

Glyph: **kulai** = a hare; kulai mandal = the three rupees given to the bride's father as the price of his daughter; kulai hopon = a leveret; kulai ape sede dar.keda = the hare has run in your direction, i.e. it is for you to reply to what has been said (Santali.lex.)

Hare s'as'a, saso, sasalum = hare, rabbit (G.); soso, sosea_ (Kon:kan.i) s'a_sa (Skt.) sword or knife [s'as = to cut (Skt.)]

kulhi = the village street (Santali.lex.)

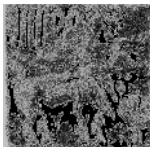
kulhu = a Hindu caste, mostly oil men (Santali.lex.)

kulhu = an oil press (Santali.lex.)

kol 'metal, alloys of metal'; furnace. **kol**, **kolhe** (iron-smelter)(Santali.lex.) kol, kollan-, kollar = blacksmith (Ta.lex.) [kollulaive_r-kan.alla_r: nait.ata. na_t.t.up.); mitiyulaikkollan- mur-iot.ir.r.an-n-a: perumpa_](Ta.lex.)



m1179 2606 Human-faced markhor with long wavy horns, with neck-bands and a short tail.



m1180a 1303 Human-faced markhor [maru_ka 'a deer' (Skt.); marai sambar, Indian elk (Ta.)(DEDR 4724)]

antelope: *kuran:ga* a deer in general (Skt.); Rebus: *korn:ga* 'a Hindu caste of wood turners' tiger: *kol* (furnace)

Glyph: *vahur.o* young bullock (S.); *vohur*. heifer (L.); *vahar.*, *vahir*. heifer (P.);(CDIAL 11459). *paghaia d.an:gra* a pack bullock (Santali)

Substantive (soldier, trader) **va_karan-** 'soldier' (Ta.) *vahoro*, *vohharo*: *vahoro*, *voro* (Hem. Des. *vohharo* = Skt. *ma_gadha* a mixed tribe, a bard) a trader, a *bora_*;

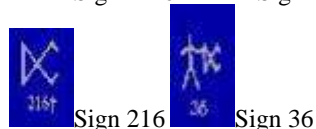
bull: *bailo* (*bal* 'iron ore'); *d.an:gra* 'bull'; *d.han:gra* 'blacksmith'

Jointed animals: *san:gad.a* (*kan:gar* 'furnace')

Crab glyphs (including ligatures)



Sign 364 Sign 251



kamt.ao, **kapt.ao** = to grab, to grasp, to seize, as a hawk a bird (Santali.lex.) **khablao** = to grab, clutch, grip (Santali)



(Ka.);

m0312 Persons vaulting over a water-buffalo.

kambala = a buffalo race **kambula**, **kambula** = a buffalo race in a rice field

(Tu.)(DEDR 1239). *Khamd.a*, *khamd.ao* = to gambol, to sport, to flirt (Santali)

Glyph: *ka_mal.iyo* a hairy kind of caterpillar (G.) cf. *kamal*. blanket (G.); *kambal* (Skt.)

Substantive: *ka_mal.i_* a writslet made of glass (G.)

cf. *kambiga* = a mace bearer (Ka.lex.) [In this context, the spoked-wheel-fellies glyph on Seal h598D, together with an inscription containing the 'crab', 'fig-leaf' glyph gains significance as **put.hi**, a copper ingot]. **kabar.a** = an apparatus; **kat.h kabar.a** = wood work; *khu_h da_ kabar.a_* = the machinery of a well (P.lex.) **kampa_d.aga** = teak, *te_gu* (Ka.lex.) **kaba_d.amu** = a bullock-load of grass or straw, the load being distributed on both sides (Te.lex.) *kaba_d.a* = a bullock- or horse-load of grass, wood etc. (Ka.M.Te.); *kava_d.a* (Te.);

kava_t.a.mi (Ta.); kaba_d.i = a person who brings and sells kaba_d.as (Ka.lex.)

kapt.a kapt.i = to quarrel and pull or strike each other (Santali.lex.) **khablao** = to grab, clutch, grip (Santali)

ka~wa~r.i, ka~ori = to implore, to beg earnestly, to entreat; ka~oarikaten metamkana on.d.e alom calaka = I beg you not to go there (Santali.lex.)

[Glyph reinforcement on side b of tablet h180: a crab issuing forth; crab (**kamat.ha**)]:

Glyph: *sal* a gregarious forest tree, *shorea robusta*; *kambra* a kind of tree (Santali)

Substantive: *sal* workshop (Santali) **s'a_la** = workshop (Skt.); **s'a_lika** belonging to a house; a village of artificers, of artisans; a weaver; a toll, tax (Skt.lex.)

Combined animal glyphs



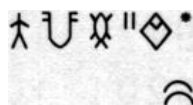
m1135 2140 Pict-50

Composite animal: features of an ox and a rhinoceros facing the standard device.



A votive pottery vessel inscribed in 'post-harappan' script, found at Bet Dwaraka.

These signs could be compared with signs on other epigraphs of the civilization. The fourth sign from left could be a stylized version of the 'water-carrier' sign.



Kalibangan121A, B **copper/bronze rod with epigraph.**

kan.d.kankha 'copper furnace'

ten:go 'standing'; *ten:goc* 'axe'

Substantive: *bad.hoe* 'a carpenter, worker in wood'; *badhoria* 'expert in working in wood' (Santali)

Glyph: *badhor.* 'a species of fish with many bones' (Santali)

Glyph: *tapor* 'a hod, cover of a cart'. Substantive: *trapu* 'tin' (Skt.)

Double, *bar*; rebus: *bhara* 'oven'; i.e. tin furnace.

