COINS

IN THE GOVERNMENT MUSEUM, CHENNAL

With a Detailed Catalogue of the Denarii Hoard from Budinatham (Tamil Nadu)



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With a Detailed Catalogue of the Denarii Hoard from Budinatham (Tamil Nadu)

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FOREWORD

he diplomatic, commercial and cultural links between the ancient Roman Empire and the Indian sub-continent date back to the 2nd Century B.C. or even slightly earlier. These comprehensive contacts continued with no interruption for several centuries as scores of Roman traders and their Egyptian and Arabian trade agents regularly came to India for buying spices, gemstones, textiles and other oriental luxuries. In course of time, many Roman craftsmen settled in India and their presence impacted Indian art and architecture. Diplomatic missions regularly travelled between the Roman Empire and India. Several Roman emperors including Augustus, Trajan, Antoninus Pius and Constantine I received ambassadors from kingdoms in India.

The Embassy of Italy and the Italian Cultural Centre in New Delhi have been promoting research and public awareness about the importance of the relations between Rome and India, both in Italy and in India. I am delighted that the Government Museum in Chennai has joined hands with us to host a unique exhibition, for the first time in Southern India, of the Roman objects and coins found in the Indian sub-continent, with Dr. Suresh Sethuraman as its curator, known for his pioneering research work in this field and with the cooperation of the Indo-Italian Chamber of Commerce and Industry.

I am confident that both the exhibition and the catalogue will go several steps further in shedding light on a subject which proves beyond doubt that the contacts between India and Rome are steeped into the history of the two countries and provide a rock-solid foundation for our ever-growing friendship and cooperation.

Giacomo Sanfelice di Monteforte
 Ambassador of Italy to India

FOREWORD

rchaeological evidences of the links between the Roman Empire and India are abundant in scores of sites spread throughout India, mainly in South India. These sites have yielded Roman objects including coins, wine amphoras and bronze artifacts. The coins constitute the largest and most significant class of finds. Many museums in India have collections of Roman coins found in the neighbouring regions.

In 2004, an international seminar was organised at Pondicherry, focusing on Arikamedu, one of the biggest and the most important Roman trading stations in South India. This academic interest in Arikamedu paved the way in 2007, for further research and the consequent publication, sponsored by the Development Cooperation Office of the Embassy of Italy in New Delhi, of the first-ever exclusive monograph on this site by Dr. S. Suresh, an internationally acknowledged authority on the subject. In 2010, the Italian Cultural Centre contributed for a research programme aimed at documenting Roman antiquities originally found in India and now in European collections, mainly the U.K. and France, again by Dr. Suresh.

The decision of the Government Museum of Chennai, with one of the richest collections of Roman objects, mainly coins, anywhere outside Europe, to bring out a catalogue coinciding with the exhibition on the same theme, is a welcome step towards drawing attention to these objects which had, so far, never been documented, published or exhibited. I wish to express, on behalf of the Italian Cultural Centre, my sincere gratitude to Dr. Suresh and to Dr. Sauro Mezzetti of the Indo-Italian Chamber of Commerce and Industry, Chennai, for their invaluable collaboration.

Dr. Angela Trezza
 Director
 Italian Embassy Cultural Centre, New Delhi

INTRODUCTORY REMARKS

he flourishing trade between South India and the Roman Empire is not commonly known either in India or in Italy.

From the Mediterranean area there were exports of ceramics, oil, wine and imports of spices, cotton, silk and precious stones. A lot of gold and silver flowed from the Roman empire towards the India markets. Pliny the elder estimated its amount to 100 million Sesterces per year. During the Augustean age, each year, about 120 vessels sailed from the West towards India. As the prince poet Ilango of the Chera dynasty describes, "In the harbour were to be seen sailing vessels with many sailors from distant lands... The sun shone over the open terraces, over the warehouses near the harbour, and over the turrets with their airholes like the eyes of the deer... In different places, the observer's attention was arrested by the sight of Yavanas – a name for Greeks and Romans – whose prosperity never waned".

The Indo-Italian Chamber of Commerce and Industry (IICCI) in Chennai has been active in promoting awareness about these commercial ties that were knit almost 2000 years ago. In the year 2004, the Chamber was partner with the Italian Embassy and the Italian Cultural Pavillion of Auroville, an experimental township in Tamil Nadu – that hosts one of the largest Italian communities in India – in organizing a conference in Pondicherry, which is close to Arikamedu, one of the most important sites for the ancient Roman trade with India. This conference was jointly organized with the local government of Pondicherry and brought together, for the first time, all the main experts in this field from Italy, India and France.

The IICCI, in collaboration with the Italian Institute of Culture of the Italian Embassy in New Delhi, is now promoting and supporting a new initiative towards the preparation of a detailed catalogue of the ancient Roman coins found in the village of Budinatham in Tamil Nadu, and now in the Madras Museum collection. This museum has one of the most important collections of Roman coins that have been found in India. Indeed, this museum has one of the largest collections of Roman coins outside Europe, most probably the largest in Asia. This catalogue will enable the museum to make its collection known to specialists worldwide. The Madras Museum is one of the oldest and richest in the country

and we hope his endeavor will further strengthen the links between Italy and the cultural institutions of Chennai. We have already collaborated with the Madras University, one of the oldest in India, where a Luigi Pirandello Center for Italian Studies has been established a few years ago, by the Italian Embassy. The present event aims to be another milestone towards the consolidation of the deeper ties between India and Italy.

While releasing this catalogue, we are especially thankful to Dr T.S. Sridhar, Principal Secretary and Commissioner, Department of Museums, Govt. of Tamil Nadu, for the collaboration provided and the enthusiastic support shown towards this idea since the beginning, to Dr S. Suresh, Tamil Nadu State Convener, Indian National Trust for Art and Cultural Heritage (INTACH) who, since many years, has been researching in this field both in India and Europe, to the local chapter of INTACH itself for its continuous attention for any heritage initiative related to Italy, to the Italian community in Chennai, Pondicherry and Auroville for all the attention and support. A special thanks and gratitude goes also to the Italian Company Lavazza and its subsidiaries in India, Fresh And Honest Café Ltd. and Barista Coffee Company Ltd. whose generous support made the release of this catalogue possible. The trade of spices and other commodities has been a very important feature of the Indo-Italian commerce throughout the centuries, from Roman to Venice merchants. Italy is a country that cares for its heritage while looking at the future and it is of particular significance that this particular endeavor has generated yet another fruitful association between India and Italy.

— Sauro Mezzetti Chairman Regional Committee Indo-Italian Chamber of Commerce, Chennai



PREFACE

he Government Museum, Chennai is not only renowned for its beautiful South Indian bronzes but also known for its numismatics collections. It has a rich collection of the ancient, medieval and modern Indian coins of gold, silver, copper, lead, potin (an alloy of copper, zinc, lead and silver) and bullion (,an alloy of gold and silver with base metal). Besides these, there is a representative collection of foreign coinage such as Roman, Chinese, Venetian which are historically significant. This is the only museum which possesses a good number of Roman coins outside Europe. India and Italy are peninsular countries and both are known for their contribution to mankind in the fields of history, civilization, art and architecture, literature and allied fields. The Rome-India commercial contact commenced during the pre-Christian era. The blow of trade winds resulted in the flow of fleets from the European peninsula to the Asian peninsula.

The Museum had, up to 1865 AD, only a very small collection of coins in its cabinet. After implementation of Indian Treasure - trove Act 1878, all finds, unearthed anywhere in the state, are sent to this museum by the Revenue authorities for examination and for acquisition; thus it enriched the numismatics collection in Government Museum, Chennai. Most of the North Indian coins are donated and exchanged by North Indian museums and institutions such as the Prince of Wales Museum, Bombay; the Asiatic Society, Nagpur; the U.P. Coin Committee; Indian Museum, Calcutta and so on.

The present Numismatics gallery was started in the year 1978 on the first floor of bronze gallery. This gallery was further refurbished with air conditioning and displayed many original coins in the year 2009. In the recent years, this section has conducted exhibitions on Vijayanagar coinage and punch-marked coins with special lecture and special bulletin on the captioned subject. Many important coins of Tamil country have been displayed in the World Classical Tamil Conference -2010 and in the special exhibition for the completion of 1000 years of Thanjavur temple . Rare coins were viewed by 10 million people during these two great events of the State. The Government Museum, Chennai gave valuable suggestions in segregation of Tirumala Tirupathi Devasthanam's hundiyal collection. The Museum not only deals with old collections, but also plays an important role in designing new coins; to commemorate the 1000th year of Thanjavur temple, Government of India decided a special coin. Government Museum, Chennai has approved the new design

made by Government of India Mint, Mumbai.

In pre-independence days, the museum played a vital role in conducting excavation by Robert Eric Mortimer Wheeler, the then D.G. of ASI. In the year 1993, Government Museum, Chennai conducted a small 'Exhibition of Roman Antiquities' in Chennai, Kolkata (Indian Museum) and Coimbatore. Museum publications are renowned; in Numismatics Section many books were published for the benefit of scholars and researchers. Many curators have published different articles in the leading journals. Some of the publications are listed below:

- Aravamuthan, T.G., Catalogue of the Venetian coins in the Madras Government Museum, 1938.
- Aravamuthan, T.G. Catalogue of the Roman and Byzantine coins in the Madras Government Museum, 1942.
- Balakrishnan Nayar, T., 'The Dowlaishweram Hoard of Eastern Chalukyan and Chola Coins', Bulletin of the Madras Government Museum, 1966.
- · Mohandas, P.N., Coins of India Through the ages, 1960.
- Sanakaranarayana .N.,- Catalogue of Venetian Coins in the Government Museum, Madras, 1989.
- Sanakaranarayana .N., -Catalogue of Vijayanagar Coins in the Madras Government Museum, 1977.
- Sridhar, T.S., Dr., & N.Sundararajan, A catalogue of Silver Punch marked coins from Vaigainallur village, Kulithalai taluk of Karur district, 2010.

This new publication on Roman coins is a catalogue, discussing in detail about the distinct counter marks on the coins. No doubt this new catalogue will be one more feather in the field of Museum publication. I thank the Government of Tamil Nadu for their support and the Indo-Italian Chamber of Commerce and Industry for their assistance. I wish to compliment Dr. S.Suresh, Tamilnadu State Convener, The Indian National Trust for Art and Cultural Heritage (INTACH) and Thiru.N. Sundararajan, Curator, Numismatics Section, Government Museum, Chennai, for their sincere and painstaking efforts in bringing out this catalogue within the limited time given to them.

— Dr.T.S.Sridhar, I.A.S.,
Principal Secretary and Commissioner,
Department of Museums and Department of Archaeology,
Government of Tamil Nadu.

HISTORICAL BACKGROUND

The political scenario

n the long history of India, the period from around the fourth century B.C. to the third century A.D. is one of the most eventful. The political history of the period can be reconstructed mainly on the basis of the literary, archaeological, epigraphical and, to a lesser extent, the numismatic sources. During this time, the Mauryas and later, the Kushans were ruling most parts of North India. The Satavahanas, Sangam Cheras, Sangam Cholas and the Sangam Pandyas were the major powers in South India.

The Satavahanas were among the most powerful rulers of South India. They ruled over a large territory that included some parts of the present-day state of Maharashtra as also most parts of Karnataka and Andhra Pradesh. Paithan or Pratisthana in Maharashtra was their capital.

The Cheras, Cholas and Pandyas and some minor chieftains ruled the region south of Satavahana territory. This region was called Tamilakam because the language spoken here was Tamil. Tamilakam was bound by the Venkatam or Tirupati hills in the north and the Cape Comorin in the south. To the west, lay the Arabian Sea and to the east, the Bay of Bengal. The region thus mainly included the present-day states of Tamil Nadu and Kerala and the Union Territory of Pondicherry.

The Tamil kings were great patrons of art and literature. At the Pandya palace in Madurai (Tamil Nadu), scholars and poets from different lands assembled to participate in academic debates and discussions. Such a gathering of Tamil scholars was called the Sangam. The Sangams were held frequently between 200 B.C. and 300 A.D. Hence, historians call this period the 'Sangam Age' and the literature of those days as the 'Sangam literature'. And the prefix 'Sangam' is frequently appended to the three main dynasties—Cheras, Cholas and Pandyas- that ruled the region during this period. This is the only instance where a historical period has been named after an academic conference.

The Sangam Chera kingdom comprised present-day Kerala and parts of western Tamil Nadu—the Kongu Nadu or the Coimbatore region. The location of the capital of this kingdom was, until recently, hotly debated by scholars. Some scholars felt that

Tiruvanchikulam in coastal Kerala was the Chera capital while others opined that Karur, on the banks of the river Amaravati, a tributary of the Kaveri, in Tamil Nadu, was the capital. The discovery of Sangam Chera inscriptions at a site called *Pugalur near Karur and* the recurrent finds of thousands of Sangam Chera coins in and around this town have now proved, beyond doubt, that Karur was the royal capital. Muziris, on the Malabar coast, was the chief port of the Cheras.

The kingdom of the Sangam Cholas mainly consisted of parts of northern and central Tamil Nadu with the epicentre of power in the Tiruchi-Tanjavur region of central Tamil Nadu. The Cholas had two capitals. Uraiyur (near the city of Tiruchirappalli or Tiruchi) was their main capital while the port-city of Kaveripumpattinam, also called Kaveripattinam or Cholapattinam or Kolapattana, served as the secondary capital.

The Sangam Pandya kingdom comprised the regions of Madurai, Ramanathapuram and Tirunelveli in southern Tamil Nadu. The Pandya kingdom was situated immediately south of the Chola kingdom, the river Kaveri often forming the boundary between the two. Thus, the Pandyas were the rulers of the southernmost tip of India and were closest to the island of Sri Lanka. Madurai, also called Kudal, was the capital of the Pandyas. Marungurpattinam or Alagankulam and Korkai were the chief ports of the kingdom.

While the Cheras, Cholas and Pandyas were the three main rulers of Tamilakam, there were a number of minor chiefs who were loyal to one of the above three powers. These chiefs often shifted their allegiance from one power to the other. Among these chiefdoms were the Malaiyamans or Malaiyans of Tirukoilur or Kovalur and the Adigamans of Tagadur in Tamil Nadu. Compared to the other chieftains, the Malaiyamans were very powerful. They exercised control over Malaiyaman Nadu which included parts of present-day Pondicherry and the adjoining South Arcot region of Tamil Nadu, with the town of Tirukoilur, 193km from the city of Chennai, as their capital. The famous port of Arikamedu, near Pondicherry, was under their control for some years.

