

## **History as a Tool to Identify Stray Coins: Case Study of Reza Abbasi Museum**

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### **Abstract**

Hundreds of stray coins are being donated every year to different Iranian museums but it is difficult to establish their authenticities due to lack of knowledge about places of their findings. Part of these stray metallic pieces is related to Parthians. Due to their lengthy rule, of about five centuries, Parthian coins form important part of numismatic collection at the museums. Authors have taken Reza Abbasi Museum at Tehran as case study to review the authenticity of those coins.

A comparison between statistical data and available historical records give a vivid idea about the genuineness and forgery of these metallic pieces. As such, this article attempts to show the genuineness of some of the coins by taking into account statistical data from early Parthian kings and their comparison with the available historical documents.

**Keywords: Parthian, Stray coins, Authenticity, Forgery, Reza Abbasi Museum**

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### **Introduction**

One of the problems faced by the Cultural Heritage Organization of Iran is the identification of original and forged coins, principal collections of which at different museums have come from outside the domain of archeological excavations.

The best way to identify their authenticity is to make a comparison between these specimens and geopolitical history. To some extent, this process can help resolve the problem of the authenticity of the coins which are either purchased from individual collectors or donated time to time. Most of the coins at Reza Abbasi Museum in Tehran are stray ones that were purchased but their sources of origin are still unknown. To see their authenticity, the present paper would compare some of these coins with historical and geographical events.

### **Research Background**

Numerous researches have been carried out to identify ancient coins. These researches are based on national indexes like deciphering epigraphic details on the coins. Some of these studies have also applied non-destructive method in their experiments. Apart from optical investigation, computer science (Keynote Lecture in Computer Science, 2008: 163-175) has been used to classify ancient coins (Wei et al., 2007: 63-66).

Although, destructive and non-destructive methods are being used for decades, however Craft method is the one that can be employed in new researches (Craft et al., 2006:179-182). Craft accomplished his research on Roman coins but so far as Iranian coins are concerned Calay was the first who classified the hoard of Parthian coins (Caley., 1955:1-104) that was later published by American Numismatic Society.

Bacharach carried out an extensive research on Sasanian silver coins (Bacharach & Gordus., 1972:92). Gordus later published a number of articles on Sasanian coins (Gordus, 78-86). Likewise, Hajjivalaei did spectroscopy through PIXE method on Sasanian coins found in the archaeological excavation (Hagivalie, et al., 2008:1578-1582). Although, the numismatic analysis with PIXE method was carried out on silver coins of 5<sup>th</sup> century BC and it was found that there is no difference between real and forged coins. Probably, forged coins were prevalent that were transformed later into percentage of silver coins.

### **Historical Background**

Arsaces I (247-211BC) founded the Parthian dynasty by defeating Androgores of Seleucid satrapy and crowned himself in Assak in 247 BC (Bivar, 1983:29). Probably, his rule continued till Antiochus IV. The time when Antiochus III was defeated by Romans,

Parthians re-established their power in Hyrcania, Herat and possibly Nisa (Sellwood, 1980:21-26). He ruled about 36 years and issued silver coins at Mithradatkart-Nisa.

After the death of Arsaces I, the Seleucids re-occupied the Parthian territory. Antiochus III defeated Arsaces II (211-191BC) at Tagae near Damghan. Seleucids later made peace alliance with Parthian and Arsaces II was succeeded by Phriapatus in 191 BC. He issued a number of coins in Hecatompylos, Rhagae\_Arsacia and Mithradatkart (Sellwood, 1980:257). Phriapatus (191-176BC) was third king of the Parthian dynasty. He was succeeded by one of his sons Phraates I. Sellwood did not attribute any coin to Phraates

Mithradates I (171-138 BC) was another king who made Parthians powerful (Bivar, 1983: 36). Undoubtedly, he was a great king who transformed Parthian from a small dynasty to a world empire. He occupied Trans-oxiana, Tapuria Mede, Mesopotamia and Selucia in 141 BC. He fought with Sakas in Hyrcania and finally occupied southern and central Iran. He also successfully faced with Demeterius (Bivar, 1983:35).

Majority of historians believe that Mithradates died in 138/137 BC. He issued a number of silver coins in Hecatompylos, Nisa, Ecbatana, Susa, Rhagae, and Selucia. Phraates II (138-127 BC) succeeded the Parthian throne in 138 BC. He freed Demetrius and allowed

him to return to Syria and took his throne from Antiochus VII. Phraates was killed while waging a battle against Saka, in 128/127 BC (Bivar, 1983:: 39). He issued coins at Susa, Ecbatana, Rhagae, Nisa, Tambrax, Apamea-Rhagiana, Epardus, Aria, Saramana, Selucia on the Tigris, Selucia (Sellwood, 1980: 44-53). He was succeeded by Artabanus I (127-14 BC).

He recollected Parthian army and faced Sakas in Bacteria but injured during the battle and died in 124/123 BC. He issued coins in Ecbatana, Rhagae, Margiana, and Seleucia on the Tigris, Selucia, and Susa (Sellwood, 1980:56-62).

