

Tentative Attributions of some Gold Fanams of the Eastern Gangas

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In 2006, a relatively large number of gold fanams of the Eastern Ganga dynasty appeared on the coin market and were quickly dispersed. Although I was unable to determine the size of the hoard or the precise place of its discovery, I was able to examine and photograph 82 of these coins and to acquire images and some details of another 30 specimens. The purpose of this paper is to report on these 112 coins, to propose a chronological organization for them into five distinct groups and then to suggest some tentative attributions to individual kings of the dynasty, something which no one has attempted until now. The 82 coins that I was personally able to examine are presented in the Appendix.

The coins have been known to the numismatic world since at least 1882, when Biddie published some in the *Proceedings of the Journal of the Asiatic Society of Bengal*. Since then, many more have been reported, found mostly in Orissa, although most remain unpublished. The literature has been ably reviewed by Tripathy.² The obverse typically depicts a couchant bull along with other symbols, while the reverse features a symbol thought to represent the letter *sa* (for *samvat*, or year) flanked by elephant goads or an elephant goad and a battle axe, along with a number below, generally regarded as a regnal date. Some coins also carry the legend *śrī rāma* on the reverse above the letter *sa*. A typical coin is shown in Figure 1.



Figure 1: Typical Eastern Ganga fanam

¹ Boston University. This paper was originally drafted while I was a Fulbright-Nehru Fellow at St. Stephen's College, Delhi, on sabbatical from Boston University. The support of all three of these institutions is gratefully acknowledged. I would also like to thank Steve Album, Amol Bankar and Asif Biloo for sharing coin images with me, and Amol Bankar and Edward Cohen for helpful discussions.

² Snigdha Tripathy: *Early and Medieval Coins and Currency System of Orissa*, Calcutta: Punthi Pustak, 1986, Chapter 10.

A few authors have in the past attributed some of these coins to Anatavarman Chodaganga (1078-1150), but without much evidence for this conclusion. Presumably they were led to this identification by the fact that Chodaganga was perhaps the greatest of the Eastern Ganga rulers (he was the builder of the famed Jagannath Temple in Puri), and certainly the one with the longest reign. But this hardly forms the basis for an accurate attribution. Tripathy concludes, “It is … not possible to assign at the present state of our knowledge any of these *fanams* to a particular king of the Ganga family.”³ The present paper hopes to make some progress toward changing that conclusion.

Classification of the Coins

The first task facing any student of these coins is to read the dates on them. Since all of the relevant number forms on these coins are not shown in the usual sources such as Dani⁴ or Ojha,⁵ I provide in Table 1 a listing of the numerals. Note that the number 6 is omitted, as it does not appear anywhere on the coins (see the discussion below on the *Anka* system used on the coins).

0	1	2	3	4	5	6	7	8	9
·	ନ	୩	୩	୪	କ	?	ର	ର	

Table 1: Numerals on Eastern Ganga Coins

One interesting aspect of these coin dates is that these coins may be the earliest Hindu coins using decimal numbers for dating.⁶ Earlier dated coins, such as those of the Western Kshatrapas and the Guptas, used the old numbering system with special symbols representing each of the single digits and then separate symbols representing two-digit multiples of ten, such as 20, 30, 40, and so on, and yet further separate symbols representing three-digit numbers such as 100, 200, etc. Thus a number like 123 was written as 100-20-3. But the Eastern Gangas coins are written using only the symbols for the single digits, with the position of the number indicating the value such as tens or hundreds, just as we do today.

Turning now to the question of attribution, S.C. De attempted to develop a classification of the coins on the basis of variations in the symbols on them.⁷ However, as pointed out by Tripathy, the “symbols … seem to have little difference in their depiction and the different varieties of them emphasized by De on the basis of the symbols of indifferent and careless

³ Tripathy, *ibid.*, p. 132.

⁴ Ahmad Hasan Dani: *Indian Palaeography*, New Delhi: Munshiram Manoharlal Publishers, 1997 (reprint).

⁵ Pandit Gaurishankar Hirachand Ojha: *The Palaeography of India*, New Delhi: Munshiram Manoharlal Publishers, 1971.

⁶ I am indebted to Edward Cohen for pointing this out to me.

