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# “Chariots” in contact: on the value of the signs \*91, \*92 and \*94 of Hieroglyphic Luwian

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**Abstract:** In this paper, I will re-examine the evidence for the interpretation of a complex compound logogram of the Hieroglyphic Luwian syllabary, PES<sub>(2)</sub>.SCALA.ROTAE. I will also offer an improved interpretation of the text of the KÖRKÜN stela. Finally, I will tentatively suggest that the specific meaning of the compound logogram PES<sub>(2)</sub>.SCALA may depend on the contact with the semiotic inventory of the cuneiform writing system.

**Keywords:** Anatolian hieroglyphs, Ancient Near East, writing systems, Luwian, Akkadian.

## 1 Introduction

The Anatolian hieroglyphic writing system is a mixed logographic-syllabographic script that originated some time during the Middle or Late Bronze ages in Anatolia. The oldest specimina are difficult to identify, as it is unclear at what point a possible pre-graphemic semiotic inventory turned into a glottographic writing system.<sup>1</sup> Whatever the solution to the problem of its origin, what is certain is that, by the late XV or early XIV century BCE, the hieroglyphs were certainly a systemic inventory of logograms and phonograms that were employed to write Luwian –

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<sup>1</sup> On the origin of the Anatolian hieroglyphic writing system, cf. the recent discussions by Yakubovich 2008; Waal 2012; Oreshko 2013; Payne 2015, chapter 3; Giusfredi 2018, 142 f.; Mora in press.

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one of the main languages of Bronze (and Iron) Age Anatolia. Luwian seems to have remained the only language for which the hieroglyphs were consistently used, even after the adoption of the script by the XIV and XIII century Hittite rulers, who employed it on their seals and, eventually, to compose monumental stone inscriptions.<sup>2</sup>

Over the past 80 years, the successful deciphering of the Anatolian hieroglyphs occurred for the large majority of the signs, including a number of logograms, also employed as determinatives,<sup>3</sup> which appear to be rather stable over the centuries during which the script was employed, and an inventory of syllabograms, that changed more significantly with the transition from the Bronze Age to the Iron Age. These eventually stabilized in what looks like a pretty consistent graphic *koinè* during the so-called Neo-Hittite phase, which indicates the period between the XI and the VIII/VII century BCE with a number of small Luwian-speaking (or rather Luwian-writing) principalities that flourished in southern Anatolia and Northern Syria.<sup>4</sup>

While the deciphering of the script was, in general, very successful, thanks also to the presence of multilingual documents and to the comparison with the cuneiform Luwian texts of the Hittite archives, a few problematic signs still exist. In the following pages, I will concentrate on one of them which is, structurally, a triple compound logogram formed by three single logograms combined in a graphically stable and ordered fashion. As a matter of fact, as different variants exist, depending on the presence or absence of one of the three main components, as well as the orientation of an asymmetric element, it is better to speak of a single “sign-type”, which includes three concrete realizations that Laroche, in his catalogue of the Anatolian hieroglyphs, recorded under the numbers \*91, \*92 and \*94.





## 2 The sign PES<sub>(2)</sub>.SCALA.ROTAE

The signs \*91, \*92 and \*94 of Hieroglyphic Luwian are considered to be three variants of a sign-type, generally composed by a sequence PES<sub>(2)</sub>.SCALA.ROTAE. The shapes recorded by Laroche (1960) are the following ones:

<sup>2</sup> See Payne 2015, Chapter 2, with extensive references to previous scholarship.

<sup>3</sup> On the writing system, cf. Hawkins 2000, 1–37; Hawkins 2003; Payne 2015, 17–44.

<sup>4</sup> For an overview on the history of the Neo-Hittite states, see Jasink 1995; the introductory chapters in Hawkins 2000, 38–45, 73–79, 224–226, 249–252, 282–288, 330–333, 361–364, 388–391, 398–402, 425–432; Giusfredi 2010, chapter 2; Bryce 2011.

Sign (Laroche <i>HH</i> )	Latin transcription (uncommon)	Picture
L 91	PES.SCALA(?)	
L 92	PES.ROTAE (at present unattested)  PES.SCALA(?).ROTAE (attested, as with PES <sub>2</sub> , cf. below paragraph 3.)	1.  2. 
L 94	PES <sub>2</sub> .SCALA(?)	