In the Andhra region, the decline of the Satavahanas, resulted in the emergence of new dynasties such as the Ikshvakus, the Salankayanas or Vaingeyakas, the Kandaras or Anandas and the Vishnukundins. Among these dynasties, the Ikshvakus may be regarded as the immediate successors of the Satavahanas. Nagarjunakonda or Sriparvata Vijayapuri was the capital of the Ikshvakus. Subsequent to their decline in the early fourth century A.D., the Salankayanas rose to power and prominence in Andhra. Their capital was Vengipura, modern Peddavegi. The Vishnukundins or Vishnukundis ruled over Andhra and large parts of Maharashtra from around the fifth century A.D. to atleast the beginning of the seventh century. The place name Vinukonda in Andhra is believed to have been derived from the name 'Vishnukundin'. Vinukonda has a hill fort and many scholars believe that it was the capital of the Vishnukundins.

In the Tamil Nadu region, after the decline of the Sangam Cheras, Sangam Cholas and the Sangam Pandyas, the Pallava dynasty rose to power and prominence. The Pallavas rule extended from around the third to the ninth centuries A.D. Their main capital was Kanchipuram while their secondary capital and chief port was Mahabalipuram or Mamallapuram in Tamil Nadu.

The Roman trade

From around the third century B.C. the kingdoms of South India, mainly Tamilakam, maintained commercial ties with the Romans. The commerce reached its zenith during the rule of the Roman emperors Augustus (27 B.C –14 A.D.) and Tiberius (14-37 A.D.). The contacts continued during the reigns of the Roman emperors Gaius or Caligula (37-41 A.D.), Claudius (41-54 A.D.) and Nero (54-68 A.D.). Towards the end of the first century A.D., there was a slow but steady decline in the trade. During the subsequent centuries, especially after the split of the Roman empire into two in the fourth century, the trade declined further until it ended around the seventh century A.D.

The Romans came to India in search of Indian gemstones, silk, cotton, ivory, spices, sandalwood and peacocks. Indian gemstones, mainly beryl, and Indian spices, especially pepper and cardamom, were in great demand in the Roman markets. In return, India obtained coral, wine, olive oil and metals such as gold, silver and copper from Rome. The metals imported from Rome were mostly in the form of coins and medals.

Archaeology as well as ancient literary works, both Graeco-Roman and Tamil, throw welcome light on the long and interesting history of the Rome-India links. The ancient Tamil works referring to the Roman trade are the Sangam poems that refer to all foreign traders - Greek, Roman and West Asian - as Yavanas, a term that is extensively used in Sanskrit literature and in ancient Indian stone inscriptions as well. The Purananuru and the Ahananuru are the most important Tamil poems referring to the Roman trade. The principal Graeco-Roman works dealing with the trade include Naturalis Historia or Natural History by Pliny (77 A.D.), the Periplus Maris Erythraei by an anonymous author (80-89 A.D.?) and the Geography by Claudius Ptolemy(150 A.D.). These Graeco-Roman works are more useful than the Tamil poems not only because they provide more detailed and accurate descriptions of the trading networks and the trade goods, but also because they are precisely datable. Thus, a comparative study of the information provided in these classical texts reveals a clear picture of the gradual development of the commerce. These texts collectively confirm that the trade slowly began on the Malabar coast around the third-first centuries B.C. but steadily shifted to the Coromandel coast by the first century A.D. Thus, while the Periplus (first century A.D.) provides limited information on the east coast of India, Ptolemy's Geography (second century A.D.) contains copious references to the Coromandel ports.

Coming to the archaeological sources for the study of the commerce, most of the exports from India to Rome were perishable goods such as aromatic woods, textiles, spices and birds. Hence, there is a marked paucity of concrete material evidence for the trade in the Roman empire sites. On the other hand, many parts of India, mainly South India, have revealed substantial archaeological materials connected with the trade.

The majority of the Roman finds in India are the Roman coins in gold (aurei and solidi), silver (denarii) and copper (nummi). Most of these coins occur as hoards buried underground mostly in an earthenware pot and rarely, in a brass or bronze vessel. Sometimes, the coins have been discovered in ancient Megalithic graves. Some of the Roman coins have been recovered from ruined Buddhist *stupas* where these coins were placed as ritual offerings by devotees. A few coins have been found within ancient houses and palaces in the course of regular archaeological excavations. Occasionally, these coins occur in association with Roman jewellery.

The Roman coins were sometimes used as currency in certain parts of India and hence, the ancient Indians began to produce imitations of these coins mainly to offset the shortfall in the supply of these coins from Europe. As these imitations were probably produced with royal sanction and with no intention of criminal fraudulence, many of them equal, not only in weight, but also in the purity of the metal, the genuine Roman coins. These imitations and genuine Roman coins often occur together, sometimes in association with early Indian coins, in many archaeological sites in South India.

Besides Roman coins and jewels, Roman ceramics have been discovered in many sites in India. The most important ceramic finds are the amphora jars — long conical jars with handles on both sides. These jars came to India, mostly filled with Roman wine and olive oil. Such jars are found mainly in western and southern India. The *terra sigillata* — a class of ancient pottery including mould-made decorated vessels as well as undecorated wheel-made ones produced in Italy — have been found in a few sites such as Arikamedu and Alagankulam in southeastern India. Other types of Roman terracotta objects such as lamps and icons are very few in India. A few such lamps have been found in Arikamedu.

Roman glass including raw glass, glass vessels and beads were imported into India. Among these objects, the glass vessels are widely known. These include small ribbed glass bowls reported from Daranikota in Andhra Pradesh and Arikamedu near Pondicherry. Arikamedu has also yielded some interesting Roman glass beads.

Among the other Roman objects found in India, the metal artifacts such as statuettes, mirrors and vessels are noteworthy. Such finds are relatively rare. Most of these objects have been discovered in Afghanistan-Pakistan and Maharashtra-Gujarat regions and not in South India.



ROMAN COIN FINDS IN INDIA

y the time the Rome-India trade declined around the sixth-seventh centuries A.D., many of the Roman coins in India may have been lost or buried. One may presume that throughout the middle ages, farmers and treasure-diggers would have repeatedly discovered Roman coins in many sites throughout the country. Most of these finds were never recorded or documented and the coins would have been melted or lost. There are, however, a few vague reports of Roman coins found in Sri Lanka as early as 1574 and in the Gujarat region of western India around the seventeenth century.

Since the late-eighteenth century, however, many of the finds of Roman coins, in different parts of India, have been recorded although in many instances, the records do not contain complete information regarding the weight and state of preservation of the coins. The first well-recorded find is from Nellore, in Andhra Pradesh, not too far from Chennai city. This discovery, made in 1786 by a peasant while digging in his farm, became famous probably because it was communicated to the Society of Antiquaries in London. It was published in the well-known Journal Asiatick Researches in 1790. The next few decades saw a series of discoveries in two major clusters of sites, both in Tamil Nadu, lying on the ancient trade routes linking the Kerala or the Malabar coast with the Coromandel coast::

- 1) The Vellalur-Coimbatore-Pollachi stretch and
- 2) In and around Karur.

Indeed, the nineteenth century saw the discovery of some of the largest and most important Roman coin finds in India. Serious academic interest in the study of these coins also dates back to the early decades of that century. The very presence of these coins in the remote sites of India appeared strange and unusual to the Europeans obviously because such finds, that too in large numbers, had never been recorded earlier. Hence, the attention of the early scholars was confined to simply reporting the finds. No attempt was made to analyze the historical significance of the coins. Thus, most of the early published accounts are descriptive notices of the finds. These notices, often too brief and sketchy, are scattered in various obscure journals and museum reports. The value of these notices, however, lies in the fact that often they constitute the sole evidence, published or otherwise, for many of the early finds. The writings of H.H.Wilson (1832), J.Prinsep (1832, 1834), Walter Elliot (1844, 1856-57), G.Bidie (1874), Capt. Waterhouse (1879),

Henry Little (1883) and Edgar Thurston (1888, 1889, 1891,1894) come under the above category. The nineteenth century authors did not identify many of the features unique to the Roman coins found in India. Such features include the presence of imitations among the finds and the countermarking of a few of the coins with minute symbols. The significance of the slash marks on the Roman coins in India, was, for the first time, analyzed in detail by G.F. Hill in his famous article, published in the *Numismatic Chronicle*, on the aurei find from Pudukkottai in Tamil Nadu (1898). Incidentally, this hoard is the largest slashed aurei hoard in the whole of India.

The utilization of the Roman numismatic finds in India for the study of the pattern of Indo-Roman trade was first attempted by Bishop Caldwell (1851). Basing his observations on a study of the very large Kottayam (Kerala) hoard, he made a pioneering attempt to trace the route adopted by the Romans to reach the Malabar ports. He also hinted at the use of the Roman coins as 'money' by the ancient Indians. It was, however, Robert Sewell (1904) who systematically classified all the Roman coins found in India, known to him, emperor-wise and traced the history of the trade based on this classification.

In the twentieth century, besides the hoard and stray finds, Roman coins have also been recovered in the stratified context during the course of archaeological excavations in several sites such as Peddabankur (1968-69) and Totlakonda (1988-92)in Andhra Pradesh and Karur (1980s?)and Alagankulam (1989-91)in Tamil Nadu. These new finds have mostly been published in journals such as the *Journal of the Numismatic Society of India and Studies in South Indian Coins.* Simultaneously, a few European scholars like E.H.Warmington (1928, 1974), Mortimer Wheeler (1946, 1951, 1954), Paula Turner (1989), David MacDowall (1990, 1991, 1996) and Peter Berghaus (1991) have interpreted some of these finds in the wider context of Roman economy, trade and monetary policies. Suresh (1993, 2008, 2009, 2010) has studied and analyzed many of the little-known and unpublished finds including those in collections outside India. He has also attempted (1992, 2004, 2007) to analyze the reasons for the significant differences as well as 'overlaps' in the distribution pattern and chronology of the different types of Roman objects including coins found in India.

The Roman coins found in India hardly receive attention in any general study on Roman economy and trade mainly because most of these finds and their significance are not widely known to the academic community in Europe and the U.S.A. There are, however, two notable exceptions to this — one is Sture Bolin's work (1958) on the role of the denarius in the Roman economy and the other is C.Rodewald's work (1976) on the monetary policy of Tiberius. Both these scholars seem to have relied on Mortimer Wheeler's writings (1946, 1951, 1954) for the data pertaining to India.

The Madras Museum and its Roman coin collection

The Government Museum in Egmore, Chennai (formerly Madras), popularly known as the Madras Museum, was established by the English East India Company on 29 January, 1851. Dr. Edward Green Balfour, a renowned surgeon and scholar, was appointed to organize the museum. Thus, this is one of the oldest museums in South Asia. It is also one of the largest museums in Asia. It is a multipurpose museum with separate departments for Archaeology, Anthropology, Numismatics, Botany and Zoology. The museum also has

a full-fledged Chemical Conservation Laboratory.

Almost from its inception, the Madras Museum has had a collection of old coins. Balfour's successor Jesse Mitchell expanded the Numismatics Section. The section has a good collection of coins belonging to almost all the dynasties that ruled different parts of India, mainly South India, during the ancient and medieval times. The collection also includes foreign coins such as Roman, Venetian and Chinese coins found in India. Numismatists like T.G. Aravamuthan, T. Balakrishnan Nayar, R. Vanaja and N. Sankaranarayana have served in this Section and have catalogued and published many of these coins.

Most people are simply unaware that the museum has the largest collection of Roman coins found in India. In fact, this is one the biggest collections of Roman coins anywhere outside Europe. The museum's rich Roman collections can be traced to a host of interesting historical factors. During the early years of the museum, the British territories in India were divided into large administrative units or provinces of which the Madras Presidency was one of the most important. The Madras Presidency comprised most parts of the present-day states of Tamil Nadu and Kerala as also some parts of other states such as Karnataka and Andhra Pradesh. For many decades, the Madras Museum was the sole museum in the entire Presidency and hence, any archaeological or numismatic find anywhere in the region was deposited in this Museum. As this region yielded the largest number of Roman coins during the late-nineteenth and early-twentieth centuries, the museum's Roman collections registered a phenomenal growth. Thus, this museum has the unique distinction of housing Roman coins found in almost every part of South India. It is also the first museum in the whole of Asia to attempt a catalogue of some of the Roman coins in its collection as early as 1874.

The most important Roman coins in the Madras Museum include those recovered from the Roman trade sites such as Budinatham, Vellalur and Karur in Tamil Nadu. A few of these are very rare and unusual coins not seen in any other museum in India. Some of these coins bear rare and interesting countermarks including Hindu religious symbols.

Significantly, the Madras Museum has yet another little-known link with the Rome-India trade. Around the year 1940, Jouveau-Dubreuil, a French scholar, sent a collection of glass and semi-precious stone beads, potsherds and terracotta figurines found at Arikamedu, India's largest and most important Roman trade site, to the Museum. He also requested Dr. A. Aiyappan, the then Superintendent of the Museum, "to do something for the site". Accordingly, with the financial aid given by the French India Government at Pondicherry, the Madras Museum undertook trial excavations at Arikamedu. The excavations revealed the foundations of several buildings, Mediterranean amphora jars and beads. The digs proved that Arikamedu was "one of the most ancient sites in Southern India". Aiyappan published an article entitled "A Dakshina Taxila, Historic Relics From Arikamedu" in the newspaper, *The Hindu* on 23 March, 1941. This article prompted many Indians to visit the site. Although the first systematic archaeological excavation at Arikamedu, the Museum's digs are not widely known even amongst archaeologists. The Roman pottery finds from this excavation later inspired a series of archaeological digs at the site, by Indian, British, French and American archaeologists.

A CATALOGUE OF THE ROMAN COINS IN THE MADRAS MUSEUM

his catalogue has been prepared on the basis of a physical examination of the relevant coins in the museum, the museum records and the earlier publications on the subject. As the practice of recording the find-spot of coins was not often followed, especially in the early years of the museum, the precise provenance of many of the coins is not clear. In many instances, the provenance has been deduced on the basis of circumstantial evidences including the year of the find and the coin types in the find as recorded in earlier publications. The museum collection, however, includes many Roman coins for which the provenance cannot be traced now.

It has also been difficult to ascertain the exact number of coins in many of the finds, especially those discovered in the nineteenth and early twentieth centuries. Often, all the coins of a particular find or hoard did not reach the museum. For example, the hoard from Akhilandapuram (Tamil Nadu), found in 1936, had 30 coins of which only 5 were acquired by the Madras Museum. Similarly, only a few coins from the large Kottayam (Kerala) hoard, found in 1847, reached this museum. In some instances, after acquiring the entire hoard, the museum gifted certain coins from the hoard to other museums. For instance, in 1913, the museum acquired the entire Kathanganni (Tamil Nadu) hoard of 233 denarii but subsequently, several coins from this hoard were gifted to various museums in India and the U.K. In many instances, the museum records do not contain information about the precise number of coins in a particular find or hoard acquired by the museum and the details of those coins that were later sold or gifted to other institutions.