⁷ Susil Chandra De: “Orissan Coins,” *Journal of the Kalinga Historical Research Society*, Vol. 1, No. 4, 1946-47, pp. 363-373.

striking by die-cutters, bear little or no significance in this context.”⁸ The differences that De saw on the coins seem relatively minor and several appear to be die variations rather than true die differences. He also made no attempt to attribute the coins to individual kings on the basis of his classification, although he did point out that the coins looked to be issued by several kings rather than all by Anatavarman Chodaganga.

In what follows, the coins from the hoard are divided into five distinct groups, based on differences in their style and detailed designs. Each is discussed in turn in what follows and representative coins from each group are shown in Table 2.

Group 1: This group contained only one coin, which had a rather unusual form for the reverse letter *sa*, not seen on any other coin (see the illustrated coin in Table 2). The overall style was crude and resembled the style of coins from group 2, which is why I elected to place this first in the series. The other groups all follow logically in chronological order. It is a little risky creating a group from just one coin, since it is possible that this coin is simply an anomalous member of group 2 or belongs to a completely different time period. In that case, the chronological sequence would be reduced to just the next four groups and I will consider this possibility when discussing the attributions.

Group 2: There were 32 coins in group 2, divided into two sub-groups. The distinguishing feature of the coins of group 2 is the presence of a prominent circle in front of the obverse bull, with two pellets or dots above it in a vertical alignment. The group 1 coin had a vertical line above the circle and, as we will see, the group 3 coins have only one pellet above the circle. The coins are divided into two sub-groups on the basis of differences in their reverses. Of the 32 coins in the group, 28 had a letter form for the reverse letter *sa* that was open to the bottom; I have labeled these coins sub-group 2a. The remaining 4 coins featured a closed *sa*, as seen on the coin for sub-group 2b in Table 1. Because of the similarity in the obverse styles, these two sub-groups did indeed seem to belong to a single group rather than two chronologically distinct groups. Coins from sub-group 2b are known only for dates after year 15, so it appears the closed *sa* was creeping into use late in this group’s period.

Group 3: The group 3 coins are distinguished from those of group 2 in two important ways. First, as mentioned earlier, there is only one pellet above the circle in front of the obverse bull. Second, the letter form for the reverse letter *sa* is here more elongated and is always closed. To my eye, the style of the coins is more refined than that of the group 2 coins. There were 36 coins in this group and they included dates ranging from year 2 to year 33, the longest span of any of the groups.

Group 4: Coins of group 4, which included only 6 specimens, are very similar to coins of group 3. As in the group 3 coins, there is one pellet above the circle in front of the obverse bull, and the

⁸ Tripathy, *ibid.*, p. 126.

Table 2: Examples of coins from the five groups

(Note: Bold type is used to identify the distinguishing features of each group.)

Group	Photo	Details
1 (1 coin)		Unusual sa. Date known: 12*
2a (28 coins)		Circle with two dots above in front of bull. Open sa. Dates known: 2, 5, 10, 12*, 13, 15, 17, 19, 22, 23
2b (4 coins)		Circle with two dots above in front of bull. Closed sa. Dates known: 15, 18, 22, 27*
3 (36 coins)		Circle with only one dot above in front of bull. Closed, elongated sa. Dates known: 2*, 3, 18, 23, 24, 25, 27, 28, 29, 31, 32, 33
4 (6 coins)		Circle with only one dot above in front of bull. Closed, elongated sa with śrī rāma above. Dates known: 2, 15*
5 (37 coins)		Conch in front of bull, chakra above. Closed, elongated sa with śrī rāma above. Dates known: 3*, 4, 5, 7, 15, 17

*Denotes date on illustrated coin.

letter *sa* is closed and elongated. The distinguishing feature is the addition of the legend *śrī rāma* above the letter *sa* on the reverse. Because of the close similarity of the obverse types of groups 3 and 4, it is conceivable that coins of these two groups were issued in parallel rather than in sequence. However, I felt the addition of the legend *śrī rāma*, which was continued on all coins of group 5, was a sufficiently radical innovation to warrant placing the coins of group 4 in a separate category. As the bull is associated with the god Siva, while Rama is an incarnation of the god Vishnu, the inclusion of the *śrī rāma* legend marks a new phase in the coinage where both Siva and Vishnu are being honored.