### Research Methodology

#### Sample selection

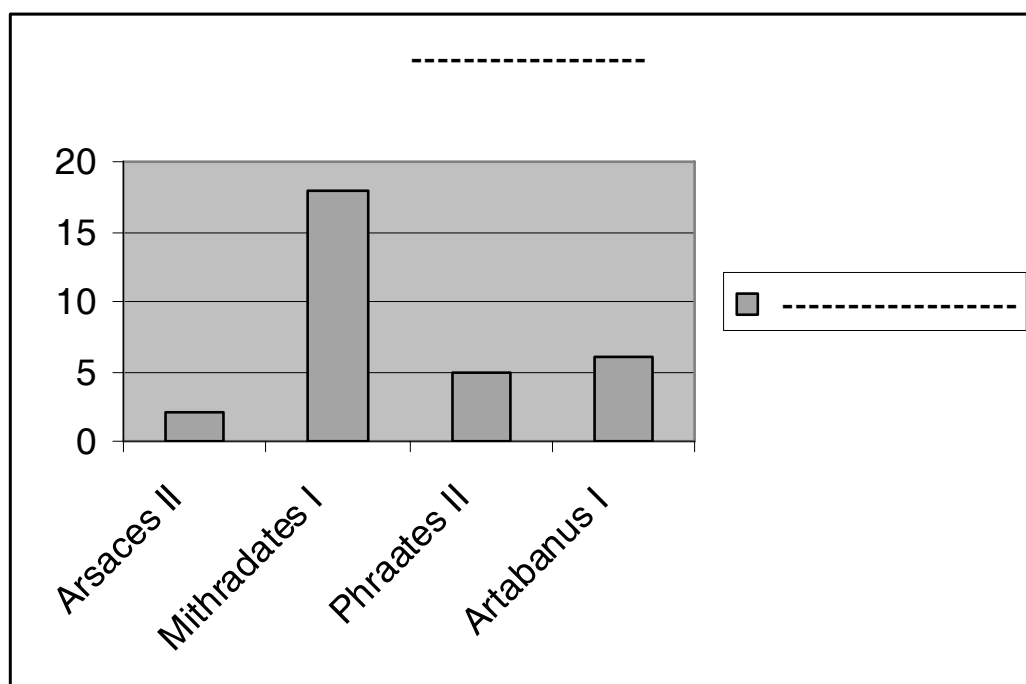
Reza Abaasi Museum was built in 1978 in the Iranian capital, Tehran. The museum has a rich treasure of valuable objects ranging from the pre-historic era to the contemporary Islamic period. A number of artifacts are still unclassified; among them one can point to the large collection of coins, partly belonging to Parthian era.

The coins introduced in this article are related to numismatic collection of this museum.

Here, we have selected the silver Drachma of Parthian issues, which were minted in the northwest and central mint houses of Parthian empire and Tetradrchama coins minted only in

Seleucid mints houses which today are situated in Iraq and Syria. All of the coins of this museum were either purchased or donated hence; they are counted as stray because place of their finding are still unknown.

With permission of Director of the museum, authors documented filmed and catalogued Parthian coins, and prepared them for statistical analysis.



**Table 1** Statistical analyses of Parthian coins in Reza Abbasi Museum

### Result

Parthian coins (Table 1) in Reza Abbasi Museum shows that their geographical distribution has had coincidence with the historical events. Coins from the period of Arsaces I show that his mint houses were situated in present Turkmenistan and his coins were not found beyond the eastern Iranian border. It has also been not reported from the numismatic collections of the proposed

museum. Coins of Araces I are manifestation of his lengthy rule. Arsaces II extended the Parthian power to eastern border which has been indicated from his coins. However, the number of coins show Parthians had become weak during this period. A lengthy rule of Mithradates and the emergence of Parthian as the world emperor indicated from the number coins he issued during his reign. Coins from Mithradates surpass other early Parthian kings.

Initial issues of Mithradates are largely concentrated in eastern Iran however; we also witness numismatic hoards in central and western Iran which could have been possible after the expansion of Mithradates' rule to these regions. Parthians during Mithradates I emerged not only a world power rather played important role in establishing commercial activities between the East and the West.

After Phraates II, Parthian empire was disturbed by Sakas who occupied several mint houses and issued their own coins. This is also proved by the paucity of Parthian coins during Phraates II. The lack of numismatic evidences is also attributed to short reign of Phraates II. Collection of Phraates coins in the proposed museum is less than the coins attributed to Artabanus. Probably, his coins were more prevalent in the western part of the empire. Surprisingly, Artabanus I who faced much resistance and trouble from Sakas and other northeastern tribes found to have issued more coins than Phraates. Number of coins attributed to the reign of Artabanus I shows his center of power may have been the northeast part of Parthian empire where he encountered with the central Asian tribes. Due to his long presence to counter the invaders, he was forced to issue more coins to pay for his big army. Parthians encountered problems in eastern region till the time of Mithradates II until they came up with a centralized rule in eastern and western region.

