clutching his prey and normally the shorter legend AKPA or AKRA, occur in all series except Triton (cf below). Not all coins are accompanied by a legend, but when present it is always placed on the obverse.

A die study of the material has been carried out. The number of die-links documented so far are not frequent enough to establish a reliable die-sequence in each series, but in spite of this shortcoming the die study helps to understand the structure of the coinage. It can be demonstrated that there are numerous transfers of obverse dies between the series, that two obverse dies with different eagle types (clutching or screaming) and varying position (turned right or left) or two obverses of varying style and artistic quality sometimes share a common reverse and so on. The transfer of obverse dies and the fact that all series contain heavy as well as light coins indicate that the series do not follow one after the other, but they overlap and to a large extent they must have run parallel. In the catalogue the heavy coins have, as far as possible, been listed at the beginning of each series and the lighter coins at the end. The somewhat irregular weights of the individual specimens, and the occasional appearance of light pieces within a group of heavier coins can be explained by the striking process *al marco*.⁵¹⁰ On the whole all series reflect the same pattern. The tendency to a sinking weight standard is clear but fairly moderate. Series 1, Triton and Series 2, Octopus have the highest weights by frequency with a peak at 21–20 g. and few coins below 17.00 g. Series 3–5, Leaf, Shrimp and Hippocamp, have a wider range of weights and a larger portion of light coins. The peak moves downwards from 21–20 g to 15–12 g. The weight pattern indicates that series Triton, which contains no light coins, and Octopus with a concentration of heavy coins and rather few coins at the lower end of the weight scale, belong mainly to the early part of the minting period, and that series 3–5 with a larger portion of light coins cover most of the later part. That series 5, Hippocamp was the last to be put in circulation is evident from the fact that the majority of its obverse dies was taken over from other series. It has also the largest portion of light coins. (See table p. 155.)

⁵¹⁰ Hackens, p. 310; Naster, *Problèmes et méthodes*, p. 67.

Series 1, Triton

Series 1, Triton is a small series, comprising only seven obverse dies, all showing a screaming eagle with lifted head and spread wings. Unlike the other series Triton has only one eagle type and shares dies only with series Octopus. The die that has been placed first, 1.O1, is of an excellent artistic quality. It shows an eagle, turned left, in an upright position perched on a large hare, facing right. The position of the hare is unusual in so far that it is turned in the opposite direction from the eagle. In the left field there is a cicada. The die gives the impression of being a prototype for the following varieties of this type of eagle, most of them of an inferior style compared with 1.O1. In series Triton the prey of the screaming eagle is either a hare (1.O1–O2, 1.O5–O6) or a fish (1.O3–O4, O7). This supports the assumption that we are here at the beginning of the coinage. In the other series the prey of the eagle with lifted head is occasionally a hare but normally he holds a large fish in his claws, and the hare is assigned to the eagle with lowered head. In the hemilitra series there is no example of a clutching eagle holding a fish.

The legend used with the screaming eagle has the long form AKPAΓANTINON, following the rim of the coin. In series Triton it is written in minute letters, often completely effaced and legible only on a few specimens. When visible the letters are quite distinct, and it seems certain that in at least one instance (1.O2) the letter rho with tail (R) was used. The long legend cannot be regarded as later than the shorter version AKPA. At Akragas a longer legend normally precedes a shorter one. That is the case already in the early didrachm coinage. In periods II–III the tetradrachms have a long legend and the smaller coins, including the late gold coins, have a shorter version. In the bronze coinage the legend changes with the eagle type.

The reverses of the hemilitra display a rich selection of marine symbols taken from the fauna or in two cases, Series 1.Triton and Series 5.Hippocamp, from the mythology. Triton forms a counterpart to Skylla who figures on the tetradrachms (nos. 531–535), and is displayed in a similar way below the crab. The sea god Triton is best shaped in 1.R1–1.R2, where he holds the large conch shell close to his mouth as if really blowing it. The curved fish tail has two dorsal fins and a forked tail-fin.

The history of the various sea-monsters date back to archaic times and their genealogy is complicated.⁵¹¹ In the literary sources Triton is first mentioned by Hesiod (*Theogony*, 930 f) as a son of Poseidon and Amphitrite. In Herodot (IV, 179 ff) he appears as a seer, but in the later Argonautica by Apollodoros of Rhodes (earlier third century BC) he has undergone the same metamorphosis as Skylla and is there described in his wellknown form as a fish-tailed monster. In the art, however, he is rendered as a merman already on black-figure vases, where he is shown fighting with Herakles.⁵¹² From the fifth century onwards his status as a sea god decreases. He becomes one among other marine deities attending the major sea gods in mythological scenes. On a famous cup by Onesimos picturing Theseus and Amphitrite, Triton appears in a modest position under Theseus' feet.⁵¹³ In later periods Triton is often multiplied in number (*tritones*) and has a female equivalent (*tritones*).

Triton shares some attributes, such as trident and rudder, with other marine deities but most typical of him is the conch shell, a large spiral shell belonging to the order *Gastropoda* and genus *Triton*.⁵¹⁴ Triton blows it as a trumpet in order to calm the rough seas. There are no good analogies to this charming motif on other Greek coins. When a sea god is represented with an unspecified symbol, it remains uncertain whether Triton or some similar deity (Glaukos) is represented.⁵¹⁵

Series 2, Octopus

Series 2, Octopus is a much larger series than Triton. It has a similar weight peak but a wider range of weights. Three obverse dies from series Triton (1.O2, 1.O3, 1.O4) reappear in series Octopus. There are also numerous die-links to other series (see Table X). The principal eagle type is the screaming eagle with lifted head. The bird is pictured in a three-quarter view with both wings and legs well visible and with the head and

⁵¹¹ In general: Shepard, chapter II, p. 10 ff.; Daremberg & Saglio, pp. 483–4; *RE* vol. 7, 1948, col. 245 ff.; *KIP*, vol. 5, col. 967–969.

⁵¹² Fine example in Arias & Hirmer, pl. 14, lip cup, mid 6th century, Tarquinia, Museo Nazionale.

⁵¹³ Boardman, *ARFV*, fig. 223.1, early fifth century BC.

⁵¹⁴ *Encyclopaedia Britannica* (ed. 1964), vol. 20, p. 848 with fig. 4.

⁵¹⁵ Cf. Imhoof-Blumer & Keller, pl. 13.28–37. For the goat-rider blowing a conch shell on the silver and bronze coins of Himera, see Lacroix, *Le origini*, pp. 273–275.

the half-open beak seen in profile. In some cases the eagle's head is thrown back in an awkward way (2. O11–O12, 2. O18–O19). As in series 1 the long legend is written in tiny letters, which are often worn off. On several dies there are no visible traces of letters, and in such cases it is difficult to know whether there has been a legend which is now illegible owing to the worn state of the coins, or if there is no legend. However, as mentioned above, it seems likely that not all obverse dies had an ethnic.

On 1.O2 transferred from Triton and on 2:O8, 2:O9, 2:O13, 2:O21–2:O25 the eagle's prey is a hare.⁵¹⁶ On all other obverse dies in this series the eagle with lifted head is grasping a large fish in its claws. The fish, turned upside down, has two dorsal fins and a deeply incised tail and can with certainty be identified as a grey mullet. The same fish occurs on the Akragantine hemidrachms and on numerous other Sicilian coins.

The clutching eagle with lowered head which was not found in series Triton, appears in series Octopus. There are three varieties: a large, half upright eagle on 2:O8 (no 638), a small eagle bent over a very small hare on 2:O24 (no 662) and an eagle with widespread, flapping wings on 2:O13 (no 644). Die-links between nos. 637–638, 657–658, 659–660, 661–662 show that the two eagle types are interlaced in no special order and confirm the fact that the position of the eagle, turned left or right, changes capriciously.

The reverses are richly varied and highly decorative. The octopus below the crab is accompanied by a conch-shell, the same shell that Triton uses as a trumpet to blow at. The crab holds often in either right or left claw a small worm-like animal. It is sometimes described as an eel (e.g. in *BMC*, 86–88), and although an eel undoubtedly belongs to the marine fauna, it is nevertheless more likely that not an eel but a snake is represented. The crab and the snake figure in the mythology as enemies, and in a fable by Aisopos the crab kills the snake. The superior strength of the crab may explain the small size of the snake.⁵¹⁷

⁵¹⁶ Calciati I, p. 169, no. 17/1 identified the prey on 2:O13 as a tortoise, but the identification cannot be accepted. It is true that the animal's back is rounded but the long legs and big head with long ears show that it is a hare.

⁵¹⁷ Deonna, pp. 57–58 with notes 133–136; Lacroix, *Le origini*, p. 269 with note 20.

Series 3–4, Leaf and Shrimp

The two series are closely related and share the same reverse symbol below the crab, a thin, curved crustacean. On the bronze coins this little animal is not very distinctly drawn, but it is undoubtedly the same as on the rare drachm (no. 604) where the details are more clear. It has five pairs of legs on the body and five pairs of swimmerets (legs on the tail). No pair of legs have claws. On the drachm the two stalked eyes are shown, on the bronzes the head is thin and pointed, sometimes with a single eye shown. The traditional designation crayfish or cray has been used for this and other crustaceans by English scholars since the 19th century.⁵¹⁸ Crayfish, lobsters, prawns, shrimps and crabs are all decapod Crustacea.⁵¹⁹ Crayfish and lobsters are similar and the first pair of legs have large claws; lobsters are marine and crayfish live in freshwater. The so called "Mediterranean crayfish" (=scampi, Norwegian lobster or Dublin Bay Prawn) has long thin claws. Only the European rock lobster (=spiny lobster or sea-crawfish) does not have large claws, nor does it have well developed swimmerets. It is obvious that the thin crustacean pictured on the coins is not a true crayfish or lobster,⁵²⁰ which both have large claws, but a smaller species with long thin legs without claws in front, thick, shorter swimmerets and a head with a thin, pointed upper part sticking out above the eye. The traditional name crayfish therefore seems antiquated and not correct and it should be rejected for a more appropriate designation. It is, however, difficult to decide whether the small and sketchy rendering on the coins is more like a sea-crayfish (spiny lobster, *palinurus vulgaris*) or a shrimp. The curved body and details described above seem to indicate a shrimp. For a sea-crayfish one would expect the thick and long antennae to be shown, but there are only occasionally traces of very thin antennae (4.R18, 4.R20) which are more similar to the extremely thin antennae of a shrimp. The term shrimp has therefore been adopted here for the bronze hemilitra as well as for the drachm (no. 604). A river shrimp (or prawn) may be suggested as a suitable companion to the freshwater crab.

⁵¹⁸ E.g. BMC Sicily (1876), nos. 62, 96 ff.; Head, *HN²*, p. 122. I am grateful to Henry S. Kim, Oxford, for valuable information on this point.

⁵¹⁹ Information sheets nos. 10294–95, October 2000, from Museum Victoria, Canberra; *Encyclopaedia Britannica* (1964), vol. 14, col. 262; *ib.* vol. 20, pp. 584–585; pl. II (shrimp); Moncharmont, p. 34, fig. 34 and pl. V.

⁵²⁰ A true crayfish or lobster is pictured on rare coins of Astakos in Bithynia (Imhoof-Blumer & Keller, p. 49.7, pl. 8; Head, *HN²*, p. 510) and at Metapontion (Imhoof-Blumer & Keller p. 49.6, pl. 8; Noe & Johnston, nos. 418–419), in both cases seen from above.

There are several obverse die-transfers between series 3, distinguished by the additional leaf above the crab, and series 4 (see table x). Both series contain a number of overstrikes and reveal a wider range of weights than series 1–2. It is evident from the weights of the undertypes that the overstrikes of series 3 belong to the early part of the series and those of series 4 to the later part. The coins of series 4 demonstrate best the sinking weight standard (table x). In the first sequence (701–712) the flans are strikingly large and the weight peak above 20 g. Die-links are few except that 4.O5 is connected with four different reverse dies. In the following lots the weight peak moves downwards and die-links become more frequent.

The principal obverse type in both series is the clutching eagle rendered in varying ways. One of the finest dies is 4.O2, here placed at the beginning of series 4 after the exceptional 4.O1 with flying eagle (no 701). 4.O2 shows a slender eagle with very broad, wide-open wings in a half upright position and a small head bent over a large thin hare. Some variants show the eagle in a more horizontal position with the head lowered closer towards the prey. The eagle is however never actually picking at its prey. The artistic standard is good though few dies can match 4.O2 and the similar 4.O4, obviously by the same hand. Besides the many good dies there are a few which look rather curious, e.g. 3.O13, 3.O23–O24 in series Leaf, 4.O34 and 4.O37 in series Shrimp. The strange obverse 4.O17 (without legend?) shares the fine reverse 4.R24 with the perfectly normal 4.O16 and must belong to the regular series in spite of the awkward execution of the eagle.

As already mentioned the clutching eagle is nearly always combined with the short legend AKPA or AKRA, in most cases written in fairly large letter and easily legible. The legend is placed in the field behind the eagle, below the wing or on either side of the body. Both forms of rho, with tail (R) and without (P), occur. Some coins with R in the legend have low weights indicating that this letter form was still used also at a late date (nos. 741–743). A single die in series 3 (3.O2, no.667) shows a clutching eagle combined with the longer legend AKPATANTINON, also found once in series 5.Hippocamp (no. 787).

Besides the principal obverse type, series 3–4 also contain a number of dies with screaming eagle, some of them transferred from series 2. Octopus (2.O14, 2.O20). Among the new obverse dies with this type of eagle is 4.O22 (no. 741) with the unique legend AKΡΑΓΑ, irregularly arranged in the right field, and known from a single coin in London. The light weight (13.99) assigns it to the later part of the series and shows that the letter form R continues in use.

The exceptional obverse 4.O1 singles out from all other hemilitra obverse dies by showing a flying eagle carrying a snake in his claws. The motif is, with rich variation, used also on smaller bronze denominations (tetrantes, hexantes) and on silver- and gold coins of this period. On the bronze hemilitron the snake is very much entangled in the eagle's claws with only the head sticking out from the muddle. The eagle does not lower his head towards the snake but is seen in flight with his head stretched forwards. An eagle with snake is well known from the coins of Elis,⁵²¹ but a closer analogy to the Akragantine type is found on a gem in the British Museum.⁵²²

The reverses of series 4 with symbol shrimp display a certain monotony but can nevertheless be very fine, e.g. 4.R18, 4.R24. The large pellets arranged in various ways indicate the value but serve also as a decorative element. 4.R2–4.R4 are enriched by the addition of a small scallop shell below the crab. 4.R15 has some additional minor symbols, a 'ring' and a bruch-like object, which have not been identified.⁵²³

Only series 3 has a combination of marine and floral elements on the reverse. The leaf placed above the crab is most often a vine leaf. It recalls the vine branch on the late tetradrachms. The round, lobated vine leaf with frayed outlines is easily recognizable. In a few cases the leaf has an oblong or triangular shape with smooth, rounded lobes and may then be a fig leaf. In a few cases the leaf is undistinct or partly effaced. The decorative effect of the vine leaf makes it a common symbol on coins, especially when combined with a bunch of grapes.⁵²⁴

⁵²¹ Cf. Seltman, *Olympia*, p. 27, pl. III, Group C, series XI, BA–Bt = Kraay, *ACGC*, 326 (c. 440).

⁵²² *BMC Gems*, 1164. Richter, *Gems*, 451; Imhoof-Blumer & Keller, pl. 20.48.

⁵²³ In Westermark, *Le origini*, p. 10, I suggested that the 'brush' may be a Spirographis, cf. Moncharmont, pp. 30–31, fig. 29. For the 'ring', see note 28 under chapter on Tetrantes.

⁵²⁴ Good pictures in Franke & Marathaki. In the West the two outstanding examples are of course Naxos and the Serdaioi, illustrated there on p. 81 and p. 125.

Series 5, Hippocamp

Series 5, Hippocamp is a small series. It has only a small number of new obverse dies, the majority of the dies being transferred from other series, most of them from series 4 (table x). The clutching eagle dominates; only few dies have a screaming eagle with lifted head (2.O23; 3.O25; 4.O18; nos.800, 791, 788). The two obverses of nos.782 (5.O2) and 787 (5.O4) have remarkable legends. On 5.O2 the engraver has corrected a mistake by inserting letter P above KA and 5.O4 is another rare example of a long inscription being used with the clutching eagle (cf. above no. 667, Leaf).

There are more die-links than in any other series. Nos. 779–785 form a die-chain linked also with no.777 through 5.R4. Most obverse dies were used with more than one reverse die. The fine die 2.O13 appears first in series Octopus but is mainly a die of series Hippocamp, where it is combined with at least four reverses (R1–R4, nos. 774–777) and continued to be in use even in a ruined state with heavy die flaws (nos. 776–777). 2.O21 has four reverses, 4.O3 has three, 5.R19 is combined with four obverses of different types (nos. 798–801, transferred from series Octopus (2.O23–O24) and Shrimp (4.O33, O37). It seems likely that we are here at the end of the coinage with a rich supply of obverse dies at hand.

Hippocamp contains a number of heavy coins but has also in proportion to the size of the output more light coins between 15g–12g than any other series. The low weight peak and the numerous die transfers from other series show that hippocamp was the last series to be put in circulation.

The distinguishing symbol of series 5, the hippocamp or sea-horse, is most often represented in a simple shape with an upright forepart without legs and sometimes but not always a fanlike fin below, a curved tail with a long dorsal fin ending in a forked tail-fin. On 5.R2 (no. 775) the tail-fin is bushy and not forked. The forepart is clearly that of a horse with a horse's head and mane, even the muscular breast of a horse seems to be rendered. A horse forepart with legs is shown on 5.R1, 5.R12, 5.R14. On these dies there is no fin at the junction between the forepart and the tail.

The hippocamp has no mythological significance and seems to be mainly a symbol of the sea, associated with marine deities and other sea-monsters. The name comes from the real sea-horse, but the shape is a hybride of a horse forepart and a long fish-tail.⁵²⁵ It is very common in the art and figures on coins from the late 5th century onwards. Often, as on the early didrachms of Taras⁵²⁶ and the later bronze coins of Syracuse and Solous, the shape is elaborate with long legs and wings, combining the hippocamp and the pegasos.

The reverse 5.R7 (nos. 781–782) does not picture a hippocamp but a *ketos* (sea-dragon).⁵²⁷ In contrast to the hippocamp, the *ketos*' body is thin and snake-like, the head is like a dog's with a long snout. When shown with open long and currugated jaws filled with rows of sharp teeth the *ketos* has a more unplesant or even terryfying look than the decorative hippocamp.

At Akragas, a *ketos* with a fish in his mouth is the constant symbol of the hemidrachms, series 2 (nos. 576–582), but in the bronze series it occurs only on this single reverse die. It is rendered in an unusually elaborate way: the thin body with two large fins in front, a dorsal fin and a forked tail forms a loop ending in the small head, turned back. On coins from Syracuse,⁵²⁸ Katana⁵²⁹ and Gela⁵³⁰ the shape and the movement of the *ketos* is much simpler. The difference between the two sea monsters hippocamp with horse-shaped forepart and the snakelike *ketos* is apparent on some didrachms of Cumae of Rutter's Period IV.⁵³¹

Overstrikes (see catalogue and Pl. 71)

Series 3 and 4 contain a number of overstriking on coins of Himera and Panormos. In series 5 only one overstriking on a light Himera has been found. The majority of the

⁵²⁵ Shepard, pp. 26ff.; *LIMC* VIII, suppl., pp. 634–637, 'Hippokampos' (Noëlle Icard-Gianolio).

⁵²⁶ Fischer-Bossert, *Tarent*, pls. 1–4; Mastelloni.

⁵²⁷ *LIMC* VIII, suppl., pp. 731–736, 'Ketos' (Boardman).

⁵²⁸ Boehringer, *Syrakus*, Ketosgruppe, p. 190 ff.

⁵²⁹ Arnold-Biucchi, *Randazzo*, pl. 3:60–68.

⁵³⁰ Jenkins, *Gela*, p. 58, nos. 219–223, pl. 14.

⁵³¹ Rutter, *Campanian Coinages*, p. 12, pl. 4:80–82, rev. Kr 73–75.

identifiable overstrikes belong to Series 3, Leaf. The fourteen overstruck coins which have been documented in this series are all on Gorgoneia of Himera, and all but two are heavy Gorgoneia. The overstrikes are concentrated to a restricted number of die combinations, which indicates that the production of such coins was concentrated to certain moments of need and not spread out over longer periods. Eight emanate from the same obverse die, 3.O2, combined with two reverse dies 3. R1 (670.1.3.8) or 3.R3 (669.1.3.4.5.9), and four belong to the die pair 3.O1–3.R1 (667.1.2.4.7). No. 667.1 is overstruck on the unusual Gorgoneion type with hair formed by large dots.⁵³² Later on in the series there are two overstrikes on light Gorgoneia (no.694.2 without weight and no.696.6, 10.39 g).

The overstrikes in Series 4, Shrimp, give a different pattern. There are six in all; of them is only one (no.749.1) on a heavy Gorgoneion weighing 22.90g. This coin is however a special case. It is struck over a heavy undertype but is through 4.R35 coupled with a group of considerably lighter coins (nos. 743–748), where this heavy coin falls out of the pattern. In this case an old, heavy coin seems to have been used for an occasional overstriking. Two overstrikes are on light Punic coins with types cock/six pellets and legend *sys*, usually attributed to Panormos (no.756.1.4). On the coin in Berlin (no.756.4) the Punic undertype is clearly visible on both sides of the Akragantine coin: the neck and head of the cock appear below the crab and the large pellets are seen on the eagle side. This overstrike has been known since 1877⁵³³ and remained for a long time an unicum, until a second specimen of the same die-pair could be identified (no.756.1). Three more are uncertain (nos. 750.6, 757.2, 758.2) and might be either Himera or Panormos. All overstrikes belong to the latter part of series 4 showing that the Gorgoneia and the cock *sys* bronzes were used simultaneously as undertypes.

In Series 5 Hippocamp there is only one sure overstrike on a light gorgoneion of Himera (no. 796.1).⁵³⁴

⁵³² Kraay, *Le origini*, pl. 6.5.

⁵³³ Friedländer, *ZfN*, p. 336; Gåbrici, *Rassegna*, p. 252: 47; Tusa Cutroni, *Le origini*, p. 234, note 22; Westermark, *NAC/QT* 1984, 74, pl. II.16.

⁵³⁴ For 800.5 see Catalogue.

The curious coin no.760 in Series 4 is an example of an unusual doublestriking. The same coin has been struck with both obverse and reverse on each side. On the obverse there are clear traces of a crab's legs and shell on the left behind to eagle; on the reverse the outlines of the large hare and the dotted border of the previous obverse are well visible. The coin is correctly described by Calciati (I, 13OS–CM) but there is probably no countermark on the eagle's body as he suggests.

Transfer of dies. Hemilitra

| 1. Triton | 2. Octopus | 3. Leaf | 4. Shrimp | 5. Hippocamp |
|--------------------------|------------------------------------|------------------------------|--------------------------|----------------|
| 1.O2 (613)—1.O2 (620) | | | | |
| 1.O3 (614)—1.O3 (621–23) | | | | |
| 1.O4 (615)—1.O4 (624–25) | | | | |
| | 2.O13 (644) ————— | | | 2.O13 (774–77) |
| | 2.O14 (645) ————— | | 2.O14 (738) | |
| | 2.O20 (656–57) ————— | | 2.O20 (747–48) | |
| | 2.O21 (658) ————— | | 2.O21 (732) ——— | 2.O21 (793–96) |
| | 2.O23 (660–61) — 2.O23 (700) ————— | | | 2.O23 (800) |
| | 2.O24 (662) ————— | | 2.O24 (754) ——— | 2.O24 (799) |
| | 2.O25 (663) ————— | | 2.O25 (773) | |
| | | 3.O5 (674–75) ——— | 3.O5 (710) | |
| | | 3.O11 ¹ (682) ——— | 3.O11 ¹ (719) | |
| | | 3.O15 (686) ——— | 3.O15 (733–34) | |
| | | 3.O16 (687) ——— | 3.O16 (737) | |
| | | 3.O22 (696) ——— | 3.O22 (761–63) | |
| | | 3.O23 (697) ——— | 3.O23 (769–70) | |
| | | 3.O25 (699) ————— | | 3.O25 (791) |
| | | | 4.O3 (703) ——— | 4.O3 (779–81) |
| | | | 4.O17 (729–30) ——— | 4.O17 (789) |
| | | | 4.O18 (731) ——— | 4.O18 (788) |
| | | | 4.O23 (742) ——— | 4.O23 (797) |
| | | | 4.O33 (759–60) ——— | 4.O33 (801) |
| | | | 4.O37 (771–72) ——— | 4.O37 (798) |

Tetrantes

The tetrantes are the most frequent of the smaller bronze coins and must have been issued in great quantities. The material studied here can only be regarded as a fairly substantial sampling of the original production. Only coins of a reasonably good state of preservation have been considered for the die study. Some coins with an uncertain obverse or reverse have been included, if the other side can be identified with certainty. The tetrantes are the most uniform of the bronze denominations in so far that they have throughout only symbol shrimp below the crab. The only exception is no.807, which seems to have a small fish instead of the ordinary shrimp. The material has been grouped in five series according to types (A–E). The standard series (D, nos. 839–913) shows a clutching eagle standing right with a hare in its claws; the reverse has three pellets in a row below the crab. The hare is sometimes placed on a pile of stones. An eagle turned left (E, nos. 914–917) is rare. Only small groups of coins (A–C) differ from the standard pattern: Series A (nos. 802–805) has a screaming eagle, three-quarter facing left. All preserved coins, from a single obverse die, are in worn condition. The eagle's feet and prey are more or less off flan. The prey is not clearly visible on a single specimen, and it remains uncertain whether it is a hare or a fish.⁵³⁵ A still smaller but well documented issue (B, nos. 806–807) shows an eagle engaged in struggle with an enormous snake, entangling his head and legs. This issue is clearly associated with the rare hemilitron no.701 and the hexantes nos. 985–989. Series C (nos. 808–838) is somewhat irregular. Most of the coins have an additional symbol on either obverse or reverse: a vine leaf and/or a 'ring' (mussel?) on the reverse (nos. 808–820), or in one case on both obverse and reverse (no. 808),⁵³⁶ a little crab on the obverse behind the eagle (nos. 827–832) or a scallop shell in front (nos. 833–835, 838). The vine leaf corresponds to the hemilitra series 3 and occurs also on the tetradrachms (nos. 589–591). The miniature crab and scallop shell do not occur on other denominations of the eagle/crab bronzes, but the scallop shell is found also on the large fish tetradrachms and the small crab on the tetradrachms nos. 586–588, on the dekadrachms and on the bronze coins with river god head/eagle on capital (pl. 2.36).