Group 5: The coins of group 5 have reverses just like the coins of group 4, with an elongated, closed form for the letter *sa* and the legend *śrī rāma* above. However, the obverse is very different. The circle in front of the bull is now transformed into a conch (*sankh*), and the circle seen above the bull on all coins of groups 1 through 4 is now transformed into a discus (*cakra*). As the conch and discus are attributes of the god Vishnu, the coins of this group mark a deepening of Vaishnavite influence. According to Tripathy, “The Gangas were originally followers of Saivism and adopted Saivite symbol of couchant bull as the royal emblem. . . But later on they are known to have embraced Vaishnavism . . .”⁹ The coins of groups 1-3 illustrate a purely Saivite sensibility, while groups 4 and 5 are manifestations of the process of incorporating Vaishnavism into the official pantheon.

One possibility that cannot be ruled out is that groups 4 and 5 actually constitute a single group. There were only 6 coins in my sample that belonged to group 4, of which three were dated 2 and three were dated 15. There were no coins in group 5 that carried the date 2. So one possible scenario is that the year 2 coins were produced using the old obverse (simple circles before and above the bull) and then the obverse was changed (to the one with conch and discus replacing the circles) starting in year 3. The year 15 coins with the old obverse would then be anomalies or mules that were accidentally produced using old obverse dies. There is in fact a chance that all three year 15 coins of group 4 were produced with the same pair of dies, although the images I obtained for two of those coins were of very poor quality, so it was difficult to make a firm determination on the matter.¹⁰ Nevertheless, I will consider the possibility that groups 4 and 5 constituted a single group when discussing the attributions.

Attributing the Coins to individual Kings

In order to attribute the coins, I made the assumption that the five groups formed a tight chronological sequence. There are two implicit leaps of faith in this assumption. First, it assumes that the groups are separated in time rather than in space. One could imagine the differences in the designs and styles characterizing the different groups as arising from the making of the coins at different mints or at least from the work of different die cutters. If that were the case, it would

⁹ Tripathy, *ibid.*, p. 131. Unfortunately, Tripathy does not inform us when this Vaishnavization took place.

¹⁰ Of course it is also possible that the “old” obverse continued to be used at one mint, while the “new” obverse was used in a different mint. However, I will argue in the next section that it is likely that all the coins in this hoard were the products of a single mint.

render the ensuing analysis moot. I confess I find the assumption of a chronological separation appealing and reasonable, given the way the logical evolution of the designs seems to have proceeded. Second, it is assumed that the groups form a tight sequence, following one another in time without any gaps. Again, one could imagine that the groups could have been widely separated in time. However, there are two arguments against this. First, all these coins were found in one hoard and are therefore likely to be close to one another chronologically. Second, the coin styles and designs of the different groups are quite close to one another, again suggesting that they are close in time. Therefore, given the assumption that the groups are separated in time, the assumption that they form a tight chronological sequence seems quite reasonable.

The crux of the strategy for individual attributions is to look at the highest date seen in each of the groups and then to examine the dynastic list of the Eastern Gangas to see which sequence of kings is consistent with the minimum reign-lengths suggested by the coins. We see from Table 1 that the highest dates for groups 1 through 5 respectively were 12, 27, 33, 15 and 17. Our next task is to determine what this implies for the possible regnal lengths of the issuing kings.

It is known that the Eastern Ganga kings followed the *Anka* system for dating their reigns. This system had a number of unusual features that make the reckoning of actual time elapsed somewhat complicated.¹¹ These features can be summarized as follows:

- The system always started the yearly reckoning at the start of the new year, “the 12th day of the bright fortnight of the month *Bhadra* (August-September), which is known as *Suniya*.¹² If a king took the throne even a few days before this date, the first “year” of his reign would then just be a few days long.
- Coins were generally minted on the date of the new year and therefore the first coins would be given the regnal date 2; the number 1 would not be used. Indeed, I have never seen an Eastern Ganga coin dated 1.
- All dates ending in 6 would be skipped; year 5 would be followed by year 7, year 15 would be followed by year 17, and so on.
- Similarly, all years ending in 0 would also be skipped, except for the year 10.

The application of this system is seen in the dates on the coins; there are no known coins dated 1, 6, 16, 20, 26, 30, 36, and so on.