Alternative:

kot.u 'curved, bent (Ta.) *kor.va* sickle (Kol.) i.e. two sickles.

go_t.u state of being full grown, but hard; *go_t.ad.ike* a hard, inferior kind of arecanut (Ka.)(DEDR 2202).

kod. 'place where artisans work'

Rice in husk. Glyph: *val* (pl. *valkul*) grain of unhusked rice (Kol.); *val bi.am* husked rice (Kol.); *val* paddy (Nk.); *valku* pl. paddy, rice (Nk.); *valci* paddy, husked rice, boiled rice, food (Ta.); *var-r-u* grain of boiled rice from which the water is strained off (Ma.); *vad.lu* unhusked rice, paddy (Te.)(DEDR 5287)

Substantive: *bali* = iron ore, iron stone sand; the Kol iron smelters wash the ore from the sand in the river bed; *balgada* 'sand carried down by a flow of water' (Santali)

Alternative:

kon.e an inner apartment or chamber (Ka.); a room apartment (Tu.); *ko_nar.* shed for hens (Go.)(DEDR 2211).

Glyph: *duht.i* double; *doht.a* having two houses in different places; a town and country residences (Santali)

A 'wheel' glyph with two short linear strokes on the upper register, may, similarly connote: *gad.i* 'wheel'; *gad.*, *gad.h* resident of hill fort with two residences *doht.a*

ko_n., *ko_n.a*, *ko_na* corner (Ka.); *ko_ne* corner (Ga.); *ko_na* id. (Kond.a); *kon.a* corner, angle (Skt.)(DEDR 2209; CDIAL 3504).

Stylized antelope glyph

An antelope glyph evolves into a sign which is inscribed on a tin ingot found at Haifa.



m0398



2308 Second sign on text 2308 (eye):

kharen a pupil of eye (Santali) *ka~rec* one eyed, blind of one eye (Santali)

ke~r.e~ ko~r.e~ an aboriginal tribe who work in brass and bell-metal; *ker.e sen:gel* fire in a pit, as the Koles burn charcoal (Santali)



m0078



3118



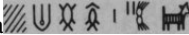
m1097



2313



m0039a



1544

[The second sign on text 1544: glyph: eyebrows *kut.i* (Santali); *kut.hi* 'furnace for smelting iron ore']



m0290



2527

Dog (?) or antelope shown on text 2527: *kut* 'dog'; Rebus: *kut.asi* 'hammer' (possession, together with homestead + *kut.hi* 'furnace': teeth of comb + dog + thigh: *bakher kut.i*) + *dhar.a* 'underside of thigh'; *dharao*, *dhard.harao* 'to pour, to pour into a mould' (Santali) *dad.ko* a lump (G.) Tiger: *kul*, *kol* 'smithy'.



847



85

sa~_pro = thigh (of animals)(N.); **sa~_pr.i_** = leg of a goat or sheep killed for meat (Ku.)

Bowl *sambalige* (Ka.), **sa~_par.** = cavity formed by two bowls placed together (G.)(IL 3564)



V050

Glyph: *ku_ran-* dog (Ta.); *ku_ra id.* (Tu.)(DEDR 1901).

Substantive: *kuruku* 'whiteness'; *kuru* brilliancy (Ta.); *kuro* silver (Kol.Nk.Go.); *khura* (Nk.)(DEDR 1782).



m0917



1224

m0945



1208



m0420A1si



m0420A2si



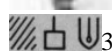
3236



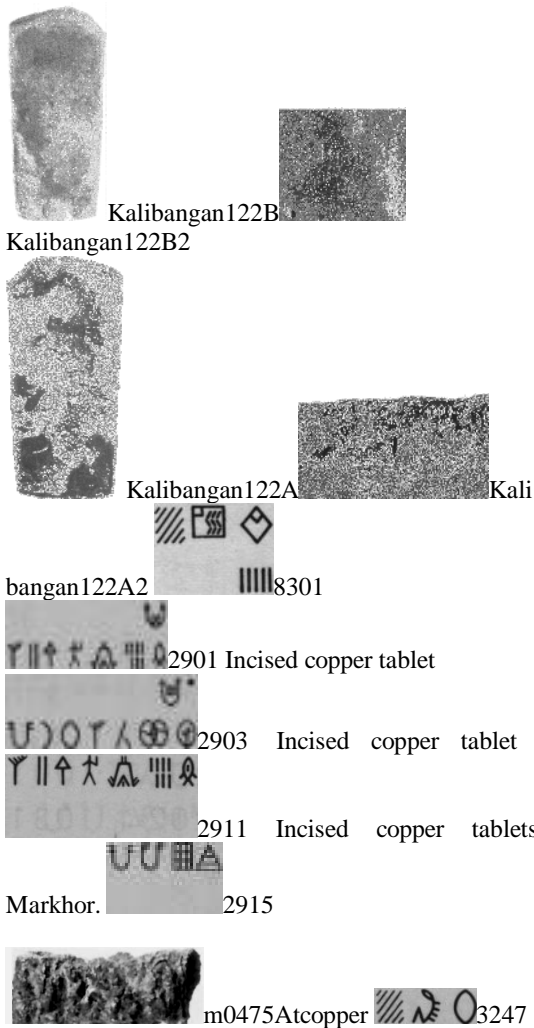
m0421A1si



m0421A2si



3237



Openwork stamp seals, late 3rd–early 2nd millennium B.C.

Central Asia (Bactria-Margiana) Copper alloy; 3 5/8 in. (9.2 cm)

http://www.metmuseum.org/toah/ho/03/nc/ho_1984.4.htm

‘Openwork copper or bronze stamp seals, often called "compartmented" seals, were cast in both geometric and figural patterns in Bactria-Margiana and are distinctive to that region. This copper-alloy



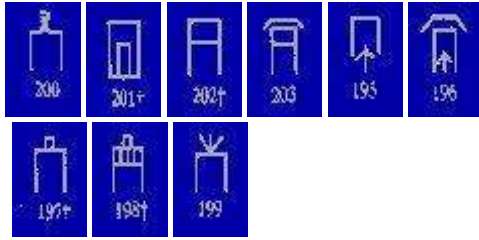
example represents a male figure dressed in a short kilt and mountain boots with upturned toes. If his horned headdress is similar in meaning to examples found in Mesopotamia and Iran, the figure may be divine. The arrow-shaped forms emerging from his shoulders and under his arm may represent snakes or lightning bolts.’