⁵³⁵ Cambridge, *McClellan* 2069 calls it a thunderbolt (!); Calciati I, 61, a hare; *SNG Agrigento* 219, uncertain.

⁵³⁶ The "ring" has not been identified; cf. Salinas 262 "oggetto non riconoscibile"; Calciati I, tetras 50mv 1/2 and hemilitron 26A suggests 'mussel shell?'.

Die links are not infrequent but not numerous enough to establish a die sequence and a reliable relative chronology of the types. The weights, however, indicate that the more unusual series A–C belong to the earlier part of the output (cf below). Die-linkages are most frequent within series D. The longest die-chaine is formed by O45–O50 (nos. 884–911). The interlinkage of these dies shows that they were struck simultaneously. A noteworthy feature is that some obverse dies (O16, O38, O45, O46, O49) are coupled with six or more reverse dies. A high proportion of reverse to obverse is characteristic for the early silver coinage, but not so much for the other bronze denominations.

The three pellets marking the value are most often placed below the crab (D). In issues A–C the pellets may be placed in the normal way below the crab, or two pellets above on either side of the crab and one below or above between the claws.

Ethnic

The small issue with screaming eagle nos. 802–805 has no visible ethnic. When there is a legible legend it is always AKPA with P. The legend is either divided AK–PA or AKP–A or it is written AKPA and placed on either the right or the left side of the flan.⁵³⁷ Occasionally it is retrograde and reversed (O45, nos. 884–890). The die-linkage shows that the variations in the legend does not follow a systematic order, e.g. O29 (no. 851) with legend on the right side is through R43 linked with O30 with divided legend (nos. 852–854).

Weight. The heaviest recorded weight of a tetras is 14.65 (no. 811.1, series C); the standard weight by frequency for the denomination is *c.* 9.70 g. The rare tetrantes with screaming eagle has a peak at 9.50–10.00 and those with snake at 10.00–10.50, indicating that these issues with weights around the average or a little above it belong to an early phase of the output. The largest and most standardized series (D) is probably the only one that continues down to the end. It covers a wide range of weights. It was mentioned above that it has not been possible to establish a reliable die-sequence, but as displayed on pls. 60–65 the coins show a slight but clear weight reduction. The first

⁵³⁷ The legend Ακράγαντινον (e.g. *SNG Agrigento* 219), does not exist on the tetrantes.

lot (839–853, pl. 62) has about the same weight standard as issues A–C (10.50 g), lot 855–880 (pl. 63) has a medium of *c.* 8.50 and for the last lot 881–913 (pls. 64–65), (the few coins with eagle I. are not included) the medium has sunk to *c.* 7.50. This last figure can be checked against the fairly substantial die-linked sequence 884–912 (O45–O49) which has the the same medium weight, 7.50 g. A weight reduction from *c.* 9.70 g to *c.* 7.50 g can thus be regarded as certain.

Style

Some of the numerous obverse dies stand out as being of better artistic quality than the standard type. The fine O3 is the only obverse with vine leaf behind the eagle. O7 with the crab symbol shows an eagle with wide open wings and finely rendered feathering. Most eagle types and symbols have their counterparts among the hemilitra. The screaming eagle with lifted head is almost exclusively confined to the hemilitra. It occurs on a single tetras die (O1) and on no other smaller denominations. An eagle grasping a snake is rare on the bronzes. It is found on hemilitron 701, on some hexantes (985–989) and on the single tetras die O2 (806–807).

Overstrikes

Tetrantes overstruck on foreign coins are rare but include undertypes from more mints than is the case with the hemilitra.

Himera and sys (Panormos)

In addition to the numerous hemilitra overstruck on Himera and *sys* bronzes of the cock type, there are also a few tetrantes with undertypes from these mints.⁵³⁸ A tetras (no. 811.5, Pl. 71) of issue C in St. Petersburg is restruck on a heavy Gorgoneion tetras of Himera. The types of the underlying coin are well visible on both sides. The weight (12.64) is well above the medium for a tetras and points to an early issue. The die-combination (O4–R9) includes several other heavy coins, among them the heaviest documented tetras (14.65, no. 811.1).

⁵³⁸ Virzi remarks in his handwritten (unpublished) catalogue that all Akragantine tetrantes in his collection had been restruck on transitional tetrantes of Himera, a statement which must be regarded as an exaggeration. He made a similar statement about the hemilitra. *cf.* Westermarck, *Le origini*, pp. 11–12.

This overstrike is the only one which belongs to an early phase of the tetras series; the remaining pieces are all lighter and may be placed towards the end of the coinage. A tetras overstruck on a *sys* bronze of the cock type was published by Calciati (I, 55 OS). The weight of the undertype is 7.35. As mentioned above the medium weight of the Akragantine tetrantes sinks from c.9.70 to c.7.50. The weight of the *sys* undertype thus corresponds to a late Akragas tetras. The restriking has not effaced all of the underlying types. On the new obverse the outline of the cock's neck, tail and legs can be traced; on the reverse the three large pellets are still well visible. The overlying eagle and crab have come out rather distorted (Pl. 71). The dies cannot be determined with certainty but may be O50–R89 (no. 913) at the end of series D. The overstruck tetras confirms the close correspondence in weight and probably in time between the cock coinage and the Akragas bronzes.

Solous

The two tetrantes overstruck on hemilitra of Solous with types Herakles head/shrimp, six pellets are fairly recent discoveries. The one published by Calciati belongs to series C (add no. 820, Pl. 71).⁵³⁹ On the obverse the undertype, the Herakles head, inverted, and the overstruck eagle are both well distinguishable; on the reverse hardly anything of the original type can be seen. The Akragas obverse die is O10 (no. 820), the reverse die is similar to R16, but it is uncertain whether there is a leaf above the crab or not. The other tetras restruck on Solous is worn and undefined; the dies remain uncertain, but the coin certainly belongs to the final phase of the series D.⁵⁴⁰ It may in fact be the same die-pair as for the Punic overstrike mentioned above (no.913). The litra standard of Solous was around 15 g; the weight of the hemilitron (c.7.50) thus corresponds to a tetras of Akragas.

⁵³⁹ *NAC/QT* 25, 1996, pp. 71–81, pl. I.1–3.

⁵⁴⁰ Published by Manganaro, *JNG*, p. 17, pl.2.8, who correctly dates it to the end of the century; Lee, *NC* 2000, p. 61, pl. 3d.

Segesta or Eryx

The overstruck tetras in the ANS is the most uncertain and the original mint cannot be determined with certainty.⁵⁴¹ The traces of the original obverse, on the reverse of the Akragas coin, are so faint that it is not possible to say whether the undertype is a female head (Segesta) or a male head (Eryx). Of the overlying crab the right part is visible and one of the pellets placed above, close to the crab's claw. There does not seem to be a pellet below. The tetrantes with all three pellets placed above in the upper field are quite rare and belong to issues B and C. The visible part of the crab is similar to R9 (type B). The overstruck eagle has not come out well; below the dog, inverted, there are traces of the eagle's head and the front part of the wings, but from what can be seen it might very well be O4, combined with R9 (no.816). The overstriking has left a considerable part of the underlying reverse type visible. The front part of a dog, standing r., with a large pellet in an incuse circle above can be seen. There are traces of two more pellets, one below and one in front of the dog, possibly punched. If the underlying coin is from Segesta, it is most likely a hexas of Bérend's group B, first struck on a heavy litra standard of c.50 g. and later revalued with punches to the double value, a trias (litra c. 25 g).⁵⁴² The weights of group B range from 10.20 to 5.59 with a peak at 8.50–8.00. The weight of the overstriking (6.76) is thus at the lower end of the Segesta group, and it is a poor weight for an Akragas tetras of type C, which has a medium above 10.00. However, another low weight (6.64) has been recorded for a coin belonging to the same die combination (no. 810.8).

The other possibility for the undertype suggested in the *SNG ANS* is Eryx. The rare first bronze series of Eryx has on the reverse a standing dog, adopted from Segesta, and on the obverse a male bearded head. The series, comprising tetras, hexas and onkia, is sometimes dated to the fourth century,⁵⁴³ but it belongs undoubtedly to the late fifth century.⁵⁴⁴ The coins were struck on a heavy litra standard (50+ g.), similar to the heavy standard at Segesta. Both pellets and punches were used as at Segesta. The recorded

⁵⁴¹ *SNG ANS* 1064, here Pl. 71.

⁵⁴² Bérend, *Le origini*, pp. 53–77.

⁵⁴³ Calciati I, p. 281(c. 400–340); Gábrici, p. 130 (c. 344–336).

⁵⁴⁴ Zodda, pp. 13–14.

weights of the rare tetrantes are all high: 14.89 (implying a litra of *c.* 60 g.), 9.91, 9.23; the flans are exceptionally large and flat (26–28 mm). The recorded weights of the hexantes of Eryx are all above 7.00 g, thus well above the weight of the overstriking, but due to the scarcity of the coins the weight limits are of course uncertain. However, the flans of the Eryx bronzes are often irregular, the dog is somewhat stiff and primitiv with a straight front line and the pellets are very large. The flan with slightly bewelled edges, the finely curved outlines of the dog and the pellets in incuse circles point to Segesta rather than Eryx for the undertype.

Bérend dated Segesta group B to *c.* 414–410, a date which fits well with the overstrike, which belongs to the earlier part of the tetras seies. It seems likely that the major part of the Segestan groups are contemporary with Akragas.

Hexantes

The hexantes are less numerous than the tetrantes but more richly varied. They can be divided into five small series distinguished by the kind of prey the eagle clutches in his claws. The only substantial issue is the one with obverse eagle on fish. In addition to hare and fish and the rarer snake, there are two new types of prey, a bird and a pig, which do not figure on any other bronzes of Akragas. The bird is evidently a huge species with a small head on a long, thin neck. The eagle carries it hanging upside-down with spread wings. The size and the characteristic details of the prey point to a water bird, most likely a swan or possibly a heron.⁵⁴⁵ Aristotle, who knew that the ‘crook-taloned birds’ took any prey they could overcome including birds (*HA* VII.593b.25), says that eagles hunt sea-birds watching them when they emerge from the sea (*HA* VIII 620a.6ff). The so called pig is not very clearly rendered and sometimes it is blurred by the wear of the dies.⁵⁴⁶ On the best preserved dies (P.O2, P.O4) the little animal has long, thin legs and a longish head with large ears. It looks similar to the prey on the hemidrachms nos. 581–582 and is therefore most likely a fawn. The sea eagle was known as a fawn-killer (Aristotle *HA* VIII.618b.18ff.). A similar picture of an eagle attacking a dead fawn

⁵⁴⁵ The bird is rarely named. Lanz 82, 1997, 58 calls it a dove.

⁵⁴⁶ The usual name for this prey is pig (German: Ferkel). So *BMC* 108; Bernhard, p. 116.6; Lanz 78, 1996, 127; Calciati I, 75A; *cf.* Winterthur, Bloesch 592 (dog); *SNG Morcom* 525 (uncertain animal).

is shown on a gem, illustrated by Keller & Imhoof-Blumer (pl. 20.44). On the other, less clear dies (P.O1, P.O3), the details are less distinct, but it seems likely that the prey is the same on all four dies.

The hexantes are, if well preserved, very fine coins. The obverse eagle is rendered in several varieties, some of which are stylistically close to the eagles on other denominations, e.g. the eagle with wide open wings on nos. 976–984 is similar to the hemilitra Series 3, nos. 678–680 and Series 4, nos. 702–704. The rare eagle on snake is represented by a single die. The bird is here less tangled up with the snake than he is on the tetrantes nos. 806–807. Here the snake's head is turned upwards towards the eagle in a way that recalls the didrachms no. 601–602 and the gold. In neither case are they engaged in fighting. In contrast to other prey the snake is not dead but alive and seems to be watching its opponent.⁵⁴⁷

The reverse of the hexantes has either two slender fish or a single, fat fish. The slender fish is sometimes called tunny,⁵⁴⁸ but is more likely a grey mullet as on the hemilitra. The rendering of the thick fish varies a little. In most cases it seems to be a perch as on the onkiaï. When the fish is depicted with a bulging eye, a big mouth and a rounded tail-fin (Hare, R5; Snake, R1–R2; Fish b, R10), it may be a mero (gigant sea perch) as on the silver coins.⁵⁴⁹

The small issues of hexantes have few obverse dies, most of them combined with several reverse dies. Only issue Fish a has a higher number of dies (21 *obv.*, 23 *rev.*). Obverse die-links are fairly scarce, but reverse die links between Bird and 'Pig' (B.R3), and Fish b and Snake (F.R24, F.R29, nos. 973, 985 and 978, 986) indicate that the issues run partly parallel.

⁵⁴⁷ For a similar motif *cf e.g.* the later bronze coins of Morgantina. Erism, Morgantina, pp. 23–26, pl. 3.12–17.

⁵⁴⁸ BMC nos. 107–110.

⁵⁴⁹ When the fish is given a name in catalogues it is usually called a perch (*e.g.* Leu 6, 1973, 67; MMAG list 515, 1988, 1) or a mero (Leu 79, 2000, 334). *cf.* Calciati, *Koinon*, 58 (cernia); Lanz 78, 1996, 123 (Knurrhahn).

The legend on the hexantes is AKPA or in one case AKPAΓ (F.R14, nos. 961–962), placed on either the obverse or the reverse. The hexas and the onkia are the only bronze denominations which can have legends on both sides of the coin. On the hexantes the legend is written in minute letters encircling the types eagle or crab. The standard weight by frequency for all series is *c.* 6.75. A slight difference in weight between the issues can be noticed. Hare, Bird and ‘Pig’ have a peak at 7.50–7.01, Fish at 7.00–6.51 and the lightest issue, Snake, at 6.50–6.01, indicating a moderately sinking standard.

Onkiai

The onkiai are comparatively scarce. The obverse shows an eagle standing left or right on a fish (grey mullet) with head reverted, a variety of the eagle motif which is here used for the first time at Akragas. It is related to the eagle on Ionic capital found on many of the earlier silver coins. A combination of the reverted head and the Ionic capital reappear on the reverse of the later bronzes with obverse head of young river god. The cicada behind the eagle’s back on O1–O2 links the issue to the tetradrachms nos. 584 (R2), 585 (R3).

Two reverse dies R1–R2 have a conch shell below the crab, all others have a single fish similar to the one on the sextantes. On the onkiai the rendering of the fish is unambiguous; it has a thick body with a long dorsal fin, a forked end-fin and a small mouth, recognizable as a perch, well known from fish plates.⁵⁵⁰

The ethnic is always AKPA, either encircling the eagle or placed at one side. In one case (R3) the ethnic appears also on the reverse.

The die-plan comprise 8 obverse and 15 reverse dies with some die-links. Most die combinations are well documented, implying an intermittent output of a few die-pairs at the time. The weight is stable with a medium at exactly 3.50 (lira 42 g). No weight reduction can be noticed.

⁵⁵⁰ Lacroix, *La faune marine*, pp. 40–41, fig. 4.

Chronology

The struck bronzes with types eagle and crab are clearly related to the silver coins of period III. The relative chronology is dependent of how the material is arranged. In the publications mentioned above, Calciati I and *SNG Agrigento*, both containing a large material of Akragas, the bronze coins having on the obverse a clutching eagle with lowered head have been placed first followed by those showing a screaming eagle with lifted head or standing with head reverted. Calciati does not discuss the sequence, and it is not clear whether he regards his groups as following each other in a chronological order or not. In the *SNG Agrigento* the coins with clutching eagle (nos. 97–193) are given an early date, c. 440–425/420, and those showing an eagle with lifted head (nos. 194–229) are assigned to the period 425/420–416, followed by the series with the young river-god on the obverse⁵⁵¹ (cf below). The chronology proposed for the early group in the *SNG Agrigento* is dependent on an overstrike (no. 383.4) in Caltabiano's *Messana*, which the author regards as being struck over a large fish tetradrachm of Akragas which has on the obverse a representation of a clutching eagle similar to the one on the bronze coins.⁵⁵² It was argued above (p. 80 note 18), that the overstrike is highly uncertain and cannot be taken into consideration for the chronology of either the silver or bronze coinages.

The arrangement of the material in series according to their reverse symbols which has been adopted here and was described above (p. 116), has lead to a somewhat different conclusion as to the priority of the eagle types. The screaming eagle standing on his prey with lifted head is the only type in the short Triton series, which has the highest weight by frequency and for this and other reasons already mentioned, seems to have initiated the struck bronzes. The same eagle type is predominate in series Octopus. After the introduction of the clutching eagle it became the most common dominating the series Leaf, Shrimp and Hippocamp. The frequent transfers of obverse dies between the series show that the series to a large extent run parallel. That is also evident from the use of letter R. The longtailed R is found in series Triton, Octopus, Leaf, Shrimp

⁵⁵¹ Martino, p. 10, n. 16, also regards Calciati's Group I, eagle with lowered head, as the oldest.

⁵⁵² Caltabiano, *Messana*, p. 91, 'Tale cronologia potrebbe avere conseguenze non soltanto in relazione alle emissioni acragantine in argento, ma anche per quanto riguarda gli inizi della monetazione di bronzo che recano tipi analoghi a quelli dei tetradrammi'.

but not in Hippocamp. In the silver coinage the change from R to P occurred between the tetradrachm series with reverse large fish, which has always R, and reverse Skylla, which has always P, and can be followed on the hemidrachms accompanying these series. The corresponding orthographic change in the bronze coinage underlines how closely related the silver and bronze coins are. However, on the bronzes the letter form R occurs rarely, and it seems therefore likely that the bronze coinage was initiated towards 415 more or less at the same time as the Skylla series, where the famous eagle pair which combines a clutching and a screaming eagle, was introduced. This leads to the question of how the screaming eagle with lifted head on the silver coins is related to the similar type on the bronzes. There is an apparent difference. On the silver coins the foremost bird of the eagle pair stands with lifted head and closed wings; on the bronzes the single eagle stands in a screaming attitude three-quarter facing left or right with open wings. Normally the types of the bronze coins were taken over from the silver in a simplified form.⁵⁵³ Yet in this case, the single screaming eagle with lifted wings is a fine variant adopted for the bronzes and cannot be regarded as a mere copy of the similar eagle on the silver.

The traditional terminal date for the eagle/crab bronzes (406) is here maintained, and no other bronze series is included in Period III. The fine bronze series with types *Youthful head of river-god Akragas/Eagle standing with reverted head on Ionic column* is thus excluded as well as countermarked coins.⁵⁵⁴ Some scholars have argued, with good points, for a pre-406 date of this series.⁵⁵⁵ On the other hand, the soft fleshy style of the head and the eagle type taken over from the onkiai as well as archaeological evidence seem to support a later, fourth century date, which has also found strong support.⁵⁵⁶ There are few finds of the river-god series and none can be dated to the fifth century. The only hoard which contains a hemilitron of this series is the important Milena hoard (hoard 21). In the hoard there are more than one hundred bronzes of the eagle/crab

⁵⁵³ Lacroix, *Le origini*, pp. 267–268, 285–286.

⁵⁵⁴ Westermarck, *Le origini*, p. 14; Boehringer, *SM* 1978, p. 52. Countermarked coins: In general, Pedroni; Garraffo, *Monetazione*, pp. 192–200.

⁵⁵⁵ Consolo Langher, p. 72, 211; Westermarck, *Le origini*, p. 23 and p. 19; Mannino, p. 74.

⁵⁵⁶ Previous note; Westermarck, *Le origini*, p. 18; Cahn, *Antikenmuseum Basel*, comment to no. 269; *SNG Morcom* 534.

series, many of them countermarked with Herakles head and crab, and a single example of the river-god series. The Syracusan coins in the hoard are heavy bronzes (drachms?) with Athena head/dolphins and star and fractions with Athena head/hippocamp,⁵⁵⁷ which belong to the time of Dionysios and point to a burial date within his reign. The struck bronze coins of Akragas found in the excavations at Himera (find A4) are all of the eagle/crab series, nine of them countermarked with a Herakles head. The river-god series is absent. The Milena hoard and the finds from Himera indicate that the first countermark, the Herakles head, which is frequently used on the eagle/crab bronzes is earlier than the river-god series, which never has this countermark but only later ones. At the archeological site of Sabucina (find A10) two hemilitra of the river-god series (Mannino 65–66) were found with eagle/crab bronzes, some with countermark Herakles head, and Syracusan coins from the time of Dionysios, both Hippocamps (Mannino 99–108) and the large bronze with Athena head/dolphins and star (Mannino 95–98). Also in this case hemilitra of the river-god series thus occur with countermarked bronzes and Syracusan bronzes from Dionysios. Another three hemilitra of the river-god series have been found at Vassallaggi (find A12). One is without countermark, and the two others are countermarked, one with a crab and the other with a young head and kerykeion. The bronzes of the eagle/crab series from the same site include a hemilitron and a tetras with the same rare countermark ‘young head’, which is clearly later than the countermarks Herakles head and crab as it is sometimes applied on top of an earlier countermark. The Syracusan coins include hippocamps.⁵⁵⁸

Archaeological evidence thus strongly supports a fourth century date for the river-god series as well as for the countermarks except the countermark Herakles head, for which a date to the time of Punic domination 405–392, that was long ago suggested by Consolo Langher, seems the most convincing.⁵⁵⁹

The history of Akragas and many other Sicilian cities in the first half of the 4th century is virtually unknown. According to the peace treaty of 405 the citizens of Akragas were allowed to return to their much ravaged city but had to pay tribute to Carthage

⁵⁵⁷ Boehringer, *Essays Thompson*, pp. 21–26; Boehringer, *Monetazione*, pp. 80–81.

⁵⁵⁸ Orlandini & Adamesteanu, p. 206 (IV).2; *AIIN* 9–11, p. 267, sporadico 3.

⁵⁵⁹ Consolo Langher, pp. 66, 72.

(Diodor XIII.14.1). A repopulation must have taken place.⁵⁶⁰ Akragas and Messana are mentioned in connection with Dionysos' attempt to conquer Tauromenion in 394 (Diodor XIV.96.3). In the war of 397–392 against Carthage Dionysos was victorious and his empire, comprising the entire island except the extreme western part, reached its peak. Thereafter Sicily enjoyed peace for about ten years (392–383/382), while Dionysos was engaged in South Italy. This short period of peace seems to be the most likely period for the river god bronzes. The status of Akragas is not known,⁵⁶¹ but it may have been possible for the city to issue coins. The connection between 'sovereignty and the right of coinage' has been much discussed in later years. Kinns has pointed out that the attempt to attribute all coin series to periods when a city was 'free' or enjoyed a period of 'prosperity' has little to recommend it, stressing the local need as a chief reason.⁵⁶² A post 380-date for the Akragantine series seems unlikely with regard to Dionysios' severe defeat in the renewed war against Carthage (383/2 onwards), whereafter he had to surrender Selinous and the territory of Akragas west of the Halykos river. This event has been seen as the beginning of a serious decline for Akragas.⁵⁶³

Related coinages in western Sicily

Bronze coins from four mints in the western area of the island are known to have provided undertypes for overstrikes at Akragas: Himera, Panormos, Solous and Segesta (or Eryx). The bronze series of these mints, their development and chronology, are therefore of interest for Akragas.

Himera

The early Gorgoneia comprise a) a rare variant showing a Gorgoneion with a round face, a small smiling mouth, finely waved hair close to the head and legend IMEPAION and b) the common type showing a Gorgoneion with rougher features and a large mouth

⁵⁶⁰ Beloch, pp. 283–284, thinks that the population remained large also after 406.

⁵⁶¹ Seibert, p. 50, gives a dark picture of Dionysios' treatment of the Greek poleis: "Obgleich Dionysios sich gern in der Pose eines Vorkämpfers griechischer Freiheit sah, hat er die von den Karthagern eroberten Städte nach ihrer Rückeroberung keineswegs besonders gefördert".

⁵⁶² Kinns, *NC* 1986, pp. 247–248.

⁵⁶³ Beloch, p. 284.

with pendent tongue, mostly anepigraphic but occasionally with legend IMEPA or IMEPAION. For group (a) the denominations trias, tetras, hexas and onkia, several struck from the same obverse die, are documented.⁵⁶⁴

The ordinary Gorgoneia (b) occur in several stylistic variants and fall into a heavy group with a hemilitron of *c.* 30–20 g and a lighter group with a peak at 15–12 g for the hemilitron.⁵⁶⁵ The heavy group seems to have started with an issue, isolated already by Imhoof-Blumer in 1886,⁵⁶⁶ comprising a hemilitron with standing figure and six pellets, pentonkion with reverse five pellets, trias with reverse seated figure or pellets and sometimes legend HIMEPA, tetras with three pellets connected with lines forming a T and hexas with two pellets within H. To these can be added a rare onkia with legend HIMEPAION of which only a few examples are known.⁵⁶⁷ The weights of this issue implies a litra standard of over 70 g.

The hemilitra with the ordinary reverse (six pellets) have sometimes the same high weight over 30 g, but the standard is rapidly sinking. The highest recorded weight for an Akragantine overstrike on Himera is 31.26 g. (no. 669.1). It is obvious that the undertype belongs to an early phase of the Gorgoneia coinage. The other weights recorded for overstrikes on heavy Gorgoneia in group 3 Leaf (nos. 667, 669, 670) are also high compared with the normal Akragantine hemilitra, whereas the light group of Gorgoneia (with a peak at *c.* 15 g.) has very much the same standard as the lighter hemilitra of Akragas.

The chronology of the Gorgoneia with reverse six pellets has been much discussed. Price⁵⁶⁸ assigned them to the period *c.* 450–430 BC. He noted that the developed form of rho (P) was used already on the trias in Imhoof-Blumer's initial issue, and concluded that the earliest issue cannot be earlier than the silver coins of Himera with the same letter form. In Gutmann & Schwabacher⁵⁶⁹ the transition from R to P follows on the

⁵⁶⁴ Calciati, Himera, pp. 8–10.

⁵⁶⁵ Kraay, *Le origini*, pp. 27–41.

⁵⁶⁶ Imhoof-Blumer, *NZ*, pp. 241–46, pl. 6.

⁵⁶⁷ Leu 28, 1981, 25(=*Le origini* pl. 40.2); Leu 77, 2000, 80.