The catalogue deliberately excludes the precise number of coins in each find or hoard because in most instances, it is not possible to furnish the correct number due to the circumstances outlined above. It was also felt that for the purposes of historical research on the foreign coins found in India, the provenance of the coins and the circumstances or context of the find may be more useful than the mere number of specimens in each find.

Thus, the catalogue excludes the Roman coins for which we have no clue about their provenance.

There are no records to ascertain whether any of the coins from the famous Pudukkottai hoard, found within the Tondaiman kingdom of Pudukkottai (now in Tamil Nadu) in 1898, were acquired by the Madras Museum within a few years after the discovery. The hoard consisted of 501 gold coins. On date, 20 of them are in the British Museum, London. The Government Museum, Pudukkottai, possessed 2 more coins from the hoard. On 9 October, 2009, these 2 coins, along with 855 other gold coins, have been transferred from the latter museum to the Madras Museum. The fate of the rest of the hoard is unknown.

Abbreviations used in the Catalogue:

H: Hoard find

S: Stray find/Surface find

E: Stratified find—find from archaeological excavation

AV: Gold (coin)
AR: Silver (coin)
AE: Copper (coin)

amil Nadu

Serial no.	Year of Find	Site	Context of Find, Metal
1-	1936	Akhilandapuram	H, AR
2.	1827	Bishopsdown (Udhagamandalam)	S, AV
3.	1946	Budinatham	H, AR
4.	1912	Coimbatore Area	S, AR
<u>ئ</u>	1916	Kalikanayakanpalaiyam	S, AV
6.	1856	Kaliyampattur	H, AV
7.	1909	Kallakinar	H (?), AR
8.	1932	Karivalamvandanallur	H, AV
9a.	1806	Karur	s, AV
9b.	1878	Karur	H, AR
10.	1913	Kathanganni	H, AR
11.	1887-90	Kilakarai	S, AE, Bronze
12.	1987	Koneripatti	H, AR
13.	1917	Madurai Hills	H, AV

The second secon			
14.	٤	Malaiyadiputhur	S, AV
15.	1929	Mambalam (Madras City)	н, AR
16	1800	Pollachı	H, AR
17.	1898	Pudukottai	н, AV
18.	1883 (?)	Saidapet (Madras City)	S (?), AE
19.	1992	Soriyapattu	H, AV
20.	٥	Tanjavur	S, AE
21.	ć	Tıruchirappalli	S (?), AE
22.	٤	Tirunelveli	?, AE
23.	1918	Tondamanathan	H, AV
24a.	1891	Vellalur	H, AR
24b.	1931	Vellalur	H, AR
24c.	1939	Vellalur	H, AV

Indian Islands

	H (?), AV	
	Kadmat Island, Lakshadvip	
	1949	
Į	25.	

Andhra Pradesh

Serial no.	Year of Find	Site	Context of Find, Metal
26.	19 th Century	Bezwada	S, AR
27.	1943	Bhagavanpavam	s, AV
28.	1928	Gumada	H, AV
29.	1914	Mallayapalem	s, Av
30.	1933	Nandyal	H, AV
31.	1904	Ongole	S, AV
32.	1940s	Upparipeta	S, AV
33.	1951	Veeravasaramu	H, AV
34.	1889	Vinukonda	H, AV

Kerala

	100
H, AV (few coins AR?)	S, AV
ottayam	ottayam
1847	٤
35a.	35b.

A DETAILED CATALOGUE OF THE COINS IN THE BUDINATHAM HOARD

Budinatham, also locally called VadaBudinatham, is a small village in the Udumalpet taluk formerly in the Coimbatore district but presently in the Tiruppur district in Tamil Nadu. The village is around 86km from the city of Coimbatore and 9km from the small town of Udumalpet. It occupies an area of 875.88 hectares and its population, as per the census conducted in 2001, is 1483. The village is known for its temples including the Thandumari Amman temple, Sellandi Amman temple, Mariamman temple and the Madurai Virar temple.

On 11 February, 1946, a large hoard of Roman silver coins was discovered in Budinatham. There are no records about the precise spot where the coins were found. But a few elderly residents of the village remember the circumstances of the discovery. According to one such resident named Marudan, son of Tiruman, the hoard was found near the Madurai Virar temple while digging for mud to be used for building a mud wall in a house in the neighbourhood. The coins were found in a mud pot that was accidentally broken at the site. The coins were taken away by the police and later acquired by the Madras Museum.

The find-spot of the hoard is of immense historical significance. Budinatham is located right on the ancient trade route or highway that linked the port of Muziris on the Malabar coast with the port of Kaveripattinam on the Coromandel coast. The important sites on this route, from the west to the east, are Budinatham, Pollachi, Vellalur, Kodumanal, Karur and Uraiyur. Interestingly, Roman coins have been recurrently found in most of these sites and many of these coins are in the collection of the Madras Museum. Among all these sites, Budinatham appears to have been very important. Although now a tiny village, the place was a prosperous urban settlement in those days. This is attested by the fact that in earlier times, Budinatham was also called Vibhuti Managaram ('Big city of the sacred ash') alluding to both the large size and the religious sanctity of the locality.

Not surprisingly, the Budinatham hoard, consisting of 1407 coins, is one of the largest Roman coin hoards in the whole of India. It is also one of the few Roman coin hoards where most of the coins constituting the hoard are available, in a single collection, for physical examination and study. The most important and enigmatic feature of the hoard is, however, the presence of countermarks on many of the coins.

The Budinatham find does not appear in Wheeler's (1946) list of Roman coins found in India, published within a few months after the discovery of the hoard. It also does not find a place in P.L.Gupta's list (1965) that is mainly based on Wheeler's list. The hoard, however, figures in several later lists including those compiled by Paula Turner (1989), P.L.Gupta(1991) and S. Suresh(2004, 2007). A few scholars like Paula Turner (1989), David MacDowall (1996) and Suresh (2004) have commented on the uniqueness of this hoard. But full details of each of the coins in the hoard, including the weight and the countermarks, have so far, not been documented or studied. In various conferences in Europe and India, MacDowall, Turner and Peter Berghaus emphasized the necessity to study this hoard in detail. In the 1980s and 1990s, each of them studied select coins from the hoard in the museum. They repeatedly asked Suresh to undertake the detailed study of the hoard.

Although, the Budinatham hoard contains 1407 coins, Paula Turner and many other scholars wrongly state that the hoard contains 1398 coins. The museum's unpublished Administrative Report for 1946-47 categorically states that the hoard was discovered by "one person" and it contained 1398 coins and 9 broken coins. According to the Report, the coins were cleaned in the museum's laboratory the same year. Physical examination of the coins revealed that among the "9 broken coins", coin no. 1399 is not broken. There are a few broken coins among the 1398 coins. Coin no.1397 was broken on 7 December, 1947 while its plaster cast was being taken, according to the label on the coin pouch, signed by T. Balakrishnan Nayar who worked in the Numismatics Section. The hoard is recorded in the Section's Accession Register Volume II, and has been assigned the accession number 806 and the coins are numbered individually from 1 to 1407. The following catalogue strictly follows the number assigned to each coin in the museum records.

Abbreviations used in the catalogue

A: Emperor Augustus

AR: Silver

T: Emperor Tiberius

All the coins of Augustus are of the 'Gaius and Lucius Caesars reverse' type:

Obverse: Royal bust to right.

Legend: CAESAR AVGVSTVS DIVI F PATER PATRIAE

Reverse: Gaius and Lucius Caesars veiled, standing on left and right respectively; shields and spears between them. Each rests a hand on one of the two shields that stand upright on the ground. The spears are behind the shields. The butts of the spears are pointing upwards. Between the butts, simpulum and lituus.

Legend: C.L.CAESARES AVGVSTI F COS DESIG PRINC IVVENT

All the coins of Tiberius are of the 'PONTIF MAXIM' type:

Obverse: Royal bust to right.

Legend: TI CAESAR DIVI AVG F AVGVSTVS

Reverse: Livia seated to right, on chair, holding sceptre in right hand and the

branch of a tree in left hand..

Legend: PONTIF MAXIM

There are wide variations in the state of wear of the coins. In other words, some coins are more worn than the others, indicating that the former coins were used for a longer period than the latter.

The weight of the coins is per the details furnished by N. Sundararajan.

	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
<		AR	3.35	20.00	C below chin		9
< 4		AR	3.61	18.05		K below simpulum and lituus.	9
A; reverse co with gum (?)	A; reverse covered with gum (?)	AR	3.7	19.15	C on chin; below chin, marks not clear		12
Coin n	Coin misplaced— A?	AR					
Coin r A?	Coin misplaced— A?	AR					
A		AR	3.5	18.15	O on right cheek, near ear		9
٨		AR	3.66	18.32	C below chin		9
٧		AR	3.62	19.15	I on right cheek		12
A		AR	3.55	19.22	O near right eye		12
4		AR	3.62	19.06	K near nose	small scratch mark on the left	12
∢		AR	3.61	19.44	C on chin; O below chin		7
∢		AR	3.50	19.10	C in front of lips		9
⋖		AR	3.10	19.39	C in front of neck		7
∢		AR	3.69	18.40	O below crescent (fish?) on chin		7
∢		AR	3.65	19.35	C and a scratch mark in front of nose		9

6	12	9	m	12	o	12	တ	တ	12	9	12	က	12	12	12
C on right cheek	O in front of nose; scratch mark in front of O	V in front of neck	C in front of neck	two lines, parallel to each other, in front of neck; some more lines nearby	scratch mark in front of chin	O in front of neck	C on right cheek	M and V in front of chin and neck	IES within rectangle in front of face		triangle on right cheek; C in front of neck	O in front of chin			
19.00	19.25	19.35	18.38	19.39	19.40	19.00	19.27	19.26	18.30	18.00	18.43	18.27	18.21	18.16	18.40
3.66	3.47	3.26	3.18	3.69	3.66	3.54	3.72	3.76	2.88	3.41	3.58	3.46	3.50	3.51	3.56
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR, broken -chipped in corners	AR, plated coin?	AR, plated coin?	AR	AR	AR	AR
A	A	A	A	A	A	A	A	Ą	٧	А	А	A	А	A	4
16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
32.	A	AR	3.52	19.00			-
33.	A	AR	2.87	18.43			12
8.	A	AR	3.51	18.20			7
35.	A	AR	3.29	18.44			12
36.	А	AR	3.39	19.35			12
37.	٨	AR	3.44	18.38			6
38.	٨	AR	3.35	19.40			6
39.	A	AR	3.28	18.30	M in front of neck; above M, marks not clear		12
40.	A	AR	3.52	18.25	V,X (not clear) on right cheek; three parallel lines on neck		g
41.	A	AR, broken coin	3.00	18.40			9
42.	А	AR	3.46	19.10			က
43.	4	AR	3.41	18.43			9
44.	А	AR	3.13	18.18	dot in front of nose		8
45.	А	AR	3.66	19.20	dot(?) on neck		12
46.	4	AR	3.35	20.00			9

47.	A	AR	2.96	18.38	C (?) in front of chin		12
48.	A	AR	3.14	19.20			12
49.	A	AR	3.16	18.25			12
50.	A	AR	3.42	20.20			9
51.	A	AR	3.58	20.10			6
52.	А	AR	3.71	20.05	X in front of neck		3
53.	А	AR	3.65	20.36	+ and other scratch marks on face	lines on and near shields	6
54.	A	AR	3 40	20.12			_
55.	A	AR	3 66	19.30	semi-circle or rayed circle below chin		12
56.	4	AR, plated coin?	3.58	20.44	X, lines in front of bust		10
57.	∢	AR	3.34	20.25			12
58.	T	AR	3.57	20.11	line below chin	S in front of Livia	12
59.	T; obverse covered with gum(?)	AR	3.29	20.19			9
.09	T, obverse covered with gum (?)	AR	3.52	18.20	line(?) below chin		9
61.	T	AR	3.57	18.25	line in front of nose	IISC across figure of Livia	9
62.	_	AR	3.56	20.10	C or crescent below chin		8

	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
	Coin misplaced—T	AR	3.51	19.00	slash mark near rim		ć
10	Coin misplaced—T	AR	3.53	19.45	S to right of bust; D to left of bust		ذ
	_	AR	3.70	17.41	marks, not clear, in front of face	small scratch mark in front of Livia	9
	Т	AR	3.28	19.42	C in front of face	scratch mark behind Livia	9
		AR	3.60	19.31		C behind Livia	9
		AR	3.51	18.20	two Cs in front of face, near rim		12
	F	AR	3.54	18.22	NOT in front of face	inverted R behind Livia	g
	L	AR	3.26	20.00		scratch mark, not clear, in front of Livia	12
	T	AR	3 80	18.31	scratch mark in front of face		o
	_	AR	3.48	18.21	V below chin		T
	F	AR	3.32	19.15			9
	_	AR, imitation?	3.04	17.44			8
	-	AR	3.02	18.16	C in front of neck	R, with scratch mark on it, behind Livia; NOT in front of Livia	9
	—	AR	3.57	19.30			9
1					¥		

77.	7	AR	3.70	20.30			9
78.	_	AR	3.77	20.25	T in front of face		9
79.	_	AR	3.52	19.00	scratch mark in front of face		9
80.	1	AR	3 66	18.25	scratch mark in front of face	scratch mark behind Livia; second scratch mark in front of Livia.	0
81.	Ţ	AR	3.24	18.10	scratch mark near eye		12
82.	Ţ	AR	3.63	20.33			9
83.	1	AR	3.66	18.00			3
84.	Ţ	AR	3.55	19.00			12
85.	}	AR	3.53	19.05			9
. 86.	Т	AR	3.57	18.10	dot below nose		8
87.	—	AR	3.59	18.30		arrow-like symbol in front of Livia	12
88.	F	AR	3.62	19 15	mark resembling V in front of neck		12
89.	⊢	AR	3.59	19.00			3
.06	⊢	AR	3.53	20.20			3
91.	L	AR	3.62	19.20		slash mark behind Livia, near rim	12

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
92.	 	AR	3.64	18.37			೯
93.	F	AR	3.41	19.20			5
94.	1	AR	3.33	20.05			12
95.	F	AR	3.68	18.40			11
.96	1	AR	3.72	19.05	C in front of neck		3
97.	A	AR	3.57	19.19			5
98.	А	AR, plated coin?	2.86	18.15			12
.66	A	AR, plated coin?	3.63	18.32			9
100.	4	AR	3.39	19.38			2
101.	А	AR, plated coin?	3.57	19.00			12
102.	A	AR	3.34	19.00	dot below neck		12
103.	A	AR	3.67	19.15			12
104.	А	AR	3.69	19.04			12
105.	A	AR, plated coin?	3.65	19.05			2
106.	А	AR	3.50	20.00	dot on right cheek		2

	A	AR	3.74	19.21		3
	A	AR	3.65	20.03		3
-	A	AR	3.59	20.25		2
	A	AR	3.61	19.26		6
	A	AR	3 82	19.85	scratch marks, not clear, on face and in front of face	12
	A	AR	3.80	19.25	marks (SOC), not clear, below neck	6
113.	А	AR	3.64	19.09		12
114.	А	AR, plated coin?	3.71	19.38		9
115.	A	AR	3.73	19.36		12
116.	A	AR	3 54	19.04		2
117.	Ą	AR	3.65	19.13		9
118.	Ą	AR, plated coin?	3.12	21.07	tiny scratch mark in front of neck	3
119.	Ą	AR	3.48	19.25		9
120	А	AR	3.61	19.23		2
121.	А	AR, plated coin?	3.83	19.41		8
122.	٧	AR, plated coin?	3.51	19.31		12

Die alignment	8	6	9	9	9	3	12	3	80	8	0	11	9	12	
Countermarks, slash marks – reverse									dot-like circle below simpulum and lituus	ω			9	-	3
Countermarks, slash marks – obverse			,												
Diameter in millimeters	19.35	19,41	19.23	19.42	19.09	19.03	20.01	20.04	19.04	19.13	19.02	19.26	19.26	20.15	20.37
Weight in grams	3.15	3.69	3.76	3.58	3.21	3.69	3.63	3.89	3.41	3.67	3.41	3.56	3.77	3.63	3.21
Metal	AR, plated coin?	AR	AR	AR	AR	AR	AR	AR, plated coin?	AR	AR	AR	AR	AR	AR	AR, broken coin
Ruler	A	V	А	A	А	A	A	A	٥	A	А	4	А	4	A
Coin no.	123.	124.	125.	126.	127.	128.	129.	130.	131.	132.	133.	134.	135.	136.	137.