Stele of Ushumgal, 2900–2600 BCE; Early Dynastic periods I–II Umma (probably), southern Mesopotamia

Alabaster (gypsum); H. 8.8 in. (22.4 cm) ‘Among the earliest written documents from Mesopotamia are records of land sales or grants, often carved in stone with associated images, perhaps for public display. The Sumerian inscription on this stele records a transaction involving three fields, three houses, and some livestock. Ushumgal, a priest of the god Shara, and his daughter are the central figures of the transaction, but because of the archaic script, it is not clear whether Ushumgal is buying, selling, or granting these properties. The smaller figures along the sides very likely represent witnesses to the transaction. In addition to their importance to understanding the development of writing, these early land documents provide evidence that land could be privately owned in early Mesopotamia, although a significant proportion was still owned by the gods and managed by their temples. While this development is not surprising from a modern point of view, in antiquity it represented a momentous conceptual and cultural shift.’

<http://www.metmuseum.org/collections/view1.asp?id=3&full=0&item=58%2E29>

The glyph in front of Ushumgal is similar to signs on epigraphs of Sarasvati Civilization.




On the Ushumgal stele, three fields and three houses, are marked by three horizontal lines and three vertical lines; on Sign 202 there is one horizontal line; this could denote 'one field'. Similarly Sign 197 or Sign 201 may denote one house; and Sign 198 may denote one large house + 4 small houses. A comparable glyph is sometimes found on gold *ta_li* (*man:gal.asu_tra*) designs used in Tamilnadu.

Tiger, three ligatured tigers, tiger looking back

kol metal (Ta.) **kol** = pan~calo_kam (five metals) (Ta.lex.) Thus, the entwined figures of 3 or more tigers may connote an alloy of 3 or more metals.



m1168  2360 Tiger with long (zebu's) horns?

kollan-ulai-k-ku_t.am blacksmith's workshop, smithy; Text 2360: lid: dakhna; rebus: d.a_kin.i_, 'sword'; rim of jar: kan.d. kanka, 'gold furnace'.

ku_t.am 'horns'; **ku_t.am** 'workshop'

pen.i_ 'griddle, frying pan' (Ta.)
bene 'cork' (Ka.)

Merchant of timber

la_d.i_ a lass; a lassie; a bride; **la_d.li_** a woman bred up in the midst of fondness and indulgence (G.)
Glyph: *lat.* To subjugate, conquer (Santali) *lad.avum* to quarrel; *lad.a_yi_*, *lad.ha_yi_* a fight; wrestling, a combat; a contest, a brawl, an affray; an altercation (G.)

Glyph: *lar.i* having the hair tied in a knot at one side of the head instead of at the back (Santali) *lat.* A lock of hair; tangled hair; *lat.iya_m* pl. locks of hair; tangled hair (G.)

lotta a hollow, a ravine, pit (Ka.); dent, depression, small pit or hollow; *loddi* a valley (Te.); *loddi* id. (Go.)(DEDR 5197).

lot.iyo a section of Muhammadans; a Vohara_; a Bora_ (G.) *lod.hum* iron; a razor; a mason's tool; *lod.ha_m* a carpenter's iron tools (G.)

la_d. [Skt. *la_t.a*, fr. Skt. *ra_s.t.ra* name of a country prob. Ka_t.hia_wa_d.a] an individual of a particular section among Wa_nia_s, merchants (G.)

lad.vaiyo a warrior; a wrestler, a combatant (G.)
lar.hai to fight, to quarrel; *lar.an:kar* fighting, quarrelsome (Santali)

lat. to take possession of, subjugate, conquer; *lat.ak* hindrance, intervention (Santali)

la_t.i_ a place where timber or fuel is stored and sold (G.)

lat. a string of pearls (G.)

lat.t.ho a lump of gold; the axle of a cart-wheel (G.)


lat. to take possession of (Santali)



V132 *lod.ha* a wave, a swing; *lot.* to shake (Skt.)(G.)

lot.avum to roll over and over; to turn and toss about (G.)

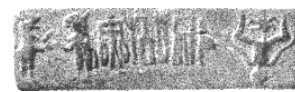


1253  h461 *ten:go* 'standing, axe'; *kan.d.kankha* 'rim of pot, copper furnace'; *pan.e* 'figus, quarry'; *loddi* 'wave, valley'; *kot.u* 'curved, bent (Ta.) Substantive: *ko.t.e* palace (Kod.); *kot.a* hamlet (Malt.)(DEDR 2058) *ko_d.i* outlet of tank (Te.)(DEDR 2197); alternative: *kor.va* sickle (Kol.) i.e. two sickles.]



V294 *got.i_* a lump of silver (G.)

Tigers, stone fort, rampart



h180A



h180B

4304 Tablet in bas-relief h180a Pict-106: Nude female figure upside down with thighs drawn apart and crab (?) issuing from her womb¹⁰; two tigers standing face to face rearing on their hindlegs at L. Pict-92: Man armed with a sickle-shaped weapon on his right hand and a cakra (?) on his left hand, facing

a seated woman with disheveled hair and upraised arms.