Thus the dates we see on Eastern Ganga coins are *Anka* dates and, given the particular features of the *Anka* system, it is possible to construct a table “translating” the observed *Anka* dates into the actual regnal length. Since the first date (year 2) reflects only a partial year, each *Anka* date could denote one of two actual elapsed years, and this is reflected in the table. For example, if the highest observed *Anka* date were year 3, that would denote a reign that lasted at least one year and possibly two, but less than three. This is illustrated in Figure 2, which shows

¹¹ See Tripathy, *ibid.*, p. 132, for a description of the *Anka* system.

¹² Tripathy, *ibid.*, p. 132.

an illustrative timeline for the first ten years of a reign and the Anka dates that would be seen on coins issued during those ten years. Because of the number of years skipped in the *Anka* system, the actual elapsed time was shorter than what might have appeared from the *Anka* dates, and this is seen clearly in Table 3, which shows the correspondence between Anka years and elapsed years.

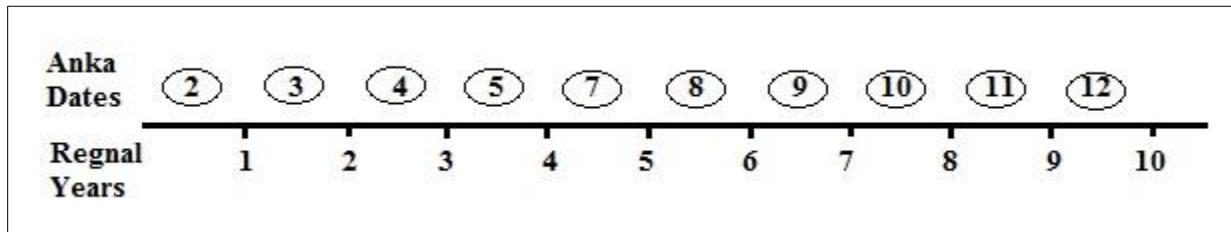


Figure 2: Illustrative timeline of regnal years and *Anka* dates

Table 3: Correspondence of *Anka* dates to actual years elapsed

<i>Anka year</i>	2	3	4	5	7	8	9	10	11	12
<i>Actual year</i>	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
<i>Anka year</i>	13	14	15	17	18	19	21	22	23	24
<i>Actual year</i>	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
<i>Anka year</i>	25	27	28	29	31	32	33	34	35	37
<i>Actual year</i>	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30
<i>Anka year</i>	38	39	41	42	43	44	45	47	48	49
<i>Actual year</i>	30-31	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40

Based on the calculations in Table 3, it is now possible to state the minimum regnal length required for each of the reigns implied by the different coin groups from Table 2. Each reign would have to have been at least this long in order for coins with the highest observed *Anka* dates to have been issued in that reign. For example, the highest observed date for group 2 was 27. This is the highest observed *Anka* date. From Table 2, we see that an *Anka* date of 27 implies an actual year 21 or 22. Thus the king who issued the group 2 coins must have had a reign at least 21 years long to have been able to issue coins with the *Anka* date of 27. Note that this is the *minimum* regnal length; the actual regnal length could have been longer and we may have just not observed coins issued later in the reign. The third column in Table 4 gives the minimum regnal lengths for the five kings who issued the coins in the five groups.

One immediate observation worth making is that the highest date observed on the coins is 33. This would suggest that it is highly unlikely that any of these coins belong to the reign of Anantavarman Chodaganga, whose reign lasted 69 years and who therefore could have issued coins with *Anka* dates as high as 87 (see column 4 of Table 5). If any of these groups were his,

we would expect to see dates in the 40's, 50's, 60's, 70's or 80's. Not seeing any of these therefore suggests that none of these coins are his. So whose are they?

