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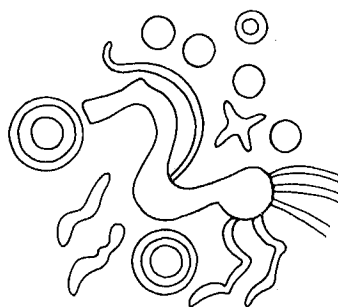
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Some Remarks Concerning the Parthian Gold Coins : the Parthian Calendars

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The Babylonian calendar, known from cuneiform tablets to have been composed probably at about 1300-1000 B.C., was a lunisolar system dividing the year into 12 approximately equal months. The year began with the month Nisanu (Table I) whose neomenia occurred at about the time of the vernal equinox¹. However, to keep the lunar year in general accord with the tropical year (the length of time between two consecutive crossings of the sun at the vernal equinox, equal to 365.24220 days), an intercalary month was introduced either at the end of the year, after the month Addaru or after the sixth month, Ululu.

TABLE I. THE MONTHS NAMES IN A NUMBER OF ANCIENT CALENDARS.

	Old Persian month name	Elamite month name	Babylonian month name	Pahlavi month name	Seleucid month name
I	Adukanaiša	Hadukannaš	Nisanu	Farvardin	Artemisios
II	Θūravāhara	Turmar	Aiaru	Ardvahišt	Daisios
III	Θāigarciš	Sakurriziš	Simanu	Hordād	Panemos
IV	Garmapada	Karmabataš	Duzu	Tir	Loios
V	----	Turnabaziš	Abu	Amurdad	Gorpiaios
VI	----	Karbašiyaš	Ululu	Shahrēvar	Hyperberetaios
VII	Bāgayadiš	Bakeyatiš	Tashritu	Mihr	Dios
VIII	Varkazana	Markašanaš	Arahsamna	Abān	Apellaios
IX	Āssiyādiya	Hašiyatiš	Kislimu	Ādur	Audnaios
X	Anāmaka	Hanamakaš	Tebetu	Dai	Peritios
XI	----	Samiyamaš	Shabatu	Vahman	Dystros
XII	Viyaxana	Miyakannaš	Addaru	Spandarnad	Xandikos

The Achaemenids employed both the Babylonian and the Old Persian calendrical systems. In the trilingual Behistun inscription, written in cuneiform Old Persian, Elamite and Akkadian, the names of nine months have been given by Darius according to the old lunisolar Persian Calendar (Table I). However, it appears that the Persian government used the Babylonian calendar in official Iranian records but that the month names were replaced by the traditional Persian names. The preserved documents from the Royal Treasury in Persepolis, covering the period 510-495 B.C., confirm this hypothesis. The surviving cuneiform inscriptions also reveal that while in the earliest period the insertion of an intercalary month was decreed according to the merit of the case (a second Addaru was ordered by royal decree to be intercalated in 541 B.C.), the first regularity prevailed during the reign of Cambyses (529-522 B.C.). In the third regnal year, a second Ululu was inserted and thereafter, based on the octaeteris count, the 5th and the 8th years of his reign had an intercalary Addaru².

The 19th year of Darius reign marked the introduction of the 19-year Metonic cycle (the insertion of 7 lunar months over a period of 19 years), and the year began with the

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I am indebted to Dr. Martin J. Price and David Sellwood for their expert views and revision of my notes. The responsibility for mistakes and misinterpretations is, of course, mine alone.

1 R.A. PARKER and W.A. DUBBERSTEIN, *Babylonian Chronology 625 B.C.- A.D. 75* (Brown University Studies, 19), Providence, 1956.

2 W. HARTNER, *Old Iranian Calendars*, in *The Cambridge History of Iran*, ed. E. YARSHATER, Cambridge, 1985, vol. 2, ch. 16, p. 742.

spring equinox which, due to the precession of the vernal point to the West by 1 degree of arc in about 72 years, had moved to approximately 27 March 503 B.C. (= 1 Nisanu), the earliest solar date. There can be little doubt that in spite of some expected initial erratic intercalary pattern, this date was selected intentionally to commence a new and more precise calendrical system than its Babylonian predecessor. There is also a considerable probability that the Later Avestan calendar was started on 27 March 503 B.C. with the first day of the month Farvašinam. This was a calendar composed of two year forms employed side by side both having 12 months of 30 days each together with 5 epagomenal days. The first, the Civil Year form had no intercalation; the other, called the Vihečakik Year form in Pahlavi texts, served Zoroastrian religious purposes and allegedly had one intercalary month every 120 years (see Table I for Pahlavi month names).