⁵⁶⁸ Price, *Essays Robinson*, p. 8.

⁵⁶⁹ Gutmann & Schwabacher, p. 108, p. 111.

tetradrachm dies Q4 (with R) and Q5 (with P) linked with the same reverse die. The chronology established by the authors for their group II beginning with Q5, c. 450–420, has been revised by Arnold Biucchi, who rearranged the sequence of the groups and dies in a convincing way and lowered the date of the relevant group (=her group III) to c. 440–430/425.⁵⁷⁰ As mentioned above the majority of the Gorgoneia are anepigraphic, but when there is a legend it is always spelled with P. The form IMEPAION on early bronzes corresponds to the legend on the latest groups of silver tetradrachms (Arnold Biucchi's groups III–IV), dated after 440. Consequently the initial date of the bronze coinage tends to be lowered towards 430 in later numismatic literature.⁵⁷¹ The rapidly sinking weight standard points to a fairly short period of minting, and the fact that heavy Gorgoneia belonging to an early phase of the coinage were overstruck at Akragas after c. 415 indicates that the undertypes can not be too much earlier.

The rough and primitive looking Gorgoneia were followed by several lighter series with completely new and more refined types, revealing a clear Syracusan influence both in types and weight standard.⁵⁷² The low weight standard of the series *Goat rider/flying Nike* (litra c. 11–13 g) and *Female head/six pellets in wreath* (litra c. 6–10 g) is similar to the light standards in Syracuse.⁵⁷³ A hemilitron of the series Goat rider/Nike and six pellets from the Himera excavations is reported to be overstruck on a hexas of Akragas (*Himera* II.496, 6.39g). The hemilitron following the lightest Sicilian standard adopted by Himera for this new series thus corresponds to an Akragantine hexas. The overstriking cannot be earlier than c. 415 BC, the likely initial date of the Akragantine bronzes, but may be later, indicating that the Goat rider series was in circulation in the years before 409, to which it is usually dated.⁵⁷⁴ This implies that the striking of the later group of Gorgoneia ought to have ceased by c 415.

⁵⁷⁰ *NAC/QT* 17, 1988, pp. 87–89.

⁵⁷¹ Leu 6, 112–115 c. 445–430; Leu 28, 1981, 25 c. 445; Leu 77, 2000, 80–81, c. 435; MMAG Lafaille, c. 430–420; *SNG Morcom* no. 594 (c. 430). Cf *SNG Agrigento* 460–430.

⁵⁷² Tusa Cutroni, *Himera* II, p. 716, note 11; Kraay, *Le origini*, p. 41.

⁵⁷³ The connection is also attested by an overstriking of Syracuse *Female head/octopus* on Himera *Female head/six pellets in wreath* published in Calciati II, Syracuse OS5, 3.87. For the problematic chronology of this much discussed, frequent Himerean series, cf Boehringer, *SM* 1978, p. 53 and Boehringer, *KME*, pp. 33–34.

⁵⁷⁴ Kraay, *Le origini*, p. 39; Boehringer, *KME*, pp. 33–34. The reverse motif is closely related to the hemidrachms of Kamarina of a similar date (c. 410–405), Westermark & Jenkins, *Kamarina*, pl. 31.b–c

Panormos

That $\varsigma\varsigma$ designates Panormos has been widely but not unanimously accepted since the publication of Jenkins' important studies *Coins of Punic Sicily I–IV (CPS)*. Positive evidence is provided by a litra (c.410) with types *Poseidon seated on rock with trident and dolphin / youth riding a goat with human face* and bilingual legend, $\varsigma\varsigma$ on the obverse and Πανορμος on the reverse⁵⁷⁵ and by a tetradrachm die sequence with Greek legend on the reverse and $\varsigma\varsigma$ added to the obverse die in its final stage.⁵⁷⁶ The likely first appearance of the legend $\varsigma\varsigma$ is on a unique drachm in Palermo (3.91 g) with obverse cock and reverse crab with dolphin below. If $\varsigma\varsigma$ is accepted as referring to Panormos, it would be the first issue of the city. The types are the same as on the didrachms of Himera of the Akragantine period, and the dolphin added below the crab might, as noted by Jenkins, have been copied from mid fifth century tetradrachms of Akragas⁵⁷⁷ (cf. nos. 384 and 393). The cock type and $\varsigma\varsigma$ legend were adopted for the obverse of a fairly substantial bronze coinage with large pellets on the reverse.⁵⁷⁸ From the thick fabric and the reverse type with large pellets, it is evident that the cock bronze coinage is related to the Gorgoneia. The cock series, with a weight peak at 12 g. for the hemilitron, is usually regarded as being contemporary with the later group of the Gorgoneia which has a weight peak at 15 g.

However, the Akragantine overstrikes provide support for the opinion that the cock series is altogether later than the light Gorgoneia and belong to the period after c. 415, when the Gorgoneia had ceased. The two hemilitra and the tetras overstruck on cock bronzes belong to the final phase of series Shrimp (hemilitra no. 756.1,4) and of series D (tetras no. 913.1), thus certainly to the last decade of the fifth century. It is of course uncertain

⁵⁷⁵ The litra exists in two varieties, a) with bilingual legend and b) with only legend $\varsigma\varsigma$ on rev. Jenkins, *CPS I*, pp. 28–29, a) pl. 2.y = pl. 24.6, Jenkins, *CPS IV*, pl. 24.A (= Hunter p. 208.2); Mildenberg, *SNR*, p. 13, pl. 2.4 (same ex.); b) Jenkins, *CPS I*, pl. x = pl. 24.5; Jenkins, *CPS IV*, pl. 24.B (= *BMC* p. 246.1). In an appendix to Jenkins, *CPS IV*, p. 48–50, Jenkins defended the equation $\varsigma\varsigma$ = Panormos against Lo Cascio. For a later discussion of the interpretation of the word, see Xella.

⁵⁷⁶ Kraay, *SM*; Jenkins, *CPS I*, pl. 7.5 and 10.

⁵⁷⁷ First published by Imhoof-Blumer, *NZ*, p. 267.1, pl. 7.14; Rizzo, pl. 65.1; Jenkins, Himera, p. 34, pl. 4.7; Jenkins, *CPS I*, p. 33, pl. 6A.

⁵⁷⁸ Gàbrici, pp. 47, 194–95, pl. I.24–25; Tusa Cutroni, *Quaderno Imerese*, pp. 117–118, pl. 58.4–7; Gandolfo, 1984, p. 76–77; For the weight standard, see Kraay, *Le origini*, p. 38.

how much earlier the undertypes are, but the light weight of both the undertype and the overstriking suggest that there need not be a wide gap between them. The overstrikes also demonstrate that a date to the period 405–394 for the cock bronzes must be ruled out.⁵⁷⁹

It is well known that the coin types of a certain city are strikingly similar or sometimes even identical on silver and bronze.⁵⁸⁰ That would however not be the case at Panormos if the cock/ *sys* coinage is associated with the didrachms imitating Segestan prototypes. The explanation for that must be that Panormos and other Punic mints copied a diversity of motifs from Greek cities (Himera, Akragas, Segesta etc.) and have no real coin types of their own.

Solous

The two hemilitra of Solous used for overstrikes at Akragas belong to the city's first bronze coinage with types *bearded Herakles head* and legend Σολοντινον/ *shrimp and pellets* and the Punic letters *kfra* retrograde (=the village, the Punic name of Solous). The series comprises two denominations: hemilitron (c.7 g.) and tetras (c.4 g.). It is preceded by rare silver coins with the same bilingual legends: a litra with obverse standing cock and reverse tunny fish and a didrachm copying the types of Selinous.⁵⁸¹

At Solous the cock type was not continued on the bronzes as at Panormos. The bearded Herakles head was undoubtedly taken over from Selinous. Calciati pointed to the striking stylistic resemblance between the Solous bronzes and the hemidrachms of Selinous with obv. bearded Herakles and rev. quadriga. The three issues of hemidrachms with bearded head of Herakles or unbearded heads either facing or in three-quarter view, all with stylistically similar quadriga reverses, are usually dated to the years before the destruction in 409⁵⁸² but may be later. A similar date within the last decades of the

⁵⁷⁹ Consolo Langher, pp. 362–363.

⁵⁸⁰ Lacroix, *Le origini*, pp. 265–286, pls. 35–38.

⁵⁸¹ Didrachm: Imhoof-Blumer, *Berliner Blätter*, p. 55.1, pl. 54.20 (8.40, Berlin); Jenkins, *CPS I*, pl. 23.15 (same ex.). Litra: Imhoof-Blumer, *NZ*, pp. 267–268, pl. 7.16 (0.65, Berlin); Jenkins, *Himera I*, p. 34–35, pl. 4.6, Jenkins, *CPS I*, pl. 23.16 (all same ex.). A second specimen in London (*BMC* p. 242.1, 0.68). As to the litra Imhoof-Blumer and Jenkins both noted that the style of the cock is similar to the cock on the drachm of Panormos (Jenkins, *CPS I*, pl. 6A) and regarded them as contemporary.

⁵⁸² Price, *Le origini*, p. 80, pl. XI.4–6.

fifth century, suggested already by Imhoof-Blumer,⁵⁸³ must be accepted for the first bronze series of Solous with regard to Akragas. The overstrike cannot be firmly dated but cannot be later than 406. A bearded Herakles head normally preceeds a youthful unbearded head at mints where both types occur. That is also the case at Solous, where a youthful, unbearded head of Herakles appears on the the following bronze series with reverse hippocamp.⁵⁸⁴ The type is paralleled at Syracuse (Athena head/hippocamp) and should like the Syracusan hippocamps be ascribed to the time of Dionysios.

Summary

In western Sicily the bronze coinages were based on a heavier litra standard than that of eastern Sicily.⁵⁸⁵ At Akragas the hemilitra show a weight reduction from a litra standard of c. 44–42 to c. 30–24. The tetrantes move from c.10.25 to c.7.50 (litra c.42 to c.30) and the hexantes from c. 7.25 g to c. 6.25 g (litra c. 42 to c. 37) whereas the smallest denomination, the onkia, does not display any weight reduction at all but has a stable weight at 3.50, implying a litra of c.42. The standard used at Akragas is similar to the light Gorgoneia of Himera with a hemilitron sinking from c.22 to c.15 (litra c.44 to 30) and to the slightly lighter standard of the Cock ziz series of Panormos. At Segesta the heavy litra standard of Bérend's Group B (c.50), was reduced by punches to half the value (or c.25) by a revaluation of the hexas to a tetras. The same seems to have been the case at Eryx though the material is scarce and the weights erratic. A litra standard of c. 30–25 was also in use at Motya in the series Gorgon/palmtree (denominations tetras, hexas, onkia), whereas the standard of the first bronze series of Solous (hemilitron and tetras with Herakles head/shrimp) was only half as heavy or c.15. The litra standard at Solous seems to be the lightest in Western Sicily, apart from Himera, where the sudden change in weight with the introduction of the Goat rider/Nike series (litra c.12) implies an adoption of an east Sicilian standard. The overstruck hemilitra of Solous and Himera confirm that these denominations correspond to a tetras and a hexas of Akragas.

⁵⁸³ NZ 1886, p. 268. The series has been dated both to the end of the fifth century (Head, *HN*², p. 170, Leu 6, no. 207) and to the fourth century (Gàbrici, p. 169; Consolo Langher, p. 287).

⁵⁸⁴ Mostly anepigraphic, sometimes with letters kfra. Imhoof-Blumer, *Berliner Blätter*, p. 55:3–6; Jenkins, *CPS* I, pl. 23.19. Gàbrici, p. 50–51, pl. II.40 dated the series to the time of Dionysios. Cf. Jenkins, *Centri siculi*, p. 94.

⁵⁸⁵ Jenkins, *Gela*, p. 105.

Circulation area

Bronze coins of Akragas have been found within a large area covering almost the entire island except the northeast corner and with a concentration to the city's *Hinterland* between the rivers Platani and Salso-Himera.⁵⁸⁶ Most finds come from archaeological sites, but there are also a few hoards. A small pothoard (hoard 3) belongs to the fifth century. The recorded coins comprise five hemilitra, representing all series except 3.Leaf, and one tetras of Akragas and two hemilitra of Himera. All coins have heavy weights and represent early issues in the series. Most important is the large Milena/Milocca hoard published by P. Orsi (hoard 21), which in fact seems to have been found at Monte Raffè.⁵⁸⁷ The majority of the coins are Akragantine: 6 cast bronzes (5 triantes and 1 tetras), 84 struck hemilitra, described as 'multi logori', and more than twenty tetrantes. Of the hemilitra 16 are countermarked with countermark Herakles head and three have double countermarks, Herakles head and crab. There is a single hemilitron of the river-god series. The lot of Syracusan coins comprises twelve heavy bronzes with *Athena head/dolphins and star* and seven of the smaller denomination with *Athena/hippocamp* said to be of 'mediocre conservazione'. The oldest coins in the hoard are the cast bronzes of Akragas and the single Himera Gorgoneion. As argued above, the composition of the hoard supports the opinion that the series with river-god head, represented by a single coin, is later than the eagle/crab hemilitra countermark with Herakles head, of which there are 16 coins. The presence of both Syracusan hippocamps and the later heavy bronzes with Athena/dolphins points to a burial date towards the end of the reign of Dionysios I.⁵⁸⁸ The existence of double countermarks on three hemilitra, Herakles head and crab, indicates that also the crab countermark belongs to this period and not to the time of Timoleon.⁵⁸⁹

⁵⁸⁶ Tusa Cutroni, *Le origini*, pp. 225–227; Vassallo, pp. 17–34.

⁵⁸⁷ La Rosa, p. 642, note 1; Garraffo, *Monetazione*, p. 195.

⁵⁸⁸ A burial date at the very beginning of the fourth century as suggested by Tusa Cutroni, *Le origini*, p. 23 seems too early. Morcom, *NC* 1988, pp. 229–230, contests a fifth century date of the hippocamps on evidence of the excavations at Motya: 'Hippocamps are found in a context which post-date the destruction in 397 BC'.

⁵⁸⁹ Cf. *Morgantina*, p. 137.

Coins from archeological excavations are often found in layers disturbed by later activities on the spot.⁵⁹⁰ However that is not always the case. Suzanne Frey-Kupper has made a list of coin finds from sites where sealed layers show the finds *in situ*.⁵⁹¹ Among them is a little lot of six Akragas amalgamated bronze coins, perhaps the content of a purse, from the Big East Gate at Selinus (see find A11), found in a burnt layer which the archaeologists connect with the Punic invasion of 409. More numerous and in better condition are the coins from the 1984–1985, 1987 excavations in the area of the old train station at Gela (find A3). In several rooms there was a layer damaged by fire and sealed by roofing tiles. According to the excavators, the destruction of the building occurred during the Punic invasion in 405. Among a total of 89 bronze coins, a smaller number (28 ex, lot A) come from such burnt layers and six more coins (lot B) from layers sealed by tiles or fallen walls. The two lots comprise coins from the mints of Akragas, Gela, Kamarina, Segesta, Syracuse and Rhegion which all belong to the late 5th century and confirm the date given by the excavators. In contrast to the coins from sealed layers, the slightly later five Syracusan hippocamps (Carbé 62–66) and a tetras of Akragas with countermark Herakles head (Carbé 13) were found in a stirred level or above the fallen tiles.⁵⁹²

The finds from Sabucina santuario *extramoenia*, published by Sole (find A10), belong to the late fifth and early fourth centuries. The building was destroyed by fire but perhaps not in connection with war. Two lots of coins found in Room C and Room E are regarded as hoards by Sole and Frey-Kupper. Both lots have a preponderance of coins of Akragas and smaller portions of Syracusan bronzes such as the common series Female head/octopus (Sole 27–29), Female head/star in quadratum (Sole 73) and three hippocamps (Sole 74–76).

The coin finds from the earlier excavations at Sabucina (find 10a), republished by Mannino, and from Vassallaggi (find A11) are of great interest for the presence of several examples of the river-god series and were mentioned above (p. 131–134).

⁵⁹⁰ Spagnolo, p. 55.

⁵⁹¹ Frey-Kupper, *Monte Iato*, X.2, Anhang, 1, pp. 525–537.

⁵⁹² Carbé, pp. 57–58, nos. 13, 62–6; Frey-Kupper, *Monte Iato*, Anhang 1, pp. 525–528.

At Himera (find A4) the archaeological evidence is not conclusive for a pre-409/408 chronology of the total finds. C. Boehringer has given good literary and numismatic arguments for a possible dating of the archaeological ‘strata of 408’ to a later period, perhaps around 380.⁵⁹³ The Himera excavations (find A4) have yielded more coins from Akragas than from any other foreign mint except Syracuse.⁵⁹⁴ Yet the number is not high. Of 115 coins published in *Himera* I and 641 in *Himera* II, 51 are of Akragas: 3 AR, 10 cast AE, 38 struck AE, all of the eagle/crab series. Most frequent are the hexantes (15 ex), which is surprising as the hexas is less common than the hemilitron and the tetras. However, the above mentioned overstrike (p. 134–136) shows that the hexas must have been compatible with a Himerean hemilitron of the series Goatrider/Nike. Of the eleven hemilitra and eight tetrantes no less than seven hemilitra and two tetrantes have countermark Herakles head. The four not countermarked hemilitra belong to series 4.Shrimp. Three have low weights (12.40, 11.90, 11.89), pointing to a place late in the series. The preponderance of countermarked hemilitra supports Boehringer’s arguments for a fourth century date of the archaeological strata.

Reinterpretations of finds from earlier excavations have changed the archaeological record also for Gela. Numerous coins from the Acropol show that life continued within certain areas of the city also after the Punic invasion.⁵⁹⁵ These finds include hemilitra of Akragas (some with countermark Herakles head) and Syracusan bronzes from the time of Dionysios I.

The hoards and coin finds from archaeological sites briefly mentioned above demonstrate that in early finds (hoard 3) coins of Akragas and Himera occur together, whereas in later finds (Sabucina A10a) many Akragas coins have countermark Herakles head and the Syracusan coins include hippocamps. Still later (hoard 21, Milena) the Akragas material include coins with double countermarks and hemilitra with obverse River god head and for Syracuse large bronzes with Athena head/dolphins.

⁵⁹³ Boehringer, *KME*, pp. 29–40, pls. 7–8.

⁵⁹⁴ Tusa Cutroni, *RIN* 1988; Carbè, pp. 53–54.

⁵⁹⁵ *Himera* II, p. 716.

The bronze coinage of Akragas is by far the largest of all Sicilian cities in the late fifth century. In the time of Dionysios I Syracuse took over the role of Akragas and became the most prolific mint for bronzes.

Akragas' abundant bronzes must have played an important role in the economy of the city.⁵⁹⁶ In contrast to the plentiful bronze series the size of the silver coinage of the late fifth century is moderate, and there is no regular series of a small silver denomination with which the bronzes can be connected as fractions. Silver and bronze must therefore have functioned on different markets.

The finds demonstrate that Akragas' bronze coinage was not restricted to the local market but 'clearly had some place in the currency' of other cities in spite of the different weight standards.⁵⁹⁷ Overstrikes confirm that a new value could be given to foreign coins.

Gold coinage

The gold coins share the magistrate name Silanos with the tetradrachms nos. 595–596 and are in type and style closely related to the silver coinage belonging to the very last phase of Period III, especially to the smaller denominations in silver (nos. 601–607). A resemblance between gold and silver is an exception rather than a rule and is not found in the contemporary gold issues from other Sicilian mints.⁵⁹⁸

Technically the thin flans of the first gold coins (nos. 1007–1012) tend to be slightly concave on *both* sides. It is therefore difficult to be certain which face of the coin that was struck by the lower (obverse) die. In the issues 1007–1011 the crab side may be the obverse from a technical point of view and the eagle the reverse. From 1013 onwards, however, the eagle seems to be on the obverse. In the catalogue this uncertainty has not been taken into account and the eagle side is regarded as obverse throughout.

⁵⁹⁶ Caltabiano, *SNG Agrigento*, p. 7.

⁵⁹⁷ Jenkins, *Gela*, p.106.

⁵⁹⁸ Hill, *Historical Greek Coins*, p.122, note 2. For the fifth century Sicilian gold issues in general: Boehringer, *Essays Thompson*, pp. 16–17; Boehringer, *RBN*; Jenkins, *Gela*, pp. 98–100; Caltabiano, *Messana*, pp. 127–130; Manganaro, *L'or perse*, pp. 304–307; Bérend, *Monetazione*. All issues are well illustrated on Boehringer's plates, *RBN*, pls. 6–7.

The first series with legend AKP or AKPA (nos. 1007–1015) is by far the most prolific. The number of dies is not high (4 *obv.*, 6 *rev.*), but the output of the issues signed by Silanos (nos. 1011–1015) must have been considerable and is well documented by a large number of preserved specimens. The die sequence can be followed thanks to the addition of pellets on both sides. The obverse type is an eagle with closed wings involved with a long snake, appearing from under a pile of stones. It is first combined with two rare reverse dies showing a dolphin below the crab (R1–R2). The first issues (nos. 1007–1008) have no marks of value but in 1009 two large pellets have been added in the obverse die below the eagle. In the next issue (no. 1010) the reverse has been recut in the same way by addition of two pellets below the dolphin. The recut eagle die, O1¹, now in a more worn state, continues to be used with two more crab dies, R3–R4, with the name Silanos inscribed below the crab instead of the dolphin (nos. 1011–1012). The remaining issues of the first series also carry his name. The long lasting obverse O1 is finally replaced by three more obverse dies, O2–O4. The eagle is here larger and stronger, and the long legs have thick leg-feathers. O4 with the eagle turned right and the snake rendered in a more natural way, is the finest artistically, but the die has a number of thin cracks all over the surface. As mentioned above the eagle and snake motif of the first gold series is exactly the same as on the last litrai (nos. 606–609). It seems likely that the dies for both gold and silver were cut by the same engravers. A close copy of this Akragantine emblem appears on some tetradrachms of Messana and must be taken into account for the chronology of Messana.⁵⁹⁹

The second issue (nos. 1016–1017) must have been of an extremely short duration. It is so far documented by only two coins, struck from one reverse and two obverse dies, which differ considerably in design from the previous series. Instead of an eagle involved with a snake, the more common eagle with wide open wings grasping a hare in his claws reappears on these last gold coins. The two obverse dies are similar but have different legends: the long legend AKPAΓANTINON as on O5 is used frequently on both silver and bronze coins of period III, the rarer legend AKPAΓΑΣ as on O6 is above all known from the dekadrachms. The single reverse has again the fat fish below the crab recalling the tetradrachms (nos. 529–530), didrachms (nos. 601–603) and the

⁵⁹⁹ Caltabiano, *Messana*, p. 123, Series XV, nos. 627–629, R251–R253, pl. 38.

litrai (nos. 605–607), where the same giant perch is a characteristic symbol. The artistic quality is amazingly high; the two coins are real masterpieces and may be works by the master who cut the dies for the famous didrachm (nos. 601–602).

Akragas' first gold series has a weight standard of 1.34 g, corresponding to the first gold issue at Syracuse with types *Female head/trident*, of which there are also smaller fractions, a half (0.67 g) and a fourth (0.30 g), all very rare.⁶⁰⁰ The ratio of gold to silver was earlier often reckoned at 1:15 for all Sicilian issues, a ratio which was in most cases, but not all, easy to adjust to the weight standard of the litra.⁶⁰¹ Reinach however realized long ago that the ratio for the coins weighing 1.34 g. must be 1:13, which gives a proportionate value of 17.40 g. in silver, thus a tetradrachm or 20 litrai.⁶⁰² He regarded the two pellets as marks indicating the value of two didrachms in silver and rejected Head's earlier interpretation of the pellets as denoting the weight of two Attic obols.⁶⁰³ Reinach's opinion has been both accepted and discarded,⁶⁰⁴ but it is, in my view, the correct explanation, as it refers to the value of the coin and not to the weight. It was shown above that the pellets were added in the first eagle die at an early stage of the production. It seems likely that the purpose was to make the value of the piece clearer. Value marks are rather more frequent on coins from Akragas than they are on coins from other Sicilian mints. Letters denoting the value occur on drachms with IIEN and on litrai with AI, and fractional silver, nos. 610–611, and all bronzes are marked with pellets, which is not always the case at Syracuse. The didrachm was the old principal denomination at Akragas, and even if it was rarely minted at the end of the century, it was a standard unit in the weight system.

⁶⁰⁰ Boehringer, *RBN*, pl. 6.B3.–B5.

⁶⁰¹ Mommsen, *RM*, p. 95; Head, Syracuse, p. 17; Head, *HN*², p. 176; Holm III, pp. 106–107, 111; Regling, *Sammlung Warren*, 197–198; Lederer, p. 19. The coins weighing 1.34 g were then considered to be equivalent to 24 litrai.

⁶⁰² Reinach, *RN*, p. 507. The denomination gold tetradrachm is now generally adopted for this issue, see Boehringer, *Essays Thompson*, pp. 16–17.

⁶⁰³ Reinach, *RN*, p. 507; Head, Syracuse, p. 18.

⁶⁰⁴ Accepted by e.g. Giesecke, p. 50; Collection *Nanteuil*, comment to No. 260, Manganaro, *L'or perse*, p. 305, but not by Jenkins, *Gela*, p. 99, n. 26. Boehringer, *Essays Thompson*, p. 16, explains the pellets as a sign of a change in value. So also several auction sale catalogues, e.g. Leu 72, 1998, 61; Hirsch 196, 1997, 5–6.