The sign is currently attested in the 8<sup>th</sup> century inscription of BULGARMADEN § 9, where it seems to determine(?) the nominative-accusative plural *zallalla*, generally translated as “chariot” or “cart” because of the context (cf. Hawkins 2000, 521 ff.; Yakubovich, ACLT). The meaning “speed” of Cuneiform Luwian *zalla-* is based on the comparison with this Hieroglyphic Luwian substantive, cf. Melchert 1993, s.v. and Starke 1990, 337). Note that cognates to the form *zallala-* exist and confirm the meaning: *zallan* is an adverbial/prepositional element that in the compound *zallan tuwa-* means “move away”, and a motion verb *zallaniya-* seems to mean “to turn”, vel sim. Also, a Glossenkeil word in Hittite, *zallawara-*, is associated to the motion verb *iyanni-* and is probably also the Luwian name of a vehicle.<sup>5</sup> The text runs as follows: “I was dear to my lord Warpalawas ...”

- [1] |á-p[a]-sa-pa-wa/i-mu-u | (“ASINUS”) tara/i-ka-sa-ni-ia-za (\*92)  
za-la-la | (“ARGENTUM.DARE”) pi-ia-ta-’  
“... and he gave me *mule carts* (lit. ‘carts for mules’)”

5 KUB 44.4 obv. 5. Cf. Melchert 1993, s.v. *zallawar*. Starke 1990, 337 ff., 544 ff.

A second occurrence accompanying the substantive *zallalla-* can be found in the also late ASSUR LETTER D, § 9; again, the reference is to a “cart” (Hawkins 2000, 533ff.):

- [2] |DOMINUS-ni-wa/i |(\*91)za-la-la-si-na |kwa/i-ti-sà-mi-na-i |(VIA)ha+ra/i-wa/i-ni  
 “Send to the Lord the *k.* of a cart!”

A further occurrence is attested in the generally problematic TOPADA text, where the logogram is probably the title of a low-ranking ruler who was friendly towards King Wasusarmas (cf. Hawkins 2000, 451 ff.).

- [3] wa/i-mu tara/i-zi/a REX-ti-zi/a CUM-ni wa/i<sub>6</sub>-sa<sub>7</sub>-ta<sub>x</sub> wa/i<sub>5</sub>+ra/i-pa-la<sub>x</sub>-wa/i-sa<sub>x</sub> ki<sub>x</sub>-ia-ki<sub>x</sub>-ia-sa<sub>4</sub>-ha ru-wa/i<sub>7</sub>-ta<sub>x</sub>-sa-ha \*92  
 “And three kings were dear to me: Warpalawas, Kiyakiyas and Ruwas the \*92”<sup>6</sup>

The context here is not very helpful, and the meaning, perhaps “charioteer” (Yakubovich, ACLT), can only be based on the BULGARMADEN and ASSUR parallels and on the aforementioned Cuneiform and Hieroglyphic Luwian related forms.

In all the above cases, the sign has clearly three graphical elements: a PES or PES<sub>2</sub>, combined with the sign conventionally transcribed as SCALA, and two small instances of the sign ROTA under the sole. Before examining the final, problematic occurrence of the sign, I will now discuss the three elements that compose its typical shape.

### 3 The three components of the sign

The “foot” sign, in the two variants with opposite orientation PES and PES<sub>2</sub>, is generally unproblematic. In Hieroglyphic Luwian, it introduces substantives like *pada/i-* “foot” and verbs of motion, including *awi-* “come”, *upa-* “bring”, *usa-* “carry”, *hinu-* “move”. Its role in the semiotic composition of a sign for vehicles is rather obvious, and requires no further discussion. The other two graphic elements, on the other hand, do.

The sign representing a single wheel is L 292:

<sup>6</sup> Cf. also Weeden 2010 for discussion of this peculiar monumental inscription.