The conquest in 323 B.C. of Babylonia by Alexander the Great brought the Macedonians into contact with a calendar far more advanced than any used for civil purposes in Greek cities. In consequence, the administration in conquered Asian territories continued the reformed Babylonian practice while Alexander's court used the Macedonian calendrical system.

The Seleucids adopted the reformed Babylonian calendar but assigned to it the Greek month names (Table I). The Seleucid era in the territories of Babylonian calendar was reckoned from the Babylonian New Year and began on 2-3 April 311 B.C. However, the Seleucid court and the Greek cities of the realm continued to reckon the beginning of the era from the anticipated accession date of Seleucus I in the late autumn or early winter of 312 B.C. It appears that the Seleucid style of the Macedonian calendar was equated to the reformed Babylonian calendar and followed its 19-year intercalary cycle as early as 245 B.C.³ Yet, the evidence pertaining to the death of Alexander the Great indicates that in fact such a practice was adopted considerably earlier and before he died in 323 B.C.⁴

The first month of the Seleucid era was Dios. It corresponded to the 7th Babylonian month of Tashritu and marked the beginning of the second half of the Babylonian year after the autumn equinox. Following the Babylonian intercalation of Addaru and Ululu in years 3, 6, 8, 11, 14 and 19 of each cycle, a second Xandikos was intercalated, and in the 16th Seleucid year (17th Babylonian) a second Hyperberetaios was also intercalated.

The Parthian court and administration in Iran used both the Seleucid and the Arsacid era and equated the first year of their era to Seleucid year 65, i.e. 248/247 B.C. A drachm of Artabanus I struck at Agbatana (type S22.2) seems to bear a date in this reckoning (EKP = 125 P.E. = 124/123 B.C.). Their Babylonian scribes, on the other hand, dated their documents by the years of both eras while their Greek documents of the period followed the Macedonian style of the Seleucid calendar. Yet, on the documents written in Iranian language, the problem of the completely different Zoroastrian nomenclature for months and days is met with. This calendrical system which was composed of 12 months of 30 days duration, had the months (Table I) and days in each month named after Zoroastrian divinities, e.g. the first month Farvadin after Farvašis, the mighty and bounteous spirit of the just. The first day of each month was named Ohrmazd after the supreme god Ahura Mazda. Recent discoveries have revealed a Parthian inscription of Artabanus IV which is dated «Year 462, (month of) Spendarmad, day of Mihr». A Parthian contract drafted in the year 300 of the same calendrical system makes mention of the month Harvatat (Avestan name form) corresponding to the third month of the Zoroastrian year, Hordād (Pahlavi name form). The scribes of the Arsacid administration in Nisa, writing in Parthian Aramaic, again employed Zoroastrian names of months and days. The earliest so-dated document of this group is from the year 158 of the Arsacid era (= 90/89 B.C.). However, except for the fact that Zoroastrian calendar terminology was in use in about 100 B.C., the history of the Zoroastrian year before the

³ J. JOHNSON, *Dura Studies* (Thesis, Univ. Pennsylvania), Philadelphia, 1932, p. 4-6.

⁴ A.J. SACHS, *Late Babylonian Astronomical and Related Texts, copied by T.G. Pinches and J.N. Strassmaier*, (*Brown University Studies*, 18), Providence, 1955, no. 209, p. XIII.

epoch of Sasanian remains obscure. Nevertheless, because we already know that the Achaemenids assigned to the Babylonian months and days the Persian names and employed them in their documents inscribed in Iranian language, and moreover, the Manichaeans did the same and assigned to the seventh month of the Babylonian calendar the name of the first month of the Persian year, Farvardin⁵, it is highly probable that the Parthians too continued the same practice and assigned Zoroastrian month names to a borrowed calendrical system.