The rare coins of the second issue have a weight of 1.74 g., a standard which was used also for equally small and shortlived issues at Syracuse, Gela and Messana.⁶⁰⁵ The name dilitron for gold coins of this standard cannot be more correct than the name diobol for coins of the previous series. A ratio reckoned at 1:15 would give the equivalent in silver of 6 drachms or 3 didrachms or 1½ tetradrachm ($AV\ 1.74 \times 15 = AR\ 26.10 = 6 \times 4.35$), and the double unit (3.48 g.), minted only in Syracuse, would be 12 drachms or 3 tetradrachms. The high gold value of 1:15 for these issues has been thought to be disproportionate compared with Athens, where the ratio at the time seems to have been 1:12,⁶⁰⁶ and unsatisfactory due to the fact that such denominations in silver do not exist in Sicily.⁶⁰⁷ But the same divisions are found in the contemporary gold coinage of Athens, where the gold triobol or 1/4 stater (2.17 g) has the value of six drachms. There is no reason to think that gold had depreciated in Sicily at the end of the century and that the value relation there would be the same or as low as in Athens.⁶⁰⁸ The second gold issue is likely to be the first with the value relation 1:15, which then remains the same for the following series at Syracuse, Kamarina and Gela with a weight of 1.16 g, corresponding to a tetradrachm in silver, and also for the heavier gold struck under Dionysios.⁶⁰⁹

Head realized that the Sicilian gold issues were contemporary and struck within a short period of time (*c.* 412–406).⁶¹⁰ Seltman thought that the gold coins of Akragas, Kamarina and Gela were emergency issues minted during the war against Carthage.⁶¹¹ This limits the time space to a few years and for Akragas probably to the one year 406. The gold served to pay the mercenary troupes that were hired for the defence of city, which was under siege for eight months that year.⁶¹² The extreme brevity of the second issue seems to indicate that the production may have come to an abrupt end at the end of the siege and the fall of the city in December 406. The larger first issue could have been produced during the preceding long siege.

⁶⁰⁵ Illustrated by Boehringer, *RBN*, plate 7:E12–E17.

⁶⁰⁶ Robinson, *ANSMN*, p. 10; Lewis, p. 106.

⁶⁰⁷ Boehringer, *RBN*, pp. 56–59.

⁶⁰⁸ Jenkins, *Gela*, p. 98.

⁶⁰⁹ Bérend, *Monetazione*.

⁶¹⁰ Head, *Syracuse*, pp. 17–18.

⁶¹¹ Seltman, *GC*, p. 137. So also Jenkins, *Gela*, pp. 98–99.

⁶¹² de Waele, pp. 126–131. For the mercenaries' pay see Manganaro, *L'or perse*.

HOARDS

1. Agrigento (Girgenti) 1862, 288 AR fractions (pot hoard). *IGCH 2086*.

Fractions, mostly unofficial imitations.

Disposition: Berlin (25 Syracuse, 1 Akragas); some in Paris; remainder dispersed

Burial date: c. 435 BC (Jenkins).

Salinas nos. 173,176, pl. 7.27 and 7.30; Salinas, *RN* 1867, pp. 335–342, pls. 9–10; Lederer, Kleingeld, pp. 493–495, 563–572, 4 pls.; Jenkins, *Gela*, p. 147:1; Boehringer, *Barbarisierte Münzen*, pp. 176–177, pl. 25.5,15; Lee, *NC* 1999, p. 11.

Akragas 3 imitations of litrai, B39, B48, B55.

2. Agrigento (Girgenti) 1918, 10 AR fractions. *IGCH 2078*.

Disposition: Syracuse.

Burial date: c. 440 BC

Curro Pisanò, p. 225; Boehringer, *Barbarisierte Münzen*, p. 177, pl. 25: 31–33; Caltabiano, *Messana*, p. 161:13bis.

| | |
|-----------|---|
| Akragas | 1 litra, Series B.1, 458.2; 2 imitations, B52, B60. |
| Himera | 1 obol |
| Syracuse | 4 obols of which 2 imitations |
| Leontinoi | 1 obol |
| Rhegion | 1 obol, Caltabiano, <i>Messana</i> , 137 |

3. Agrigento, province of, 1976–1977, 10+AE. Pothoard.

Disposition: Dispersed.

Information from Ian Lee, Parkstone Poole

Burial date: End of fifth century

| | |
|---------|---|
| Akragas | 1 hemilitron Series1 Triton, 613.2 (ex.Spink/Galerie des Monnaies 10.10.1977, 68) |
| | 1 hemilitron Series 2 Octopus, 630.7 (ex. Spink/Galerie des Monnaies as last, 67) |
| | 1 hemilitron as last, 639.1 (Private collection) |
| | 1 hemilitron as last (not recorded) |
| | 1 hemilitron Ser.4 Shrimp, 712.1 (Private collection) |
| | 1 hemilitron Ser.5 Hippocamp, 779.3 (ex. Spink/Galerie des Monnaies as last, 69) |
| | 1 tetras, 841.2 (ex. Spink/Galerie des Monnaies as last, 70) |

Himera 2 hemilitra Gorgoneion/six pellets, 23.41; 28.41 (ex. Spink/Galerie des Monnaies as last, 86–87)
 1 hemilitron (not recorded)

4. Augusta (ancient Megara Hyblaia) 1954, 28 AR. *IGCH* 2101.

Disposition: Syracuse.

Burial date: close to 400 BC (Jenkins)

Gentili III, pp. 79–94, pls. 8–10; Jenkins, *Gela*, p. 147, no. 2; Caltabiano, *Messana*, p. 165, no. 27.

Akragas 1 tetradrachm, Quadriga Series 2: 595.11.
 Gela 3 tetradrachms, Jenkins 222, 393, 468 (Group VIII, c. 420–415).
 Selinous 1 tetradrachm, Gentili 13, pl.9, as Schwabacher 24.
 Messana 6 tetradrachms, Caltabiano 171, 328, 370, 479, 517, 604 (Ser. XVA).
 Rhegion 1 tetradrachm, Herzfelder 33c (Group II).
 Leontinoi 1 tetradrachm, Gentili 5, pl. 8.
 Syracuse 15 tetradrachms, Gentili 14–28, pls 9–10, latest issue Tudeer 82 (O30–R55).

5. Caltanissetta 1948, 4+AR. *IGCH* 2099.

Disposition: Lisbon, Gulbenkian 169, 173, 201; remainder dispersed.

Burial date: c. 400 BC.

Westermarck & Jenkins, *Kamarina*, p. 99.

Akragas 2 tetradrachms, Skylla 531.18; Quadriga, Series 2, 590.2 (Gulbenkian 169). A cast of the Skylla tetradrachm in the BM marked "Herzfelder 1948, Caltanissetta" is included in the *IGCH* as coming from this hoard. The coin is heavily tooled.
 Gela 1 tetradrachm, Jenkins 483.9 (Gulbenkian 201).
 Kamarina 1 tetradrachm, Westermarck & Jenkins 136.2 (Gulbenkian 173).

Canicatti 1929 Hoard see 39. Sicily 1927–28.

6. Carancino (near Syracuse) 1907, 4 AR. *IGCH* 2081.

Disposition: Syracuse.

Burial date: Before 450 BC? (Kraay).

Cesano, *Studi di Numismatica* 1.1, pl. 6.3; Currò Pisanò, p. 223.

Akragas 1 didrachm, Group IV, 258.1

The other coins, 1 tetradrachm of Gela and 2 AR Syracuse, are not recorded.

7. Casulla 1933, 40 AR. *IGCH* 2075.

Disposition: Syracuse.

Burial date: 470/465 BC.

Curro Pisanò, pp. 226–227; Jenkins, Himera, p. 31; Arnold-Biucchi, *Randazzo*, pp. 20, 25, 42–43, 44, 46; Caltabiano, *Messana*, p. 158 no. 9, p. 175; Mattingly, *Chiron*, pp. 7–9; Rutter, *Studies Price*, p. 311; Westermark, Himera 2, p. 427.

Akragas 24 didrachms: Group II (3 ex): 100.4; 117.3; 133.5; Group III (6 ex.): 203.1; 211.1; 215.7; 223.5; 228.4; 229.1; Group IV (15 ex): 238.9; 242.3; 249.3; 251.8; 259.6; 262.9–10; 265.2; 267.2; 271.6; 282.6; 283.5,16; 291.9; 292.1.

Himera 4 didrachms of Akragantine type:
Jenkins Group II O10, O13, O14, O15.

Syracuse 9 tetradrachms: Boehringer Series IXa, 205; Series X, 228; Series XI, 260, 269, 276; Series XIIb, 324; B variants V?–R84, Series XI, V116–R191; 1 unc.

Leontinoi 2 didrachms, Rizzo pl. 32.11–12.

Messana 1 tetradrachm: Caltabiano Series II A, 38.

8. Catania (environs), 1976, 180 + AR. *CH* 3, 1977, 13.

Disposition: DK.ispersed

Akragas 1 tetradrachm, Eagle pair/ Quadriga, Series 2, 589.6

Other Sicilian mints, Siculo-Punic, Ambracia. Pegasi.

9. Catania or Sortino, before 1885. 4+AV. *IGCH* 2093.

Disposition: Syracuse (2 Akragas, Inv. 4929, 14523); London (1 Kamarina)

Burial date: c. 405 BC (Jenkins)

Curro Pisanò, p. 221; Jenkins, *Gela*, pp. 148–9, no 7; Westermark & Jenkins, *Kamarina*, pp. 93, 99, note 421; *Sikanie* 8, 1985, p. 70; Manganaro, *L'or perse*, p. 305.

| | |
|----------|--|
| Akragas | 2 AV: 1015.9; 1015.15 |
| Gela | as Jenkins, <i>Gela</i> , AV 493–494. |
| Kamarina | 2 AV: Westermarck & Jenkins 206.5. (For a second specimen see <i>ibid.</i> note 421) |
| Syracuse | as Rizzo pl. 48.5–6 (Athena head/Gorgoneion) |

10. S. Caterina Villarmosa 1955, 55+AR. Pot hoard. *IGCH* 2089.

Disposition; Agrigento (55).

Burial date: c. 420 BC (Jenkins).

Griffo, *AiIN* 2; Jenkins, *Gela*, p. 157:24; Caltabiano, *Messana*, p. 163:21; SNG Agrigento; Hurter, *Segesta*, pp. 40, 158.

There is some discrepancy between the number of mints and coins listed by Griffo in 1955, by Jenkins and in the *IGCH*. Jenkins, who saw and handled the hoard in 1959, mentions "a number of forgeries". His list includes the genuine coins and is probably the most reliable. In the *SNG Agrigento* none of the coins of Gela (*cf* below), Himera, Leontinoi or Naxos are included. *Cf.* A. Walker, *SM* Heft 201, 2001, p. 16. Jenkins' figures in brackets.

| | |
|-----------|--|
| Akragas | 5 (7) didrachms. Group I: 28.1; Group II: 100.2; Group III: 210.2; Group IV: 253.19; 255.18 = <i>SNG Agrigento</i> 75, 80, 81, 84, 86. |
| Gela | 5 didrachms, 2 (3) tetradrachms: Group I: 27.1; 64.1; 65.1; 67.1; 96.1; Group II: 114.2; Group VI: 399.1; (Group IX: 483.2?, "questionably from this hoard", <i>Gela</i> p. 157). The coins are not included in the <i>SNG Agrigento</i> but correspond to <i>SNG</i> nos. 473, 476–480, 482, 484. |
| Himera | 1 didrachm, possibly <i>SNG Agrigento</i> 497. |
| Segesta | 4(4) didrachms, <i>SNG Agrigento</i> 570–573; Hurter, <i>Segesta</i> , 118b; 119b; 129f; 131d. |
| Syracuse | 12 (13) tetradrachms: B122E; B124E; B225; B131; B133?; B248(2 ex.); B269; B602; B673; B699; B706 = <i>SNG Agrigento</i> 582, 584, 585, 588–92, 601–04. |
| Leontinoi | (2 tetradrachms); 2 didrachms, possibly <i>SNG Agrigento</i> 528–29. |
| Naxos | (1 didrachm) |
| Messana | 4(3) tetradrachms: Ser.4, C168.1; Ser.5, C305.1; Ser.9, C354.1; Ser.12, C466.1. |
| Rhegion | 1 tetradrachm, Caltabiano, <i>Messana</i> , Series 2, 85.1; 2(1) Oikist drachm(s), <i>SNG Agrigento</i> 54–55. |

Athens 7(8) tetradrachms, *SNG Agrigento* 1048, 1050–54, 1058; 2(1) didrachm(s), *SNG Agrigento* 1055–1056.

11. Centuripe 1952, 88 AR. *IGCH* 2131.

Disposition: Syracuse (88 AR).

Burial date: *c.* 340 (Jenkins).

Curro Pisanò, pp. 229–30; Caltabiano, *Messana*, p. 172.

Akragas 1 Eagle/crab tetradrachm, 322.6.

Kamarina 1 tetradrachm, Westermarck & Jenkins 142.41.

Messana 2 tetradrachms, Caltabiano 326, 604.

Other mints: Rhegion, Leontinoi, Syracuse, Athens, pegasi.

12. Comiso 1970 (near Kamarina), 375 AR (145 tetradr., 230+ didr.). *CH* 1,1975,10?

Disposition: Dispersed.

Burial date: *c.* 470 BC.

Information from H. A. Cahn, who listed 175 coins soon after the discovery, and from C. Boehringer who has kindly provided me with photographs of the coins of Akragas and continuously sent information about additional coins, weights and die axes.

Published by C. Boehringer in *SNR* 2010, pp. 5–33, pls. 1–17. P. Höfer, *Beitrag zur spätarchaischen Silberprägung von Syrakus*. Numismatica Classica, Feldkirch 1982, 4 pp.; Arnold-Biucchi, *Randazzo*, p. 23, note 89 ("East Sicilian" hoard); C. Boehringer, *SNR* 71, 1992, p. 207; Knoepfler, *SNR*, p. 15 note 51; Rutter, *Studies Price*, p. 310; Westermarck, *Himera* 2, pp. 427–428.

Akragas 93 didrachms.

Group I (17 ex): 1.1; 4.1; 11.19; 14.4; 19.10; 26.13; 40.3,11; 45.2; 52.1; 53.1; 57.2,5; 67.1; 70.2; 87.4; 89.5 (CB, *SNR* 2010, nos. 1–17).

Group II (10 ex): 90.2; 92.4; 94.1; 97.1; 115.2; 118.1; 132.6; 133.9; 135.1; 147.1 (CB 18–27).

Group III (34 ex): 160.11; 163.5; 165.2; 171.4; 172.3; 175.1,6; 178.4; 183.7; 184.2,13; 192.2; 196.19; 198.1,6, 24; 200.2; 215.4,9,19; 216.3; 217.1,5; 218.3; 220.29; 223.2; 224.2,18; 225.4; 227.1; 228.3; 229.3; 233.2; 236.3 (CB 28–61).

| | |
|----------|--|
| | Group IV(31 ex): 238.2, 36; 239.14, 15; 240.5, 7; 241.8; 244.2; 245.1; 246.5, 22; 248.8: 249.1; 253.1,10,29; 255.2, 19; 256.4; 262.3; 267.1; 269.1; 273.2; 275.2,9; 279.6; 280.4; 281.3; 284.2, 4; 288.2 (CB 63–93). Unofficial imitation of didrachm, B11 (CB 62). |
| Gela | 46 didrachms, 2 tetradrachms, Jenkins, <i>Gela</i> , Group I.3–96 (CB 94–139); Group II, 110 (2 ex., CB 140–141). |
| Himera | 6 Akragantine didrachms (CB 142–147). |
| Syracuse | 83 tetradrachms, 5 didrachms. Boehringer, <i>Syrakus</i> , Series I–X, 10–230 (CB 154–241). |
| Messana | 2 didrachms, Caltabiano 39–40 (CB 148–149); 2 tetradrachms, Caltabiano, <i>Messana</i> , 62, 78.2 (CB 150–151). |
| Rhegion | 2 tetradrachms, Caltabiano, <i>Messana</i> , 90.2; 107 (CB 152–153). |

13. Contessa 1888, 113 AR. *IGCH* 2119.

Disposition: Palermo.

Burial date: c. 390–380 (Jenkins).

Salinas, *NSc* 1888, pp. 302–313; Tusa Cutroni, *AIIN* 3, p. 208; Jenkins, *ANS Cent.*, p. 377; Jenkins, *Gela*, p. 149, no 8; Boehringer, Ognina, pp. 140, 143; Caltabiano, *Messana*, pp. 170–171, no. 40; Hurter, *Segesta*, pp. 41, 158.

| | |
|----------|--|
| Akragas | 2 tetradrachms Eagle/crab 357.1; Eagle pair/Skylla 531.9. |
| Gela | 10 tetradrachms, Jenkins 113.5; 120.5; 130.5; 339.4; 386.4; 393.12; 395.7; 398.12; 399.6; 400.6. |
| Kamarina | 1 tetradrachm, Westermarck & Jenkins 140.4. |
| Katane | 4 tetradrachms to Rizzo pl. X1.8. |
| Messana | 16 tetradrachms to Caltabiano 627, Series XVA. |
| Rhegion | 2 tetradrachms, latest issue Herzfelder 78b. |
| Segesta | 2 tetradrachms, Hurter T 11.e and f. |
| Syracuse | 4 dekadrachms, 27 tetradrachms to Tudeer 88. |

14. El Arahal (SE of Seville, Spain), 1962. 6 AR(+fragm?). *IGCH* 2310.

Disposition: Unknown.

Burial: c.440 BC.

R. B. Lewis, *NC* 1962, pp. 425–427, pl. 21:1–6; Jenkins, *Gela*, p.146; Hurter, *Segesta*, pp. 41, 158.

| | |
|-------------|---|
| Akragas | 1 tetradrachm Eagle/crab (with two chisel cuts), 379.7. |
| Gela | 1 didrachm, Jenkins, <i>Gela</i> , Group I, 100.6. |
| Leontinoi | 1 tetradrachm, C Boehringer, <i>Studies Price</i> , pl. 12.46. After 450/45 BC. |
| Segesta | 1 didrachm, Hurter 82a. |
| Metapontion | 2 incuse staters, Noe-Johnston, <i>Metapontum</i> I, class XI as 255, 257 (with chisel cut). Dumpy fabric. After c. 465 BC. |

A fragment of a tetradrachm of Leontinoi (dies of *Lockett* 681; cf. Boehringer, *Studies Price*, pl 11.33 var.) may not belong to the same find (Lewis p. 427).

15. Gela 1956, c. 1000 AR. IGCH 2066.

Disposition: Gela (Akragas 266+), partly dispersed.

Burial: c. 480 BC.

Orlandini, p. 125, no. 2006; Orlandini, *AIIN*, p. 31; Griffo, *AIIN* 5–6, pp. 59, 301; Robinson, *NC* 1961, p. 110; Boehringer, *JNG*, p. 95; Boehringer, *SNR* 1992, p. 207; Breglia, *Moneta ateniese*, pp. 10, 22; Kraay, *GCH*, pp. 27ff.; Kraay, *NC* 1971, p. 335; Kraay, *NC* 1972, pp. 16–17; Kraay, *NC* 1977, p. 196; de Waele, pp. 26–27; Williams, *NC* 1972, pp. 2–3; *Asyut hoard*, pp. 13–16, 20, 62–63, 119, 121, 139; Holloway, *RBN*, pp. 9–10; Arnold-Biucchi, *Randazzo*, pp. 41–43; Mattingly, *Chiron*, p. 5; Caltabiano, *Messana*, 25, p. 157; Rutter, *Italy and Sicily*, pp. 114, 131; Rutter, *Studies Price*, p. 310.

Jenkins, *Gela*, pp. 150–51, no. 10, gives a full summary of the hoard.

L. Grabow documented 404 Akragas didrachms (casts and photographs) at the Gela Museum in the late 1950's. In 1980 C. Boehringer secured casts and photos of 220 Akragas coins which remained after the theft in January 1973 and subsequently of 46 coins which were later recovered. He has generously placed this material at my disposal.

| | |
|---------|---|
| Akragas | 400 didrachms (+ 3 not identified) |
| | Group I (81 ex): 5 (1); 9 (2); 11(1); 12 (2); 14(2); 16(1); 18(1); 19(2); 20(3); 21(1); 22(2); 28(1); 29(1); 31(1); 33(2); 34(2); 35(3); 37(1); 40(3); 41(2); 42(2); 43(2); 44(1); 46(2); 50(1); 51(1); 54(1); 55(1); 56(1); 58(1); 59(1); 64(2); 65(3); 67(1); 68(1); 69(1); 70(1); 72(1); 76(3); 77(1); 78(2); 79(1); 81(1); 83(2); 84(1); 85(2); 86(2); 87(1); 88(4); 89(3). |
| | Group II (61 ex): 91(1); 92(1); 93(1); 99(1); 100(1); 101(1); 107(1); 108(2); 109(2); 111(3); 114(1); 115(1); 117(2); 118(1); 119(1); 120(3); 122(1); 123(5); 124(1); 128(5); 129(4); 131(2); 132(2); 133(2); 137(1); 140(2); 142(4); 144(1); 147(1); 148(2); 150(1); 153(1). |

Group III (258 ex): 157(1); 159(2); 160(3); 162(2); 163(2); 164(6); 166(6); 167(6); 170(5); 171(2); 172(2); 173(2); 174(2); 176(1); 177(5); 178(2); 179(1); 180(4); 181(6); 182(8); 183(2); 185(1); 186(22); 187(21); 188(9); 189(1); 192(6); 194(1); 195(11); 196(1); 197(4); 198(5); 199(4); 200(3); 201(1); 203(4); 204(6); 205(4); 207(1); 208(4); 209(5); 210(1); 212(16); 214(1); 215(7); 216(4); 217(4); 218(3); 219(2); 220(34); 221(2).

Number in brackets= number of coins under each catalogue entry.

Unofficial imitations: B1.

| | |
|----------|---|
| Gela | 251 didrachms: Jenkins, <i>Gela</i> , Group I, nos 1–40. 1 unofficial imitation, Jenkins B2. |
| Syracuse | 16 tetradrachms, 2 didrachms to B Series IV.46. |
| Zankle | 2 Samian tetradrachms. |
| Rhegion | 1 tetradrachm: Caltabiano, <i>Messana</i> , per. IB (485–481), no 55 |
| Akanthos | 2 tetradrachms. |
| Athens | 187 ‘unwreathed’ tetradrachms. |

16. Giarre Riposto (south of Taormina) before 1913, AR unc. number. IGCH 2115.

Disposition: Mainly dispersed, Gulbenkian and Jameson, a few.

Burial date: Early fourth century.

Westermarck & Jenkins, *Kamarina*, p. 100.

| | |
|----------|--|
| Akragas | 1 tetradrachm Quadriga Series 1, 585.1 (= Gulbenkian 167). |
| Kamarina | Westermarck & Jenkins 142.9 (= Gulbenkian 174). |
| Naxos | Cahn 106.1 (= Jameson 678); Cahn 108.8 (= Jameson 679). |
| Panormos | 2 Ziz tetradrachms (= Jameson 689–690). |

The provenance of the two coins from Akragas and Kamarina is known only from notes in the British Museum.

S. Giorgio Ionico, se 34 below.

Girgenti, see Agrigento.

17. Himera 1984, 400+AR. CH 8, 1994, 66.

Disposition: In trade.

Burial date: *c.* 409/408 BC.

Mid-American Rare Coin Auctions, Capitol City Sale 15.2.1985, nos. 546–619; do. G.N.A. Sale 24.5.1985, nos. 959–975, 978–1009; Arnold-Biucchi, *NAC/QT*, pp. 93–94; Boehringer, *KME*, pp. 34–35; Caltabiano, *Messana*, pp. 163–164, no. 23.

Of the original uncertain number of coins, 123 are illustrated in the sale catalogues. *Coin Hoards* 8 reports 119 tetradrachms of Himera. Of these at least twenty are said to be of the latest type with signature MAI (*cf.* Arnold-Biucchi, p. 94).

| | |
|-----------|--|
| Akragas | 4 didrachms. Group II: 110.1; Group III: 157.1; 233.1; Group IV: 259.30. 7 tetradrachms. Eagle/crab: 298.1; 329.4; 352.10; 367.6; 422.1; Large fish: 530.1; Skylla: 535.1 |
| Himera | 1 didrachm of Akragantine type; 1 didr. G–S 4; 6 tetradr. G–S 8(=A–B 13), G–S 16(=A–B 18), G–S 18(=A–B 20, 2ex.), G–S 20(=A–B 22, 2ex) + unc. number of later tetradrachms. |
| Selinous | 2 didrachms, 3 tetradrachms. |
| Gela | 8 tetradrachms, 2 didrachms to Jenkins 459, 464 (Group VII, 425–420). |
| Kamarina | 1 tetradrachm, Westermarck & Jenkins 141. |
| Syracuse | 1 didrachm, 55 tetradrachms to B. 77 and Tudeer 5, 7, 16, 23(2), 29, 37, 44. |
| Leontinoi | 13 tetradrachms including the last <i>obv.</i> die, C. Boehringer, <i>Studies Price</i> , p. 51, pl. 13.67 (dated to 415–13). |
| Katane | 6 tetradrachms to Kraay, <i>ACGC</i> 841 (425–420). |
| Messana | 5 tetradrachms Caltabiano 83.1; 355.5; 382.2; 441.5; 469.4. |
| Rhegion | 1 tetradrachm, Caltabiano, <i>Messana</i> , 66.1 (480–478); 3 tetradrachms as Herzfelder 4, 53, 55 (Group 3, <i>c.</i> 435–425). |
| Segesta | 5 didrachms. |

18. Lentini 1921, 88 AR. IGCH 2077.

Disposition: Syracuse 22 (2 Akragas, 3 Gela, 5 Messana, 11 Syracuse).

Burial date: 460–450 (Jenkins); Arnold-Biucchi (445–440); Caltabiano (450–445).

Curro Pisanò, pp. 225, 238; Jenkins, *Gela*, p. 153, no. 13; Arnold-Biucchi, *Randazzo*, pp. 42, 45–6. Caltabiano, *Messana*, p. 161, no. 15.

| | |
|----------|--|
| Akragas | 2 tetradrachms, 7 didrachms, of which two are preserved. Group II: 107.5; Group III: 200.9. |
| Gela | 3 tetradrachms, Jenkins Group II:114; Group III: 208, 217. |
| Messana | 5 tetradrachms, Caltabiano Series IIB:48, 50; Series IV.181; Series VII.329, 330 |
| Syracuse | 57 tetradrachms to Boehringer 554 (Series 16a). |

19. Leonforte (Nissoria) 1952, 327 AR (pot hoard). *IGCH* 2133.

Disposition: Syracuse.

Burial date: c. 340–330 (Jenkins).

Jenkins, *Gela*, p. 155, no. 19; Caltabiano, *Messana*, p. 172, no. 48.

| | |
|--------------|---|
| Akragas | 1 tetradrachm Eagle pair/quadrige, Series 2, 594.2. |
| Gela | 1 tetradrachm, Jenkins Group VIII, 472.19. |
| Messana | 1 tetradrachm, Caltabiano Series IX, 367.4 |
| Syracuse | 4 decadrachms, 19 tetradrachms to Tudeer 102. |
| Siculo-Punic | 3 tetradrachms. |
| Athens | 1 tetradrachm (4th century). |
| Pegasi | 297. |

20. Massyaf, Syria, 1961, 75 AR + fragments and jewellery.

Disposition: Paris (the majority); Beirut (a few).