Table 4: Minimum regnal lengths implied by *Anka* dates in the coin groups

Group	Highest <i>Anka</i> date	Implied minimum regnal length
1	12	9
2	27	21
3	33	26
4	15	12
5	17	13

We can try to answer this question by comparing the sequence of implied minimum regnal lengths from Table 4 with the actual regnal lengths of the Eastern Ganga kings to see if there is a sequence of kings whose reigns are consistent with the implied minimum regnal lengths. Table 5 provides the dynastic list of Eastern Ganga kings, along with their accepted regnal dates and the implied regnal lengths. Comparing the sequence from column 3 of Table 4 with the dates in column 3 of Table 5, we see that there is only one sequence of reigns consistent with the minimum regnal lengths implied by the coins, the sequence of the last five kings, starting with Bhanudeva II (1306-1328) and ending with Bhanudeva IV (1414-1434). These five kings then would be tentatively identified as the issuers of the coins in groups 1 through 5.

Table 5: Dynastic list of Eastern Ganga kings

King	Regnal dates	Regnal Length	Highest <i>Anka</i> date
Anantavarman Vajrahasta III	1038-1070	32	41
Rajaraja I Devendravarman	1070-1078	8	11
Anantavarman Chodaganga	1078-1147	69	87
Kamarnava II	1147-1157	10	13
Raghava	1157-1170	13	17
Rajaraja II	1170-1190	20	25
Anivankabhima II	1190-1197	7	10
Rajaraja III	1197-1207	10	13
Anangabhima II	1216-1235	19	24
Narasimha I	1238-1263	26	33
Bhanudeva I	1264-1279	15	19
Narasimha II	1279-1306	27	34
Bhanudeva II	1306-1328	22	28
Narasimha III	1328-1352	24	31
Bhanudeva III	1352-1378	26	33
Narasimha IV	1378-1414	36	45
Bhanudeva IV	1414-1434	20	25

Sources: For dates: N. Mukunda Rao: *Kalinga under the Eastern Gangas*, Delhi: B.R. Publishing House, 1991, Michael Mitchiner: *Oriental Coins and their Values: Non- Islamic States and Colonial Powers*, London: Hawkins Publications, 1978. Last two columns computed by the author.

A different, and perhaps more transparent, way of doing the same comparison would be to take the known regnal lengths of all the kings and calculate the implied highest *Anka* date that might be seen on that king's coinage. These numbers are calculated in column 4 of Table 5. We then compare the sequence of observed highest *Anka* dates and compare that with all continuous sequences of dates in column 4 of Table 5. Once again, only the sequence starting with Bhanudeva II and ending with Bhanudeva IV would be consistent with the observed sequence of dates.

I had mentioned earlier that the identification of group 1 on the basis of a single coin was problematic and therefore might be spurious. What if that was not a separate group and only groups 2-5 were correctly identified? If we look at all sequences of 4 successive reigns to see which sequence of kings might have given rise to the observed sequence of dated coins, we see once again that the only sequence of kings that could have issued groups 2-5 is the sequence of the last four kings, starting with Narasimha III (1328-52) and ending with Bhanudeva IV. Thus identifying these four kings as the issuers of coins from groups 2-5 seems a bit stronger.

Finally, I had also mentioned the possibility that groups 4 and 5 might have actually constituted a single group. If that were the case, we would have only four groups (and only three if group 1 is discarded) with highest known *Anka* dates in the sequence (12, 27, 33, 17), implying minimum regnal lengths of (9, 21, 26, 13). Looking at Table 5 again, we find that there are now two sequences of kings' reigns that would be consistent with this sequence of groups. One sequence would start with Bhanudeva II, as before, and end with Narasimha IV; the effect of rolling groups 4 and 5 together would be to reattribute the "group 5" coins from Bhanudeva IV to Narasimha IV. The other sequence would push the attributions forward by one king and start the sequence with Narasimha III (who would now be the issuer of group 1), ending with Bhanudeva IV. Thus the possibility of this scenario creates some uncertainty about the precise attributions. We would be left with the result that the four groups were issued either by the last four kings, or by the last four just prior to the last king.

Conclusion

Unfortunately, no precise attribution of these coins can be made with a high degree of confidence. What seems fairly certain is that none of these coins were issued by Ananatavarman Chodaganga, as some writers have previously assumed. It also seems fairly clear that these coins were probably issued by late rulers of the Eastern Ganga dynasty, apparently by some combination of the last five rulers. Table 6 presents the attributions that could be tentatively made under the different scenarios that have been discussed in the paper. The basic scenario, which divides the coins into five groups, would assign the coins to the last five rulers of the dynasty. Eliminating group 1 does not alter the attributions of the remaining coins. However,

merging groups 4 and 5 eliminates one king, either the last or the first of this sequence of the last five kings. The results therefore await further data and analysis for corroboration or rejection.