The term, **bharan**, evokes two semantic interpretations: 1) an asterism represented by pudendum muliebri and 'bearing in the womb'; 2) act of filling as in creating mixed alloys. A semantic expansion occurs in the following lexemes: **bhart** = a mixed metal of copper and lead; **bhart-i_ya** = a barzier, worker in metal; **bhat.**, **bhra_s.t.ra** = oven, furnace; **bari** = blacksmith; **bha_ran.** = to bring out from a kiln

bharan.i 7th asterism (figured by pudendum muliebri)(AV.); **bharan.a** bearing in womb (RV.); **bhara** carrying, booty (RV.)(**bhr.** bear)

Mixed Alloys or bharan

To make agricultural implements and utensils carpenter's tools or weapons are referred to: **svadhiti** (RV 3.8.6); **va_s'i** (RV 10.53.10; 101; 10); **paras'u** (RV 1.30.4; 3.53.22; 6.3.4; 7.104.21; 10.28.8). The tools and weapons were made of **as'man** (stone) and **ayas** (metal). **Ja_taka teles** refer to 18 guilds of workers and to work of metalsmith who manufactures agricultural implements, weapons of war in various metals like copper, brass, bronze and iron. [RL Mehta, 1939, *Pre-Buddhist India*, Bombay, p. 199; cf. Cowell, FB, ed., *Ja_takas*, I, p. 343; III, p.93; IV, p. 105; V, p.282]. Jaina Pras'na **Vya_karan.a** lists 18 guilds which includes bronze-smiths (**Ka_m.syaka_ra**) (*Pras'na Vya_karan.a*, pp. 193-194). Jaina texts describe the processes used by a metalsmith: smelting of ore, forging and casting techniques. [JC Sikdar, 1964, *Studies in the Bhagavati Sutra*, Muzaffarpur, p. 268; JC Sikdar, 1947, *Jaina Canon*, Bombay, p. 187]. **Pa_n.ini** refers to the tools and implements made of copper and other metals used by a metal smith. [Pa_n.ini's *As.t.a_dhya_yi*, 2nd edn., Varanasi, 1963, p. 234]. Patan~jali comments on **Pa_n.ini's su_tra (ji_vika_rthe ca_pan.ye: v.3)** in **Maha_bha_s.ya** and notes that Mauryas had made images of Gods for obtaining gold. This may be a reference to metal images. (Kielhorn, ed., *Mah_bha_s.ya*, vol. II, Bombay, 1906, p. 429]. **Pa_n.ini** uses the term **lohita_yasa** (5.4.94) for copper.

"...the question arises that if **ayas** stood for copper in R.gvedic times why it was called lohayas during the later Vedic age. The answer lies in the semantic changes of the word **ayas** resulting from the technological developments in the society. In early

Vedic age metallurgy was in its primitive stage and varieties of baser metal were not known. The words **hiran.ya** and **rajata** denoted precious metals and **ayasa** denoted baser metals. Thus theoretically **ayas** was a general name for baser metal. But as copper was the popular metal for use, **ayas** practically meant copper. By later Vedic age when other varieties of baser metal such as iron, tin, and lead came to be known, the copper was called **lohayas** in order to distinguish it from other metals. As bronze was a mixed metal, combining both copper and tin and having a distinct colour, it was probably simply called **ayas** during the later vedic times. This is suggested by a passage of **Va_jasneyi Sam.hita_ (XVIII.13)** where **ayas** has been mentioned in contrast with **hiran.ya**, **loha**, **s'ya_ma**, **si_sa** and **trapu**. Such semantic changes are not strange because we know that the word **loha** which definitely stood for copper during the later Vedic age became popular name for iron in historical times." (DN Tripathi, 'Ayas' in the R.gveda--A note, in: Vibha Tripathi, 1998, *Archaeometallurgy in India*, Delhi, Sharada Publishing House, pp. 347-348).

Loha may be interpreted as copper because of the red colour associated with it. [cf. Taittiri_ya Sam.hita_ 4.7.5; Keith 1914, I: 381; Weber 1871: 404]. **Si_sa** and **trapu** connote lead and tin in Atharva Veda (**Si_sa**: AV 12.2.1, 20; **trapu**: AV 11.3.8). In Atharva Veda, both **loha** and **ta_mra** are used. (AV 11.3.7-8; Griffith 1896, II:61; Whitney 1905, II:61; Roth and Whitney 1924: 247). Atharva Veda (AV 18.3.17) uses the term, **kasye**, to denote bell metal or bronze; this is apparently concordant with the lexeme, **kam.sa** (Skt.). Tin is called **taua**, zinc is **jasada** and lead is **sisaga** in Jaina literature (Jain, 1947). Cilppatika_ram (V.24-39; VRR Dikshitar, 1939, *The Silappadikaram*, Milford: 111) mentions coppersmiths of Puha_r city; and furnaces for metal smelting, copper and bronze workers in Madura (Dikshitar 1939: 206). Pali rendering of **trapu** is **tipu** (*Vinaya*, Parivara Patha VI.2).

Bharant (lit. bearing) is used in the plural in **Pan~cavim.s'a Bra_hman.a** (18.10.8). **Sa_yan.a** interprets this as 'the warrior caste' (**bharata_m** – **bharan.am kurvata_m ks.atriya_n.a_m**). Weber notes this as a reference to the Bharata-s. (*Indische Studien*, 10.28.n.2) In the Punjab, the mixed alloys were generally called, **bharat** (5 copper, 4 zinc and 1 tin). In Bengal, an alloy called **bharan** or **toul** was created by adding some brass or zinc into pure bronze. Sometimes lead was added to make it soft.

bar.ae-bur.ui = to oil and comb someone's hair (Mundari.lex.) **va_raki_ra** = a small comb (Skt.); **va_ruka** = to comb (Ma.); **va_r** = to comb as hair (Ta.); **ba_can.ige** = a comb (Ka.); **ba_grka_** wooden comb worn by boys and girls (Kur.)(DEDR 5357). **ba_ran.e**, **ba_rane**, **ba_rpan.i** = a comb; **ba_runi** = to comb the hair (Tu.lex.)

dosta = zinc (Santali) **jasada** = zinc (Jaina Pali)

Rebus: **jot** = a pair, match, fellow; **bhage jotkin napam akata** = they are a capital pair (Santali) cf. **kin** = two (Santali); rebus: **ginna** = metal vessel (Te.) [Note glyphs of bulls and antelopes in pairs.]

Rebus: **jasu** = a spy, a detective, an informer, an accomplice; *guti ho~ ja~ha~tis ja~ha~tiske jasuka* = servants sometimes become accomplices (thieves) (Santali)


Glyph of disheveled hair may be connoted by lexemes: **salae sapae** = untangled, combed out, hair hanging loose (Santali.lex.)