138.	А	AR	3.52	21.35			8
139.	A	AR	3.55	19.41			12
140	A	AR	3.60	18.31			9
141.	Ą	AR	3.61	18.13			9
142.	А	AR	3.47	19.09	scratch marks on face and in front of face		12
143.	٨	AR	3,38	18.49			6
144.	А	AR	3.65	18.32			12
145.	А	AR	3.73	15.23			9
146.	А	AR	3.68	15.33		,	9
147.	А	AR	3 46	15.29			12
148.	A	AR	3.61	18.36			9
149.	A	AR	3.69	19.25			9
150	А	AR	3.83	19.19			9
151.	4	AR	3 47	19.04			8
152.	4	AR, plated coin?	3 69	19.28			8
153.	А	AR	3.63	19.41	S-like mark in front of face, near rim		12

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
154.	4	AR	3.71	20.03			9
155.	A	AR	3.57	17.01			9
156.	A	AR	3.46	18.28			12
157.	A	AR	3.49	18.26			6
158.	Ą	AR	3.47	19.34			12
159.	A	AR	3.59	19.28			8
160.	А	AR	3.55	19.44			-
161.	А	AR	3.67	20.33			1
162.	A	AR	3.57	20.15			1
163.	А	AR	3.58	19.25			11
164.	А	AR	3.57	18.30			9
165.	А	AR	3.47	18.26	X in front of face		6
166.	A	AR	3.76	20.05			12
167.	4	AR	3.52	19.25			9
168.	А	AR	3.60	18.48			3

169.	A	AR	3.10	18.16	C in front of neck	12
170.	А	AR	3 63	19.30		5
171.	А	AR	3.62	21.36		12
172.	А	AR	3.79	19.24		11
173.	А	AR	3.57	19.33		9
174.	А	AR	3.76	18.37		12
175.	А	AR	3.45	20 24		12
176.	A	AR	3.53	18.11		12
177.	4	AR	3.61	20.20		11
178.	A	AR	3.58	20.13		9
179.	٧	AR	3.62	18.48		9
180.	٨	AR	3.51	19.09		10
181.	∢	AR	3.69	20.05		12
182.	٧	AR	3.64	19.16		4
183.	∢	AR	3.65	21.02		11
184.	A	AR	3.61	19 27		12

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
185.	4	AR	3.50	19.19			12
186.	A	AR	3.69	20.44			4
187.	<	AR	3.52	19.09			6
188.	٨	AR	3.65	20.22			11
189.	A	AR	3.62	18.12			12
190.	A	AR	3.67	18.35			12
191.	А	AR	3.75	19.40			8
192.	А	AR	3.67	19.23		,	5
193.	А	AR	3.79	21.29			ર
194.	А	AR	3.71	19.46			9
195.	А	AR	3.31	19.12			12
196.	А	AR	3.76	18.49			9
197.	А	AR	3.29	18.32			5
198.	A	AR	3.41	18.18			9
199.	A	AR	3.07	18.25			5

200.	A	AR	3.77	18.14	C on right cheek, near ear	12
201	А	AR	3.64	19.19		9
202	А	AR	3.74	19.18	tiny slash mark on neck	9
203.	A	AR	3.80	19 38		9
204	А	AR	3.73	18.28		12
205.	А	AR	3.46	19.05	K on right cheek	12
206	А	AR	3.79	19.41		3
207.	A	AR	3.55	18.17	two tiny slash marks on head near rim; P and A in front of chin and neck	8
208.	Ą	AR	3.60	15.29	circle behind neck	8
209.	٧	AR	3.42	17.44		10
210.	A	AR	3.62	19.12	tiny slash (?) on head	12
211.	A	AR	3.79	19.35		8
212	A	AR	3.56	18.23		o
213.	A	AR	3.32	20.35		ပ
214.	A	AR	3.47.	19 28		12
215.	А	AR	3.49	18.28		8

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
216.	A	AR	3.59	19.33			8
217.	Ą	AR	3.64	20.01			12
218.	A	AR	3.76	19.05			9
219.	А	AR	3.05	19.00			12
220.	A	AR	3.43	18.20			9
221	A	AR	3.63	18.18			1
222.	A	AR	3.75	18.45			12
223.	А	AR	3.51	20.00			12
224.	А	AR	3.60	19.40			വ
225.	А	AR	3.75	19.15			12
226.	А	AR	3.50	19.00			9
227.	A	AR	3.61	20.15			12
228.	A	AR	3.70	18.15	mark, not clear, on neck		9
229.	A	AR	3.73	19.30			3
230.	A	AR	3.68	20.00			3

			19.25		11
4 4	AR AR	3.68	18.30		12
AR		3.61	18 25		12
AR		3.72	21.00		വ
AR		3.73	19.15		9
AR		3.57	19.45		12
AR		3.45	20.35	small vertical slash mark below chin	9
AR		3.61	19.45	circle in front of neck	rð.
AR		3.68	19.48		6
AR	E	3.61	20 30	C, not clear, in front of face	9
AR		2.45	18.20		10
AR, broken into two	oken	3.58	20.10		
AR		3.36	20.05		12
AR		3.65	19.40		9
AR		3.70	18.30	two marks, not clear, behind neck, near rim	9

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
247	А	AR	3.61	19.42			9
248.	A	AR	3.56	18.27			9
249.	А	AR	3.30	19.20			6
250.	A	AR	3.63	19.20			3
251.	A	AR	3.75	19.28			2
252.	A	AR	3.66	20.04			9
253.	А	AR	3.76	20.16			3
254.	А	AR	3.70	18.04			3
255.	A	AR	3.71	18.33			4
256	А	AR	3.67	20.03			5
257.	A	AR	3.21	18.13			3
258.	А	AR	3.11	19.09			12
259.	٨	AR	3.09	18.37	vertical slash mark (J-shape) in front of neck		9
260	А	AR	3.48	15.35			9
261.	Ą	AR	3.56	21.09	scratch mark in front of chin and neck		12

262.	A	AR	3.39	18.25			9
263.	A	AR	3.72	20.09			-
264.	A	AR	3.58	19.20			11
265.	A	AR	3.80	20.15	scratch mark in front of neck		9
266.	A	AR	3 50	19.05	dot on right cheek		9
267.	A	AR	3.48	18.20		}	8
268.	A	AR	3.71	18.21			8
269.	4	AR	2 93	18.10			12
270.	<	AR	3.20	19.35			o
271.	A	AR	3.57	18.25			11
272.	A	AR	3.64	20.00			10
273.	A	AR	3.67	20.25	P in front of face		6
274.	A	AR	3.49	19.40			12
275.	< <	AR	3 57	20.00	dot in front of neck		_
276.	< <	AR	3 84	18.00			12
277.	А	AR	3.77	19.25	C on neck; R on ear-both not clear		3

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
278	⋖	AR	3,58	21.00			9
279.	A	AR	3.68	19.45	horizontal line in front of chin		12
280.	А	AR	3.49	19.15			1
281.	A	AR	3.35	19.10			9
282.	A	AR	3.55	19.45	vertical line in front of neck		9
283.	A	AR	3.61	19.20			11
284.	۲	AR, plated coin?	3.05	19.15	three marks—a line on face; below it, a scratch mark extending from chin to neck, also on face; horizontal line in front of neck		12
285.	۷	AR	3.69	20.00			8
286.	⋖	AR	3.04	20.00	vertical line (slash mark?) just in front of face, almost at the edge of face, slashing tip of nose		12
287.	Ą	AR	3.33	20.15			12
288.	A	AR	3.66	19.00			12
289.	А	AR	3.81	19.30			7
290.	A	AR	3.76	20.10			10

2	2	_	5	9	6_	2	2	8	4	Ψ		=======================================	9	-
C or double C to left of Lucius						two dots, one below the other, below lituus								
	three marks, all lines—one behind head, second on forehead, third in front of face			scratch mark on nose—it extends beyond nose			vertical line on right cheek, extending upto neck	horizontal line in front of forehead	two dots on neck	dot on neck				
19.00	18.10	18.35	20.25	18.35	20.10	18.00	19.05	19.33	18.45	20.00	19.30	18 19	19.00	18.25
3.50	3.60	3.63	3.69	3.24	3.29	3.77	3.65	3.62	3.25	3.50	3.56	3.55	3 25	3.27
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR, plated coin?	AR	AR, plated coin?	AR
A	V	A	А	A	4	А	А	A	٨	۷	A	∢	A	4
291.	292	293.	294.	295.	296.	297.	298.	299.	300.	301.	302.	303.	304.	305.

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
306.	A	AR	3.59	18.06			3
307.	A	AR, plated coin?	3.38	18.35			12
308.	A	AR	3.49	18.09			1
309.	A	AR	3.34	18.05			12
310.	Ą	AR?, copper coated or copper coin?	3.38	19.03			12
311.	A	AR	3.60	19.00			5
312.	A	AR	3.42	19.10			Reverse too corroded to identify die alignment
313.	A	AR	3.65	19.00			က
314.	A	AR	3.42	19.05			12
315.	A	AR	3.18	19.05			3
316	А	AR	3.16	20.00			12
317.	А	AR	3.51	19.50	horizontal line on head		9
318.	А	AR	3.43	20.25			9
319.	∢	AR	3.43	20.25	C (?) on head; scratch marks or lines in front of head; vertical scratch mark on neck		9

A	AR	3.38	19.50		10
A	AR	3.65	20.00		3
A	AR	3.79	20 50		12
A	AR	3.65	18.30		7
A	AR	3.40	20.45		1
A	 AR	3.39	21.00		12
А	AR	3.19	19.35	big hole or drill hole on face	12
A	AR	3.46	21 00		7
A	AR	3.58	19.10	dot in front of face, near rim	12
A	AR	3.53	18.25	V, E and another mark, not clear, on face	3
-	AR	2.95	19.00		2
4	AR	3 34	18.25	small horizontal line or slash on forehead	8
٨	AR	3.36	17.25		7
٧	AR	3.43	18.25		8
4	AR	3.45	18 15		12
∢	AR	3.75	18.10		7

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
336.	A	AR	3.68	18.30			6
337.	A	AR	3.08	18.35			9
338.	A	AR	3.14	18.25			12
339.	A	AR	3.22	18.05			12
340.	<u></u>	AR, plated coin?	2.63	18.10			Reverse too corroded to identify die alignment
341.	٨	AR, golden or copper colour—coated with copper or gold?	3.62	19.35			ω
342.	Ą	AR	3.42	18.20			9
343.	A	AR	3.40	19.00			2
344.	А	AR	2.55	18.25			12
345.	٨	AR	3.38	19.00			12
346.	A	AR	3.39	19.23			1
347.	А	AR	3.67	17.45			12
348.	A	AR	3,53	19.39	marks including a slash, not clear, around bust		7

4	9		12	6	12	12	2	2	2	2	11	5	8	-
two vertical scratch marks on neck; C in front of neck; one more mark, not clear, above C	marks, not clear, around bust			two dots on neck					C and other marks, not clear, around bust		tiny scratch mark in front of face			
18.09	19.14		19.03	18.00	19.44	18.18	20.40	20.20	19.39	19.44	20.15	19.18	20.08	18.07
3.39	3.68		3.57	3.66	3.57	3.79	3.69	3.41	3.66	3.54	3.56	3.65	3.67	3.75
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
4	4	Coin misplaced— A?	A	A	А	A	А	A	А	Α	A	A	A	А
349.	350.	351.	352.	353.	354.	355.	356.	357.	358.	359.	360.	361	362.	363.