Fig. 1: The sign ROTA (\*292) in its more refined version and in its early and problematic Yalbur occurrence

It is quite elaborated, and the structure of the wheel is represented. The occurrences, however, are far less clear in their meaning, starting with the famous one in Yalbur, § 9, that Hawkins (1995) renounced to translate, while Poetto (1993, 50, followed by Oreshko 2013) reasonably proposed to interpret the single ROTA as a sign for a chariot:

- [4] EXERCITUS CENTUM? ROTA i(a)-zi/a  
 “he(?) made an army of/with a hundred chariots”<sup>7</sup>

In the occurrences within the compounds under discussion, the wheels are often reduced to two circles, but Oreshko’s proposal for the Yalbur passage and the fact that all instances of PES<sub>(2)</sub>.SCALA.ROTAE discussed so far are related to vehicles make it unnecessary to have any further doubts about the identification of the circles.



The third component, usually transcribed as SCALA, is, however, the most problematic. First of all, we have two types. The ladder type () occurs in our compound, in the sign for “upper floor”, DOMUS+SCALA, and it may be a part of the sign *ru*, which may derive by imperfect acrophony, from the word *aru-*, “high”.



Fig. 2: The signs DOMUS+SCALA and /ru/

The staircase type () , on the other hand, only occurs in our triple compound sign:

<sup>7</sup> Cf. Hawkins 1995, 68, for transcription, mostly based on the outstanding edition by Poetto 1993 (who, however, regrettably adopts criteria of transliteration that are no longer shared by the scientific community).



Fig. 3: A staircase type SCALA in PES<sub>(2)</sub>.SCALA.ROTAE

Given its belonging to a sign that generally indicates or determines names of vehicles, and specifically chariots and carts, one may reasonably wonder whether the staircase is, in fact, a stair, or if it represents a component of a chariot, for instance the reins. I was initially attracted by this second hypothesis, which would explain the compound from a graphic-semiotic perspective: the foot is the man, standing over the chariot (wheels) and holding reins. Still, it is clear from the existence of instances of PES<sub>(2)</sub>.SCALA.ROTAE, e.g. in BULGARMADEN,<sup>8</sup> that use the ladder type version, that the two variants of SCALA should be free variants of the same element, which needs, therefore, to be still interpreted and transcribed as SCALA.

Once the three components have been, if not explained, at least identified, it is necessary to examine a couple of exceptional occurrences of the sign that have been identified in the scientific literature. As we will see, the first one is, in fact, no real exception, while the second one is, and requires discussion.

#### 4 A putative wheel-less occurrence

While one of the two occurrences in the ASSUR LETTER D, the one at § 9, was drawn by Hawkins (2000) with wheels, in another one, earlier in the text at § 4, according to Hawkins's hand copy the logogram would appear to be without the wheels.



Fig. 4: On the left, the putative wheel-less occurrence in ASSUR LETTER D, § 4; on the right, the shape with wheels in the same document, § 9 (hand copies by Hawkins)

<sup>8</sup> Edition in Hawkins 2000, 521–525.

However, the occurrence in § 4 features two small signs that Hawkins interprets as logogram markers. Since the original document is beyond hope of retrieval (I thank Annick Payne for providing me with this information), I enlarged a high quality scan of the published photograph and checked the shape of the sign: there are, in fact, almost certainly two wheels in § 4 as well (while logogram markers may or may not be present right under the wheels).



Fig. 5: The real shape of the sign in ASSUR LETTER D, § 4 (my hand copy)

Here, the logogram determines the obscure substantive *atutinzi* (plural accusative of *atuta/i-*); the actual presence of the wheels is important, because the context of the letter seems to regard the expedition of a part of a cart or chariot (see above), of shields, and some other obscure objects, the *masarinzi*, which in Giusfredi (2012, 157) I tentatively tried to interpret as garments or cloths.<sup>9</sup> Once the presence of the wheels is demonstrated, the hapax legomenon *atuta/i-* could, consistently with the interpretation offered by Hawkins (2000, 533 ff.), be a type of cart or chariot, or again an element related to a cart or chariot.<sup>10</sup>

## 5 The real wheel-less occurrence

Whatever the exact meaning of *atuti-*, the identification of the two wheels leaves us with a single instance in which the sign is actually attested without wheels:

<sup>9</sup> Cf. also Giusfredi 2010, 212. The Akkadian model form would be related to the verb *mašarum*, which has the technical meaning “to card” when referred to cloths.