Rebus: **sa_la** = workshop (B.) **sapap** = arms, tools, implements, instruments, gear; *sendra reak sapap* = gear for hunting; *raj mistri reak sapap* = the tools of a mason; *kurta rorok*

reak sapap = the tools with which to sew a coat (Santali)

sal = wedge joining the parts of a solid cart wheel (Santali.lex.) **sa_l** = a joint that fits a socket; **sa_lvi_** a maker of joints, a carpenter (G.lex.) **s'al.i_** [Skt. **s'ala_ka_**] a chip; a covert term for a quarter of a rupee, used by merchants in secret conversation (so called because a quarter of a rupee is represented by (i) in writing which resembles a **s'al.i_** or chip (G.lex.) **sal mon:garu** = a very large and heavy mallet used to hammer together the three parts of a **saga_r.i** wheel so as to drive in the dowels (**sal**) tightly (Mundari.lex.)

Pict103 Horned (female with breasts hanging down?) person with a tail and bovine legs standing near a tree fisting a horned tiger rearing on its hindlegs.  1357

go_ti = a woman (Te.lex.)

got.i_ = a lump of silver (G.lex.)

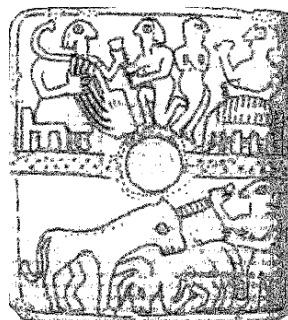
d.okri_ 'old woman' (Hi.); **dokri, dukri** 'old woman' (Kurku); **d.okra_** 'aged, old' (Hi.Mar.) **d.okro** an old man; **d.okri_** an old woman (G.) **t.on:ku < d.on:ku** (Te.) crookedness (Ta.); **d.on:ku id. (Ka.)(Ta.lex.)** **dhokar.a** decrepit, hanging down (of breasts)(Or.); **duk** hunched up, hump of camel (Kho.); **dok^u** hump-backed (K.); **d.okro, d.okhro** old man (Ku.); **d.okra_** old, decrepit (B.); decrepit (H.); old man (M.)(CDIAL 5567). **d.osa, d.usa** having a maimed or bent body (from disease etc.)(K.)(CDIAL 5563).

Substantive: **dhokra** 'metal worker'

Pictorial motifs of spearing or killing

koru, kori, korru to kill (Kor.)

Rebus: **koru** 'a bar of metal' (Tu.)



Limestone wall plaque from Susa (After J. Boese, 1971, *Almesopotamische Weihplatten: Eine sumerische Denkmalsgattung des 3. Jahrtausends v. Chr.*, Berlin/New York: de Gruyter, Taf: XXIV.21]. This plaque shows, on the lower register a person plunging a dagger at a tiger which seems to have subdued a bull. Both the tiger and bull are motifs which recur on inscribed objects of Bharatiya civilization. The top register shows a scene with two seated persons receiving some vase; one on the left is playing on a lute. The plaque is perhaps related to a temple which stood on the Acropole.

A parallel pictorial motif occurs in Crete on an ornamented dagger. A sword, found in the palace of Mallia and dated to the Middle Minoan period (2000-1600 BC), is an example of the extraordinary skill of the Cretan metalworker in casting bronze. The hilt of the sword is of gold-plated ivory and crystal. A dagger blade found in the Lasithi plain, dating about 1800 BCE (Metropolitan Museum of Art), is the earliest known predecessor of ornamented dagger blades from Mycenae. It is engraved with two spirited scenes: a fight between two bulls and a man spearing a boar.

kun.d.ali = a snake (Te.) kun.d.a = a pit (Tu.) [Note the snake on side m0492C of the tablet]

Glyph: *sal* a gregarious forest tree, *shorea robusta*; *kambra* a kind of tree (Santali)
kudra than 'the place where the Pargana bon:ga is worshipped'; *kod.ra* 'scraper'

ko_la_ flying fish, exocetus, garfish, belone (Ta.);
ko_la_n, *ko_la_mi_n*, *ko_li* needle-fish (Ma.)(DEDR 2241).

kor.am breast (Santali) *kol* breast, bosom (H.);
kaula_, *kola_*, *kauli_id.*, lap (H.); *ku_l* belly, stomach, womb (Kur.); *ku_las* offspring, descendant (Kur.); *ko_li* abdomen (Malt.); *xo_l* womb, offspring, entrails, woof, weft (Br.)(CDIAL 3607; DEDR 2244)

kot.t.e small stick (Kol.Nk.)(DEDR 2071).*ko_l* stick (Ta.); staff (Ma.Ka.); *ko_lu* (Tu.)(DEDR 2237).

go_ti woman (Te.); *ko_tai* woman (beautiful as a garland)(Ta.)(DEDR 2214). *kon.d.e* tassels of sash (Kod.); *gon.d.e* topknot, tassel, cluster (Te.); *go~d.a_* cluster, tuft (M.)(DEDR 2081). *ko_lam* beauty, form, shape (Ta.); form, figure ; idol, beauty (Ma.); *ko_la* the d.and.ur dance (i.e. stick dance)(Go.)(DEDR 2240).

kon.d.i sting of a scorpion (Ka.Tu.)(DEDR 2080).

got.a_ a garment with clusters of flowers woven in it; *got.a_kor* [+ *kor* a border] a border of a garment having clusters of flowers woven in it; *got.iyum* a piece of cloth made use of in making up a turban to give it a round shape (G.) *go_t.u* embroidery, lace (Tu.); *go~t.u* an ornamental appendage to the border of a cloth, fringe, hem, edging (Te.); *got.* Hem of garment; *got.a_* edging of gold lace (H.)(DEDR 2201).

got.o a nosegay (G.)