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
364.	V	AR	3.63	19.25	S,C,V in front of face		7
365.	4	AR	3.38	19.00	j j		12
366.	A	AR	3 69	19.00			12
367.	A	AR	3.65	19.20			9
368.	A	AR	3.11	19.00			9
369.	A	AR, plated coin?	3.71	20.20			3
370.	A	AR	3.70	17.25	L in front of face; one more mark, not clear, below L		4
371.	Ą	AR	3.48	19.30			9
372.	А	AR	3.57	20.00			9
373.	A	AR	3.57	20.00			12
374.	А	AR	3.41	19.20			9
375.	А	AR	3.67	20.27			12
376.	А	AR	3.63	20.00			9
377.	A	AR	3.71	20.25		atleast three vertical parallel slash marks	6
378.	А	AR	3.45	20.20	F, V outside bust		12

379.	A	AR	3.59	20.30		12
380.	А	AR	3.26	18.20		12
381.	А	AR	3.10	18.10		10
382.	А	AR	3.64	20.00		10
383.	Ą	AR	3.45	19.10		9
384	А	AR	3.56	19.21		6
385.	٨	AR	3.70	19.20		12
386.	٨	AR	3.65	19.00	V or L in front of chin	12
387.	A	AR	3.56	20.10		2
388.	4	AR	3.53	19.24	scratch mark in front of nose	2
389	ď	AR	3.54	18.45		89
390	A	AR	3.66	18.40	circle in front of lips	12
391.	⋖	AR	3.22	19.25	mark, not clear, may be S, in front of face	10
392.	A	AR	3.21	19.35		12
393.	Ą	AR	3.71	20.33		12
394.	A	AR	3.49	19 22		8

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
395.	A	AR	3.42	19.31			12
396.	A	AR	3.72	19.28			12
397	А	AR	3.65	17.04			6
398.	А	AR	3.65	18.29			12
399.	А	AR	3.61	19.25			11
400.	А	AR	3.58	18.45			3
401.	Ą	AR	3.30	19.30			9
402.	А	AR	3.45	19.00			9
403.	¥	AR	3.31	19.00	small vertical line in front of forehead		9
404.	А	AR	3.47	19.00			
405.	А	AR	3.31	20.05			12
406.	A	AR	3.69	18.25			11
407.	4	AR	3.17	19.10			2
408	_	AR	3.43	17.25			9
409.	T	AR	3.34	18.05			1

410.	—	AR	3.70	19.15		3
411.	—	AR	3.55	18.35	mark, not clear, in front of chin and neck	12
412.	L	AR	3.25	18.05	slash mark on neck	6
413.	-	AR	3.43	19.00		9
414.	F	AR	2.65	18.25		ಣ
415.	F	AR	3.43	19 00		9
416.	F	AR	3.26	19.05	C-like mark on neck	9
417.	L	AR	3.55	18.30		4
418.	T	AR	3.38	18.00		4
419.	T	AR	3.50	19.00	small horizontal slash on neck	6
420.		AR	3 59	17.15		6
421.	1	AR	3.25	19.25		3
422.	Τ	AR	3.54	20.25	tiny scratch marks on face	12
423.	⊢	AR	3 58	19.19		12
424.	Т	AR	3 11	19.00		9

Soin 70	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
425.	<u> </u>	AR	3.45	19.45			9
426.	-	AR	3.54	18.05			7
427.	H	AR	3.53	18.00			9
428.	-	AR	3.38	19.00			3
429.	—	AR	3.67	18.20			က
430.	L	AR	3.29	19.00			3
431	F	AR	3.37	18.30			3
432.	1	AR	3.98	18.05			9
433.	Т	AR	3.43	18.30			9
434.	L	AR	3.50	18.45	R(?) on ear		3
435.	_	AR	3.53	18.48	circle in front of face		-
436.	_	AR	3,53	19.10			9
437.	1	AR	3,45	18.00			9
438.	-	AR	3.22	18.65			8
439.	-	AR	3.39	19.00			9

440.	1	AR	3.20	18.60		11
441.	—	AR	3.41	19.35		12
442.	1	AR	3.56	18.55		9
443.	!	AR	3.45	18.97		-
444.	⊢	AR	3.64	18.30	dot below ear	3
445.	-	AR	3.70	19.00		6
446.	H.	AR	3.65	18.35		9
447.	-	AR	3.35	19.35		9
448.	F	AR, plated coin?	3.15	18.90		-
449.	1	AR	3.61	18.50		12
450.	_	AR, plated coin?	3.12	17.93		3
451.	1-	AR	3.43	19.23		6
452.	_	AR	3.63	19.63		3
453	Т	AR	3.56	20.16		7
454.	T	AR	3.41	18.16		2
455.	—	AR	3 62	19.35		

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
456.	<u></u>	AR	3.63	19.05			6
457.	<u> </u>	AR	3.23	18.70			6
458.	<u></u>	AR	3.19	18.85			9
459.	J	AR	3.21	18 75			
460.	۲	AR	3.59	18.79			က
461.	⊢	AR	3.51	18.81			9
462.	, -	AR	3.44	18.79			5
463.	, -	AR	3.23	19.05			12
464.	Ţ	AR	3.31	17.25			12
465.	⊥	AR	3.65	19.30			12
466.	_	AR	3.46	17.25			-
467.	T	AR	3.72	19.20			4
468.	L	AR	3.34	19.58			10
469.	-	AR	3.30	18.95			4
470.	_	AR	3.29	18.88			12

471.	-	AR	3.16	18.55		9
	_	AR	3.66	18.60		11
		AR	3.50	18.61		7
474.	-	AR	3.30	19.34		6
475.		AR	3.44	18.40		12
476.	T	AR	3 77	19.85		5
477.	Ţ	AR	3.36	20 05		9
478.	Т	AR	3 70	18.90		5
479.	F	AR	3 70	19.23		9
480.	L	AR	3.60	18.27	V-like mark and other marks, not clear, in front of face	12
481.	_	AR	3.34	18.95		12
482.	_	AR	3.45	18.50		2
483.	þ	AR	3.16	18.26		o
484.	⊢	AR	3.26	18.60		2
485.	T	AR	3.51	19.90		12
486.	_	AR	3.46	19.20		12
				ĺ		

So ii oi oi	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
487.	⊢	AR	3.53	19.98			7
488.	-	AR	3.46	18.52			9
489.	-	AR	3.40	18.10			9
490.	—	AR	3.19	18.53			6
491.	-	AR	3.41	20.85			9
492.	F	AR	3.34	18.70			9
493.	-	AR	3.61	19.90			12
494.	F	AR	3.73	19.11			7
495.	L	AR	3.48	18.75			7
496.		AR	2.79	17.78			_
497.	Т	AR	2.86	17.85			11
498.	T	AR	3.52	19.03		72	-
499.	Т	AR	3.11	17.83			22
500.	L	AR	3.39	19.85	dots or other marks, not clear, below neck		Reverse too corroded to identify die alignment
501.	_	AR	3.31	18.79			3

502.		AR	3.44	18.88			12
503.	L	AR	3.72	18.87			-
504.	1	AR	3.68	18.65	circle on right cheek; some more marks, not clear, on face		7
505.	_	AR	3.30	17.94			12
506.	L	AR	3.72	18 05			4
507.	1	AR	3.46	19.76			9
508.	Т	AR	3.12	18.07	circle behind head		10
509.	T	AR	3.42	18.01			5
510.	Т	AR	3.40	18.60	scratch marks around bust		6
511.	Ť	AR	3.30	20 01			9
512	_	AR	3.68	17.86			9
513.	T	AR	3.71	20.03			6
514.	—	AR	3.45	17.95			10
515.	—	AR	3.54	17.19			12
516.	⊢	AR	3.61	18.32		C or crescent on Livia	9
517.	1	AR	3.62	18.62			7

0.73	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
	-	AR	3.56	17.55			5
519.	<u></u>	AR	3.61	18.55			12
520.	_	AR	3.29	18.87			12
521.	<u>-</u>	AR	3.38	17.45			12
522.	F	AR	3.45	20.20			12
523.	<u> </u>	AR	3.66	19.29		V near rim	က
524.	 	AR	3.73	18.64			5
525.	<u> </u>	AR	3.59	18.48			5
526.	_	AR	3.61	19.46			5
527.	_	AR	3.62	18.25			5
528.	-	AR	3.32	18.28			6
529		AR	3 26	19.44	slash marks on head; V in front of face		12
530.	-	AR	3.66	18.30			12
531.	⊢	AR	3.64	19.05		small scratch mark (?) on Livia	12
532.	-	AR	3.16	18.45			9

						orroded									
12	1	4	9	9	9	Reverse too corroded to identify die alignment	12	9	8	8	12	ത	2	D.	9
			scratches, not clear, in front of face										minor slash mark near eye		
17.43	17.25	19.25	17 75	18.84	19.04	19.75	19.94	18.23	18 00	19.36	17.26	18.46	19.55	18.22	18.78
3.67	3.15	3.43	3.62	3.59	2.80	3.51	3.51	3.62	3.43	3.69	3.59	3.65	3.55	3.05	3.45
AR	AR	AR	AR	AR	AR, plated coin?	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
7	_	-	F	-	F	⊥	T	Ţ	⊥	⊢	-	1		_	٢
533.	534.	535	536.	537	538.	539.	540	541.	542.	543.	544.	545.	546.	547.	548.

	Ruler	Metal	Weight in grams	Diameter in millimeters	Gountermarks, slash marks – obverse	Countermarks, slash marks ~ reverse	Die alignment
		AR, plated coin?	3.10	18.19			7
		AR	3.50	18.37			5
		AR	3.53	20.10			12
1		AR	3.17	18.17			∞
}		AR, plated coin?	3.30	18.30			9
		AR	3.53	19.40	two slash marks crossing each other to form a X on bust	slash mark in front of Livia extending to her left hand	9
		AR	3.78	18.28	5		б
		AR, plated coin?	3.61	18.49			7
		AR	3.65	18.12			3
		AR	3.46	18.43			9
[AR	3.65	19.48			က
		AR	3.24	18.33			വ
] [AR, plated coin?	2.88	18.20			Q
		AR, plated coin?	3.43	18.93			2
		AR	3.41	18.12			2

564.	1	AR	3.54	18.32		3
565.	L	AR	3.58	19.02		9
566.	—	AR	3 40	18.50		9
567.	—	AR	3.22	18.36		က
568.	_	AR	3.43	19.15		1
569.	F	AR	3.68	19.13		9
570.	-	AR	3.54	19.42		8
571	L-	AR	3.23	18.57		8
572.	.	AR	3.63	19.03		9
573.	Ţ	AR	3.22	18.26		2
574.	—	AR	3.10	18.98		5
575.	—	AR	3.46	17 75		3
576.	⊢	AR	3.60	19 30		2
577.	}	AR	3.43	19.98		9
578.	⊢	AR	3 60	17.52		e
579.	1	AR	3.44	18.72		9

Coin .	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
580.	F	AR	3.56	19.01			
581.	-	AR	3.67	17.85			5
582.	T	AR	3 63	18.72			5
583.	-	AR	3.68	19.52			10
584.)	AR	3.61	18.57			12
585.	F	AR	3.55	19.30			9
586.		AR	3.35	20.16			3
587.	₽	AR	3.67	18.29			5
588.	_	AR	3.65	18.90			5
589.		AR	3.42	18.41			4
590.	_	AR	3.61	19.13			9
591.	Ţ	AR	3.51	20.30			7
592.	Т	AR	3.59	18.29			7
593.	Ī	AR	3.62	18 28			7
594.	_	AR	3.65	18.00			5

595.	-	AR	3.55	18.85		10
596.	_	AR	3.70	19.28		6
597.	⊢	AR	3.72	18.19		5
598.		AR	3.79	18.76		9
599.	<u></u>	AR	3.77	18.89		12
600.	<u> </u>	AR	3.58	18.53		6
601.	-	AR	3.58	18 51	marks, not clear, around Livia	80
602.	F	AR	3 67	18.51		5
603.	<u> </u>	AR	3 61	19.06		5
604.	—	AR	3.61	18 45		10
605.		AR	3.45	18.03		10
909	-	AR	3.74	18.13		5
607.	L	AR	2.92	18.32		6
608.	⊢	AR	3 61	18.08		12
.609	т_	AR, plated coin?	3.41	18.10	two dots in front of Livia	က
610.	⊬	AR	3.21	18.96		12

Coin 10.	Ruter	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks reverse	Die alignment
611.	<u></u>	AR	3.61	18.42			3
612.	⊢	AR	3.55	18.75			3
613.	F	AR	3.55	18.23			9
614.	<u> </u>	AR	3.65	18.82			-
615.	⊢	AR	3.44	18.85			7
616.	—	AR	3.70	18.42			5
617.	⊢	AR	3.45	19.40			10
618.	; ; -	AR	3.27	17.92			12
619.	F	AR	3.63	18.25			8
620.	<u></u>	AR	3.51	19.13			9
621.	-	AR	3.48	17.60			10
622.	—	AR	2.60	18.66			10
623.	⊢	AR	2.69	18.75			12
624.	—	AR	3.60	18.67			9
625.	F	AR	3.55	18.83			12

626.	L	AR	3.73	17.76			12
627.	_	AR	3.34	20.17			8
628.	F	AR	3.51	20.10		V behind Livia	10
629.	F	AR	3.43	19.10			9
630.	—	AR	3.47	18.98			5
631.	—	AR	3.60	18.48			12
632.	Coin misplaced—	AR					
633.	Con misplaced— T?	AR					
634	_	AR	3.41	18 15		two tiny slash marks behind Livia	6
635.	L	AR	3.37	18.28	tiny mark, not clear, in front of neck		12
636.	—	AR	3.34	19.33	mark, not clear, in front of face		12
637	_	AR	3.18	18.68			4
638.	F	AR	3.45	19 36			3
639.	<u> </u>	AR	3.55	19.95			വ
640.	F	AR	3.47	18.85			12
641.		AR	3.58	18.24	big hole on right cheek		5

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
642.	 -	AR, plated coin?	3.52	18 75			4
643.	<u></u>	AR, plated coin?	3.34	18.44		dots/scratch marks in front of Livia	S.
644	⊢	AR	3.64	18.05			3
645.	!	AR	3.28	18.24			3
646.	F	AR	3.84	18.48			11
647.	, - -	AR	3.83	18.25			3
648.	F	AR	3.42	19.00			5
649.	—	AR	3.52	18.27			6
650.	—	AR	3.64	18.27			11
651.	<u> </u>	AR	3.71	18.23		1	12
652.	L	AR	3 46	19.18			4
653.	—	AR	3.43	19.24			12
654.	-	AR	3.45	18.10			4
655.	Coin misplaced— T?	AR					
656.	L	AR	3.61	18.74	ļ		3

						at attach and tonothe	
657.	-	AR	3.52	18.53	tiny scratch marks/dots in front of face	front of Livia	8
658.	I	AR	3.63	18.65			-
659.	-	AR	3.65	18.80			4
.099	F	AR	3.48	18.30			
661.	_	AR	3.59	19.19			2
662.	-	AR	3.61	19.00	horizontal slash mark ın front of forehead		6
663.	F	AR?, copper coin or coated with copper?	3.88	18.68			ಣ
664.	F	AR	3.69	18.65			-
665.	Т	AR	3.38	18.44			5
.999	L	AR	3.18	18.67			7
. 199	⊢	AR	3.63	18.63			9
.899	⊢	AR	3.60	18.52			3
.699	⊢	AR	3.67	18.65			8
670.	F	AR	3.64	18.55	tiny scratch marks, dots on head; scratch marks in front of head		7
671.	T	AR	3.60	19.62			5

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
(F	AR	3.45	18.92			-
	-	AR	3.58	18.55			5
	<u></u>	AR	3.62	19.50			10
	-	AR	3.50	18.30			-
	<u></u>	AR	3.26	19.28			9
	<u> </u>	AR	3.60	18.03			3
		AR	3.66	19.90			5
	—	AR	3.27	18.25			7
	_	AR	3.50	18 35			9
1		AR	3.44	18.33			5
	F	AR	3.36	18.74			5
	T	AR	3.78	18.22			12
	_	AR	3.27	19.14			5
	_	AR	3.33	19.13			7
	_	AR	3.37	19.12			6
1							

 -	AR	3.74	19.05		9
<u> </u>	AR	3.62	17 95		9
—	AR	3.12	19.45		8
F	AR	3.54	18.14		6
-	AR	3.58	18.98		5
L	AR	3.23	19.04		7
<u> </u>	AR	3.62	19.07		7
1	AR	3.65	18.40		6
_	AR	3.53	19.63		10
1	AR	3.69	18.62		3
⊢	AR	3.27	18.40		6
	AR	3.68	18.32		10
_	AR	3.49	18.87		12
_	AR	3.73	19.34		2
_	AR	3.65	18 20		4
⊢	AR	3.48	18.60		4

Die alignment	-	12	-	9	7	4	7	3	7	6	12	12	3	8	1
Countermarks, slash marks – reverse												tiny dots, scratch marks in front of Livia			
Countermarks, slash marks – obverse															:
Diameter in millimeters	19.15	19.21	17.53	17.20	18.85	19.42	19.70	19.17	20.35	19.20	19.25	18.40	19.12	18.17	19.09
Weight in grams	3.52	3.50	3.40	3.62	3.73	3.58	3.32	3.68	3.51	3.60	3.53	3.57	3.66	3 63	3.53
Metal	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Ruler		_	<u></u>	_	1	L	L	L	-	-	_	_	<u></u>	-	_
Coin	703.	704	705.	706.	707.	708.	709.	710.	711.	712.	713.	714.	715.	716.	717.