Burial date: c. 425–420.

Published by C. M. Kraay and P. R. S. Moorey, *RN* 1968, pp. 210–22.

| | |
|--|--|
| Akragas | 1 Eagle/crab tetradrachm (fragment):352.19. |
| Syracuse | 1 tetradrachm (fragment), probably Boehringer 265 (V120–R183). |
| Coins from Mainland Greece, Aegean Islands, Asia Minor, Cyprus, Phoenicia, Persia. | |

21. Milena (Milocca), near Caltanissetta, c. 1930, 137 AE+bronze fragm. *IGCH* 2162.

Disposition: Syracuse.

Burial date: Early 4th century?

P. Orsi, *AttiMem* 1932, pp. 38–46, figs. 1–11; Vassallo, *RIN* 85, 1983, pp. 26–7; Tusa Cutroni, *Monetazione*, p. 254; Garraffo, *Monetazione*, p. 195, note 24; Puglisi, p. 229, 17–18.

- Akragas 6 cast bronze coins (5 triantes, 1 tetras), Orsi nos. 109–114.
 111 struck bronze coins, Orsi nos. 21–108, 114–136.
 44 hemilitra with eagle r. on hare, head lowered, figs 1–2, 6: fig. 1 *obv.* = Series 4, Shrimp O12 (720–722); fig. 2 *obv.* = Series 3, Leaf O13 (684); fig. 6 *rev.* = Series 3 Leaf, *cf.* R21 (692–694) or eagle with head lifted, fig. 5 *obv.* = ser. 1 Triton, O2 (613).
 11 hemilitra with eagle r. on fish, head lifted, figs 3–4: fig. 3 *rev.* = Series 2, Octopus, R2 (621), fig. 4 *rev.* = Series 3 Leaf, R24 (699).
 10 hemilitra with eagle l., head lowered or lifted, figs 7–9: fig. 7–7bis = Series 5, 797, fig. 8 *obv.* = Series 4, O34 (764–765), fig. 9 much effaced has graffito AKRA.
 16 hemilitra with countermark Herakles head.
 3 hemilitra with double countermarks, Herakles head on one side and crab on the other side.
 23 tetrantes, much worn except three well preserved pieces, of which one is ill. fig. 10 = 858.2; another piece (known from cast) = 860.4.
 3 tetrantes or smaller denominations, much effaced
 1 hemilitron with types River-god head/eagle on Ionic capital.
- Himera 1 hemilitron Gorgoneion/six pellets. Orsi 20.
- Syracuse 12 AE with types Athena head/ two dolphins. Orsi 1–12.
 7 AE with types Athena head/hippocamp. Orsi 13–19.

22. Monforte S. Giorgio 1947, 26+ AR, 8 AE. *IGCH* 2098.

Disposition: Syracuse (some).

Burial date: *c.* 400 (Kraay).

Currò Pisanò, p. 228; Westermarck–Jenkins, *Kamarina*, p. 100; Caltabiano, *Messana*, p. 167.32.

- Akragas 1 (of 3?) didrachm, Group II: 109.6.
 Kamarina Tetradrachms, 1 didrachm.
 Messana 2 tetradrachms: as C 367–368 and C 420.6.
 Other mints: Gela, Rhegion, Naxos, Katane, Syracuse, Pegasi.

23. Monte Bubbonia 1910, 338 AR. *IGCH* 2071 (=Mazzarino=Caltagirone).

Disposition: Syracuse.

Burial date: *c.* 465.

Orsi, *NSc* 1912, 454–5; K. Christ, *Historia* 3, 1954/55, no 7; Currò Pisanò, pp. 223, 237; Boehringer, *JNG*, p. 95; Boehringer, *SNR* 1992, p. 208; Breglia, *Moneta ateniese*, 21ff.;

Jenkins, *Gela*, pp. 22–24; Jenkins, *Himera*, p. 30; Kraay, *GCH*, pp. 31–32; Kraay, *NC* 1971, p. 335; Kraay, *NC* 1972, pp. 17–19; Kraay, *Himera*, p. 26; Williams, *NC* 1972, pp. 4–7; Westermark & Jenkins, *Kamarina*, pp. 21–22; Selinus hoard, p. 11; Arnold-Biucchi, *Randazzo*, pp. 20, 21, 25, 33, 44, 46; Knoepfler, p. 26 and table ad p. 40; Mattingly, *Chiron*, pp. 3–9; Caltabiano, *Messana*, p. 158, no. 8, pp. 41, 59, 175; Rutter, *Italy and Sicily*, p. 126; Rutter, *Studies Price*, pp. 310–311; Westermark, *Himera* 2, p. 427; Lee, *NC* 1999, p. 5, note 13.

A full summary of the content of the hoard was given by Jenkins, *Gela*, pp. 154–5, no. 16. Later references added below.

| | |
|-----------|--|
| Akragas | 78 didrachms: Group I (20 ex): 7.2; 8.1; 14.1; 19.5; 20.2; 31.3,5; 34.2; 37.7; 40.14; 43.3; 46.2; 54.3; 61.1; 77.1; 80.2; 83.3,5; 87.1; 88.3. Group II (14 ex): 99.1; 103.2; 107.1; 109.4; 110.3–4; 116.4; 126.1; 128.6; 133.6; 135.3; 138.2,7; 144.4. Group III (28 ex): 154.3; 159.4; 164.2; 166.10; 171.15; 172.7; 175.3; 179.1,3; 182.2; 188.9; 193.1; 200.3,5–6,10; 204.7; 205.10; 212.7; 214.5; 219.3; 223.4; 225.1, 5; 234.1,2; 235.1; 237.1. Group IV (14 ex): 238.4–5; 239.2; 243.1; 246.3,8; 248.3; 249.2; 253.8; 254.1; 255.4; 259.4; 262.2; 279.4. Unofficial imitations: B2, B4. |
| Gela | 61 didrachms to Jenkins Group I.100.9–10; 7 tetradrachms to Jenkins Group II.180.7 (not 178). |
| Selinus | 31 didrachms: 27 of Group I, 7 of Group II with selinon leaf within incuse square. |
| Himera | 1 didrachm cock/hen: Kraay, <i>Himera</i> , Group VI, 117A. 5 didrachms of Akragantine types: Jenkins, <i>Himera</i> , Group I, O3; Group II, O10, O13(3). |
| Kamarina | 1 archaic didrachm: Westermark & Jenkins 9.5. |
| Syracuse | 61 tetradrachms, 3 didrachms, 6 drachms. Latest tetradrachm B.333, Series 12c, drachms B.356–357, Series 12d. |
| Leontinoi | 2 tetradrachms. C. Boehringer 13 (<i>JNG</i> 18, 1968, p. 95). |
| Zankle | 2 drachms as Rizzo pl. 25.3–4. |
| Messana | 5 tetradrachms: Caltabiano, Series IIA, 33–34; Series IIB, 51, 58; Series III, 99. |
| Rhegion | 4 tetradrachms: Caltabiano, Series.IIA, 65; Series.IIB, 82, 84, 99. |
| Akanthos | 1 tetradrachm. |
| Athens | 6 tetradrachms. |

24. Monteraci di Ragusa (modern Ragusa) 1953, 33 AR. IGCH 2102.

Disposition: Syracuse.

Burial date: End of 5th century (Jenkins).

Gentili II, 195, pl. 6–7; Currò Pisanò, pp. 230, 239; Jenkins, *Gela*, p. 155, no. 18; Jenkins, Himera, p. 31; Caltabiano, *Messana*, p. 165, no. 26, pp. 95, 175, 178; Hurter, *Segesta*, pp. 40, 158.

Lot 1

- Akragas 9 didrachms.
Group I: 84.3 (much worn); Group II: 148.7; Group III: 175.5; 179.6; 216.23 (= *AIIN* 2, pl. 6.2); 236.10; Group IV: 275.5; 275.10; 284.10.
1 tetradrachm Eagle/crab: 306.1 (*AIIN* 2, pl. 6.1).
- Gela 3 didrachms (*AIIN* 2, pl. 6.3–4); Jenkins, Group I, 52, 59, 67.
- Himera 2 didrachms of Akragantine type (*AIIN* 2, pl. 6.5); Jenkins, Himera, Group II, O9, O11–R50 (=Westermarck, Himera 2.59).
- Syracuse 1 didrachm, Boehringer, Series 7.98; 1 tetradrachm, Boehringer, Series 11.255. (= *AIIN* 2, pl. 7.15–16).

Lot 2

- Leontinoi 1 tetradrachm (*AIIN* 2, pl. 6.6); Boehringer, *Studies Price*, Series 3 (Apollo head), pl. 12.45 (same *obv.* die).
- Messana 2 tetradrachms (*AIIN* 2, pl. 7.13–14). Caltabiano, *Messana*, Period III, Series XIV, 511, 531.
- Segesta 5 didrachms (*AIIN* 2, pl. 6:7–11). Hurter 70g; 105c; 107g; 131c; 185b.
- Selinous 1 tetradrachm (*AIIN* 2, pl. 6.12); Schwabacher Period II, 18.
- Syracuse 6 tetradrachms, Boehringer Series 19.628; Series 22.675; Tudor 20, 28, 37, 61. (= *AIIN* 2, pl. 7:17–22. Latest coin is T 61 (not T 82).
- Motya 1 didrachm as Jenkins, *CPS* I, pl. 4.32 (Hurter, *Segesta*, p. 40).

25. Naro, ca 20 km southeast of Agrigentum 1924/25, 80+AR IGCH 2118.

Disposition: Dekadrachms *SNG. Lloyd*. 817, 1409, 1410, 1412, 1413; *Gulbenkian* 168, 301, 303, 306, 307, 311, 314; *Dewing* 870, 875, 884; *Ars Classica* 13, 1928, 334–336, 340–343; *Ars Classica* 17, 1934, 236, 766 (=AC 13,336). Casts of the dekadachms in the BM, London. Remainder dispersed.

Burial date: 400/390 (Fischer-Bossert).

Mildenberg, *KME*

- Akragas 2 dekadachms: 598.1 (= *Gulbenkian* 168); 600.1 (= *SNG Lloyd* 817).
- Syracuse 10 dekadachms (Kimon), Mildenberg 2–11; 13 dekadachms (Euainetos), Mildenberg 12–24; ca 60 tetradrachms (Mildenberg, p. 182, n. 10).

26. Ognina (Catania) 1923, 300+ AR. IGCH 2120.

Disposition: Syracuse and private possession, New York (2).

Burial date: c. 400 BC (C. Boehringer).

Columba; Currò Pisanò, pp. 225, 239; Jenkins, *Gela*, p. 156, no. 20; Caltabiano, *Messana*, p. 168, no. 34; Hurter, *Segesta*, pp. 41, 158.

A reconstruction of this important hoard including a catalogue of 311 available pieces was published by Boehringer, Ognina.

- Akragas 20 didrachms, 7 tetradrachms. Of these are 11 didrachms and 6 tetradrachms illustrated by Boehringer on pl. 28.
 Period I, 19 didrachms:
 Group II: 138.10(B1); Group III: 159.6(B2); 187.45(B4); 189.20(B6); 208.6(B5); 236.5(B3); Group IV: 238.1(B13); 238.31(B9); 249.7(B8); 248.11(B7); 272.3 (B10). Boehringer 11–12 (not ill.) belong to Group IV: no 11 is = 275, no 12 = 259. B15–20 could not be identified.
 Period II, 3 tetradrachms: Eagle/crab; 1 didrachm 340.3 (B22); 434.7 (B21); B23 not ill.; 443.2 (B14)
 Period III, 4 tetradrachms: Large fish: 530.8 (B24); Quadriga Series 2: 589.1 (B25); 593.3 (B27); 596.1 (B26).
- Messana 49 tetradrachms to Caltabiano 622, Series 15A.
- Rhegion 1 tetradrachm, Caltabiano 106, Series 3.
- Kamarina 4 tetradrachms, Westermarck & Jenkins 134.3, 142.29, 149.23, 152.11
- Segesta 29 didrachms, Hurter 13f to 194m
- Other mints are Gela, Himera, Katane, Leontinoi, Motya, Naxos, Panormos, Selinus, Syracuse, Ambrakia, Athens.

27. Pachino 1960, c. 200 tetradrachms. IGCH 2090.

Disposition: Dispersed.

Burial date: c. 405 BC

Jenkins, *Gela*, p. 159, no. 30; Caltabiano, *Messana*, pp. 164–165, no. 25. For a documentation of the major part of the hoard (124 ex.) see Boehringer, Pachino, pp. 43–48, pls. 5–10.

- Akragas Period III, 1 tetradrachm Large fish, 530.23 (not preserved).
- Gela 14 tetradrachms to Jenkins 485, Group IX.
- Himera 1 tetradrachm, Pelops Group, Gutmann & Schwabacher 11–13; Arnold-Biucchi, Group I.

| | |
|-----------|--|
| Katane | 9 tetradrachms. |
| Leontinoi | 14 tetradrachms. |
| Messana | 10 tetradrachms to Caltabiano 442.4–5, 1 barbarized (B1.3, p. 354). |
| Selinous | 1 tetradrachm, Schwabacher 10 |
| Syracuse | 73 (107+) tetradrachms to B 727, Series 25 and T.24, T.29 (2), T.31, T.37. |

28. Passo di Piazza (ancient Gela), 45 AR. *IGCH* 2068 (= Gela 1934).

Disposition: Syracuse

Burial: *c.* 475. (480/78 (Jenkins); 478–475 (Caltabiano); towards 475 (Knoepfler)

Currò Pisanò, p. 227; Barron, *Samos*, p. 42; Kraay, *GCH*, pp. 28f., 41; Kraay, *NC* 1971, p. 333; Kraay, *NC* 1972, 17; Jenkins, *Gela*, p. 156, no. 21; de Waele, pp. 26–27; Williams, *NC* 1972, p. 4; Arnold-Biucchi, *Randazzo*, pp. 18, 21, 24, 33, 41; Caltabiano, *Messana*, p. 157, no. 7, pp. 42, 59, 175; Knoepfler, pp. 10–11, 30; Mattingly, *Chiron*, pp. 5–6; Rutter, *Studies Price*, p. 310; Boehringer, *SNR* 1999, p. 177.

| | |
|----------|---|
| Akragas | Period I, 6 didrachms Group I: 57.6 (much worn); Group II: 140.6; Group III: 200.27; Group IV: 238.24; 239.13; 246.16. |
| Gela | 19 didrachms to Jenkins Group I.82 |
| Syracuse | 1 didrachm (Boehringer 51, Series 4), 18 tetradrachms to B Series 6a, 78 and 85? |
| Messana | 1 didrachm, Caltabiano Series II A, 40. |

29. Paternò (anc. Inessa), 1915, 40 AR. *IGCH* 2080.

Disposition: Syracuse 7 (Akragas 2, Syracuse 3, Messana 2)

Burial date: *c.* 460 (Caltabiano).

Orsi, *NSc* 1915, p. 226; Currò Pisanò, pp. 224, 239; Jenkins, *Gela*, p. 157, no.22; Caltabiano, *Messana*, p. 159, no. 12.

| | |
|----------|--|
| Akragas | Period I, 2 didrachms, Group IV, 248.13; 259.44. |
| Messana | 2 tetradrachms, Caltabiano 57.6, Series 2B; 224.4, Series 5. |
| Syracuse | 3 tetradrachms. |

30. Piano Rizzuto (east of Gela), 1900. 21 AR. *IGCH* 2116.

Disposition: Syracuse.

Burial: c. 400–390 BC (Jenkins)

Orsi, *AttiMem* 1919, pp. 1ff.; Currò Pisanò, pp. 222, 238; Jenkins, *Gela*, p. 149, no. 9; Caltabiano, *Messana*, p. 168, no. 35.

| | |
|-----------|---|
| Akragas | Period I, 2 didrachms, not documented. |
| Gela | 2 tetradrachms, Jenkins 472, 484. |
| Katana | 1 tetradrachm |
| Leontinoi | 1 didrachm, 3 tetradrachms |
| Messana | 1 tetradrachm, Caltabiano 622.22. |
| Rhegion | 1 tetradrachm |
| Segesta | 2 didrachms |
| Syracuse | 7 tetradrachms to Tudeer 82. |
| Ambracia | 1 stater, Ravel <i>NNM</i> 37, 1928, no. 113. |

31. Ramacca/Mineo c.1970, 14+AR. *IGCH*.

Disposition: Dispersed, casts of 15 ex in private possession

Manganaro, *RIN* 1999, p. 82; Manganaro, *RIN* 2001, p. 150, pls. 1–2.

| | |
|-----------|--|
| Akragas | 1 Eagle/crab tetradrachm, 337.40 |
| Gela | 2 tetradrachms to Jenkins 400, Group VI |
| Messana | 2 tetradrachms to Caltabiano 422, Series X |
| Leontinoi | 2 tetradrachms |
| Syracuse | 8 tetradrachms to Boehringer, Series 22 |

32. Randazzo 1980, 539+ tetradrachms. *CH* 7.17; *CH* 8, 55.

Disposition: Dispersed. Casts in ANS, New York.

Burial date: Towards 445 (Mattingly).

Published by Arnold-Biucchi, *Randazzo*; Boehringer, *SNR* 1992; Boehringer. *SNR* 1997, p. 17; Mattingly, *NC* 1992; Morcom, *NC* 1992; Caltabiano, *Messana*, p. 160, no. 14, pp. 68–69, 155, 175.

| | |
|----------|--|
| Akragas: | Period II, 8 Eagle/crab tetradrachms, Arnold-Biucchi pl.1:11,13–18. 317.2; 335.3; 340.7; 399.10; 429.1; 434.3; 436.5. 1 tetradrachm imitation: B20.1 (Arnold-Biucchi, pl.1.12) |
|----------|--|

| | |
|-------------|--|
| Messana | 136 tetradrachms: Caltabiano, Period I, 46–225; Period II, 299–354. |
| Rhegion | 10 tetradrachms: Caltabiano, Period I, 62, 64, 85, 91, 94, 99; Herzfelder no 1(4). |
| Other mints | Gela (29); Katane (29); Naxos (5); Leontinoi (14); Syracuse (308). |

33. Reggio Chiesa Pepe Bruttium 1913, 97 AR pothoard. *IGCH* 1911.

Disposition: Reggio Calabria

Burial date: End of fifth century (Caltabiano)

Jenkins, *Gela*, p. 157, no. 23; Caltabiano, *Messana*, p. 169, no. 38.

| | |
|-------------|--|
| Akragas | 1 Eagle/crab tetradrachm, 351.11 |
| Gela | 3 tetradrachms, Jenkins 224.2; 339.9; 392.7. |
| Messana | 9 tetradrachms, Caltabiano 201.4; 333.13; 352.11; 447.1; 468.4; 537.2; 604.10; 611.23; 620.14. |
| Other mints | Rhegion, Leontinoi, Catane, Himera, Selinous |

34. S.Giorgio Ionico I, 1972 (east of Taranto) c. 1000 south Italian didrachms

Disposition: Dispersed

Burial date: c. 445/440

Kraay, *AIIN* 25, 1978, pp. 9–21; Kraay, *ACGC*, p. 203; Kraay-King, *SNR* 66, 1987, 7ff.; Garraffo, *Riconiazioni*, pp. 65, 67, 84, 100, 103, 105, 111, 112 (note 19); Garraffo, *Studi Breglia*, pp. 107–109; Fischer-Bossert, *Tarent*, pp. 9–10.

Akragas 2 overstrikes: Metapontion, Kroton.

Mints documented: Taras (80); Laos (12); Metapontion (124); Poseidonia (152); Sybaris (12); Velia (2); Kaulonia (129); Kroton (182); Kroton-Temesa (2).

35. Schisò (ancient Naxos), 1852, 2000+AR. *IGCH* 2096.

Disposition: Paris (de Luynes), remainder dispersed.

Burial date: Late fifth century.

Pogwisch & Cacopardi, pp. 154–157; Salinas pp. 13–22; Evans, *NC* 1891, pp. 374–376; Blanchet, p. 16; Jenkins, *Gela*, p. 158, no. 25; Caltabiano, *Messana*, p. 166, no. 29.

The Schisò hoard is the only one which Salinas mentions for Akragas. According to him the following Akragantine series were represented:

Salinas p. 13, note to nos. 67–90 = Period I, didrachms Groups I–II. The only certain piece is Luynes 848 (=94.2, Group II).

Salinas p. 14, note to nos. 92–128 = Period II, Eagle-crab tetradrachms, Groups 1–3.

Salinas p. 22, note to nos. 188–195 = Period III, Quadriga tetradrachms.

Salinas p. 22, note to nos. 196–197 = Period III, didrachm eagle with snake.

Salinas' statement agrees quite well with the short report by Pogwisch-Cacopardi, who emphasize the coins of Akragas: "Di questa città adunque ve ne erano un gran numero coll'eterno tipo del granchio e dell' aquila; ma fra queste ve ne erano alcune di quelle invece di una portavano due aquile che divorano una lepre dal dritto, e la quadriga nel rovescio". Contrary to Salinas, also tetradrachms with reverse Skylla and Large fish are mentioned (p.155).

More problematic are the additional coins quoted on p.157: "una di Agrigento, che aveva al lato delle due aquile un serpe attorcigliato, ed un'altro, nella quale vedeasi che una delle due aquile teneva un grillo col suo becco". Obviously the coins are not very well described. The one with the serpent may be a didrachm as mentioned by Salinas and the other one possibly a Quadriga tetradrachm, series 2, with symbol grasshopper in the field.

Other mints: Gela, Himera, Kamarina, Katane, Leontinoi, Motya, Naxos, Rhegion, Segesta, Selinous, Syracuse .

36. Scornavacche 1949, 27 tetradrachms. Pot hoard. IGCH 2095.

Disposition: Syracuse

Burial date: End of fifth century (Gentili)

Gentili I, pls. 4–5; Jenkins, *Gela*, p. 158, no. 26; Caltabiano, *Messana*, p. 166, no. 28.

| | |
|----------|---|
| Akragas | 1 tetradrachm imitation, B25.1 = Gentili 1, pl. 4.1 |
| Gela | 2 tetradrachms, J Group III.233, Group V.377 = Gentili 14–15, pl. 4.11–12. |
| Selinous | 1 tetradrachm, Schwabacher Group III.31 = Gentili 22, pl.5.19. |
| Kamarina | 5 tetradrachms, Westermarck & Jenkins 145.2; 146.14; 147.7; 147.8; 152.17 = Gentili 5–9, pl. 4.2–6. |
| Syracuse | 5 tetradrachms, Boehringer Series 10.234; Series 13b.460; Series 14b.483; Series 16b.569; Tudeer 42 = Gentili 23–27, pl. 5.20.24. |
| Katane | 4 tetradrachms, Gentili 10–13, pl. 4.8–10. |
| Naxos | 1 tetradrachm, Cahn Group IV.101 = Gentili 20, pl. 5.17 |
| Messana | 4 tetradrachms, Caltabiano Period III. 489, 493, 533, 539 = Gentili 16–19, pl. 5.13–16. |
| Rhegion | 1 tetradrachm = Gentili 21, pl. 5.18. |
| Athens | 3 tetradrachms = Gentili 2–4, pl. 4.7. |

37. Selinunte 1923, 475 AR. IGCH 2084.

Disposition: The majority dispersed. London 62 (all ex. Lloyd); New York 20 (ex. Hoyt Miller); 117 casts at Winterthur.

Burial date: c. 435–430 (C. Boehringer).

Published by Lloyd, *NC* 1925, pp. 277–300, pls. 10–14; Jenkins, *Gela*, p. 159, no. 28; Westermarck & Jenkins, *Kamarina*, p. 22; Arnold-Biucchi, *Randazzo*, pp. 45–46; Arnold-Biucchi, *NAC/QT*, pp. 92–93; Boehringer, *SNR* 1997, pp. 5–19, pls. 1–4 (with catalogue of 142 coins = CB below).

| | |
|-----------|--|
| Akragas | 88 didrachms, not recorded, 3 Eagle/crab tetradrachms 337.32, 386.8; 421.5, CB 76–78. |
| Selinous | 25 tetradrachms, CB 1–25, pl. 1.1–24. 50 didrachms, CB 26–75, pl. 2–3.30–75. |
| Gela | 12 tetradrachms to Jenkins, <i>Gela</i> 380.2, CB 79–90, pl. 3.90. |
| Himera | 1 didrachm Gutmann & Schwabacher 2, CB 91. 1 tetradrachm, Gutmann & Schwabacher 15b, CB 92. |
| Katane | 2 tetradrachms, CB 93–94. |
| Leontinoi | 10 tetradrachms, CB 95–104, pl. 3.98–104. |
| Syracuse | 38 tetradrachms to B 604, CB 105–142, pl. 4.111–142. |

38. Selinunte 1978, 3+AR.

Disposition: Dispersed

Information from Galerie des Monnaies, Genève.

| | |
|----------|--|
| Akragas | 2 tetradrachmer, 394.2; 410.4 |
| Selinous | 1 tetradrachm, Schwabacher 45 (Leu 20, 1978, 39) |

39. Sicily 1927–1928, 4 AR. IGCH 2073.

Disposition: New York, ANS.

Burial: c.470

| | |
|----------|---|
| Akragas | 1 didrachm, <i>SNG ANS</i> 951: Group IV: 291.7. |
| Himera | 1 didrachm, <i>SNG ANS</i> 158: Westermarck, Himera 2, no. 55 (O10) |
| Syracuse | 2 tetradrachms, <i>SNG ANS</i> 33, 43 as Boehringer Series 8b:123, 154. |

Three didrachms in the Dewing collection: Akragas 552 (=Group III.199.6), Gela 594 (as Jenkins Group I.99) and Himera 613 (Westermarck, Himera 2, no.82 (O13), by the owner stated to have been found at Canicatti near Agrigentum, may belong to this find (note to no. 552).