go~r.e~ a pannier, a bag slung across a bullock's back, one on either side (Santali)

gote, *gotle* wry, oblique (Santali)

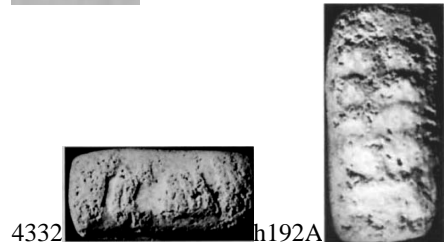
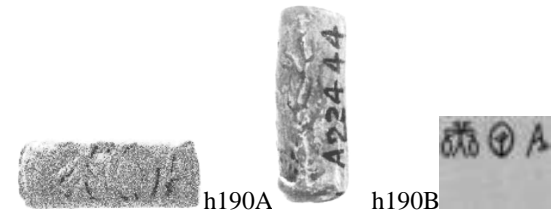
kot.iyum a canoe, a small boat (G.) *ko_l*, *ko_lam* raft, float (Ta.); *ko_lam* raft (Ma.); *ko_l* raft, float (Ka.); *ko_lamu* (Te.); *kola* boat, raft (Skt.); *kulla* id. (Pkt.)(DEDR 2238).

kot.i_ the largest bead in a rosary from which the counting begins (G.)(cf. the trefoil glyph on the *angarkha* worn by the priest -- statuette]

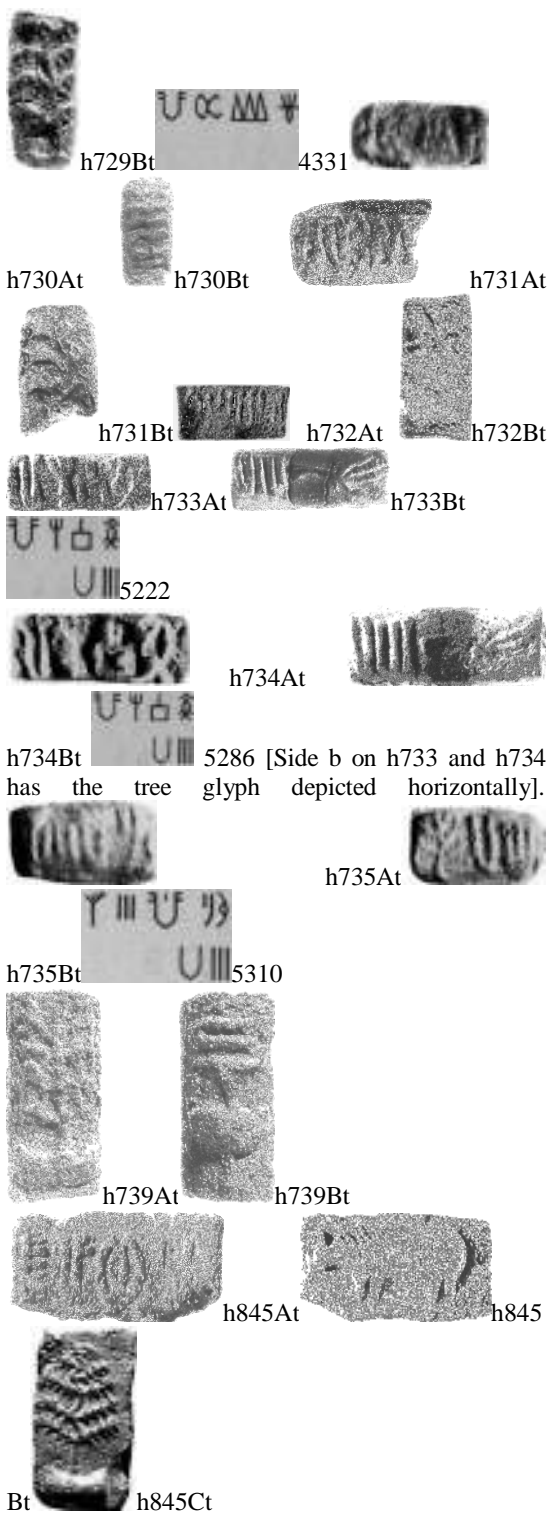
Tree



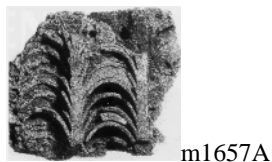
5282 Pict-75: Tree, generally within a railing or on a platform.



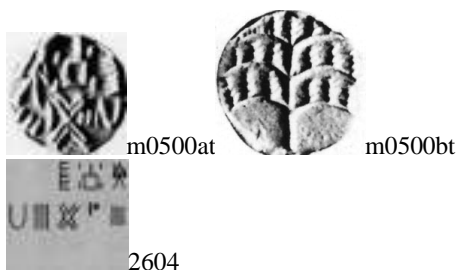




[The tree is in the middle]. Person throwing a spear at a buffalo and placing one foot on its head; three persons standing near a tree at the centre.



steatite m1657B steatite both sides of a steatite ornament; contains identical pictographs of a 'tree'.



[**kut.haru** = tree; **ku_d.ali** = cross-roads].
kut.i, 'smelting furnace' (Mundari.lex.).

khun.t.ut = a stump of a tree left in the ground; **gun.d.ra** = a stump (Santali.lex.) **kut.amu** = a tree (Te.lex.)

kut.am = a hammer (Santali)

kut.i, kut.hi, kut.a, kut.ha a tree (Kaus'.); **kud.a** tree (Pkt.); **kur.a** tree; **kar.ek** tree, oak (Pas.)(CDIAL 3228). **kut.ha, kut.a** (Ka.), **kudal** (Go.) **kudar.** (Go.) **kut.ha_ra**, **kut.ha**, **kut.aka** = a tree (Skt.lex.) **kut., kurun:** = stump of a tree (Bond.a); **khut.** = id. (Or.)