Hitherto, we have mainly been concerned with the types of calendrical systems that were employed by the Arsacids with no clear indications that from which month of the year their new year began. By examining the numismatic evidence from Seleucia on the Tigris, McDowell⁶ suggests that the relationship between the Babylonian and Macedonian calendrical systems was in use in Syria and Mesopotamia until about 16/17 A.D. although the first month and with it the start of the year varied in different places and times. He postulates that the same system, having Nisanu = Artemisios as the first month of the year, was also adopted by the Parthians and can be demonstrated for 15/16 A.D. This leads Samuel⁷ to argue that the strict Seleucid system with Dios as the first month seems likely to have been employed in the Seleucid west during the life of the dynasty and perhaps even more strictly, only in Greek texts dated by the Seleucid era and by a Seleucid monarch. None the less, Johnson demonstrates that sometimes during 229-100 B.C., a slight change appeared in the relationship between the Macedonian and Babylonian calendrical systems, causing the one month retardation of the former. This means that the year began with the month Xandikos (= 1 Nisanu) rather than the expected Artemisios. Johnson's conclusions are supported by the appearance at Dura of two cases of intercalary Dystros rather than Xandikos and also by Josephus' citation of Dios as the second month in the Macedonian year⁸. Accepting McDowell's conclusions that the sequence of coins of 15/16 A.D. can only follow the old Babylonian-Macedonian systems (Nisanu = Artemisios), Samuel demonstrates that Johnson's observed retardation of the Macedonian calendar, in fact, postdated 15/16 A.D. However, Le Rider⁹ rejects McDowell's numismatic arguments and offers sufficient evidence to show that Arsacid bureaucrats, when dating documents according to the Seleucid Era, also used the Macedonian system, although whenever the Arsacid Era was cited, the Babylonian calendrical system was employed instead. Sellwood¹⁰ studies four groups of tetradrachms belonging to the reigns of Vologases II (type S72) and Pacorus II (types S73, S75 and S77) and demonstrates the sequential significances of the obverse officina letters, running from alpha to epsilon with roughly two letters per year. He shows that only by putting the coins in the Macedonian-Seleucid system, taking Dios as the first month, can the sequence be maintained, whereas, following McDowell's hypothesis and considering Artemisios first or even taking Xandikos as the initial month could cause the mixing up of the officina letters. He consequently suggests that the Parthian mint of Seleucia, striking tetradrachms at about 80 A.D., worked to an official year commencing in the Autumn.

The accumulated new numismatic evidence since McDowell's work and the existing Parthian documents dated with Zoroastrian terminology seem to point to the fact that the Arsacids had in operation three different but compatible calendrical systems. The first, based on the Seleucid system with Dios as the first month of the year was used for dating their official documents and records inscribed in Greek and their coins. The

5 G. HALOUN and W.B. HENNING, *The Compendium of the Doctrine of Mani*, in *Asia Major*, 3, 1952, p. 200.

6 R.H. MCDOWELL, *Coins from Seleucia on the Tigris*, Univ. of Michigan, Ann Arbor, 1935, p. 147-153.

7 A.E. SAMUEL, *Greek and Roman Chronology. Calendars and Years in Classical Antiquity*, München, 1972, ch. IV, p. 139-144.

8 Josephus, *Antiquitates Judaicae*, I, 80.

9 G. LE RIDER, *Suse sous les Séleucides et les Parthes*, Paris, 1965, p. 33-35.

10 D.G. SELLWOOD, *The Parthian New Year*, in *NCirc*, 16, 1968, p. 155-156.

second, the reformed Babylonian lunisolar system was employed for dating the documents and cuneiform tablets written in Aramaic language though the era chosen was the more appropriate Arsacid era. The third, intended for official or perhaps religious documents inscribed in Iranian and/or in Aramaic languages, used the traditional Arsacid era and the Zoroastrian calendrical system in which the vague year began with the month Mihr corresponding to the months Tashritu and Dios in the Babylonian and Seleucid systems respectively¹¹.

Before turning our attention to surveying the extant numismatic evidence, it seems pertinent to consider an additional factor which played a decisive role in the organization of Parthian calendar and the establishment of their new year. There can be little doubt that the Zoroastrianism was the dominant religion in Iran during both the Seleucid and Parthian epochs, as it was in the succeeding Sasanian period, and that accordingly, it was the Zoroastrian festivals which were those most evidently kept in the land¹². No-Rooz, probably an ancient pan-Iranic spring festival, was the most important of the Zoroastrian feasts, invested with special religious significance. We are informed by one of the most prominent of Iranian scholars, Abu-Rayhan-al-Biruni, that during the Achaemenid times, gifts were exchanged between the King of Kings and other lesser rulers, nobles, the ladies of the court, merchants and humble people in token of respect and friendship. Chief among other ancient Zoroastrian festivals was Mihr (Mithra) whose festival, Mihragān, was traditionally an autumn one and respected as equally as No-Rooz was. It was celebrated on day of Mihr of month Mihr (the 16th day of the 7th month of Zoroastrian calendar). We are further informed by al-Biruni that some people gave preference to Mihragān by as much as they preferred autumn to spring. The two feasts formed the two poles of the year, celebrated as they were at the spring and autumn equinoxes.