<sup>10</sup> Could *atuti-* be an Akkadian loan itself, overlooked in Giusfredi (2012), connected to Akk. *atūdu*, “ram” *vel sim.* (AHw. I, 88) and thus indicating a small cart to be pulled by goats? While I shall not commit myself to this solution, the possibility is certainly worth of some consideration.

the 9<sup>th</sup> century text of the KÖRKÜN stela, §§ 5–7. It features the PES<sub>2</sub> version of the foot, and what looks like a very minimal version of a ladder-type SCALA – which, in this case, is almost a single straight line.

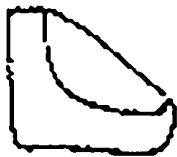


Fig. 6: The certainly wheel-less occurrence in KÖRKÜN (hand copy by Hawkins)

Apart from the shape, the context of this occurrence is peculiar (Hawkins 2000, 171 ff.). It belongs to a monumental inscription dictated by an official named Kazu(p)pi(ya)s, who must have belonged to the court of King Astiruwas of Karkemiš, during the late IX or early VIII century BCE.<sup>11</sup>

In section §§ 5–7, reference is made to the aftermath of a military campaign to take place in the future, and the text prescribes a sacrifice to be offered in front of the relief of the Storm God that accompanies the inscription. I will now propose an updated interpretation of the meaning of the passage and of the value of the wheel-less variant of the compound logogram, which, at the end of this paper, I will suggest should be treated as a separate sign. “When King Astiruwas built these *warpi*-temples ...”<sup>12</sup>

|a-wa/i |za-na |HALPA.PA|| -wa/i-ni-sá |(DEUS)TONITRUS-hu-za á-pa-ti  
 |(SOLIUM+MI)i-sà-nu-ha  
 |á-mi-sa-wa/i |(NEPOS)ha-ma-si-sá |NEPOS-ka-la-sá |á-mi |\*94-ta-ti  
 |CRUS EXERCITUS.LA/I/U-ti pi-ha-mi-sá |ARHA |“PES”-wa/i-tà  
 |á-pa-sa-pa-wa/i za-ti |DEUS-ni |X+RA/I-sa |á-sa-ha-na-ti-sa-za |pi-ia-tu

In this case, the logogram writes a dental- or *i*-stem word that is inflected in the dative-locative singular \*94-*ta-ti* and indicates the place to which the victorious successor of the local lord Kazu(p)pi(ya)s (an official of King Astiruwas) will come back from the battle before sacrificing in front of the image of the Storm God depicted on the stela.

<sup>11</sup> On the history of the Astiruwas dynasty, cf. Hawkins 2000, 78–81; Giusfredi 2010, Chapter 2; more recently Marchetti and Peker 2018.

<sup>12</sup> The meaning of *warpi* remains obscure. Yakubovich 2016 and ACLT, data retrieved in December 2018, suggests “weapon, tool”.



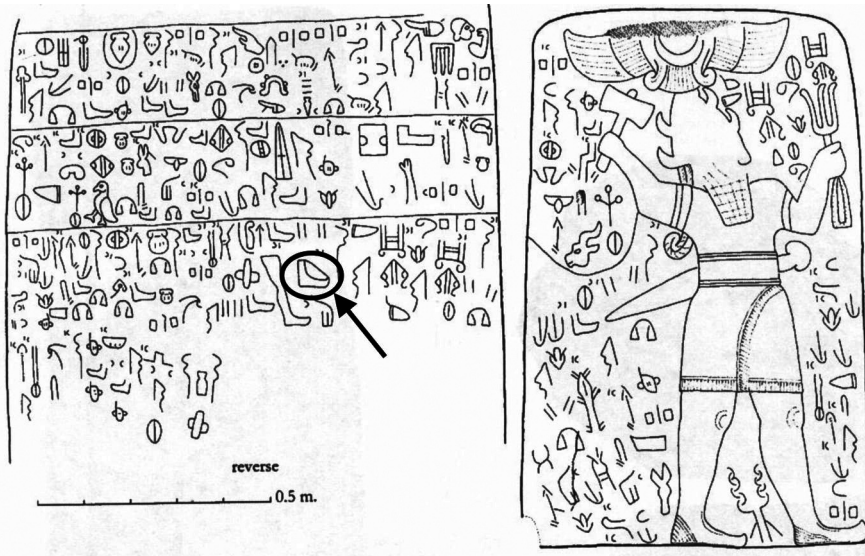


Fig. 7: The KÖRKÜN stela and the occurrence of \*94 (drawn by Hawkins)