40. Sicily, before 1956. 3 AV. IGCH 2094.

Disposition: London (1 Akragas); formerly Moretti (1 Gela)

Burial date: c.405

Hess-Leu 27.3.1956, 66, 100, 210; Jenkins, *NC* 1959, p. 25.4, pl. 5.4; Jenkins, *Gela*, p. 99 note 30; Boehringer, *Essays Thompson*, p. 17, note 29, pl. 38.12; id. *RBN*; Manganaro, *L'or perse*, p. 305.

| | |
|----------|---|
| Akragas | 1 gold 1½ tetradrachm, 1016.1 |
| Gela | 1 gold tetradrachm, Jenkins 490.4 |
| Syracuse | 1 gold tetradrachm, Hess-Leu as above, 210. |

Sortino, see 9. Catania**41. Villabate (near Palermo) 1893, pot hoard, c.250 AR. IGCH 2082.**

Disposition: London (1 Akragas tetradrachm, remainder dispersed)

Burial date: c. 440

Evans, *NC* 1894, pp. 201–217, pl. 7; Herzfelder, *Rhegion*, pp. 47–48; Kraay, *GCH*, pp. 35–37; Jenkins, *Gela*, p. 160, no. 31, pp. 64, 66, 70; Williams, *NC* 1972, p. 5; Westermarck & Jenkins, *Kamarina*, p. 22 and no. 90; Arnold-Biucchi, *Randazzo*, pp. 45–46; Arnold-Biucchi, *NAC/QT*, pp. 90–91; Caltabiano, *Messana*, p. 161, no. 16; Mattingly, *NC* 1992, p. 189; Boehringer, *SNR* 1997, p. 17; Rutter, *Studies Price*, p. 311.

| | |
|-----------|---|
| Akragas | 18 tetradrachms, the one in the BM= <i>NC</i> 1894, p. 209, no. 5, pl. 7.10=440.4. The other 17 tetradrachms, Evans p. 209, are not illustrated but described as <i>BMC</i> 38, 6 ex. (viz. no. 372); <i>BMC</i> 40, 1 ex. (viz. no. 387); <i>BMC</i> 42, 3 ex. (viz. no. 400); <i>BMC</i> 43, 1 ex. (viz. no. 411) and ‘various’, 6 ex. |
| Gela | 16 tetradrachms: Jenkins 103.1; 206.4; 221.5; 350.2 + 12 specimens described but not illustrated by Evans |
| Himera | 9 tetradrachms to Gutmann – Schwabacher 6 = A–B, <i>NAC</i> 17, p. 89, Group II (c. 455–440). |
| Leontinoi | 10 tetradrachms as <i>Randazzo</i> 77–87 and Boehringer, <i>Studies Price</i> , pl. 10:1–5, pl. 11:20–25. |
| Messana | 13 tetradrachms, Caltabiano Period II, including one or more coins with four-bar <i>sigma</i> . |
| Rhegion | 1 tetradrachm, Herzfelder 5c (= Evans, <i>NC</i> 1894, pl. VII.11). |
| Syracuse | 79 tetradrachms to B 535, end of Series 15. |

42. Vito Superiore (Bruttium) 1939, 134 AR. IGCH 1910.

Disposition: Reggio Calabria.

Burial: c. 387 (Procopio).

Procopio, Tesoretto monetale di Vito Superiore (Reggio Cal.), *RAAN*, vol. 27, Naples 1953, pp. 39–63, pls. 1–3; Jenkins, *Gela*, p. 161, no. 32; Caltabiano, *Messana*, p. 170, no. 39.

| | |
|-------------|--|
| Akragas | Period I, 6 didrachms = Procopio 8–13, not ill. Group III (2): 175.12; 184.10; Group IV (4): 240.3; 244.8; 254.18; 271.15. Period III, 1 Quadriga tetradrachm 596.7=Procopio 14, pl. 1.5. |
| Gela | 5 tetradrachms, Jenkins 339.8; 398.15; 461.10; 470.15; 485.17 = Procopio 24–28, not ill. |
| Kamarina | 4 tetradrachms, Westermarck & Jenkins 132.9; 137.7; 138.22; 157.3 = Procopio 15–18, not ill. |
| Messana | 30 tetradrachms to Caltabiano 626. Procopio 37–66 pl. 2.1–5 |
| Other mints | Terina, Rhegion, Selinous, Katane, Naxos, Syracuse, Panormos, Siculo-Punic, Carthage, Athens, Pegasi. |

Selection of archaeological finds**A1. Agrigento.**

Disposition: Agrigento, Museo Archeologico Regionale

151 bronze coins of Akragas and 6 from other mints (down to Roman times), probably found at Agrigento, acquired from a private collector: *AIIN* 2, 1955, p. 202–206; Tusa Cutroni, *Le origini*, p. 234; *SNG Agrigento* lists 77 bronzes with types eagle/crab (= *AIIN* 2, p. 202–203); Puglisi, p. 229.19–20.

Cast AE: 1 hexas, *SNG* 90 (=527.23); 2 onkiai, *SNG* 91 (=528.12); 92 (=528.44)

Struck AE: 24 hemilitra: Series 1, Triton (2): *SNG* 214 (617.3), 215 (612.9); Series 2, Octopus (13): *SNG* 160 (638.3); 196 (620.4); 197 (add. 620); 198 (629.6); 200 (631.6); 201 (625.2); 202 (630.10); 203 (628.5); 204 (632.24); 205 (664.4); 207 (653.2); 209 (656.2); 212 (660.2). Series 3, Leaf (1): *SNG* 99 (673.2). Series 4, Shrimp (3): *SNG* 101 (761.1); 102 (not in cat.), 104 (710.3). Series 5, Hippocamp (5): *SNG* 153 (787.3); 154 (784.1); 156 (778.4); 217 (800.2); 218 (791.2).

13 tetrantes: *SNG* 114, 115, 119, 124 (881.2), 125, 126, 128, 132 (901.2), 134 (886.3), 137, 138, 144 (add. 878), 150 (add. 809)

11 hexantes: *SNG* 162 (942.1); 163 (936.2); 167 (937.4); 172 (942.2); 174 (966.4); 175(931.3); 177, 182, 187(977.1); 188, 193(987.6)

17 hemilitra countermark Herakles head: *SNG* 257–260, 262–268, 271, 272, 275, 277, 278, 282.

1 hemilitron countermark Herakles head and crab: *SNG* 293.

1 hemilitron countermark Herakles head and young head: *SNG* 294.

7 tetrantes countermark Herakles head: *SNG* 282–286, 288–289

2 hemilitra river god head/eagle on capital: *AIIN* 2, p.204.91–92. Not in *SNG*.

A2. Castellazzo di Marianopoli.

Disposition: Dispersed.

Tusa Cutroni, *Le origini*, p. 236–237 with reference to F. & L.Landolina, *Illustrazioni storiche sulle monete dell'antica Sicilia* (1872), appendix A, p. 59–62; S.Vassallo, *RIN* 85, 1983, pp. 26–27.

3 cast triantes, weighing 20,19,14 g.

A3. Gela e retroterra, excavations 1951–1961, 1973.

Disposition: Gela, Museo Archeologico Regionale.

AIIN 2, 1955, p. 206.2–7; p. 207.1; p. 208.1–2; p. 209.1–3; p. 210.4; p. 212; *AIIN* 3, 1956, p. 228.1–2; p. 229:3–25; *AIIN* 5–6, 1958–1959, p. 302; *AIIN* 7–8, 1960–1961, p. 329; *AIIN* 9–11, 1962–1964, pp. 264–265; Jenkins, *Gela*, p. 106; Tusa Cutroni, *Le origini*, p. 237; *RIN* 90, 1988, p. 20; Vassallo, *RIN* 85, 1983, p. 27, 32; Puglisi, pp. 229–230.

Acropolis:

1 didrachm (damaged by fire)

1 cast trias, 1 cast tetras

9 hemilitra

6 hemilitra with countermark Herakles head, shell, crab and uncertain countermark.

15 tetrantes of which one with countermark Herakles head.

4 hexantes

1 onkia

Scalo ferroviario: 1 hemilitron, 3 hexantes, 1 onkia

Other find spots: 1 cast hexas, 4 hemilitra, 2 hemilitra with countermark Herakles head,

5 tetrantes

Scalo ferroviario, excavations 1984–85, 1987.

A. Carbè, *Quad Arch Mess.*, 8, 1993, pp. 51–59, pls. 21–25; Frey-Kupper, *Monte Iato*, 10.2, Anhang I, pp. 527–529.

66 identified Greek bronze coins of which 13 Akragas:

2 hemilitra series 5, Hippocamp: 787.2 (Carbè, p. 55.1, pl.21.1); 792.2 (Carbè, p. 55.2, pl. 21.2)

3 hemilitra, illegible (Carbè, pl. 21.3–5)

3 tetrantes (Carbè, pl. 21.6–8)

4 hexantes (Carbè, pl. 21.9–12)

1 tetras with countermark Herakles head (Carbè, pl. 21.13).

Two lots from sealed layers:

Lot A, 28 bronze coins from layers damaged by fire and sealed by roofing tiles:

Akragas 3 hemilitra (Carbè 1–3 as above); 2 tetrantes (Carbè 7–8 as above).

Gela 1 tetras, Jenkins Group VIII, 524–525 (Carbè 29)

Kamarina 1 tetras, 3 onkia, Westermarck & Jenkins type C.185–186 (Carbè 18, 21, 22)

Segesta 1 hexas countermark trias, Bérend, *Le origini*, Group B.13 (Carbè 37).

Syracuse 6 tetrantes Female head/octopus (Carbè 39, 42, 44, 46, 48, 50); 2 onkia (Carbè 53,55); 3 AE series Female head/dolphin and shell (Carbè 57–59); 2 unc. (Carbè 67–68)

Leontinoi 1 tetras, C. Boehringer series A (Apollo head /tripod, Carbè 31).

Rhegion 1 onkia, Rutter series VII (Lion mask/olive sprig, Carbè 34).

Uncertain 2 (Carbè 70, 82).

Lot B, six bronze coins from layers sealed by tiles or fallen walls:

Kamarina 1 tetras, Westermarck & Jenkins type C.185 (Gorgoneion/owl, Carbè 15)

Gela 1 tetras, Jenkins Group VIII.495 (Bull/wheel, Carbè 24)

Syracuse 2 tetrantes, (Female head/octopus, Carbè 45, 47), 1 AE Female head/wheel and dolphins (Carbè 56).

Rhegion 1 AE Rutter, *Le origini*, Groups XII–XIII (Carbè 35).

A4. Himera excavations 1963–65, 1966–1973.

Disposition: Palermo, Museo Regionale (Akragas, 3 AR, 10 cast AE, 38 struck AE) .

Tusa Cutroni, *Himera* I, pp. 366, 369, 372, 374, 375, 379, pl. 80–81; Tusa Cutroni, *Himera* II, pp. 724, 726, 730, 736, 761, 763, 769, 775, pls. 107–108; S. Vassallo, *RIN* 85, 1983, pp. 27,31; Puglisi, p. 229.17–20.

Akragas: AR (numbers in brackets refer to *Himera* I–II)

2 didrachms: 83.7 (II.637), 224.17 (II.256), 1 AR fragm. (II.309)

Cast AE

3 triantes (II.88, II.458, II.482): 525.23, 525.31, 525.58.

1 tetras (II.106): 526.12.

4 hexantes (II.92, II.209, II.481, II.596): 527.17, 527.20, 527.37, 527.39.

2 onkiai (II.158, II.532): 528.24, 528.33.

Struck AE

4 hemilitra of series 4, Shrimp: (I.63, II.7, II.180, II.412)

7 hemilitra with countermark Herakles head (I.1, I.55, II.177, II.211, II.268, II.427, II.473)

7 tetrantes (I.96, II.117, II.337, II.339, II.435, II.444, II.560)

2 tetrantes with countermark Herakles head (II.403, II.425)

15 hexantes (I.21, I.40, I.57, II.155, II.162, II.276, II.298, II.311, II.344, II.375, II.397, II.464, II.481, II.508, II.552, II.601).

2 onkia (II.235, II.539)

A5. Megara Hyblaea (tomb 69) 1889. IGCH 2088.

Disposition: Syracuse (Akragas, 2 cast AE).

Orsi, *MonAntLin*, col. 828–830; Orsi, *AttiMem* 1932, p. 44; Westermarck, *Le Origini*, pp. 13–14; Tusa Cutroni, *Le Origini*, pp. 238, 263; Manganaro, *Le Origini*, p. 264; Vassallo, *RIN* 85, 1983, pp. 26–27, 30; Puglisi, p. 229.17.

2 cast triantes: 525:13, 525.41.

A6. Monte Iato, excavations 1987–2003.

Disposition: Palermo, Museo Regionale

Information and photos from Frey-Kupper, *Monte Iato*.

Akragas 2 AR, 2 AE.

Didrachms: Group III, 205.17 (inv. M2787); 217.9 (inv. M514), Frey-Kupper, *Monte Iato* 28, 10.1, pp. 62–63, fig. 5:1–2, X.2, pl. 2.28Hemilitron (M 853), 12.30 g., Frey-Kupper, *Monte Iato* 29, pp. 65–66, vol. 2.29. Series 3 Leaf. *Obv.* Double struck. *Rev.* Unidentified, cut across flan.Hexas (M1789), 6.72, Frey-Kupper, *Monte Iato*, 30, pp. 65–66, vol. 2, pl. 230. Series Fish(a), *cf.* 950–951. *Obv.* Cut across flan.**A7. Morgantina, excavations 1955–1963, 1966–1971, 1980–1981, 1989 coins.**

Disposition: Syracuse.

Buttrey *et al.*; Puglisi, pp. 229–230.

Akragas 5th century 39 AE + 6 with countermarks, later AE 107.
 No 70, 1 cast onkia, 4.06 = 528.43
 No 71, 2 hemilitra, series 2, octopus, 17.48, 12.94
 No 74, 4 hemilitra with countermark Herakles head: 74a, pl. 14 (*obv.* of 710)
 No 72, 18 tetrantes: 72a, pl. 13 = 877.1; 72b, pl. 13 = 820.3
 No 75, 2 tetrantes with countermark Herakles head.
 No 73, 18 hexantes: 73a, pl. 13 = 921.2 (series Hare); 73b, pl. 13 = 986.5 (series snake); 73c, pl. 13 = 983.3 (series Fish b); 73e, pl. 113 = 959.4 (series Fish a).
 Puglisi 156.3. *Stratum*. 1 tetras (72) found with 1 Syracuse Athena/hippocamp (304).
 Puglisi 160.20. *Stratum*. 1 hemilitron with countermark (74) found with Syracuse Athena/hippocamp with countermarks (304) and later AE.
 Puglisi 168.36. *Stratum*. Hexas 73e=959.4 found with two Syracuse Athena/hippocamp (304) and later bronzes.
 Puglisi 185.50 *Stratum*. Tetras 72a(=921.2) found in the same area as 1 hemilitron (no 71) and late 5th century coins of Syracuse and Kamarina.

A8. Prizzi (vicino), Montagna dei Cavalli, excavations 1988, 1989, 1991.

Disposition: Palermo, Museo Regionale.

Gandolfo, 1997.

- Akragas 1 AR, 6 struck AE.
 Fragment of didrachm, Group II, unc. dies (3.18), Gandolfo 2, fig. 2.
 2 hemilitra (17.26, 16.85), Gandolfo 3–4.
 1 hemilitron (10.51), overstruck on Himera or Panormos (cock/pellets),
 Gandolfo 5. According to the description only pellets are visible of the
 underlying type, which could thus be either Himera or Panormos.
 1 hemilitron (12.19), with countermark Herakles head, Gandolfo 8.
 1 tetras (9.47), Gandolfo 6.
 1 tetras (7.52), with countermark Herakles head, Gandolfo 7.

Gandolfo, pp. 315, 317, observes that the didrachms of Akragas and a litra of Himera are the earliest coins found on the site. The Akragas hemilitra (Gandolfo 3–5) and tetras (Gandolfo 6) are the earliest bronzes together with a tetras of Gela (Gandolfo 18), Bull/River-god head (Jenkins 522–523) and a tetras of Syracuse (Gandolfo 47), Female head/Octopus. – From the time of Dionysios there are four bronzes Athena/Hippocamp (Gandolfo 47–50).

A9. Rocca d'Entella, excavations 1984–1997, 183 ancient coins (7 AR, 176 AE)

Disposition: Contessa Entellina, Antiquario.

Frey-Kupper, Ritrovamenti.

- Akragas 4 AE, 1 hemilitron (E3976) with countermark Herakles head; 1
 hemilitron (E5959) with two countermarks, Herakles head and shell; 1
 tetras (E5702), 7.99, Type D, *cf.* 905 ff.;
 1 hexas (E3894), 7.14, series Fish(a), 947.2.

A10. Sabucina (Caltanissetta), excavations 1962, 1964, 1991–1992.

Disposition: Caltanissetta, Museo Regionale.

AIIN 9–11, 1962–64, pp. 268–272; *AIIN* 15, 1968, p. 190; Merighi, *Arch.Class.*, pp. 97–99, pls. 44–45; Tusa Cutroni, *Le origini*, p. 236; Tusa Cutroni, *Monetazione*, p. 258; Vassallo, *RIN* 83, 1985, p. 27; Mannino, pp. 71–83, pls. 22–27.

- Akragas
- 1 AR hemidrachm, 67 AE (Mannino nos. 1–18, pls 22–25)
 - 1 hemilitron, Series 3, Leaf: 678.2 (M.5); cf 585 (M.6).
 - 4 hemilitra, Series 4, Shrimp: 739A.2 (M.7); 720.4 (M.4); 720.5 (M.8); 756.3 (M.3).
 - 1 hemilitron, Series 5, Hippocamp: 784.3 (M.9)
 - 1 barbarous hemilitron, Octopus B.2.2 (M.2)
 - 8 hemilitra unidentified (M.10–17)
 - 9 hemilitra countermark Herakles head (M.55–63).
 - 2 hemilitra Rivergod head/eagle on capital (M.65–66).
 - 18 tetrantes, Series D (M.18–35)
 - 5 tetrantes unidentified (M.36–40)
 - 1 tetras countermark Herakles head (M.64)
 - 1 tetras countermark Rivergod head (M.67)
 - 1 tetras countermark Crab (M.68)
 - 3 hexantes series Pig: 935.2 (M.42); 935.3 (M.43); 939.3 (M.47).
 - 3 hexantes series Fish: a with rev. two fish: M.46, M.49 (cf 965), M.50 (cf 971)
 - 1 hexas series Fish b with rev. one fish: M.48 (cf 981)
 - 1 hexas series snake: 988.3 (M.44)
 - 6 hexantes unidentified (M.41, M.46, M.51–54)

Santuario *extra moenia* (1991–1992): 64 AE, mainly smaller denominations.

Sole; Puglisi, p. 230.

- Akragas
- 1 cast tetras with letters AK, Sole 39 (Room E).
 - 1 cast hexas, Sole 83
 - 1 hemilitron, series 2, Octopus, Sole 40 (Room E).
 - 2 hemilitra, series 4, Shrimp, Sole 41–42 (Room E).
 - 1 hemilitron, series 5, Hippocamp, Sole 43 (Room E).
 - 5 hemilitra countermark Herakles head, Sole 65–69
 - 1 hemilitron with two countermarks, Herakles head and crab, Sole 82
 - 31 tetrantes, series D, Sole 2, 9–21, 44–50, 52, 55–60 (Room C: 9–21; Room E: 44–50, 52, 54–60).

- 1 tetras with *rev.* Crab, above leaf, series C, Sole 53 (Room E)
- 1 tetras with pellets around crab, series C, Sole 54
- 1 tetras with *obv.* Eagle l., series E, Sole 51 (Room E)
- 10 tetrantes countermark Herakles head, Sole 4, 9, 30–34, 70–72 (Room C:30–34).
- 6 hexantes with two fish below crab, Series Bird and Fish:a, Sole 3, 22–23, 25, 61–62 (Room C:22–23,25; Room E:61–62, 65–67, 68–72); 2 hexantes with one fish below crab, series Fish b, Sole 24, 26 (from Room C).

Found with bronze coins of Syracuse: Female head/Octopus, 5 tetrantes, 1 onkia; Female head/star (2); Athena head/Hippocamp (1); Athena head/Star between two dolphins (1). The majority of the coins were found in two rooms: Room C (23 Akragas, 3 Syracuse) and Room E (27 Akragas, 6 Syracuse, 5 uncertain). These lots may be regarded as hoards buried in the early 4th century (Sole, pp. 85–87). The hemilitron with double countermarks (Sole 82) and the cast hexas (Sole 83) are single finds from the area.

A11. Selinunte, excavations 1955, 1963, 1990 (Grosses Osttor).

Disposition: Palermo Museo Regionale.

AIIN 4, 1957, p. 201–203; *AIIN* 5–6, 1958–1959, p. 306–318; *AIIN* 9–11, 1962–1964, p. 274; *AIIN* 15, 1968, p. 191–192, 207; *Selinus* I, pp. 349–350; Frey-Kupper, *Monte Iato* 10.2, Anhang 1, p. 534.

| Acropol: | Tempio E: | Grosses Osttor: |
|---------------------------------------|------------------------------------|--|
| 4 hemilitra | 1 hemilitron | 3 hemilitra, series 4, Shrimp, <i>SL</i> 1732, 1735, 1737 (melted together with a tetras). Probably <i>rev.</i> of hemilitron 712. Mertens fig. p. 349 |
| 2 hemilitra countermark Herakles head | 1 tetras | |
| | 1 tetras countermark Herakles head | |
| 6 tetrantes | | 3 tetrantes, <i>SL</i> 1731 (=880.2), 1736–1737. Content of a purse. Mertens fig. p. 349 |
| 3 hexantes | 1 hexas | |

A12. Vassallaggi (ancient Motyon?), excavations 1956, 1960–61.

Disposition: Gela Museo Archeologico (Akragas, 1 didrachm, 30+ AE).

AIIN 4, 1957, p. 206; *AIIN* 7–8, 1960–1961, pp. 329–30; *AIIN* 9–11, 1962–1963, pp. 266–267; Merighi, *Arch Class*, pp. 97–100, pls. 46–47; Tusa Cutroni, *Le origini*, p. 236 with note 32; Vassallo, *RIN* 85, 1983, pp. 26–27; Puglisi, p. 230.

Akragas 1 didrachm, *ArchClass* 15, p. 99.1, pl. 46.1 = *AIIN* 4, p. 206 (= Group I, 44.1).
 9 hemilitra, *ArchClass* 15, p. 99:6–14(?) = *AIIN* 4, p. 206(3) + *AIIN* 7–8, p. 330 = *AIIN* 9–11, p. 266(3) + *AIIN* 7–8, p. 330 = *AIIN* 9–11, p. 267 (2)
 7 tetrantes, *ArchClass* 15, p. 100:24–30 = *AIIN* 4 (2) + *AIIN* 7–8, p. 329 = *AIIN* 9–11, p. 266 (4) + *AIIN* 9–11, p. 267.4 (1).
 8 hexantes, *ArchClass* 15, p. 100:15–23(?) = *AIIN* 4 (2) + *AIIN* 7–8, p. 330 = *AIIN* 9–11, p. 266–267 (6).
 2 onkiai *ArchClass* 15, p. 100:31–32 = *AIIN* 7–8, p. 330 = *AIIN* 9–11, p. 267 (2).
 1 hemilitron countermark young head, *ArchClass* 15, p. 100:35 = *AIIN* 9–11, p. 266:6.
 1 tetras countermark Herakles, *ArchClass* 15, p. 100.39.
 1 tetras countermark young head, *ArchClass* 15, p. 100.38.
 1 hemilitron river god head/eagle on capital, *AIIN* 7–8, p. 330.3 = *AIIN* 9–11, p. 367.3.
 1 hemilitron river god head/eagle on capital countermark crab, *ArchClass* 15, p. 100:36 = *AIIN* 4, p. 206.
 1 hemilitron river god head/eagle on capital countermark male head with kerykeion, *ArchClass* 15, p. 100.37 = *AIIN* 4, p. 206.

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| ACNAC | Ancient Coins in North American Collections. |
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| Adamesteanu, <i>RA</i> | Adamesteanu, 'Nouvelles fouilles à Géla et dans l'arrière-pays', <i>RA</i> 49, 1957, pp. 20–46 and 147–180. |
| <i>ADelt</i> | <i>Archaiologikon Deltion</i> (Athens 1915–). |
| <i>AIIN</i> | <i>Annali dell'Istituto Italiano di Numismatica</i> (Roma 1954–). |
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| Alroth | B. Alroth, 'Changing modes in the representation of cult images', in <i>The iconography of Greek cult in the Archaic and Classical periods. Proceedings of the First International Seminar on Ancient Greek Cult, organized by the Swedish Institute at Athens and the European Cultural Centre of Delphi, Delphi, 16–18 November 1990</i> (Kernos, Suppl. 1), ed. R. Hägg, Athènes & Liège 1992, pp. 9–46. |
| Ambrosoli & Ricci | S. Ambrosoli & S. Ricci, <i>Monete greche</i> , 2nd ed. Milano 1917. |
| AMuGS | Antike Münzen und Geschnittene Steine, Berlin & New York. |

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- Ancient Society* *Ancient Society* (Katholieke Universiteit te Leuven, 1970–).
- ANS American Numismatic Society, New York.
- ANSCent* *Centennial publication of the American Numismatic Society*, ed. H. Ingholt, New York 1958.
- ANSMN* *American Numismatic Society, Museum Notes*.
- ANSNS American Numismatic Society, Numismatic Studies.
- ANSNNM American Numismatic Society, Numismatic notes and monographs.
- Antike Kunst* *Antike Kunst* (Olten 1958–).
- Antike Tierwelt* See Keller, *Antike Tierwelt*.
- Antikenmuseum Basel* See Cahn, *Antikenmuseum Basel*.
- ArchClass* *Archeologia Classica* (Roma 1949–).
- Aréthuse* *Aréthuse. Revue trimestrielle d'art and d'archeologie* (Paris 1923–1931).
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- AttiMemIIN *Istituto Italiano di Numismatica, Atti e Memorie* (Roma 1913–).
- AttiMGrecia *Atti e memorie della Società Magna Grecia* (1925–).
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Period I. Didrachms Group I: O1–O30



O1



O2



O3



O4



O5



O6



O7



O8



O9



O10



O11



O12



O13



O14



O15



O16



O17



O18



O19



O20



O21



O22



O23



O24



O25



O26



O27



O28



O29



O30

LEGENDS 2

Period I. Didrachms Group I: O31–O37
Didrachms Group II: O38–O59



O31



O32



O33



O34



O35



O36



O37

Group II



O38



O39



O40



O41



O42



O43



O44



O45



O46



O47



O48



O49



O50



O51



O52



O53



O54



O55



O56



O57



O58



O59

Period I.