12	9	ß	10	7	V	7		7	9	7	80	6	7	9	_
18.76	19.01	19.60	19.77	19.82	19.22	19.72	19.43	19.38	20.20	19.20	1917	18.30	20.55	20 45	
3.67	3.59	3.70	3.51	3.48	3.58	3.58	3.44	3.68	3.35	3.60	3.65	3.20	3.59	3.61	
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	
-	-	<u> </u>	<u> </u>	F	⊢	<u> </u>	—	F	F	1	,	F	F	L	
718.	719.	720	721.	722.	723.	724.	725	726	727.	728.	729.	730.	731.	732.	

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks reverse	Die alignment
734.	<u>-</u>	AR	3.60	19.44			9
735.	 	AR	3.58	19.77	scratch marks in front of face		2
736.	-	AR	3.61	19.80			2
737.	F	AR	3.68	20.40			7
738.	F	AR	3.50	19.35			8
739.	L	AR	3.68	18.70			9
740.	L	AR	3.45	18.65			3
741.	F	AR	3.35	18.90			O
742.	F	AR	3.16	17.70		scratch or slash mark behind Livia	3
743.	1	AR	3.48	19.17			2
744.	1	AR	3.58	18.43			7
745.	Ţ	AR	3.52	17.30			12
746.	T	AR	3.60	19.30			3
747.	Ţ	AR	3.62	18.95			2
748.	—	AR	3.32	18.95			4

9	8	4	2	11	2	2	9	4	4	ဖ	80	ھ	-	7	8
														dot, scratch mark in front of Livia	
				slash mark in front of neck											
18.05	17.95	18.42	18.38	17.43	18.40	18.34	18.12	18.72	18.25	18.50	18.60	19.27	18.60	19.42	19.36
3.45	3.33	3.51	3.55	3.63	3.43	3.35	3.49	3.27	3.44	3.48	3.74	3.36	3.57	3 64	3.69
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
—	-	-		-	F	F	T	Т	T	L	Ţ	}	L	_	
749.	750.	751.	752.	753.	754.	755.	756.	757.	758.	759.	760	761.	762	763.	764.

19.35	
	19.35
	19.75
	18.32
22	18.65
2	17.52
5 circle in front of neck	18.25
2 M-like and V-like marks in front of face	19.22
0	18.90
D.	18.85
02	18.70
18.45	18.
19.60	19.
06	19.90
30	18.80
0	19.10

780.	-	AR	3.75	19.07		12
781.	L	AR	3.72	18.83		12
782.		AR, plated coin?	3.74	19.60		3
783.	} }	AR	3 65	18.67		3
784.	_	AR	3.51	18.14		0
785.	_	AR	3.71	18 60	tiny slash mark behind bust	12
786		AR	3.35	18.17		9
787.	۲	AR	3.53	19.10		z,
788.	-	AR	3.63	20.00		7
789.	-	AR	3.76	18.75		o
790.	—	AR	3.27	18 30		5
791	H	AR	3.56	18.70		5
792.	Ţ	AR	3.60	18.13		0
793,	1	AR	3.59	19.20		8
794.	Т	AR	3.30	19 15		9
795.	ŀ	AR	3.25	18.90		10

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
796.	⊢	AR	3.68	20.10			9
797.	_	AR	3.34	19.45			ത
798.	F	AR	3.39	19 23			+
799.	—	AR	3.69	20.15			4
800.	F	AR	3.48	18 56			12
801	⊢	AR	3.62	18.98			12
802.	⊢	AR	3.63	18.51			Ŋ
803.	T	AR	3.56	18.41			Reverse too corroded to identify die alignment
804.	1-	AR	3.34	19.08			9
805.		AR	3.54	18.75			9
806.	T	AR	3.73	18.17			9
807.	Т	AR	3.73	18.10			12
808.	Т	AR	3.13	18.20			3
809.	⊢	AR	3.39	20.05			9
810.	L	AR	3.69	18.30			4

811.	⊢	AR	3.00	19.20		12
812.		AR	3.38	19.18		ō
813.	F	AR	3.66	19.17		9
814.	-	AR	3.60	18.80		4
815.	F	AR	3.14	17.38		Reverse too corroded to identify die alignment
816.	—	AR	3.47	18.38		9
817.	-	AR	3.52	19.44		88
818.		AR	3.63	18.24		6
819.	⊢	AR	3.61	19.38		5
820.	⊢	AR	3 72	19.10		o.
821.	<u></u>	AR	3.54	18.70		თ
822.	—	AR	3 59	18.55		က
823	1	AR	3.69	18.90		6
824	F	AR	3.18	18.26		1
825.	<u> </u>	AR	3.35	20 35		5
826.	<u> </u>	AR	3.24	18.15		9
						3500

1			Weight in	Diameter in	Countermarks,	Countermarks,	Die alsonment
<u>8</u> 2	Ruler	Metal	grams	millimeters	slash marks – obverse	reverse	
827	F	AR	3.69	17.55			4
828.	 	AR	3.57	18.07			3
829.	<u> </u>	AR	3.60	20.65			9
830.	L	AR	3.54	19.60			1
831.	<u> </u>	AR	3.45	18.17			9
832.	—	AR	3.60	18.01			-
833.	<u></u>	AR	3.50	19.15			3
834.	1	AR	3.72	17.99			3
835.		AR	3 62	19.75			3
836.	_	AR	3.53	18.62			ō
837.	-	AR	3.00	17.98			12
838.	1	AR	3.38	19.38			3
839.	—	AR	3.44	18.77			9
840.	L	AR	3.50	19.40			9
841.	T	AR	3.65	19.40			7

842.	-	AR	3.07	19.00			9
843.	1	AR	3.32	18.57			6
844.	<u> </u>	AR	3.59	19.74			83
845.	 -	AR	3.41	18.38			10
846.	-	AR	3.50	17.78			-
847.	—	AR	3.37	19.98	Vin	V in front of Lıvia	9
848.	_	AR	3.58	18.78			10
849.	 	AR	2.99	18.38			5
850.	T	AR	3.57	18.60			12
851	T	AR	3.53	18.40			6
852.	-	AR	3.20	19.38			5
853.	1	AR	3.45	18.39			9
854.	Т	AR	3.52	18.20			5
855.	Ţ	AR	3.52	19 51			11
856.	1	AR	3.48	18.62			12
857.	⊢	AR	3.42	19 08			2

Metal	├	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
AR 3.4	3.	3.54	18.92			C)
AR 3.71	3.71		17.60			11
AR 3.51	3.51		19.42			9
AR 3.58	3.58		18.45			6
AR 3.55	3.55		19.05			9
AR 3.25	3.25		18.43			-
AR 3.65	3.65		18.40			9
AR 3.75	3.75		19.48			9
AR 3.59	3.59		17.90			3
AR 3.58	3.58		18.00			4
AR 3.48	3.48		17.60			12
AR 3.63	3.63		19.21			9
AR 3.52	3.52		18.85			9
AR 3.60	3.60		18.20			9
AR 3.62	3.62		18.73			7

_	AR	3.61	18.00		11
-	AR	3.33	18.17		9
 -	AR	3.47	18.57		8
⊢	AR	3.71	19.35		12
⊢	AR	3.50	19.65		9
T	AR	3.19	18.23		6
1	AR	3.35	18.95		12
⊢	AR	3.45	19.90		12
1-	AR	3.53	18.37		Ω.
⊢	AR	3.63	18.76		12
-	AR	3.32	18.23		9
⊢	AR	3.43	18.87		11
-	AR	3.63	18.98	scratch mark in front of Livia	2
H	AR	3.04	18.74		9
-	AR	3.69	18.57	scratch mark in front of Livia	9
	AR.	3 56	19.80		9

Die alignment	5	9	12	4	7	9	7	7	12	9	5	6		6	6 9
Countermarks, slash marks – reverse				7			1			9	4,	3,		-	33
Countermarks, slash marks – obverse															
Diameter in millimeters	17.24	19.51	18.82	19.40	18.70	19.14	19.75	19.38	18.90	19.13	18.74	18.89	17.89		19.47
Weight in grams	3.59	3.55	3.66	3.64	3.58	3.56	3.54	3.76	3.51	3.53	3.51	3.60	3.56		3.50
Metal	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR		AR
Ruler	L	Ţ	—	L	T	T	Т	Τ	_	<u></u>	Т	_	-		
Coin	889.	890.	891.	892.	893.	894.	895.	896.	897.	898.	899.	. 300.	901.		902.

904.	+	AR	3.50	18.67		9
905.	L	AR	3.62	19.11		1
.906	T	AR	3.03	18.01		12
907.	1	AR	3.56	20.09		5
908.	1	AR	3.58	18.15		5
909.	Т	AR	3.53	18.68		4
910.	L	AR	3.65	18.23		8
911.	Ι	AR	3.61	17.96		_
912.	1	AR	3.34	18.59		6
913.	T	AR	3.30	19.07		4
914	T	AR	3.45	18.90	-	12
915.	L	AR	3.70	20.05		3
916.	T	AR	3.68	20.25		_
917.	F	AR	3.70	18.92		7
918.	⊢	AR	3 35	19.46		9
919.	—	AR	3.97	18.37		12

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks ~ reverse	Die alignment
920.	F	AR	3.52	18.80			2
921.	<u></u>	AR	3.46	19.15			9
922.	-	AR	3.77	18.90		dot in front of Livia	-
923.	<u> </u>	AR	3.70	18.85			4
924	F	AR	3.38	18.58			12
925.	-	AR	3.56	19.25			8
926.	—	AR	3.58	18.32			τ
927.	_	AR	3.55	19.37			12
928.	-	AR	3.62	19.66			3
929.	F	AR	3.49	19.63		scratch marks in front of Livia	82
930.	L	AR	3.72	19.51			12
931.	L	AR	3.58	20.07			9
932.	۲	AR	3.57	18.48			9
933.	F	AR	3.23	18.72			8
934.	T	AR	3.48	18.84		scratch mark in front of Livia	8

935.	F	AR	3.52	18.83		12
936.	—	AR	3.36	18.67		3
937.	-	AR	3.51	19.92	,	2
938.	F	AR	3,46	18.74		က
939.	F	AR	3.57	18.46		8
940.	L	AR	3.26	17.80		7
941.	⊢	AR	3.53	17.62		9
942.	-	AR	3.24	19.10		9
943.	—	AR	3.19	18.70		9
944.	F	AR	3.50	18.23		9
945.	_	AR	3.44	18.27		က
946.	⊢	AR	3.48	18 05		5
947.	-	AR	3.43	18.62		5
948.	F	AR	3 69	19.38		12
949.	T	AR	3.32	18.03		5
950.	T	AR	3.37	18.21		မွ

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
951.	_	AR	3.51	19.20			-
952.	-	AR	3.06	19.77			9
953.	<u></u>	AR	3.41	18.74			5
954.	F	AR	3.40	18.69			7
955.	· ·	AR	3.51	19.16			12
956.	<u> </u>	AR	3.52	18.73			4
957.	· F-	AR	3.63	18.60			-
958.	<u></u>	AR	3.66	18.65			5
959.	_	AR	3.64	18.51			9
960.	F	AR	3.33	18.12	two tiny slash marks on head		5
961.	 	AR	3.70	19.58			7
962.	<u>-</u>	AR	3.51	18.17		:	-
963.		AR	3.58	19.05			9
964.	1	AR	3.63	18.30			12
965.	-	AR	3.33	17.40			o

9	-	4	12	12	8	11	8	8	8	Ω Ω	12	- α	2	8	
										two dots behind Livia					
19.26	18.32	19.37	19.45	18.95	19.57	18.97	17.43	19 34	19.57	18 73	18.15	19.73	18 12	19 51	
3.54	3.53	3.57	3.64	3.78	3.66	3.58	3.68	3.43	3.54	3.57	3.55	3.25	3.34	3.48	
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	
		<u></u>		-	-	L	-	-	L	F	-	⊢	⊢	—	
966. T	796 T	968.	969.	970.	971.	972.	973.	974	975.	976.	977.	978.	979.	980.	