While Hawkins’s aforementioned edition tentatively proposed interpreting this instance of \*94 also as a sign for “chariot”, in my opinion this analysis makes little sense. First of all, the place to which the descendent of Kazu(p)pi(ya)s is expected to come back to perform sacrifice must coincide with the location of the very stela, which is indicated by the use of a proximal demonstrative that proves that the Storm God the offer must be addressed to is the one represented on the monument. Furthermore, the hendiadys (NEPOS)*ha-ma-si-sá* NEPOS-*ka-la-sá*, / *hamsis hamsukalas*/ “grandson (or) great-grandson”, clearly means “a descendent”, which makes it highly likely that the military occasion referred to by the text is a hypothetical one that would happen in the future after Kazu(p)pi(ya)s’s death (which, however, almost certainly had already happened when the stela was dedicated!). All these facts point to Kazu(p)pi(ya)s’s \*91 being not a chariot, but a location, which, given this context, can only be his resting place. I therefore wish to suggest updating the translation of Kōrkūn, §§ 5–7, as follows:

“... Here (= inside the temples, probably in the city of Karkemiš), I set up this Halabean Storm God.

(When) my grandson (or) great-grandson shall come back victorious to my *resting place*(?) with the infantry and the army, he shall make blood offerings to this god.”

I believe that the textual and historical arguments presented here for this interpretation are extremely strong. This emendation of Hawkins's translation leads us to a first, important result. While the only occurrence of the compound sign-type under discussion that is actually without wheels is, in fact, a sign with an entirely different meaning, all the other occurrences correspond to a strictly triple compound  $PES_{(2)}.SCALA.ROTAE$ , and all of them refer, in all likelihood, to vehicles, chariots or carts. Therefore, sign \*92 of Laroche's catalogue should now be consistently transcribed as  $CURRUS_2$  and added to the reconstructed logographic inventory of the Hieroglyphic Luwian system.<sup>13</sup>

## 6 The graphic and linguistic interpretation of \*91/\*94

I have, however, not yet solved the whole problem. It is still necessary to address the problem of the word behind the logogram \*91/\*94 and of the graphic structure of the sign. While the semantics is, in my opinion, sufficiently clear, these two issues are far from easy to address. I will now propose a speculative attempt at an explanation, that, however, cannot be proven in a conclusive fashion.

Graphically (and graphemically), the question we are facing can be formulated as follows: how does a wheel-less chariot become a burial/resting place? There seems to be no immediate iconicity basing on the interpretation we gave of the graphic components of the sign, nor is there an easy path for semantic change (obvious metaphors or metonymic processes can be discarded).

In order to solve this issue, I would like to propose a tentative interpretation for the meaning of \*94-*taT(i)*-, based on the comparison with (Boğazköy and Nuzi) Akkadian, considering *not* the languages, but rather the semiotic inventory of the cuneiform syllabary and its influence on the hieroglyphic one. In Boğazköy and Nuzi Akkadian, the word *mayāltum* has two possible meanings (and so does the corresponding Hittite Akkadogram *MA-YA-AL-TUM*, e.g. in VBoT 13:12). The first one is "chariot, wagon", and it is attested already in Old Hittite texts such as

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<sup>13</sup> Note that the logogram/determinative that is currently transcribed as  $CURRUS$  (\*288) is, in fact, attested five times in the Hieroglyphic Luwian corpus, and in three out of the five occurrences (KARKEMIŠ A11b+c, § 7 and A12, § 4; TELL AHMAR 6, § 27) it determines the substantive *warzani(ya)*-, which has a rather obscure meaning (an actual "chariot", as per Collon 2010, 50 f., or rather a "military campaign"?). A fourth occurrence (AKSARAY, § 7) determines the equally obscure substantive *kusa*(?), that may or may not indicate a vehicle, while the fifth is in the problematic TOPADA stela, § 7, and determines or writes a motion verb. It is therefore unclear whether  $CURRUS$  really was a sign for the substantive "chariot", and, for the time being, it is more cautious to indicate the compound under discussion as  $CURRUS_2$  instead of directly replacing the questionable  $CURRUS$ .