Didrachms Group II: O60–O64

Didrachms Group III: O65–O82

Didrachms Group IV: O83–O87



O60



O61



O62



O63



O64

Group III

O65



O66



O67



O68



O69



O70



O71



O72



O73



O74



O75



O76



O77



O78



O79



O80



O81



O82

Group IV

O83



O84



O85



O86



O87

LEGENDS 4

Period I. Didrachms Group IV: O88–O94
Period II. Tetradrachms Eagle/Crab: O1–O20
 Didrachms of Period II: O1



O88



O89



O90



O91



O92



O93



O94

Period II



O1



O2



O3



O4



O5



O6



O7



O8



O9



O10



O11



O12



O13



O14



O15



O16



O17



O18



O19



O20



O1

Period III.

Tetradrachms, Quadriga (Series 1): R6

Tetradrachms, Quadriga (Series 2): O6–O7, R7, R11–12

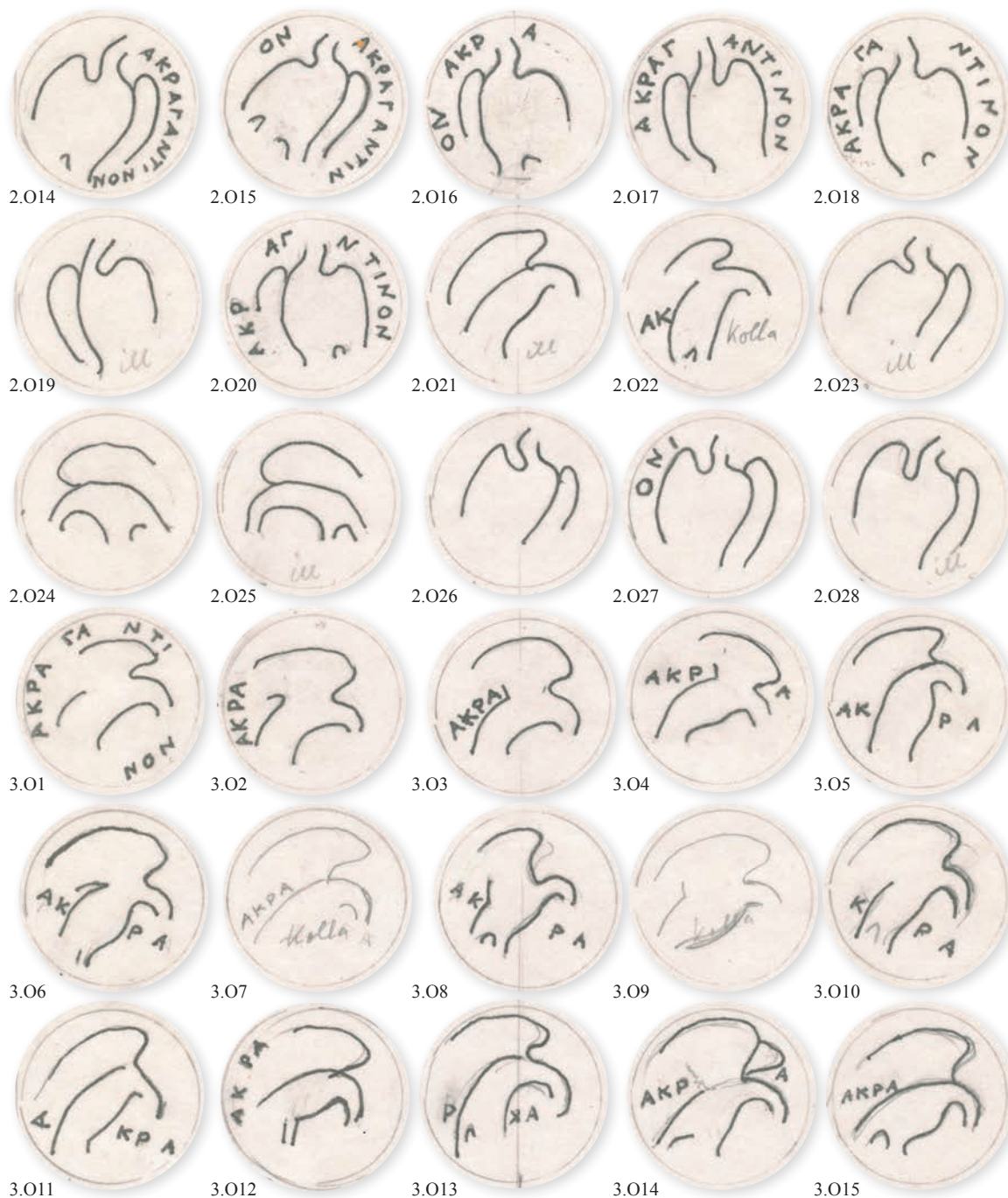
Silver: nos 601–611

Bronze coinage. Hemilitra, Series 1: O6–O7

Bronze coinage. Hemilitra, Series 2: O1–O13



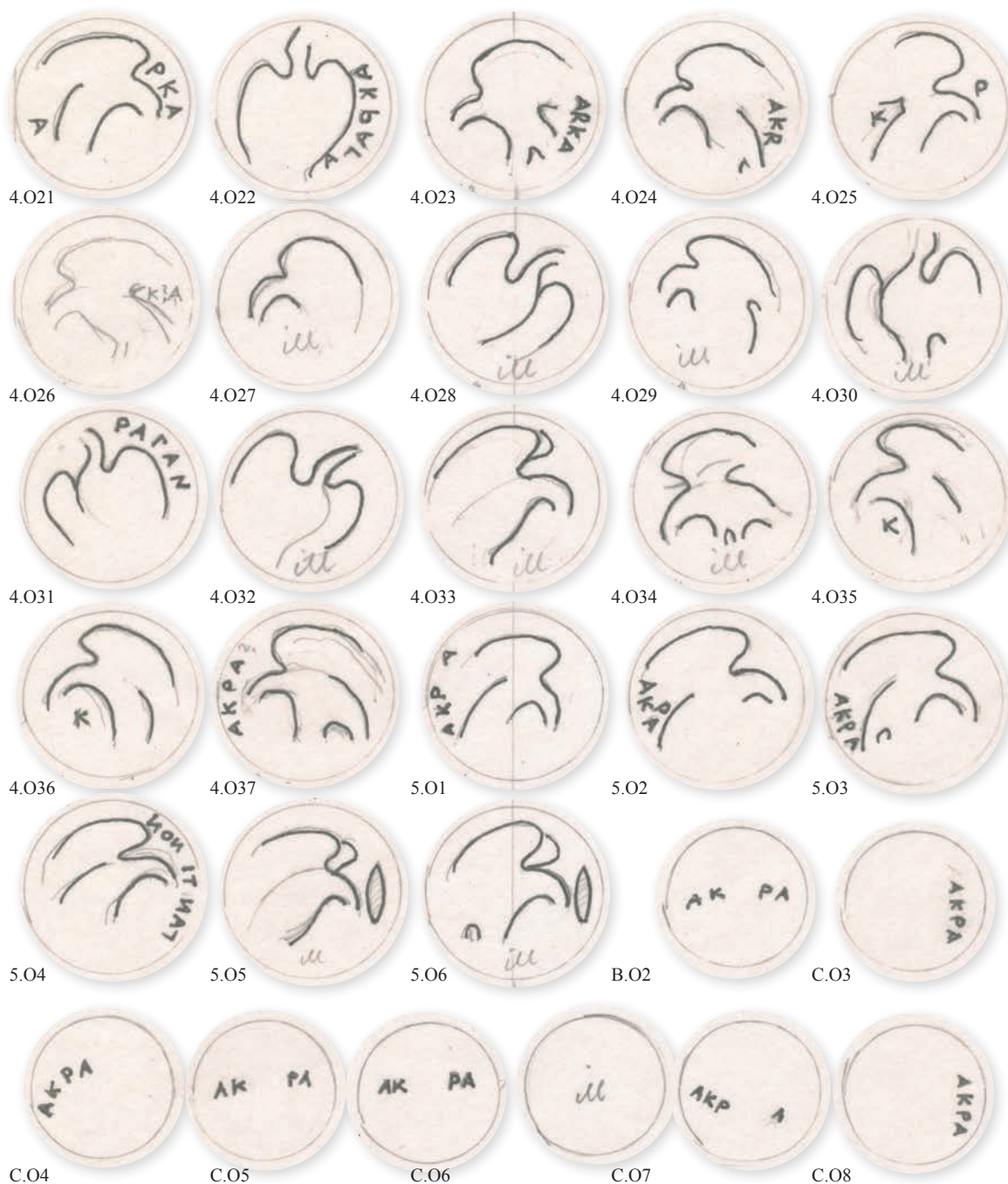
Period III. Bronze coinage. Hemilitra, Series 2: O14–O28
Hemilitra, Series 3: O1–O15



Period III. Bronze coinage. Hemilitra, Series 3: O16–O25
Hemilitra, Series 4: O1–O20



Period III. Bronze coinage. Hemilitra, Series 4: O21–O37
 Hemilitra, Series 5: O1–O6
 Tetrantes, Series B: O2
 Tetrantes, Series C: O3–O9



Period III. Bronze coinage. Tetrantes, Series C: O10–O21
Tetrantes, Series D: O22–O45



C.O10

C.O11

C.O12

C.O13

C.O14

C.O15



C.O16

C.O17

C.O18

C.O19

C.O20

D.020



D.022

D.023

D.024

D.025

D.026

D.027



D.028

D.029

D.030

D.031

D.032

D.033



D.034

D.035

D.036

D.037

D.038

D.039



D.040

D.041

D.042

D.043

D.044

D.045

Tetrantes, Series D: O46–O50

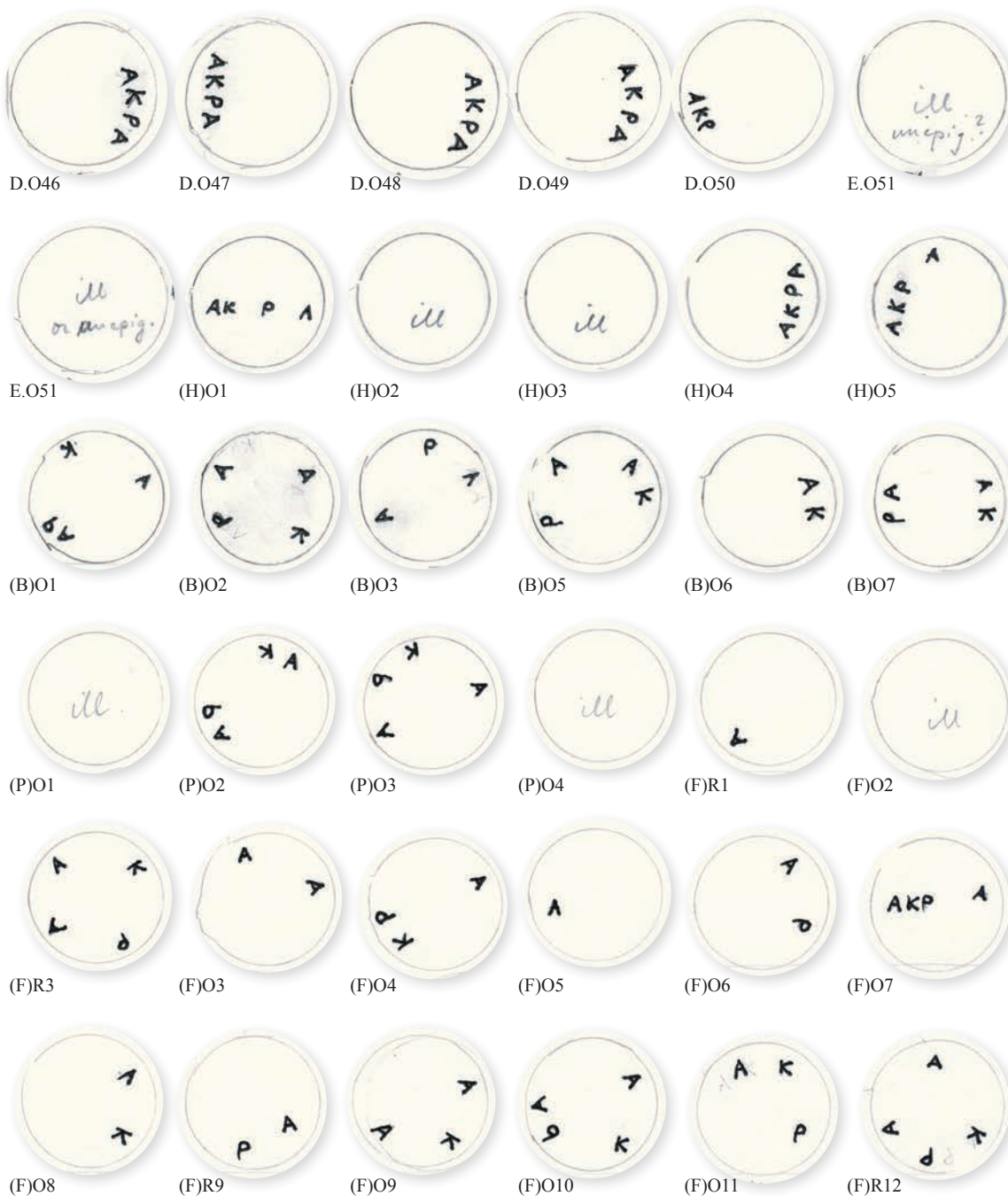
Tetrantes, Series E: O51–O52

Hexantes, Series Hare: (H)O1–(H)O5

Hexantes, Series Bird: (B)O1–(B)O7

Hexantes, Series Pig: (P)O1–(P)O4

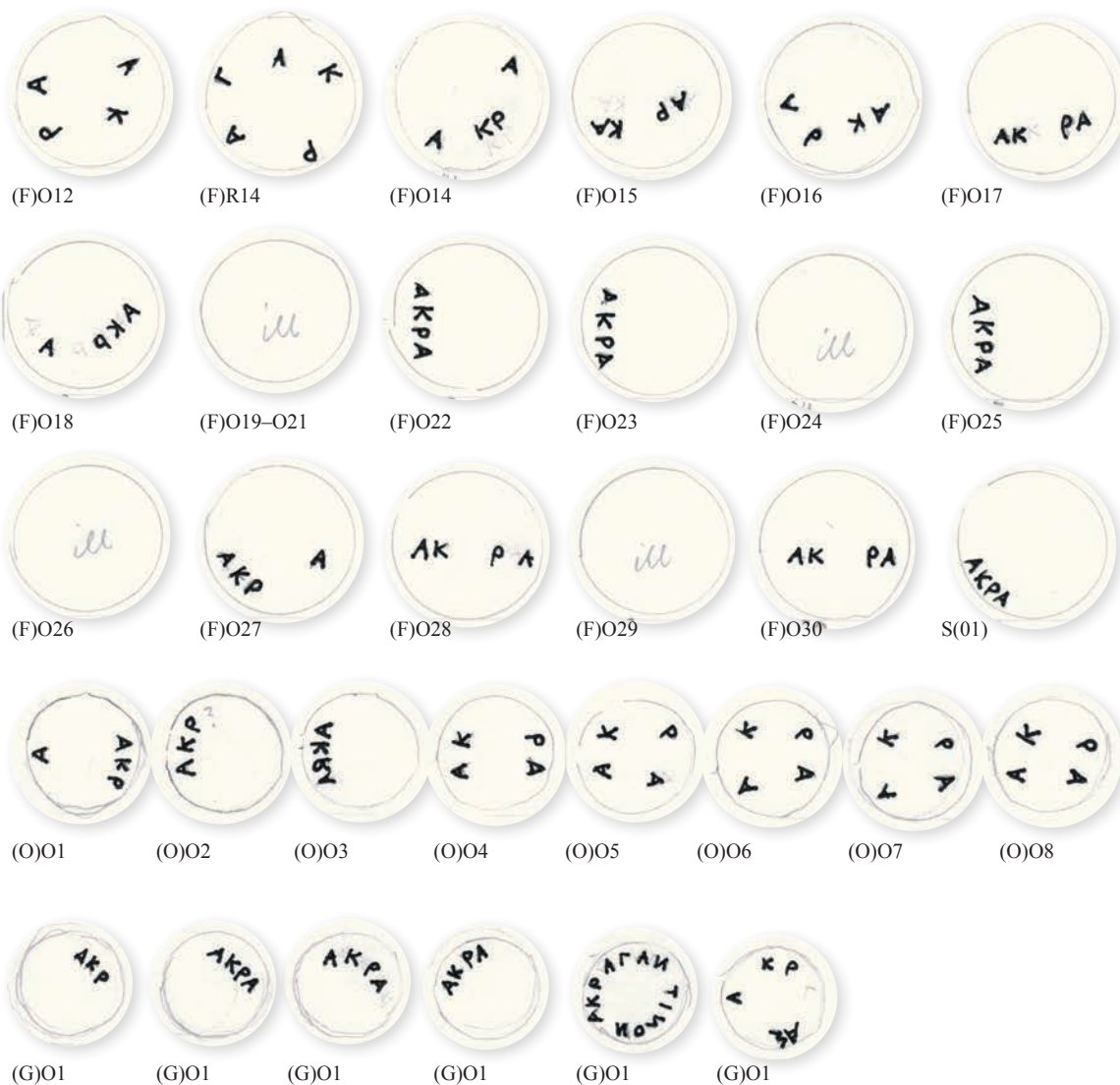
Hexantes, Series Fish: (F)O1–(F)R12



LEGENDS 12

Hexantes, Series Fish a: (F)O12–O21
 Hexantes, Series Fish b: (F)O22–O30
 Hexantes, Series Snake: (S)O1

Onkiai: O1–O8
 Gold: O1–O6



PLATES

Plates 1–2 are placed at pages 39–40.

Plates 3–71: numbers refer to the Catalogue.

For explanations to plate 40, see next page.

PLATE 40

All coins are tetradrachms except no. 10

T=Tudeer

1. Akragas 584.5. Enlarged
2. Syracuse T 63, V 22. Gillet collection
3. Syracuse T 68a, V 25. London, *SNG Lloyd* 1387
4. Hydria in British Museum, London
5. Akragas 588.1. London, *BMC* 57
6. Syracuse T 49f, R 30. London, *BMC* 159
7. Syracuse T 57b, V 20. Gillet collection = *Kunstfreund* 119
8. Syracuse T 58, V 21. London, Payne Knight = Jenkins, *CGS* fig. 45
9. Syracuse T 88a, V 33. London, *SNG Lloyd* 1403 = Jenkins, *CGS*, fig. 43
10. Akragas 598.1. Dekadrachm
11. Syracuse T 84d, V 31. London, *SNG Lloyd* 1395
12. The “Lycian” sarcophagus. Istanbul, Museum
13. Akragas 598.2
14. Syracuse T 78b, V 28. London
15. Katane. London, *BMC* 35. Enlarged
16. Akragas 596.4
17. Syracuse T 42g, V 14. London, *BMC* 188
18. Gela. Jenkins 487.1
19. Kamarina. Westermarck–Jenkins 152.8
20. Gold-ring. London, *BMC* (Finger Rings) 42 = Jenkins, *Gela* Pl. 39.4
21. Syracuse T 46a, V 15. London, *SNG Lloyd* 1381
22. Selinus. Schwabacher 44b, now in London

Group I

O1



1.2

O2



2.2

O2¹



3.1

O3



4.1

O3



5.4

R1



R1



R1



R1



R2



O3



6.4

O3



7.2

O3



8.1

O4



9.3

O5



10.2

R3



R4



R5



R5¹



R6



O6



11.12

O7



12.1

O7¹



13.1

O8



14.8

O9



15.3

R6



R6



R7



R8



R8



PLATE 4

O9



16.3

O9



17.1

O9



18.1

O10



19.9

O10



19.3

R9



R6



R10



R10



R10



O10



20.6

O10



21.1

O11



22.1

O11'



23.2

O12



24.2

R11



R_{UNC}



R12



R10



R12?