	T								Ī					1000	
Die alignment	7	12	12	8	4	8	7	12	-	12	9	80	б	9	2
Countermarks, slash marks – reverse															
Countermarks, slash marks – obverse															
Diameter in millimeters	18.93	18.82	18.62	18.43	18.77	19.42	18.86	19.20	18.88	18.35	19.82	19.30	19.18	18.98	18.90
Weight in grams	3.72	3.58	3.84	3.57	3.61	3.49	3.26	3.75	3.77	3.59	3.75	3.70	3.53	3.60	3.55
Metal	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Ruler	-	L	F	L	F	j —	_	-	<u> </u>	L	_	_	L	-	
Coin	982.	983.	984.	985.	.986	987.	988.	.686	.066	991.	992.	993.	994.	995.	.966

AR			18.52		7
AR 3.60 20.15 AR 3.62 18.05		20.1t	0 10		0 9
AR 3.68 18.28		18.2	80		12
AR 3.43 18.45	-	18.4	55		Ŋ.
AR 3.44 19.05		19.0	35	vertical scratch mark in front of Livia	12
AR 3.58 18.41		18.4	11		9
AR 3.59 18.65		18.0	35		9
AR 3.57 1832	-	183	77		7
AR 3.33 18.05		18.0	35		11
AR 3.56 19		19	19.56		7
AR 3.55 19	-	19	19.40		7
AR 3.43 18		18	18.33		3
AR 3.67 19		19	19.60		9
AR 3.54 19	_	19	19.12		5
AR 3.60 17		17	17.74		7

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
1013.	L	AR	3.56	19.00		circle, scratch marks in front of Livia; one more scratch mark above head of Livia	rO
1014.	⊥	AR	3.69	17.98			7
1015.	Т	AR	3.48	18.40			12
1016.	Т	AR	3.70	18.86			3
1017.	⊥	AR	3.41	18.57			9
1018.	Т	AR	3.69	19.35			9
1019.	T	AR	3.68	19.00			5
1020.		AR	3.50	18.07	vertical scratch mark behind bust		3
1021.	_	AR	3.63	17 85			5
1022.	_	AR	3.57	18.15			4
1023.	_	AR	3.60	19.23			2
1024.	T	AR	3.66	19.41			4
1025.	T	AR	3.67	17.80	scratch marks in front of bust		4
1026.	L	AR	3.68	18.15			9

1027.	-	AR	3.72	18.25			12
1028.		AR	3.51	18.25			4
1029.	L	AR	3 50	18.45			4
1030.	-	AR	3.07	18.27			11
1031.	F	AR	3.33	18.65			4
1032.	<u> </u>	AR	3.30	18.85			7
1033.	—	AR	3.62	18.70			5
1034.	—	AR	3 56	21.25	dot in front of bust		9
1035.	. 1	AR	3.67	18 85			2
1036.		AR	3.47	19.10			11
1037.	⊢	AR	3.46	18.00			7
1038.	F	AR	3.59	19.25		3	o
1039.	L	AR	3.75	18.94			-
1040.	⊢	AR	3.60	19.11			3
1041.	F	AR	3.77	18.67			8
1042.	Ŀ	AR	3.40	18.32			12

Coin no.	Ruler	Metai	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
1043.		AR	3.73	19.30			2
1044.	Т	AR	3.53	18.24	scratch marks around bust		5
1045.	⊢	AR	3.38	17.80			12
1046.	⊢	AR	3.61	19.16			7
1047.	_	AR	3.59	17.55			12
1048.	L	AR	3.10	19.15			10
1049.	_	AR	3.49	18.58			5
1050.	H	AR	3.66	18.94			12
1051.	_	AR	3.72	19.07			12
1052.	L	AR	3.52	18.18			8
1053.	7	AR	3.22	20.06			4
1054.	_	AR	3 18	18.52			3
1055.	L	AR	3.50	18.36			7
1056.	-	AR	3.74	18.38			5
1057.	ь	AR	3.50	19.06			4

1058.	⊢	AR	3.61	18.27		6
1059.	Ţ	AR	3 50	19.06		9
1060.	T	AR	3.48	19.43		12
1061.	_	AR	3.42	18.43		12
1062.	T	AR	3.26	19.75		4
1063.	T	AR	3.12	18.00		4
1064.	I	AR	3.38	18.45		7
1065.	_	AR	3.52	19.83		9
1066.	T	AR	3.63	19.42		9
1067.	_	AR	3.39	19.50		7
1068.	T	AR	3.43	18.12		9
1069.	_	AR	3.40	17.87		10
1070.	-	AR	3.70	18.53		10
1071.	_	AR	3.52	18.82		9
1072.	-	AR	3.56	19.28		10
1073.	F	AR	3.66	18.25		9

9 6 9 4 4 1 2 6 8	Weight in Diameter in grams millimeters
6 0 4 0 4 4 1 1 6 8	3.59 18.65
0 4 0 4 4 1 1 0 0 1 4 9 8	3.07 19.79
4 4 4 7 P 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	3,48 19.10
9 4 1 1 2 6 2 8	3.65 19.57
4	3.33 18.92
4 7 7 8 9 8	3.57 19.05
7 7 7 8 9 8 8	3.30 20.20
7	3.50 18.60
6 7 4 9 8	3.14 18.65
7 4 4 5 6 6 8 3	3.58 18.65
4 9 8	3.58 18.65
& &	3.69 18.75
8	3.31 18.07
	3.62 18.07

10	4	2	5	5	80	2	12	6	-	ю	9	-	4	е	
19.45	19.80	18.05	20.30	19.20	18.90	18.06	19.72	19.49	18 82	18.05	18.03	17.78	17.98	19.49	17 72
3.64	3.56	3.51	3.43	3.70	3.68	3.55	3.53	3.52	3.70	3 36	3.54	3.52	3.18	3.47	2 7.4
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	48
⊢	—	T	_	_	-	_	—	T	_	_	_	_	_	_	-
1089.	1090.	1091.	1092.	1093	1094.	1095.	1096	1097.	1098.	1099.	1100	1101	1102.	1103.	1104

Coin To.	Ruler	Metai	Weight in grams	Diameter in millimeters	Countermarks, slash marks obverse	Countermarks, slash marks – reverse	Die alignment
1105	-	AR	3.61	20.07			ဗ
1106.	 -	AR	3.26	18.02			6
1107.	-	AR	3.61	18.30			7
1108.	1	AR	3.63	19.14			4
1109.	F	AR	3.62	18.88			12
1110.	-	AR	3 60	18.50			3
1111.	F	AR	3.54	19.32			9
1112.	}- -	AR	3.55	18.49		scratch marks in front of Livia	4
1113.	}	AR	3.74	17.60			7
1114.	1	AR	3.35	18.83			10
1115.	1	AR	3.68	18.01			4
1116.	_	AR	3.50	18.25		scratch mark behind Livia	7
1117.	—	AR	3.65	19.20			9
1118.	Ţ	AR	3.56	19.47			2
1119.	-	AR	3 70	18.90			-
{							

1120.	Ţ	AR	3.68	19.10	9
1121.	L	AR	3.38	18.63	10
1122.	F	AR	3.38	18.40	3
1123.	F	AR	3.72	19.22	12
1124.	I	AR	3.45	19.50	1
1125.	L	AR	3.67	18.67	7
1126.	Т	AR	3.50	18 62	9
1127.	Т	AR	3.52	19.00	10
1128.	_	AR	3.64	18 27	9
1129.	_	AR	3.63	18.76	4
1130.	T	AR	3.57	18 13	9
1131.	_	AR	3.50	18.80	9
1132.	⊥	AR	3.52	19.43	9
1133.	_	AR	3.72	17 85	2
1134.	_	AR	3 28	18.50	-
1135.		AR	3.23	18.06	o

i															
Die alignment			!												
	6	10	7	12	12	12	4	2	9	o	თ	12	12	9	က
Countermarks, slash marks – reverse							,								
Countermarks, slash marks obverse															
Diameter in millimeters	19.03	19.00	18.60	19.25	18.15	18.30	18.57	18.93	18.23	19.17	19.15	19.33	18.15	18.99	18.68
Weight in grams	3.67	3.49	3.51	3.52	3.74	3.60	3.47	3.50	3.02	3.70	3.68	3.67	3.50	3.54	3.51
Metal	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Ruler	—	_	_	, +	—	F	I	L	L	-	1	-	T	Т	1
Coin	1136.	1137.	1138.	1139.	1140	1141.	1142.	1143.	1144.	1145	1146	1147.	1148.	1149.	1150.

1152. T 1153. T 1154. T 1155. T 1156. T		AR	3.17	18.85			1-
		AR	3.33	18.50			9
- 		AR	3.48	18.70			11
		AR	3.47	19.54			6
		AR	3.70	19.05			9
		AR	3.31	18.49			12
1158. T		AR	3.24	18.71			8
1159. T		AR	3.73	18 45		7.535	6
1160 T		AR	3.29	19.82			12
1161. T		AR	3.39	18.60	small slash mark in front of neck		9
1162. T	-	AR	3.48	19.90			12
1163. T		AR	3.62	18.71	Y-like mark in front of face		7
1164. T		AR	3.48	19.55			1
1165. T		AR	3 65	18.35			9
1166. T		AR	3.74	19.02			9

Die alignment															
6 1	12	၁	4	4	4_	3	6	ေ	2	6	7	in 12	in 3	7	6
Countermarks, slash marks – reverse										_		scratch marks in front of Livia	scratch marks in front of Livia		
Countermarks, slash marks – obverse															
Diameter in millimeters	18 07	20.37	18.13	19.22	19.18	19.89	18.22	18.27	19.15	17.96	19.41	20.76	19.18	19.44	18.61
Weight in grams	2.86	3.59	3.61	3.65	3.35	3.54	3.64	3.70	3.43	3.54	3.63	3.19	3.55	3.53	3.63
Metal	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Ruler	 -	-	_	-	L	L	Т	⊢	T	T	<u></u>	Т	7	T	Τ
Coin no.	1167	1168.	1169.	1170.	1171.	1172.	1173.	1174.	1175.	1176.	1177.	1178.	1179.	1180.	1181.

1	2	4	12	o	5	6	6	8	4	4	9	12	o	4	6
	scratch marks in front of Livia					V in front of Livia, near rim								scratch mark below chair of Livia	
19.07	18.89	18.79	19.77	19.15	18.94	19 49	19.68	18.53	18.51	18.98	18.43	18.85	18.43	18.81	18.79
3.34	3.57	3.54	3.53	3.65	3.68	2.82	3.67	3.63	3.44	3 55	3.38	3.37	3.36	3.44	3.75
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
<u> </u>	-	T	۲	-	_	Т	Į.	1	_	Ţ	1	1	T	-	-
1182.	1183.	1184	1185.	1186.	1187.	1188.	1189.	1190.	1191.	1192.	1193.	1194.	1195.	1196.	1197.

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
1198.	Ţ	AR	3.18	19.86			9
1199.	F	AR	3.62	19.87			6
1200.	<u> </u>	AR	3.72	18.21			9
1201.	F	AR	3.63	19.88			4
1202.	T	AR	3.54	18.52			9
1203.	⊢	AR	3.18	17.40			9
1204.	-	AR	3.55	19.18		tiny scratch mark (slash mark?) in front of Livia	3
1205.	7	AR	3.37	18.57			12
1206.	T	AR	3.60	18.45		scratch marks in front of Livia	2
1207.	j-	AR	3.24	18.57			5
1208.	_	AR	3.54	18.12			4
1209.	1	AR	3.27	19.12			വ
1210.	_	AR	3.62	19.27			4
1211.	_	AR	3.68	19.19			7
1212.	-	AR	3.37	18.35			9

1213.	—	AR	3.61	17.65			8
1214	, -	AR	3.33	18.10			3
1215.	F	AR	3 34	18.77			3
1216.	F	AR	3.10	18.45			6
1217.	1	AR	3.51	19.44			9
1218.	_	AR	3.38	17.56			4
1219.	1	AR	3.45	19.73			8
1220.	1	AR	3.46	18.84	V-like mark in front of neck		5
1221.	_	AR	3.27	18.95			11
1222.	T	AR	3.74	18.29			വ
1223.	J-	AR	3.54	19.77			o
1224.	_	AR	3.50	19.52			, o
1225	T	AR	3.59	19.25			വ ,
1226.	⊢	AR	3 58	18.73			9
1227.	-	AR	3.27	20.47			თ
1228.	-	AR	3.31	18.92		scratch mark or slash mark, not clear, above Livia	12

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
1229.	I	AR	3.54	18.68			12
1230.	F	AR	3.53	18.67			12
1231.	-	AR.	3.52	19.62			6
1232.	F	AR	3.67	17.78		,	9
1233.	L	AR	3.51	18.05	tiny scratch mark on neck		9
1234.	L_	AR	3.67	18.32			12
1235.	L	AR	3.63	18.35			12
1236.	1	AR	3.54	18.79			3
1237.	Т	AR	3.39	18.49			7
1238.	T	AR	3.64	18.48			9
1239.	Т	AR	3.10	17.36			12
1240.	Ţ	AR	3.68	19.34			9
1241.	T	AR	3.51	18.22			9
1242.	Т	AR	3.23	19.04			12
1243.	T	AR	3.39	19.55		scratch marks in front of Livia	2

AR 2.93 18.15 4 AR 3.60 20.16 11 AR 3.65 19.26 2 AR 3.61 19.32 4 AR 3.50 18.15 4 AR 3.50 18.15 6 AR 3.48 19.02 6 AR 3.63 18.55 6 AR 3.60 19.86 6 AR 3.42 19.60 6 AR 3.32 18.55 6 AR 3.42 19.60 6 AR 3.32 18.55 6	_		AR	3.40	18.10		ဇာ
3.60 20.16 3.65 19.26 3.65 19.07 3.61 19.32 3.50 18.45 3.23 18.05 3.62 18.72 3.62 18.55 3.60 19.86 3.34 19.60 3.38 19.62 3.38 19.62 3.42 18.83			AR	2.93	18.15		4
3.65 19.26 3.61 19.07 3.61 19.32 3.92 18.45 3.50 18.15 3.48 19.02 3.62 18.72 3.63 18.55 3.60 19.86 3.38 19.62 3.42 19.60 3.42 18.83	, I-		AR	3.60	20.16		11
3.65 19.07 3.61 19.32 3.92 18.45 3.50 18.15 3.48 19.02 3.62 18.72 3.60 19.86 3.42 19.60 3.38 19.62 3.42 18.83	1		AR	3.57	19.26		2
3.61 19.32 3.92 18.45 3.50 18.15 3.23 18.05 3.62 18.72 3.63 18.55 3.60 19.86 3.38 19.60 3.42 19.60 3.42 18.83	L		AR	3.65	19.07		9
3.92 18.45 3.50 18.15 3.23 18.05 3.48 19.02 3.62 18.72 3.53 18.55 3.60 19.86 3.38 19.60 3.42 19.60 3.42 18.83	Т		AR	3.61	19 32		4
3.50 18.15 3.23 18.05 3.48 19.02 3.62 18.72 3.53 18.55 3.60 19.86 3.42 19.60 3.38 19.62 3.42 18.83	Ţ		AR	3.92	18.45		12
3.23 18.05 3.48 19.02 3.62 18.72 3.53 18.55 3.42 19.60 3.38 19.62 3.42 18.83	_		AR	3.50	18.15		7
3.48 19.02 3.62 18.72 3.53 18.55 3.60 19.86 3.42 19.60 3.38 19.62 3.42 18.83	-		AR	3.23	18.05		9
3.62 18.72 3.53 18.55 3.60 19.86 3.42 19.60 3.38 19.62 3.42 18.83	.		AR	3.48	19.02		9
3.53 18.55 3.60 19.86 3.42 19.60 3.38 19.62 3.42 18.83	⊢		AR	3.62	18.72		3
3.60 19.86 3.42 19.60 3.38 19.62 3.42 18.83	T		AR	3 53	18.55		5
3.42 19.60 3.38 19.62 3.42 18.83	-		AR	3.60	19.86		9
3.38 19.62 3.42 18.83	-		AR	3.42	19.60		9
3.42 18.83	-		AR	3.38	19.62		5
	_	1	AR	3.42	18.83		9

Coin no.	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
1260.	⊢	AR	3.63	18.27			2
1261.	⊢	AR	3.36	18.18			12
1262.	⊢	AR, plated coin?	3.68	17.58			9
1263.	—	AR	3.77	18.07			9
1264.	F	AR	3.34	18.11			4
1265.	F	AR	3.65	18.83			10
1266.	L	AR	3.44	18.20			5
1267.	1	AR	3.63	19.17			5
1268.	1	AR	3.71	18.97			2
1269.	.	AR	3.43	19.07			12
1270.	1	AR	3.54	19.00			9
1271	⊢	AR	3.45	19.13			ಬ
1272.	Τ	AR	3.63	19.78			4
1273.	_	AR	3.70	1931			9
1274.	_	AR	3.72	19.89			12

7	7	-	7	2	ဖ	9	6	12	8	3	12	12	-	7	
											scratch mark in front of Livia			scratch marks in front of Livia	
19.02	19.19	19.48	18 57	18 50	19.68	18.52	19.98	20.24	18.53	18.53	18.43	18.43	18.79	19.00	18.60
3.70	3.39	3.62	3.58	3.70	3.67	3.22	3 62	3 63	3.52	3.54	3.16	3.16	3.36	3.20	3.33
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
	-	—	F	F	-	L	-	F	F	H	T	1	٢	Т	Т
1275.	1276.	1277.	1278.	1279.	1280.	1281.	1282.	1283.	1284.	1285.	1286.	1287.	1288.	1289.	1290.

Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
	AR	3.23	19.50			Ō
	AR	3.57	19.17		scratch marks in front of Livia	9
	AR	3.33	19.52			5
_	AR	3.31	19.35			4
	AR	3.73	20.50			5
 	AR	3.74	18.52			7
	AR	3.67	18.15			4
_	AR	3.68	19.35			4
	AR	2.85	18.02			7
	AR	3.21	17.80			9
	AR	3.65	20.07		vertical scratch mark in front of Livia	11
	AR	3.48	18.20			-
	AR	3.59	18.51			6
	AR	3.57	19.12			7
	AR	3.13	18.28			11

1306.	-	AR	3.58	18.11			. 8
1307.	-	AR	3.62	19.21			5
1308.	-	AR	3.57	19.63			5
1309.	-	AR	3.42	19.04			8
1310.	Т	AR	3.63	19.30			11
1311.	⊥	AR	3.21	19.29			3
1312.	⊢	AR	3.48	18.60			12
1313.	Τ	AR	3.43	18.20	3,4	scratch mark in front of Livia	5
1314.	T	AR	3.57	18.68			2
1315	_	AR	3 35	18.59			6
1316	_	AR	3.63	19.57			2
1317.	Т	AR	3.34	19.38			12
1318.	⊢	AR	3.20	18.88			6
1319	_	AR	3.40	17.90			7
1320.	⊢	AR	3 52	19.90			8
1321.	⊢	AR	3.50	19.10			9

Coin	Ruler	Metal	Weight in grams	Diameter in millimeters	Countermarks, slash marks – obverse	Countermarks, slash marks – reverse	Die alignment
1322.	L	AR	3.36	20.13			5
1323.	· -	AR	3.55	19.04			5
1324.	<u></u>	AR	3.52	19.62			2
1325.	L	AR	3 43	20.31		scratch marks in front of Livia	8
1326.	j -	AR	3.50	18.18			9
1327.	F	AR	3.53	18.79			9
1328	_	AR	3.47	19.25			2
1329.	}	AR	3.64	18.17		ļ	9
1330.	-	AR, plated coin?	3.36	19.28			о
1331.	L	AR	3.52	19.37			5
1332.	-	AR	3.62	18.05			9
1333.	T	AR	3.69	18.38			1
1334.	L	AR	3.72	19.00			4
1335.	T	AR	3.68	18.96			7
1336.	Ŧ	AR	3.15	18.11			0

1338 T AR 3.63 18.86 P 1340 T AR 3.62 19.00 P 1341 T AR 3.62 19.00 P 1342 T AR 3.66 18.30 P 1343 T AR 3.46 19.11 P 1344 T AR 3.56 18.77 P 1345 T AR 3.73 19.32 P 1346 T AR 3.73 19.32 P 1347 AR 3.46 18.79 P 1348 T AR 3.60 18.79 P 1349 T AR 3.60 18.77 P 1349 T AR 3.60 19.04 P 1350 T AR 3.60 19.04 P 1351 T AR 3.60 19.04 P 1352 T <th>1337.</th> <th>1</th> <th>AR</th> <th>3.30</th> <th>18.12</th> <th></th> <th>2</th>	1337.	1	AR	3.30	18.12		2
T AR 3.58 17.98 T AR 3.62 19.00 T AR 3.72 18.88 T AR 3.46 19.11 T AR 3.56 18.77 T AR 3.54 18.77 T AR 3.73 19.32 T AR 3.48 20.32 T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		L	AR	3.63	18.86		12
T AR 3.62 19 00 T AR 3.72 18.88 T AR 3.56 18.30 T AR 3.46 19.11 T AR 3.56 18.77 T AR 3.54 18.79 T AR 3.60 18.79 T AR 3.60 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		L	AR	3.58	17.98		12
T AR 3.72 18.88 AR T AR 3.66 18.30 AR T AR 3.46 19.11 AR T AR 3.56 18.77 AR T AR 3.73 19.32 AR T AR 3.60 18.79 AR T AR 3.48 20.32 AR T AR 3.70 18.77 AR T AR 3.60 19.04 AR T AR 3.26 18.06 AR T AR 3.64 19.47		_	AR	3.62	19 00		3
T AR 3.56 18.30 T AR 3.46 19.11 T AR 3.56 18.77 T AR 3.54 18.07 T AR 3.73 19.32 T AR 3.60 18.79 T AR 3.48 20.32 T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47	1	T	AR	3.72	18.88		5
T AR 3.46 19.11 AR T AR 3.56 18.77 18.07 T AR 3.73 19.32 19.32 T AR 3.60 18.79 18.79 T AR 3.48 20.32 19.04 T AR 3.60 19.04 19.04 T AR 3.26 18.06 19.07 T AR 3.54 19.47 19.47		Τ	AR	3.56	18.30		12
T AR 3.56 18.77 T AR 3.54 18.07 T AR 3.73 19.32 T AR 3.60 18.79 T AR 3.48 20.32 T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		Т	AR	3.46	19.11		5
AR 3.54 18.07 AR 3.73 19.32 AR 3.60 18.79 AR 3.48 20.32 AR 3.70 18.77 AR 3.60 19.04 AR 3.26 18.06 AR 3.64 19.47	1344.	L	AR	3.56	18.77		6
T AR 3.73 19.32 T AR 3.60 18.79 T AR 3.48 20.32 T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		⊢	AR	3.54	18.07		8
T AR 3.60 18.79 T AR 3.48 20.32 T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		L	AR	3.73	19.32		11
T AR 3.48 20.32 T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		⊢	AR	3.60	18.79		8
T AR 3.70 18.77 T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47		T	AR	3.48	20.32		11
T AR 3.60 19.04 T AR 3.26 18.06 T AR 3.64 19.47	1	⊢	AR	3.70	18.77		11
T AR 3.26 T AR 3.64		_	AR	3.60	19.04	scratch mark in front of Livia	9
T AR 3.64		F	AR	3.26	18.06		11
		—	AR	3.64	19.47		8

Die alignment	9	9	6	2	8	8	4	2	3	9	6	12	2	12	9
Countermarks, slash marks – reverse												scratch marks in front of Livia			
Countermarks, slash marks – obverse															
Diameter in millimeters	19.20	18.18	17.90	20.05	18.69	18.25	18.02	19.05	19.22	18.58	18.70	18.22	18.33	19.05	19.38
Weight in grams	3.45	3.60	3.50	3.55	3.51	3.70	3.56	3.40	3.50	3.18	3.64	3.22	3.60	3.30	3.14
Metal	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Ruler	—	L	—	L	F	—	F	<u></u>	F	-	-	ļ _	L	1	L
Coin	1353.	1354.	1355.	1356.	1357.	1358.	1359.	1360.	1361.	1362.	1363.	1364.	1365.	1366.	1367.

1368.	Т	AR	3.48	18.05			9
1369.	Τ	AR	3.43	18.64			5
1370.	F	AR	351	19.02			8
1371.	1	AR	3.40	18.42	scratch mark in front of neck	scratch marks in front of Livia	9
1372.	Τ	AR	3.51	18.90			12
1373.	1	AR	3.55	18.57			8
1374.	1	AR	3.71	18.36			8
1375.	_	AR	3.63	19.65			8
1376	_	AR	3.50	20.01			11
1377.	_	AR	3.35	17.32			10
1378.		AR	3.20	19.10			2
1379.	-	AR	3.53	18 42			J.
1380.	۲	AR	3.67	17.60			6
1381.	-	AR	3.39	18.41			0
1382.	T	AR	3.82	18.69			12
1383.	-	AR	3.48	18.62			8

Countermarks, slash marks – obverse
3

1398.		AR, broken into three—one part missing	3.19	19.00	L behind Livia	12
1399.	A	AR	3.36	17.95		7
1400.	F	AR, broken— one part missing	2.67			9
1401.	F	AR, broken— one part missing	3.00			ဖ
1402.	⊢	AR, broken— one part missing	3.03			9
1403.	F	AR, broken— one part missing	2.91			വ
1404.	А	AR, broken— one part missing	1.25			
1405	Ţ	AR, broken— one part missing	1.79			خ
1406.	Τ	AR, broken— one part missing	2.79			5?
1407.	⊢	AR, broken— one part missing	2.55			85

A note on the countermarks on the coins from Budinatham:

As noted above, several coins feature minute countermarks including letters of the Roman alphabet. In the case of a good number of coins, it has been difficult to ascertain whether some of the minute lines, curves and dots are actually countermarks or mere accidental scratches. Such marks have earlier been noticed on the Roman coins found in certain other sites such as Akkanpalle and Nasthullapur in Andhra Pradesh and Pudukkottai in Tamil Nadu.

P.L.Gupta (1965) and S. Suresh (2004) have attempted to analyze the significance of these marks. The possibility of these marks being effected to test the quality of the metal is ruled out because atleast some of the marks are intricate floral or geometric designs. These marks cannot be mint marks because a single mark is rarely seen on more than a few coins. Some of these countermarks may be 'bankers marks' effected in India prior to the circulation of these foreign coins in this country. Or else, these marks may have served as ownership or identification marks. The necessity of stamping one's ownership mark would arise only on specific occasions when the coins (wealth) of different individuals are being handed over for safe custody to a single money-lender or banking institution. Significantly, early Indian epigraphs allude to such deposition of coins with corporate bodies. The coins with only one mark may have always been in the possession of a single individual while coins with many marks may have been in the possession of different individuals during different periods of their circulation, each of whom would have stamped his or her own mark before entrusting the coins with a trader or a guild.

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Al: Ancient India

JNSI: Journal of the Numismatic Society of India.

JRAS: Journal of the Royal Asiatic Society

MCS: Madras Coin Society.

NC: Numismatic Chronicle.

SSIC: Studies in South Indian Coins.

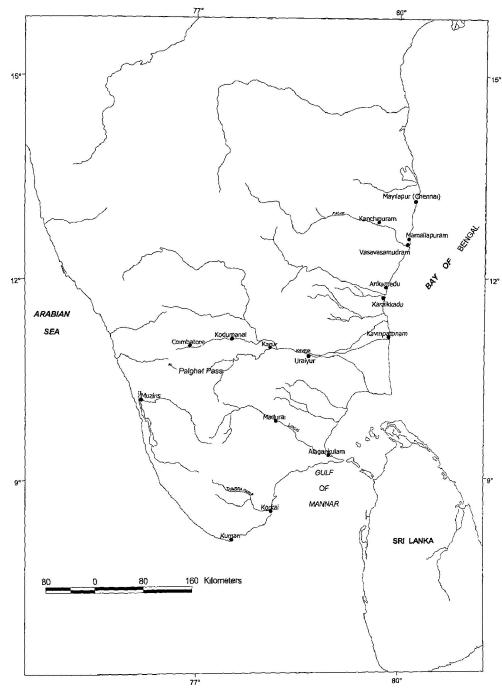
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Map showing the important Roman trade sites in South India



Mr Marudan, now in his eighties – as a teenager he saw the discovery of the Budinatham hoard in 1946



Mr Marudan at the site of the discovery of the hoard at Budinatham – 13 August, 2010



C. No 2 Obv



C. No 3 Obv



C. No 3 Rev



C. No 7 Obv





C. No 9 Obv



C. No 9 Rev



C. No 10 Obv





C. No 14 Obv



C. No 14 Rev



C. No 15 Obv



C. No 15 Rev



C. No 16 Obv



C. No 16 Rev



C. No 17 Obv



C. No 17 Rev



C. No 23 Obv



C. No 23 Rev



C. No 24 Obv



C. No 24 Rev



C. No 25 Obv



C. No 25 Rev



C. No 27 Obv



C. No 27 Rev



C. No 51 Obv





C. No 53 Obv



C. No 53 Rev



C. No 56 Obv



C. No 56 Rev



C. No 61 Obv



C. No 61 Rev



C. No 62 Obv



C. No 62 Rev



C. No 64 Obv



C. No 64 Rev



C. No 69 Obv



C. No 69 Rev



C. No 75 Obv



C. No 75 Rev



C. No 78 Obv



C. No 78 Rev



C. No 87 Obv



C. No 87 Rev



C. No 96 Obv



C. No 96 Rev

This Catalogue has been brought out to coincide with the Special Exhibition on the Roman Coins and Other Roman Antiquities found in India. The exhibition is mainly based on extensive research and is curated by Dr. S. Suresh, an internationally acknowledged authority on the Roman antiquities found in Asia. The research has been facilitated by a grant by the Italian Embassy Cultural Centre, New Delhi. The exhibition, held at the Government Museum, Chennai (India) in January-February, 2011, mainly draws from the rich Roman collections of the museum and includes many objects that have never been published or displayed earlier.



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