Table 6: Attribution of Coins to Individual Kings

Coins of Group	Basic Scenario	No group 1	Groups 4+5 merged, option 1	Groups 4+5 merged, option 2
1	Bhanudeva II		Bhanudeva II	Narasimha III
2	Narasimha III	Narasimha III	Narasimha III	Bhanudeva III
3	Bhanudeva III	Bhanudeva III	Bhanudeva III	Narasimha IV
4	Narasimha IV	Narasimha IV	Narasimha IV	Bhanudeva IV
5	Bhanudeva IV	Bhanudeva IV	Narasimha IV	Bhanudeva IV

The Appendix illustrates 82 coins according to the tentative attribution of the basic scenario, along with providing the coin details and mentioning some other coins from the hoard about which I have gathered some information but have not been able to examine personally.

Appendix: Details of 82 coins from the 2006 hoard

Group 1: Bhanudeva II (1306-1328) ?

Characteristic feature: unique form of letter sa



1: inv# m43.21, year 12, 0.47 g, 10-11 mm

Group 2: Narasimha III (1328-1352) ?

Characteristic feature: circle with two pellets above in front of bull

Group 2a: open letter sa

Additional coins known but not illustrated: year 22 (2 coins), 23 (5 coins)



2.01: inv# m43.04, year 2, 0.50 g, 9-10 mm

2.02: inv# m43.06, year 2, 0.49 g, 10-11 mm



2.03: inv# m43.14, year 5, 0.47 g, 10-11 mm

2.04: inv# m43.15, year 5, 0.47 g, 10 mm



2.05: inv# m43.16, year 5, 0.46 g, 9-10 mm

2.06: inv# m43.17, year 10, 0.48 g, 10 mm

	
2.07: inv# m43.18, year 10, 0.48 g, 9-10 mm	2.08: inv# m43.19, year 12, 0.47 g, 11 mm
	
2.09: inv# m43.20, year 12, 0.49 g, 10 mm	2.10: inv# m43.22, year 12, 0.44 g, 10 mm
	
2.11: inv# m43.23, year 12, 0.46 g, 9-11 mm	2.12: inv# m43.24, year 13, 0.49 g, 10 mm
	
2.13: inv# m43.25, year 13, 0.43 g, 9-10 mm	2.14: inv# m43.26, year 15, 0.46 g, 10 mm
	
2.15: inv# m43.28, year 15, 0.48 g, 10-11 mm	2.16: inv# m43.29, year 17, 0.49 g, 10 mm

	
2.17: inv# m43.30, year 17, 0.47 g, 11 mm	2.18: inv# m43.31, year 17, 0.51 g, 9 mm
	
2.19: inv# m43.32, year 17, 0.44 g, 9-10 mm	2.20: inv# m43.34, year 19, 0.48 g, 10-11 mm

Group 2b

Characteristic feature: closed letter sa

	
2.21: inv# m43.27, year 15, 0.44 g, 10-11 mm	2.22: inv# m43.33, year 18, 0.47 g, 9-10 mm
	
2.23: inv# m43.35, year 22, 0.48 g, 10-11 mm	2.24: inv# m43.43, year 27, 0.48 g, 10 mm

Group 3: Bhanudeva III (1352-1378) ?

*Characteristic features: Only one pellet above circle before bull, closed, elongated letter sa
Additional coins known but not illustrated: year 2 (1 coins), 18 (4 coins), 23 (5 coins)*

	
3.01: inv# m43.02, year 2, 0.47 g, 10-11 mm	3.02: inv# m43.03, year 2, 0.48 g, 11-12 mm

 	 
3.03: inv# m43.05, year 2, 0.47 g, 10-11 mm	3.04: inv# m43.07, year 2, 0.42 g, 10 mm
 	 
3.05: inv# m43.08, year 3, 0.50 g, 11 mm	3.06: inv# m43.09, year 3, 0.51 g, 11-12 mm
 	 
3.07: inv# m43.10, year 3, 0.48 g, 10 mm	3.08: inv# m43.11, year 3, 0.48 g, 11-12 mm
 	 