dare = a tree, a plant (Santali.lex.) **da_ru** = piece of wood (MBh.); in RV. Nom. **Da_ru** (gen. **Drun.ah, dro_h**); **da_ru** = wood (PaliPkt.); **do_r** = tree (Pas'.); **da_r** = tree, wood (Gaw.); **dar** = timber, firewood, gallows (Kho.); **da_r** = log (K.); timber (WPah.Ku.N.H.)(CDIAL 6298).

dal.amu = a leaf, a shoot, a blade, a petal (Te.lex.) **dal, dal.** = a leaf (G.lex.) **dala** = leaf, petal (MBh.Pal.Pkt.); **dal.** (G.M.)(CDIAL 6214).

dala_i = village headman, head constable, family title of a class of s'u_dras (Or.); **dal.vai, dal.vi_** = general (M.); **dalai, dalui** = a surname (B.)(CDIAL 6218). **dal, dal.** = an army, a force; a corps; a division of an army; a troop (G.lex.) **dala** = party, band (Skt.); army (Pkt.); **dalo** = party, group (Sh.); **dal. d.al** = company, party (K.); **dal. D.al** = army (L.); **dal** = army, swarm (P.); **dala** = army, band, flock (Or.); **dara** = army (Oaw.); **dal** = troop, company (H.); **dal.** = army (G.M.); **d.al, d.a_l, da_l** = party, section, herd of horses (Kho.)(CDIAL 6215). **dar.e** = strength, power, might, ability; to overcome, to vanquish, to conquer (Santali.lex.) [In the cultural tradition of **Bha_rata**, **Skanda**, **Ka_rttikeya** is the commander of the armed forces of the deva-s, **dal.vi_**]

The glyptic synonym for the word, **da_r** (tree) could be:

da_la = skin (esp. a whole skin) of sheep, goat, etc. (K.)(CDIAL 6308). [Note the dotted circle shown on the skin of a woman in terracotta].

d.a_r, d.a_l = herd (of deer), flock (of birds), flight (of locusts)(L.)(CDIAL 6292).

ruk birik, ruk birit trees (Santali)

Image: hole: **rukhi** an atom, a grain, a shred, a particle (Santali) **ro_ka** a hole, an aperture, a cavity (Ka.); **ruks.a** a star (Ka.)(Ka.lex.) **ro_kam** a hole (Skt.lex.) **Image: particle, atom:** **rukhi** an atom, a grain, a shred (Santali.lex.) **rok** to pierce, to perforate, to sew, to pin, to butt, to gore (Santali.lex.) **ruka, rukna** a chisel (Mu.); **rukha** (Sadani)(Mu.lex.) **uruvu-tal** to pierce through, penetrate, as an arrow, a needle (**Tiruva_ca. 28,2**) (Ta.) (Ta.lex.)

ruka = a carpenter's chisel; **kund ruka** = a chisel for cutting out round holes, mainly the axle holes of a wheel; **chumni ruka** = a small chisel; **roka d.at.a** = the front teeth, two above, to below (Santali.lex.)

Fire-pit

kun.d.i-a = village headman; leader of a village (Pkt.lex.)

kun.d.i crooked (of buffalo's horns)(L.); **kun.d.a** a bullock whose horns have been turned (L.)(CDIAL 3260). **khun.d.ha** blunt (P.)(CDIAL 3899). **khun.d.a** blunt, crooked-horned (L.); **khu~r.o** blunt (N.); **khun.d.a** (H.); **khun.d.i** crooked-horned (P.)(CDIAL 3901). **Image: crooked horned:** **khud.d.a** blunt, crooked horned; **khud.d.ha** blunt (L.)(CDIAL 3897). **khu~t.ehra** plough with small worn block (Bi.)(CDIAL 3900). **khun.d.a** blunt, crooked horned (L.); **khun.d.i** crooked-horned (P.); **khu~r.o** blunt (N.); **khun.d.a** (H.)(CDIAL 3901). **kun.d.a** a bullock whose horns have been turned (Punjabi.lex.) **Image: ox with blunt horns; lazy:** **ku_t.i** hornless (?Br.); **ku_r.ai-k-kompan-** ox with blunt horns (Ta.); **ku_r.aiyan-** short, stunted person (Ta.); **ku_r.ai** that which is short (Ta.)(DEDR 1914). **ko_n.d.a** hornless (Kal.); **ko_n.d.a** bald (Pas'.);

kon.t.ha crippled (Pali)(CDIAL 3508). ku_t.a hornless (Skt.)(CDIAL 3396). kun.d.hi_ crooked-horned (of buffalo)(P.); kun.t.ha blunt (MBh.)(CDIAL 3261).

gun.d.amu fire-pit; (Inscr.) a hollow or pit in the dry bed of a stream (Te.); **gunta** pit, hollow, depression (Te.); **gun.d.i** deep (Kol.); **ghun.d.ik** id. (Nk.); **gut.t.a** pool (Pa.); **kun.t.a** pool (Go.); **gut.a** hollow in the ground, pit (Kond.a); **kut.t.** a large pit (Kui); **gutomi** pit (Kuwi); **kun.d.i** pond (Kuwi); **kun.d.a-** round hole in the ground (for water or sacred fire), pit, well, spring (Skt.); **kut.t.am** depth, pond (Ta.); **kun.t.u** depth, pond, manure-pit (Ta.); **kun.t.am, kun.t.u** what is hollow and deep, pit (Ma.); **kun.d.a, kon.d.a, kun.t.e** pit, pool, pond (Ka.); **kun.d.i** pit; **kun.d.itere** manure-pit (Kod.); **kun.d.a** pit (Tu.); **kon.d.a** pit (Tu.); **kun.t.a, gun.t.a** pond, pit (Te.)(DEDR 1669). **kut.t.ai** pool, small pond (Ta.)(DEDR 1669). [cf. cognate etyma connoting secrecy (treasure): **gun.pu, gumbu** profundity, solemnity, secrecy, depth (Ka.); **gumpu** secret, concealed (Tu.)(DEDR 1669).] **xon.d.xa_, xo~_r.xa_** deep; a pit, abyss (Kur.); **qond.e** deep, low lands (Malt.)(DEDR 2082). **khutt** depression in earth or wall, hollow eyes (P.); **khutti_** hole in the ground in a game with cowries (P.)(CDIAL 13655). **kud.e** a rat's hole (Tu.); **kod.e** to hollow, excavate (Ka.); **kud.ute** palm of the hand, esp. hollowed or held as a cup (Ka.)(DEDR 1660).