the Bilingual Annals of Hattusili I (cf. Giusfredi 2013). The second one is “bed” (cf. also CAD, M/1, s.v.). The scribal (and possibly truly linguistic) polysemy most likely depends on the wooden or metal structure of a bed, which resembles a wheel-less chariot or wagon. For a vaguely similar semantic map cf. also Latin *lectus* : *lectica* (on which cf. De Vaan 2008, 332). In later Mesopotamian texts, the closely related Neo-Babylonian word *mayālu* also indicates, metaphorically, the burial ground.<sup>14</sup> I would like to suggest that the semantic process that produced, in Hieroglyphic Luwian, a sign for “bed” and “resting place” starting from the compound sign for “chariot” was influenced by, or at least parallel to, the polysemy of the Akkadian *mayāltum* and *mayālu* (and of the corresponding Akkado-gram *MA-YA-AL-TUM*), but following in an opposite direction. The semantic shift in Akkadian moves from the original meaning “bed” (from *niālum* “to sleep”) to the derived meaning “wagon, chariot”. In Hieroglyphic Luwian, since the combination PES+SCALA+ROTAE is almost certainly the representation of a vehicle on wheels, eliminating the wheels, a sign for the “bed” is produced by a sort of “graphic backformation”.

This reconstruction is, admittedly, tentative. If it is correct, we would be in the position of trying to identify the very word that is hidden behind the writing \*94-*ta-ti* in KÖRKÜN. It would be certainly tempting to assume that the root was the same as in the Hittite *sast(a)*- “bed” (Kloekhorst 2008, 746: a derivative noun from the verb *ses-/sas-* “to sleep”). Within the Luwian corpus, however, one should also compare the following lexical material:

- *sa<sub>5</sub>-sa<sub>5</sub>-tâ-ti* in ALEPPO 7, § 2. While the word is similar to \*94-*taT(i)*- in the final syllables, the determinative there seems to be DOMUS (Hawkins 2011, 47f.), probably pointing to the “bedroom” rather than the “bed”. Furthermore, the writing with TÂ in this case indicates a voiced dental stop.<sup>15</sup> Note also that the interpretation of the form as an instrumental in Hawkins (2011) may be mistaken. The form *sas(s)adat=i* may be a dative-locative, governed by the following postposition PRAE (*parran*). The Luwian word for “bedroom” would then be safely reconstructed as *sas(s)adat(i)*-, which might be related to, but because of the voiced dental stop *cannot be identical with*, LECTUS<sub>2</sub>-*taT(i)*- “bed/resting place”.

<sup>14</sup> See CAD M, 120, for the few occurrences.

<sup>15</sup> See Rieken 2008 for a discussion of the value of the sign TÂ of Hieroglyphic Luwian.

- (“LECTUS”) *i-sa-na-za* in KULULU 2, § 3. This word is almost certainly unrelated. It is connected to the root of Hitt. *es-/as-* “to sit”,<sup>16</sup> also present in other Luwian words (cf. Kloekhorst 2008, 254 for a list). Also, the logogram LECTUS, that determines it, is probably a couch or luxury bench rather than a sleeping bed: the context of occurrence points, indeed, to a connection with eating and drinking rather than sleeping.

## 7 Conclusion

I will not commit myself to the hypothesis of a derivation of \*91/\*94 by epigraphic contact, although I find the possibility much likelier than a mere accidental graphical similarity. What, on the contrary, has been demonstrated in this paper, is that the wheel-less \*91/\*94 must be separated from the occurrences of PES<sub>(2)</sub>. SCALA.ROTAE, and that there are no chariots in KÖRKÜN §§ 5–7. In conclusion, I suggest distinguishing between two different compound logograms:

- PES<sub>(2)</sub>.SCALA.ROTAE = CURRUS<sub>2</sub> determining and writing nouns of types of carts, chariots, wagons, or parts of these vehicles.
- PES<sub>(2)</sub>.SCALA = \*91/\*94 currently attested only in KÖRKÜN, where it is a Luwian word for “resting place”, and possibly “bed”.

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<sup>16</sup> See HW<sup>2</sup>, vol. 2, s.v., and Kloekhorst 2008, 252–255 (where the Luwian cognate (“LECTUS”) *i-sa-na-za* is, however, either overlooked or implicitly refused).

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