3.09: inv# m43.12, year 3, 0.49 g, 11 mm	3.10: inv# m43.13, year 3, 0.48 g, 10-11 mm
 	 
3.11: inv# m43.01, year 23, 0.46 g, 10 mm	3.12: inv# m43.36, year 23, 0.44 g, 10-11 mm
 	 
3.13: inv# m43.37, year 23, 0.45 g, 10-11 mm	3.14: inv# m43.38, year 23, 0.45 g, 10-11 mm

	
3.15: inv# m43.39, year 23, 0.46 g, 10-11 mm	3.16: inv# m43.40, year 24, 0.49 g, 10 mm
	
3.17: inv# m43.41, year 25, 0.46 g, 9 mm	3.18: inv# m43.42, year 25, 0.46 g, 9-11 mm
	
3.19: inv# m43.44, year 27, 0.47 g, 10-11 mm	3.20: inv# m43.45, year 27, 0.47 g, 10-11 mm
	
3.21: inv# m43.46, year 28, 0.47 g, 10-11 mm	3.22: inv# m43.47, year 29, 0.45 g, 10 mm
	
3.23: inv# m43.48, year 31, 0.45 g, 9-11 mm	3.24: inv# m43.49, year 32, 0.49 g, 10 mm
	
3.25: inv# m43.50, year 32, 0.49 g, 10-11 mm	3.26: inv# m43.51, year 33, 0.48 g, 10 mm

Group 4: Narasimha IV (1378-1414) ?

Characteristic feature: “śrī rama” added on reverse

Additional coins known but not illustrated: year 15 (2 coins)



4.01: inv# m43.52, year 2, 0.48 g, 10-11 mm

4.02: inv# m43.53, year 2, 0.48 g, 11-12 mm



4.03: inv# m43.54, year 2, 0.46 g, 11-13 mm

4.04: inv# m43.68, year 15, 0.45 g, 10-11 mm

Group 5: Bhanudeva IV (1414-1434) ?

Characteristic features: Conch and discus replace circles before and above bull

Additional coins known but not illustrated: year 3 (1 coin), 5 (1 coin), 15 (6 coins), 17 (2)



5.01: inv# m43.55, year 3, 0.49 g, 11 mm

5.02: inv# m43.56, year 3, 0.47 g, 11-12 mm



5.03: inv# m43.57, year 3, 0.48 g, 11 mm

5.04: inv# m43.58, year 3, 0.48 g, 10 mm

	
5.05: inv# m43.59, year 3, 0.47 g, 10-11 mm	5.06: inv# m43.60, year 4, 0.48 g, 10-11 mm
	
5.07: inv# m43.61, year 4, 0.49 g, 11 mm	5.08: inv# m43.62, year 4, 0.48 g, 11 mm
	
5.09: inv# m43.63, year 5, 0.48 g, 10-11 mm	5.10: inv# m43.64, year 5, 0.47 g, 11 mm
	
5.11: inv# m43.65, year 5, 0.48 g, 11 mm	5.12: inv# m43.66, year 7, 0.50 g, 11 mm
	
5.13: inv# m43.67, year 15, 0.46 g, 10 mm	5.14: inv# m43.69, year 15, 0.48 g, 10-12 mm

	
5.15: inv# m43.70, year 15, 0.46 g, 10-12 mm	5.16: inv# m43.71, year 15, 0.47 g, 10-11 mm
	
5.17: inv# m43.72, year 15, 0.47 g, 10-11 mm	5.18: inv# m43.73, year 15, 0.46 g, 10 mm
	
5.19: inv# m43.74, year 15, 0.43 g, 9-11 mm	5.20: inv# m43.75, year 15, 0.49 g, 10 mm
	
5.21: inv# m43.76, year 17, 0.44 g, 10-11 mm	5.22: inv# m43.77, year 17, 0.45 g, 10-12 mm
	
5.23: inv# m43.78, year 17, 0.45 g, 9-10 mm	5.24: inv# m43.79, year 17, 0.47 g, 10-12 mm

	
5.25: inv# m43.80, year 17, 0.45 g, 10-11 mm	5.26: inv# m43.81, year 17, 0.45 g, 10-11 mm
	
5.27: inv# m43.82, year 17, 0.47 g, 10-11 mm	