### Conclusion

The present paper, in a case study, has analyzed stray silver issues belonging to Parthian era. Distribution of silver coins shows early Parthian kings were busy in wars hence; they could not issue large number of coins. Historical sources and documents can be utilized to identify forged Parthian coins and their regular circulation. Since, most of the collection in Reza Abbasi Museum has been acquired as stray there were possibly re-melted. Other factors about forged coins may be epigraphic records on those coins.

Early Parthian metallic issues completely coincide with the Parthian history. Lack of Arsaces I coins in the museum his rule was beyond the northeastern Iranian border, and that he was often in war with his enemies. Arsaces II went beyond his predecessor and occupied northeastern part until Mithradates I who brought the Parthian power at par with Romans and controlled major trade routes.

Phraates invaded the western part and fought against Seleucid and that is why his mint houses were more active whose numismatic evidences are available in the museum.

It seems that most of the native issues of Iranian kings are less forged. It is also because of the fact that these coins were circulated throughout the empire and abroad and a forgery could have impacted commercial ties of Parthians.



1- Arsaces II



2- Arsaces II



3- Mithradates I



4- Mithradates I



5- Mithradates I



6- Mithradates I



7- Mithradates I



8- Mithradates I



9- Mithradates I



10- Mithradates I



11- Mithradates I



12- Mithradates I



13- Mithradates I



14- Mithradates I



15- Mithradates I



16- Mithradates I



17- Mithradates i



18- Mithradates I



19- Mithradates I



26- Mithradates I



33- Phraates II



20- Mithradates I



27- Mithradates I



34- Phraates II



21- Mithradates I



28- Mithradates I



35- Artabanuse I



22- Mithradates I



29- Mithradates I



36- Artabanuse I



23- Mithradates I



30- Mithradates I



37- Artabanuse I



24- Mithradates I



31- Phraates II



25- Mithradates I



32- Phraates II

**References**

- [1] Bivar, A.D.H. (1983), *The Cambridge History of Iran*, volume 3 (1) The Seleucid, Parthian and Sasanian periods, Ed Ehsan Yarshater, Cambridge,.
- [2] Caley, E. (1955), Chemical composition of Parthian coins, numismatic notes and monogram, no 129, *American Numismatic Society*.
- [3] Farhang Khademi, (2005), 'Socio-economic condition of Azerbaijan in Parthian period,' *Journal of Classical & medieval Numismatic Society*, number 2, pp1-11
- [4] Farhang Khademi, Hussain Sdeghi, Sadrudin Mosavi (2006), 'The Impact of Political Economic condition of the Parthian Period on the Chemical Composition,' *Journal of Classical & medieval Numismatic Society*, number 5, pp 31-7.
- [5] Flament, C. (2004), Analysis of ancient silver coins, Nuclear Instruments and the Physical Research Section B, vol 226, issue 1-2, 2004, pp 179-184.
- [6] Gordus, A.A. (1972), The purity of Sasanian silver coins and introduction, *Journal of the American Oriental Society*, 92, 2.
- [7] Hagivalie, H. et al. Application of PIXE to study ancient Iranian silver coins, Nuclear Instrument Methods in Physics Research Section B: Beam interactions, vol. 266, issues 8 April 2008, pp 1578-1582
- [8] Huber-Mark et al. (2008), Numismatic Object Identification Using Fusion of shape and local descriptors, Lecture Notes in Computer Science, Springer, Berlin, , pp 163-175
- [9] Gordus. A, Quantities non destructive Neutron Activation Analysis of Silver in coins, *Archaeometry*, vol. 10, issue 1, pp 78-86.
- [10] Craft G et al (2006), EPMA Investigation of Roman Coin, Silvering Technique, *Microchemica Acta*, 155, pp179-182
- [11] Sellwood, D. (1980), An Introduction to the Coinage of Parthian, London.
- [12] Wei., E. et al. (2007), A novel method for classification of ancient coins based on image textures, Proceedings 2<sup>nd</sup> workshop on Digital media and it's Application in Museum and heritage, DMAMH.



## تاریخ ابزاری برای شناسایی سکه‌های سرگردان:

### مورد مطالعه موزه رضا عباسی

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هر ساله تعداد زیادی سکه های اشکانی به موزه‌های کشور هدیه داده می شود که به علت نامشخص بودن محل پیدا شدن آنها نمی توان به اصالت آن سکه‌ها پی برد. این تکه فلزهای سرگردان که هر ساله کشف می گردد بخشی از آن متعلق به دوره اشکانی می باشد که به علت حکومت طولانی این سلسله بخش اعظم این یافته‌ها را تشکیل می دهد. که برای پی بردن به اصالت آنها مورد مطالعه را موزه رضای عباسی قرا داده ایم. داده‌های آماری از این سکه‌های سرگردان در مقایسه به تاریخ سیاسی آنها می توان چهره روشنی را در مقایسه با مستندات تاریخی درباره این سکه‌ها به ما بدهد. در این مقاله سعی در نشان دادن اصالت این سکه‌ها با نتیجه گیری از داده‌های آماری از این سکه‌های شاهان دوران اولیه اشکانی که در موزه رضای عباسی و تطابق آن با منابع تاریخی خواهیم داشت.

واژگان کلیدی: اشکایان، سکه‌های سرگردان، اصالت، موزه رضا عباسی

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