The Arsacids were demonstrably devout Zoroastrians, and in some details of doctrine, apparently more orthodox than their successors, the Sasanians. Nevertheless, the facts point to a curious development during their period of rule, whereby, No-Rooz came to be celebrated at the autumn equinox and Mihragān at the spring one, the two poles of the religious year thus changing places. When the Sasanians overthrew the Arsacids and inherited their calendar, they did not attempt, it seems, to move No-Rooz back to spring equinox. It is difficult to postulate a satisfactory explanation for this fundamental and seemingly unorthodox change in the devotional pattern by the Arsacids. Yet, it may be probable that in order to bring their traditional Zoroastrian calendar in accord with the two established Babylonian and Seleucid calendrical systems, the beginning of the year in spring equinox had to be abandoned in favour of the equally important autumn equinox which coincided perfectly with the beginning of the year in the other two systems, already equated and in use. The celebration of No-Rooz at autumn would thus seem to have been justified.

The dates on Parthian coins appear erratically until about 40 B.C. and only irregularly afterwards. As a result, the dated coins may prove inadequate chronological means in establishing the start of the Arsacid year. However a particular group of dated tetradrachms, struck at Seleucia¹³, and belonging to the reigns of Phraates IV (38-2 B.C.) and his usurping rival, Tiridates (29-27 B.C.), may throw some light on this problem. It must be emphasized that the inference derived from the dated bronze coins of Gotarzes II (types S65.38-44) studied by McDowell and mentioned by Samuel, is highly inconclusive and can be equally true for both of the months Dios and Xandikos as the first month of the year. None the less, the same group will also be examined here solely to confirm the hypothesis that the commencing month of the Parthian calendrical system was Dios.

11 E. BICKERMAN, *Time-Reckoning*, in *The Cambridge ...*, 1983, vol. 3 (2), ch. 21 (a), p. 786.

12 M. BOYCE, *Iranian Festivals*, in *The Cambridge...*, 1983, vol. 3 (2), ch. 21 (a), p. 792.

13 D.G. SELLWOOD, *An Introduction to the Coinage of Parthia*, London, 1980, 2nd ed., p. 159-181.

Table II consists of the dated tetradrachms of Phraates IV and Tiridates covering the period 30/29-26/25 B.C. and arranged in accordance with the three months Dios, Xandikos and Artemisios as the start of the year. It becomes immediately evident that there were never concurrent issues of the two kings. Assuming that the Parthian calendar started with the month Artemisios, and assigning letters P and T to Phraates and Tiridates respectively, then the sequence of the alternating reigns would become : P-T-P-T-P-T-P whereas with the start of the year as either Dios or Xandikos the sequence could be : P-T-P-T-P.

TABLE II. DATED TETRADRACHMS OF PHRAATES IV AND TIRIDATES.

Seleucid month name	ΓΠΣ = 30/29 B.C.	ΔΠΣ = 29/28 B.C.	ΕΠΣ = 28/27 B.C.	ϚΠΣ = 27/26 B.C.	ΖΠΣ = 26/25 B.C.
Dios				Phraates	Phraates
Apellaios				Phraates	Phraates
Audnaios					Phraates
Peritios		Tiridates			
Dystros		Tiridates		Phraates	Phraates
Xandikos			Tiridates	Tiridates	Phraates
Artemisios	Phraates		Tiridates	Tiridates	Phraates
Daisios			Tiridates	Tiridates	Phraates
Panemos					Phraates
Loios					
Gorpiaios			Phraates*	Phraates	
Hyperberetaios	Phraates			Phraates	
Xandikos			Tiridates	Tiridates	Phraates
Artemisios	Phraates		Tiridates	Tiridates	Phraates
Daisios			Tiridates	Tiridates	Phraates
Panemos					Phraates
Loios					
Gorpiaios			Phraates*	Phraates	
Hyperberetaios	Phraates			Phraates	
Dios				Phraates	Phraates
Apellaios				Phraates	Phraates
Audnaios					Phraates
Peritios		Tiridates			
Dystros		Tiridates		Phraates	Phraates
Artemisios	Phraates		Tiridates	Tiridates	Phraates
Daisios			Tiridates	Tiridates	Phraates
Panemos					Phraates
Loios					
Gorpiaios			Phraates*	Phraates	
Hyperberetaios	Phraates			Phraates	
Dios				Phraates	Phraates
Apellaios				Phraates	Phraates
Audnaios					Phraates
Peritios		Tiridates			
Dystros		Tiridates		Phraates	Phraates
Xandikos			Tiridates	Tiridates	Phraates