O12¹



25.1

O12¹



26.8

O12¹



27.1

O13



28.4

O14



29.1

R13



R14



R15



R13



R13



O14



30.1

O15



31.1

O16



32.2

O16



33.2

O17



34.10

R16



R16



R15



R17



R18



O18



35.5

O18



36.5

O18



37.7

O19



38.1

O20



39.1

R18



R19



R16



R19



R19



O20



40.21

O20



41.3

O21



42.2

O21



43.6

O22



44.3

O22



45.3

R18



R20



R21



R20



R21



R20



PLATE 6

O23



46.5

O23



46.2

O24



47.2

O24



48.3

O25



49.1

R22



R22



R22



R23



R23



O25



50.2

O25



51.3

O25



52.1

O25



53.1

O26



54.5

O26



55.1

R24



R25



R26



R27



R27



R28



O26



56.1

O27



57.4

O27



58.2

O27



59.3

O27



60.1

O27



61.1

R29



R30



R25



R31



R32



R33



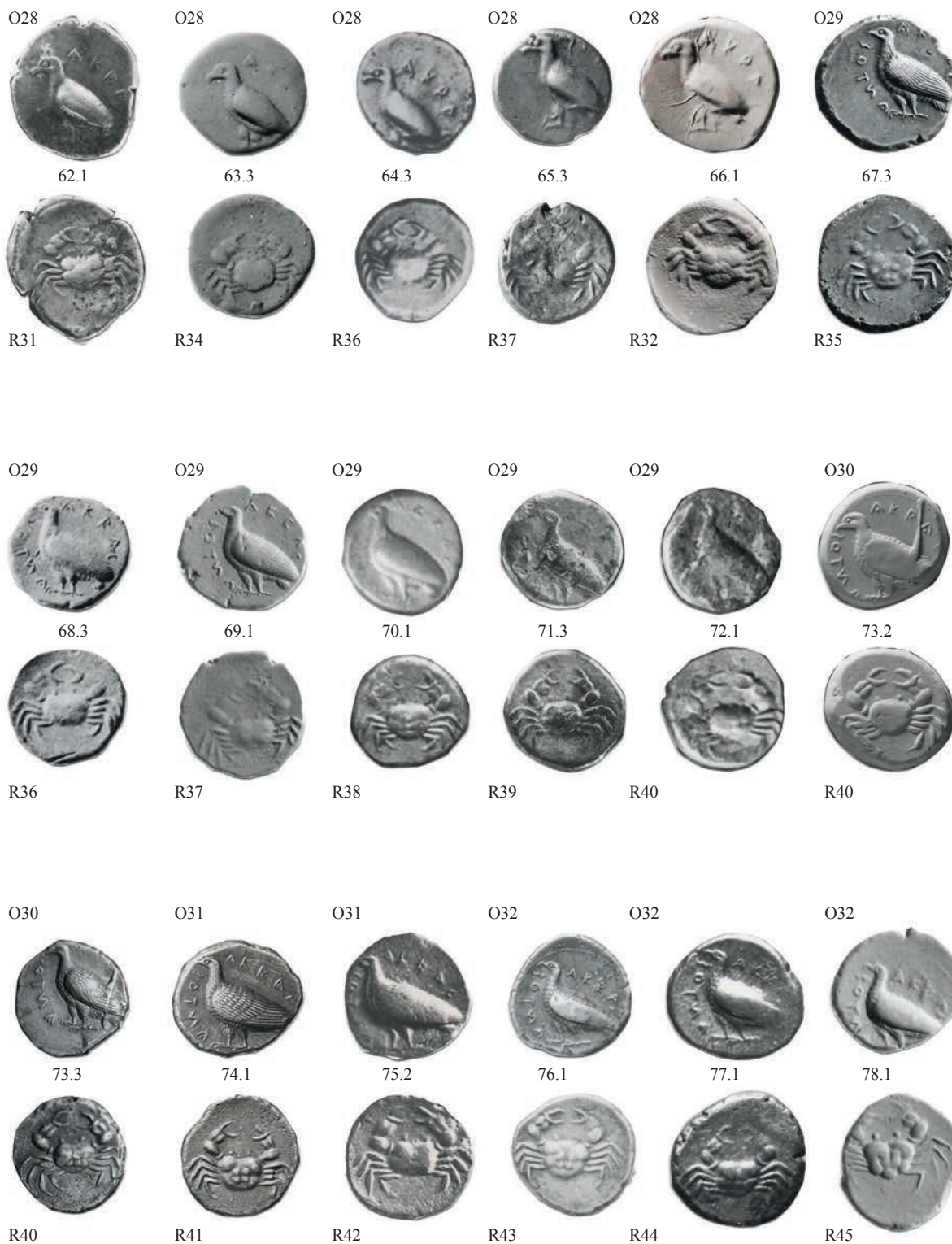


PLATE 8



Group II



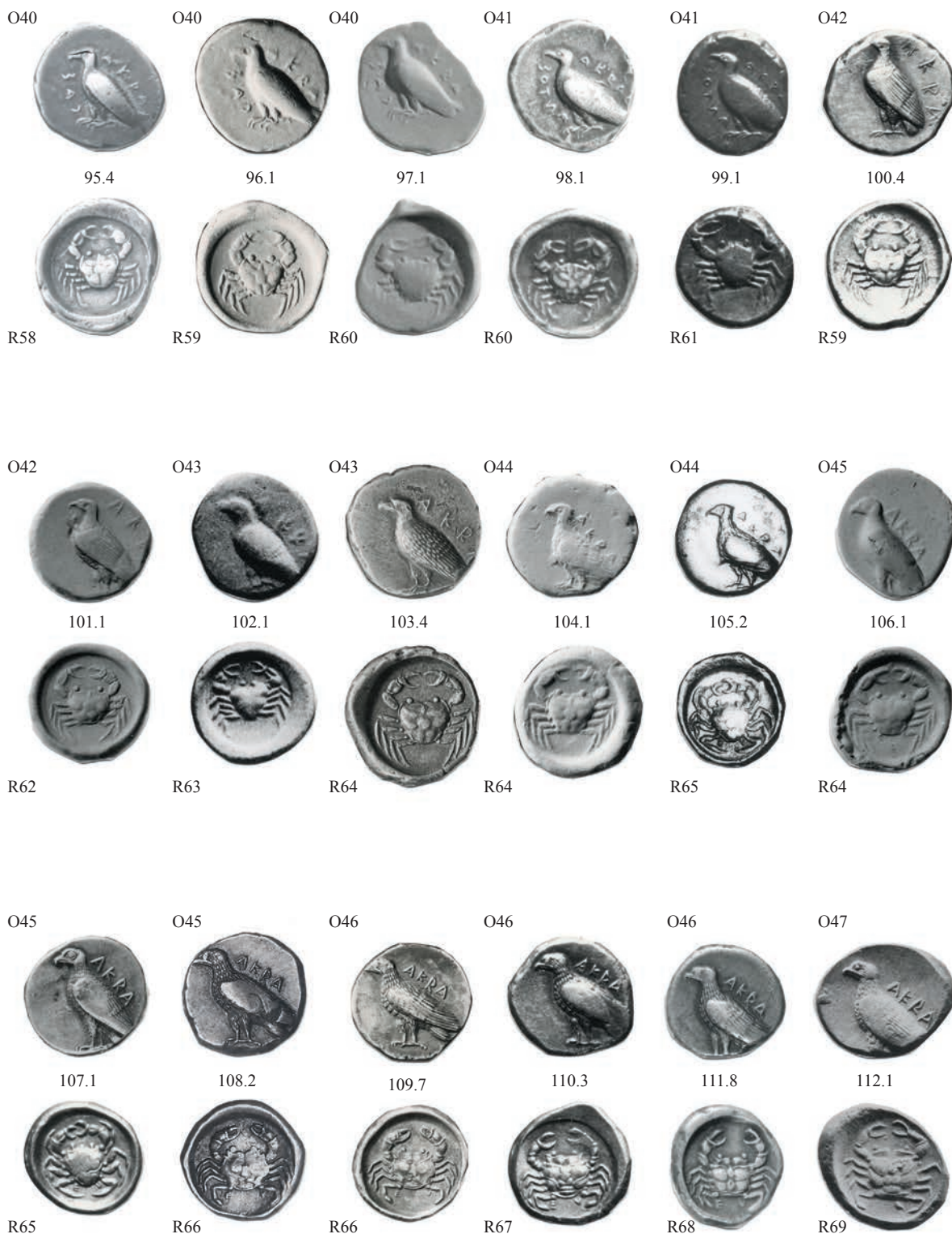


PLATE 10

O47



113.1

O48



114.1

O48



115.5

O48



116.5

O48



ad 116

O49



117

R70



R70



R71



R72



R73¹



R73



O49



118.1

O50



119.1

O50



120.2

O50



121.1

O51



122.2

O51



124.2

R74



R74



R75



R76



R76



R78



O51



123.6

O51



125.1

O52



126.1

O52



127.1

O52



128.8

O52



129.3

R77



R79



R79



R77



R80



R81





PLATE 12

O60



149.1

O61



150.1

O62



151.1

O63



152.1

O64



153.1

R97



R98



R99



R99



R100



Group III

O65



154.3

O65



155.1

O65



156.2

O66



157.2

O66



158.1

O67



159.4

R101



R102



R103



R104



R105



R106



O67



160.2

O67



161.1

O67



162.4

O67



163.4

O68



164.16

O68



165.1

R107



R108



R109



R110



R111



R110





PLATE 14

O70



185.1



R128

O71



186.2



R127

O71



187.25



R129

O71



188.31



R130

O71



189.9



R128

O71



190.1



R131

O72



192.4



R130

O72



193.11



R128

O72



194.1



R131

O72



195.2



R132

O72



196.9



R133

O73



197.1



R123

O73



198.12



R124

O73



199.6



R134

O73



200.10



R135

O73



201.6



R136

O74



202.4



R136

O74



203.5

R137



O74



204.8

R138



O75



205.7

R131



O75



205.16

R131



O75



206.6

R135



O75



207.2

R140



O75



208.3

R141



O75



209.4

R142



O75



210.1

R143



O75



211.1

R138



O75



212.23

R144



O76



213.2

R137



O76



214.5

R138



O76



215.17

R140



O76



216.9

R141



O76



217.7

R143



O76



218.3

R142



O77

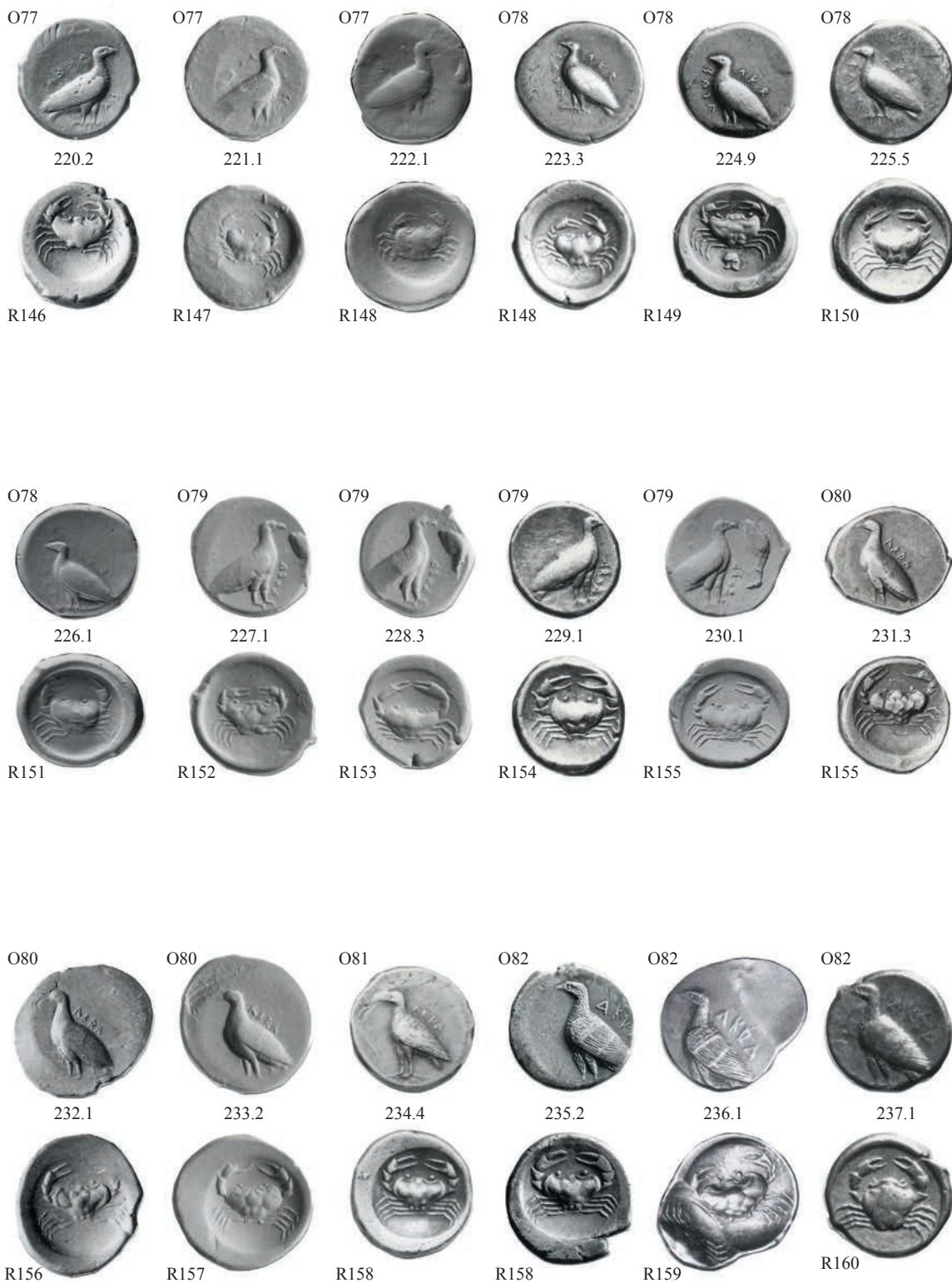


219.8

R145



PLATE 16



Group IV



PLATE 18



O89



273.7

O89



274.1

O90



275.1

O90



276.9

O90



277.1

O90



278.1

R187



R188



R189



R184



R190



R191



O90



279.7

O90



280.2

O90



281.1

O90



282.7

O91



283.9

O91



284.3

R192



R193



R194



R195



R187



R191



O91



285.5

O91



286.1

O91



287.3

O92



288.3

O92



289.1

O92



290.2

R184



R192



R193



R193



R194



R195



O92



291.2

O93



292.1

O93



293.1

O93



294.5

O93¹



295.2

O94



296.1

R196



R194



R197



R198



R199



R200



Fig A (See p. 54.)



R189 (275.1)



R189 (275.1)



R187 (283.4)



R178 (259.4)



R178 (259.49)



R198 (294.1)



O18 Enl. (35.5)



R56 x2 (92.5)



R158 x2 (234.4)

Group I

O1



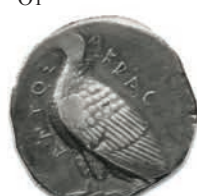
298.2

O1



299.1

O1



300.1

O1



301.1

O1



302.3

R1



R2



R3



R4



R5



O1



303.2

O1



304.1

O1



305.2

O1



306.1

O1



307.2

R6



R7



R8



R9



R10



O2



308.1

O2



309.1

O2



310.1

O2



311.2

O2



312.1

R10



R7



R1



R4



R6



PLATE 22

O3



313.1

O3



314.2

O3



315.1

O3



316.1

O4



317.4

R2



R4



R7



R8



R11



O4



318.6

O4



319.3

O4



320.1

O4



321.2

O4



322.2

R12



R13



R14



R15



R16



O5



323.6

O5



324.2

O5



325.7

O5



326.1

O6



327.1

R17



R18



R19



R20



R21



Group II

O6



328.3

R22



O6



329.1

R20



O6



330.1

R6



O7



331.2

R22



O7



332.3

R23



O7



333.1

R24



O7



334.1

R25



O7



335.2

R26



O7



336.3

R27



O8



337.23

R27



O8



338.2

R28



O8



339.4

R29



O8



340.7

R30



O9



342.3

R31



O9



343.1

R32



PLATE 24

O9



344.1

R24



O9



345.1

R33



O9



346.1

R22



O10



347.1

R33



O10



348.1

R34



O10



349a:10

R35



O10



349b:32

R35



O10



349c:46

R35¹



O10



350.1

R27



O10



351.2

R36



O10



352.7

R37



O10



353.5

R38



O10



354.1

R30



O10



355.2

R39



O10



356.2

R40



O11



357.1

O11



358.2

O11



359.4

O11



360.1

O11



361.2

R35



R39



R40



R41



R42



O11



363.1

O11



364.23

O11



365.1

O11



366.1

O11



367.9

R44



R45



R46



R47



R48



O12



368.1

O12



369.2

O12



370.1

O12



371.8

O12



372.1

R43



R49



R39



R42



R50



PLATE 26

O12



373.10

O12



374.1

O12¹



375.1

O12



376.10

O12



377.3

R44



R51



R45



R52



R53



Group III

O12



378.3

O12



379.1

O12



380.4

O12



381.1

O13



382.1

R54



R55



R56



R48



R57



O13



383.1

O13



384.3

O13



385.1

O13



386.8

O13¹



387.1

R48



R58



R59



R60



R61



O13¹



388.6

O13¹



389.5

O13¹



390.3

O13¹



391.1

O14



392.3

R62



R63



R64



R65



R66



O14



393.5

O14



394.2

O14



395.2

O14



396.1

O14



397.1

R67



R57



R59



R68



R69



O14



398.3

O14¹



399.1

O14¹



400.1

O14¹



401.1

O14¹



402.1

R70



R71



R72



R73



R74



PLATE 28

O14¹



403.1

O14¹



404.1

O14¹



405.1

O14¹



406.1

O14¹



407.1



R63



R65



R75



R61



R76

O15



408.1

O15



409.3

O15



410.1

O15



411.2

O15



412.5



R63



R77



R78



R75



R76

O15



413.1

O15



414.3

O15



415.1

O16



416.1

O16



417.4



R72



R79



R80



R80



R81

O16



418.2

O17



419.1

O17



420.2

O17



421.5

O17



422.2

R82



R79



R83



R84



R85



O17



423.2

O17



424.1

O17



425.1

O18



426.1

O18



427.1

R86



R87



R88



R84



R83



O18



428.4

O18



429.6

O18



430.2

O18



431.1

O18



432.1

R89



R90



R85



R91



R92



PLATE 30

O18



433.1

O19



434.3

O19



435.3

O19



436.3

R87



R88



R93



R94



O20



437.2

O20



438.2

O20



439.1

O20



440.4

R93



R95



R94



R96



O1



441.5

O1



441.1

O1



442.2

O1



443.1

O1



444.1

R1



R1



R2



R3



R1



O1



445.2

R2



O2



446.7

R2



O2



447.1

R2¹





PLATE 32





524.5



524.14



524.9



524.2



525.2



525.3



525.39



525.65



526.5



526.10



526.1



526.8



526.25



527.4



527.3



527.13



528.5



528.4



528.34



528.7



528.21





529.2



529.5



530.2



530.3



530.13



R1

529.2



R2

530.3



A



B

A-B Elis/Olympia, staters (London)

O1



531.6

O1



531.4

O1



531.7

O1¹



532.1

O1¹



533.2

R1



R1



R1



R1¹



R1²



O1¹



534.1

O1¹



534.2

O1¹



535.1



583.2 *obv*

R2



R2



R2



A



B

A-B Syracuse, Tudeer 47g and 460



531.2 *rev* x2



531.6 x2



PLATE 36





O1



583.1

R1



583.1



O1



583.2

R1



O1



584.5

R2



O1



584.1

R3



O2



585.10

R3



O2



585.1

R3



O3



586.2

R4



O4



587.2

R5



O4



587.3

R5



O5



588.10

R6



O5



588.12

R6



O6



589.9

O6



589.14

O6



590.2

O6



590.1

O6



591.1

R7



R7



R8



R8



R9



O7



592.3

O7



593.1

O7



594.3

O7



595.5

O7



596.3

R9



R10



R10¹



R11



R12



O6



R7



589.4

R12



596.4



1



2



3



4



5



6



7



8



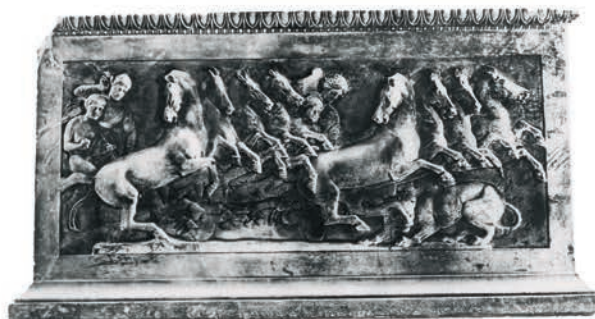
9



10



11



12



13



14



15



16



17



18



19



20



21



22



597.1



597.2



597.4



597.4



598.1



O2



599.1

O2



600.1

O2



600.2

R3



R2



R2



O2



600.3

R2





597.1





599.1





604.12 rev



Series 1



Series 2



1:04



625.1

2:01



626.2

2:01



627.5

2:01



628.3

3:02



629.2

2:R6



2:R6



2:R7



2:R8



2:R7



2:03



630.4

2:04



631.5

2:05



632.1

2:05



633.3

2:06



634.3

2:R9



R10



R11



R12



R13



2:06



635.2

2:07



636.4

2:07



637.1

2:08



638.1

2:09



639.1

2:R14



2:R15



2:R16



2:R16



2:R17



PLATE 48

2:O10



640.1

2:O10



641.1

2:O11



642.1

2:O12



643.2

2:O13



644.3

2:R18



2:R19



2:R20



2:R21



2:R21



2:O14



645.5

2:O15



646.3

2:O16



647.3

2:O16



648.1

2:O17



649.4

2:R22



2:R23



2:R23



2:R24



2:R25



2:O17



650.2

2:O18



651.4

2:O18



652.3

2:O18



653.1

2:O18



654.1

2:R26



2:R25



2:R27



2:R28



2:R29



2:O19



655.1

2:O20



656.4

2:O20



657.5

2:O21



658.1

2:O22



659.3

2:R30



2:R31



2:R32



2:R32



2:R33



2:O23



660.1

2:O23



661.1

2:O24



662.3

2:O25



663.1

2:O26



664.3

2:R33



2:R34



2:R34



2:R35



2:R35



2:O27



665.2

2:O28



666.3+1

Æ B 1



Æ B 2



Æ B 3.3



2:R36



2:R37



Series 3

3:O1



667.2

3:O1¹



668.5

3:O2



669.4

3:O2



670.5

3:O3



671.1

3:R1



3:R2



3:R3



3:R1



3:R4



3:O4



673.3

3:O5



674.2+5

3:O5



675.2

3:O6



676.1

3:O7



677.1

3:R4



3:R6



3:R7



3:R7



3:R8



3:O8



678.3

3:O9



679.1

3:O10



680.1

3:O11



681.1

3:R9



3:R10



3:R10



3:R11



3:O11¹



682.1

3:O12



683.3

3:O13



684.4

3:O14



685.1

3:O15



686.2

3:R12



3:R13



3:R14



3:R15



3:R16



3:O16



687.1

3:O17



689.2

3:O18



690.1

3:O18



691.1

3:O19



692.2

3:R17



3:R18



3:R19



3:R20



3:R21



3:O20



693.2

3:O21



694.1

3:O21



695.1

3:O22



696.5

3:O23



697.1

3:R21



3:R21



3:R22



3:R23



3:R23



Series 4

3:O24



698.2

3:O25



699.1

3:O23



700.1

4:O1



701.6

3:R23



3:R24



3:R25



4:R1



4:O2



702.7

4:O3



703.2

4:O4



704.1

4:O5



706.1

4:R2



4:R3



4:R4



4:R6



4:O5



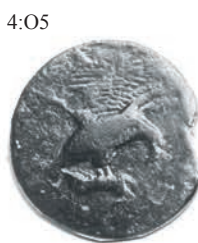
707.1

4:O5



708.1

4:O5



709.2

3:O5



710.1

4:R7



4:R8



4:R9



4:R10



4:O6



711.2

4:O7



712.1

4:O8



713.1

4:O9



714.1

4:O9



715.2

4:R11



4:R12



4:R13



4:R14



4:R15



4:O10



716.1

4:O11



717.1

4:O11



718.1

3:O11'



719.1

4:O12



720.1

4:R15



4:R16



4:R17



4:R18



4:R19



4:O12



721.2

4:O12



722.1

4:O13



723.1

4:O13



724.1

4:O14



725.2

4:R20



4:R21



4:R21?



4:R22



4:R20



PLATE 54

4:O14



726.1

4:O15



727.1

4:O16



728.1

4:O17



729.1

4:O17



730.3



4:R23



4:R23



4:R24



4:R24



4:R25

4:O18



731.1

2:O21



732.1

3:O15



733.3

3:O15



734.3

4:O19



735.1



4:R25



4:R26



4:R27



4:R28



4:R27

4:O19



736.1

3:O16



737.1

2:O14



738.2

4:O20



739.1

4:O21



740.1



4:R28



4:R29



4:R30



4:R30



4:R31

4:O22



741.1

4:O23



742.2

4:O24¹



743.2

4:O25



744.1

4:O25



745.2



4:R31



4:R32



4:R33



4:R33



4:R34

4:O26



746.1

2:O20



747.2

4:O20



748.1

4:O27



749.1

4:O28



750.3



4:R34



4:R34



4:R35



4:R35



4:R36

4:O29



751.2

4:O30



752.2

4:O30



753.1

2:O24



754.1

4:O31



755.1



4:R36



4:R37



4:R38



4:R39



4:R39

PLATE 56

4:O31



756.1

4:O31



756.4

4:O32



757.1

4:O32



758.2

4:O33



759.1

4:R40



4:R40



4:R40



4:R41



4:R41



4:O33



760.2

4:O33



760.1

3:O22



761.2

3:O22



762.2

3:O22



763.2

4:R42



4:R42



4:R43



4:R44



4:R45



4:O34



764.1

4:O34



765.4

4:O34



766.1

4:O35



767.4

4:O36



768.1

4:R44



4:R46



4:R47



4:R47



4:R47



3:O23



769.1

3:O23



770.1

4:O37



771.1

4:O37



772.1

2:O25?



773.3



4:R44



4:R47



4:R48



4:R49



4:R50



Æ B 4



Æ B 5



Æ B 6



Æ B 7



774.4



775.4



776.1



777.3



778.2

Series 5

2:O13



774.4

2:O13



775.4

2:O13



776.1

2:O13



777.3

5:O1



778.2



5:R1



5:R2



5:R3



5:R4



5:R5

4.03



779.3

4.03



780.5

4.03



781.2

5.02



782.1

5:R4



5:R6



5:R7



5:R7



5.02



783.2

5.02?



784.4

5.03



785.1

5.04



786.2

5:R8



5:R9



5:R9



5:R10



5.05



787.1

4.018



788.1

4.017



789.2

5.06



790.1

3.025



791.3

5:R11



5:R12



5:R12



5:R13



5:R13



5.07



792.3

2.021



793.9

2.021



794.11

2.021



795.5

2.021



796.1

5:R14



5:R15



5:R16



5:R17



5:R18



4.023



797.1

4.037



798.1

2.024



799.1

2.023



800.3

4.033



801.1

5:R18



5:R19



5:R19



5:R19



5:R19



795.5 enl.



PLATE 60

Tetrantes

O1



802.1

O1



802.7

O1



803.3

O1



804.2

O1



805.1

R1



R1



R2



R3



R4



O2



806.5

O2



807.1

O3



808.4

O4



809.5

O4



810.5

O4



811.8

R5



R6



R7



R7



R8



R9



O5



812.3

O5



813.2

O6



814.1

O6



815.1

O6



816.1

O7



817.1

R10



R11



R12



R13



R14



R15



O8



818.3



R16

O9



819.2



R17

O10



820.1



R18

O11



821.3



R19

O11



822.4



R20

O12



823.1



R21

O13



824.3



R22

O14



825.1



R23

O15



826.2



R24

O16



827.8



R25

O16



828.6



R26

O16



829.3



R27

O16



830.2



R28

O16



831.2



R29

O16



832.1



R30



828.4







O47¹



901.1

R81



O48



902.1

R72



O48



903.1

R79



O48



904.1

R82



O49



905.1

R80



O49



906.3

R83



O49



907.1

R81



O49



908.1

R84



O49



909.1

R85



O49



911.1

R87



O49



912.2

R88



O50



913.1

R89



4:O34



914.1

R89



O51



915.1

R90



O51



916.1

R91



O52



917.2

R92



Æ B 8.2



Æ B 8



Æ B 9



Æ B 9

Hexantes, Series Hare



Series Bird



Series Pig



Series Fish a



Series Fish b



Series Snake



Onkiai

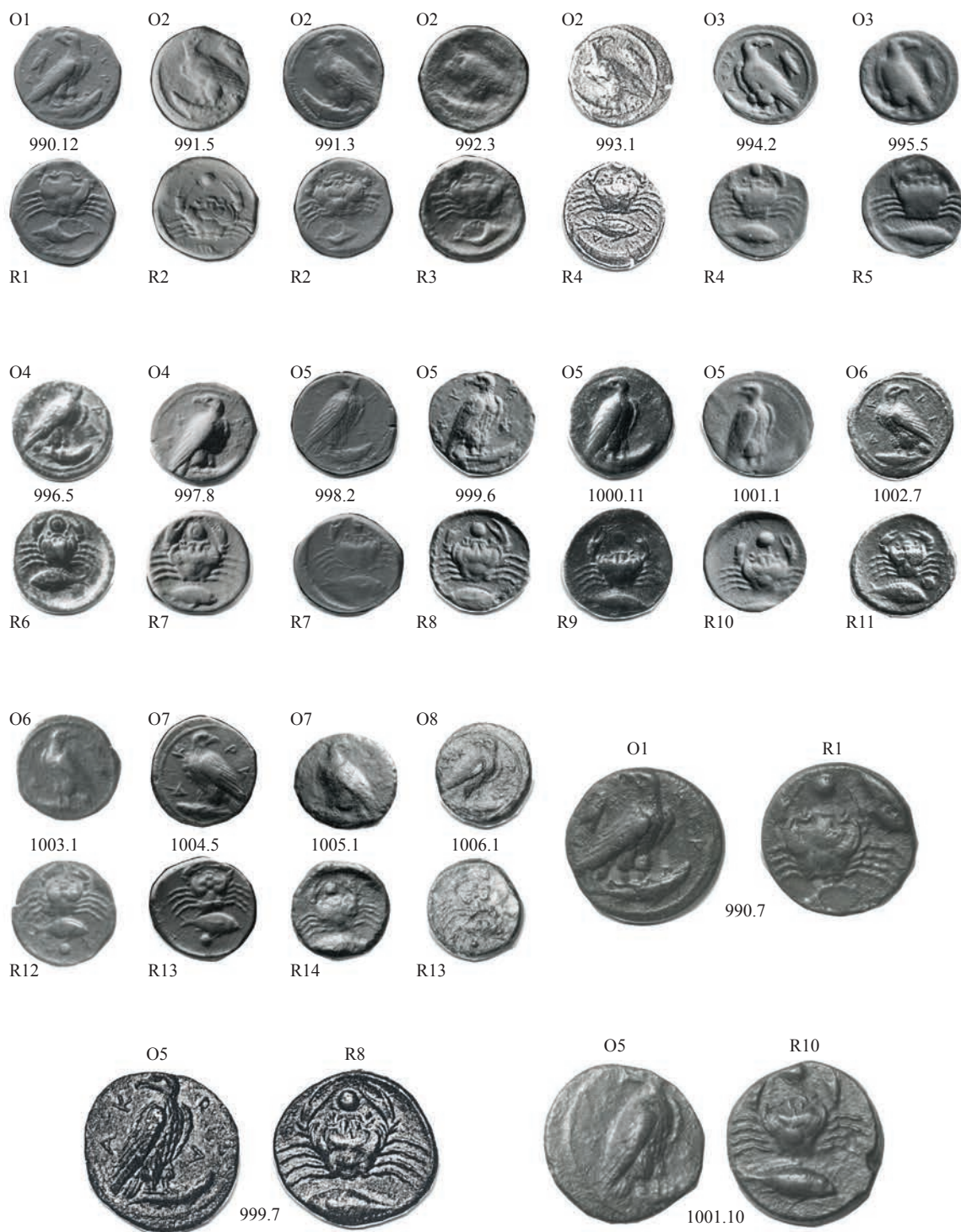


PLATE 70

Gold





79.1



585.2



Poseidonia



Himera



669.3



Panormos



756.4



Himera



811.5



Panormos



Akragas



SNGANS 1064



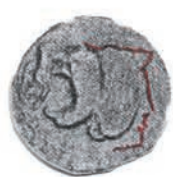
Calciati I. 55 OS



Add 820



Solous



Akragas



unc. tetras