* an isolated issue (S51.18) not necessarily struck at Gorpiaios.

Coins dated ΓΠΣ = S51.17, S53.1 and S53.2

Coins dated ΔΠΣ = S55.1 and S55.2

Coins dated ΕΠΣ = S51.18, S55.3, S55.4, S55.5 and S55.6

Coins dated ϚΠΣ = S50.6, S50.7, S51.19, S51.21, S51.22, S55.7, S55.8 and S55.9

Coins dated ΖΠΣ = S50.8, S50.9, S50.10, S51.23, S51.24, S51.25, S51.27, S51.28, S51.29 and S51.30.

Referring to the historical evidence¹⁴, we notice that Tiridates' attempts at deposing Phraates IV occurred once in about 30/29 B.C. and later in 26 B.C. which seems to favour the latter sequence. Of the two possible candidates as the starting month of the year, i.e. Dios and Xandikos, preference is given to the former for two reasons. Firstly, the month Dios coincides with the Parthian new year, No-Rooz which was brought from the spring equinox to the autumn one, and secondly, Phraates IV dated tetradrachm (type S51.18) of the year ΕΠΣ (= 285 S.E. = 28/27 B.C.) will not remain so conspicuously isolated as it appears to be in Xandikos' case. It now appears that the Parthian mint at Seleucia worked to an official year beginning with Dios as early as c. 30 B.C. For the sake of comparison, the aforementioned bronze coins have also been presented in Table III. Although these coins too confirm the unlikelihood of the month Artemisios as the beginning of the Arsacid year (due to the appearance of an unrealistic gap in the series, as stated by McDowell), they fail to establish whether the month Dios was indeed regarded as the first month in the Arsacid calendar (in both cases the coins follow an uninterrupted sequence of month dates).

TABLE III. DATED BRONZE COINS OF GOTARZES II (S65.38-44).

Seleucid month name	Year = ZNT 45/46 A.D.	Seleucid month name	Year = ZNT 45/46 A.D.	Seleucid month name	Year = ZNT 45/46 A.D.
Dios		Xandikos	S65.38	Artemisios	S65.39
Apellaios		Artemisios	S65.39	Daisios	S65.40
Audnaios		Daisios	S65.40	Panemos	S65.41
Peritios		Panemos	S65.41	Loios	S65.42
Dystros		Loios	S65.42	Gorpiaios	S65.43
Xandikos	S65.38	Gorpiaios	S65.43	Hyperberetaios	S65.44
Artemisios	S65.39	Hyperberetaios	S65.44	Dios	
Daisios	S65.40	Dios		Apellaios	
Panemos	S65.41	Apellaios		Audnaios	
Loios	S65.42	Audnaios		Peritios	
Gorpiaios	S65.43	Peritios		Dystros	
Hyperberetaios	S65.44	Dystros		Xandikos	S65.38

The gold coins of Vonones, described by D. Sellwood, carry the Seleucid year date AKT (= 321 S.E.) accompanied by the two successive months of Xandikos and Artemisios. Such a continuity in month dates had created some scepticism among scholars who generally believed that the Parthians reckoned the start of their year from Artemisios. It now seems highly probable that such a continuity is in fact pertinent to the Arsacid calendrical system which although borrowed from the Seleucids had its origin firmly rooted in Zoroastrian traditions.

¹⁴ A.D.H. BIVAR, *The Political History of Iran under the Arsacids*, in *The Cambridge...*, 1983, vol. 3 (1), ch. 2, p. 65-66.