Reservoir used in irrigation: **go~r.a_** reservoir used in irrigation (H.)(CDIAL 3264). **kun.t.am** pool, tank; deep cavity, pit (Ta.Ma.); **kun.t.u** depth (**Man.i. 8,8**); id. (Ma.); **kun.t.u-ni_r** sea, as being deep (**Na_lat.i, 94**)(Ta.lex.) **kum.d.a, kom.d.a** pool (Pkt.); **kun.d.a** basin of water, pit (MBh.); **kunu** whirlpool (S.); **kun.d.** pool (WPah.); **kunnu** cistern for washing clothes in (WPah.); **ku~_d.** tub (H.); **ku~d.** pool, well (M.)(CDIAL 3264). **ku~d.** = basin (G.) **kun.d.a** a basin; a round hole in the ground for receiving water; a pond or well consecrated to a deity (G.) **kun.d.a** [Skt. a basin] **khu-idaha, khu-idak** = a deep pit full of water (Santali)

kun.d.a = a reservoir of water surrounded with steps to go down to the bottom (G.Skt.) (G.lex.)

kun.d. = the opening in the nave or hub of a wheel to admit the axle; **kund ruka** = a gouge, a chisel with which circular holes are made in wood; **sagar. kund** = the opening in the nave of a wheel to receive the axle (Santali.lex.)

[The four signs of spoked wheels on a ten-sign sign-board of Dholavira may relate to this lexeme: the workshop of a carver, turner – on a variety of materials]. Cf. kun.dum, kun.di_, kun.d.a_l.i_ = a circle or ring [Skt. kun.d.ala] (G.lex.) **Turner:**



These signs may be ligatures of the glyph:
Thus, Sign 347 may be a duplication of this basic glyph in Sign 162.
Sign 348 is a ligature with a duplicated harrow glyph.



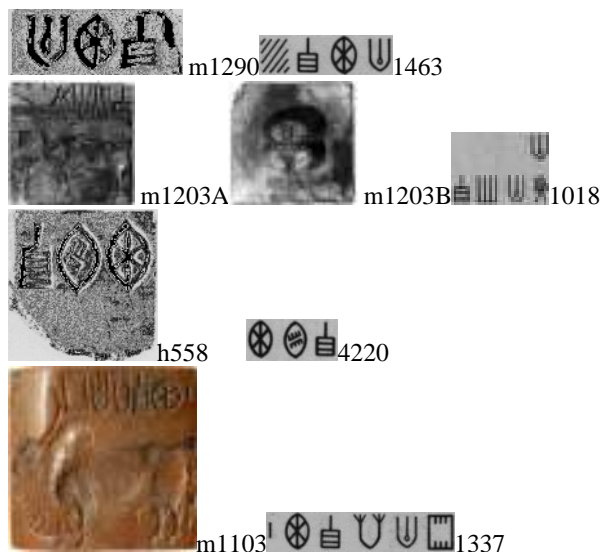
Signs 249, 250 The circumgraph of four short linear strokes has been interpreted as **kod.a** = 4 **gan.d.a**. The glyph on Sign 249 can thus be a product made in or a mineral processed in a

kod., ‘artisan’s workshop’. That this may connote a mineral is also reinforced by the appearance of this glyph on two tin ingots found at Haifa. Could this Sign 249 connote, ‘tin’?

khapar = tin, a metal once used largely to make ornaments, but now out of use (Santali)
[cf. metath. **kharva-** a nidhi of Kubera].

Other lexemes connoting tin: **ran:ku**, **trapu**, **tagara**

Sign 252 occurs on the following seals and tablets with epigraphs:



kot.i, ‘flag’ (Ta.) The first sign from the right on Text 4304. Phonetic determinant; rebus: **kut.hi** furnace for smelting iron ore.

The second sign from right, could be rebus: **kut.ha_ra** ‘armourer, writer’ (Skt.); glyph: **ku_t.a_ga_ra** = an apartment on the top of a house (Ka.lex.) **kot.t.amu**, **kot.t.a_mu** = a pentroofed shed or room; name of an ancient principality in the Telugu country (Te.lex.) **kot.t.amu** = a stable for cattle or horses (Te.lex.) **khundr.i** = a small room made by partitioning of a house (Santali.lex.)

kamat.amu = portable furnace (Te.); rebus: **kamar kidin** = a small species of scorpion (Santali)

Phut.aka = a kind of cloth (Skt.) Put.a-go_si = a small cloth to cover the privities (Ka.); put.a = a cover, covering (Ka.)

Glyph: *kahli* ‘twig’

xo_xa_ behind, afterwards (Kur.); **xo_xna_** to throw behind one's back (Kur.) **qoq** behind, at the back (Malt.)(CDIAL 2182). **kok** to raise and p;roject the head (while seeing a distant object)(Kond.a); **go_pka**, **go_k-p-**, **go_kt-** to stretch forth, stretch the neck in order to observe something, crane the head out (Kui); **go_k** to look up, await; **go_khmu_** look up! (Kui)(DEDR 2180).

Branch **kohk** (Go.), **gopka_** = branches (Kui), **kob** = branch (Ko.)

gorka, gohka spear (Go.) gorka (Go)(DEDR 2126). [All the glyphs taken together represent a group – tree, branches, spy, tiger looking back and up – point to: gohka (spear); xo_xa_ (looking back); kut.ha_ra (tree); kut.ha_ra (spade); kr.a_n.d.i (tiger, axe); heraka (spy); eraka (copper); i.e. a group of copper implements: spade, spear and axe. The tiger, alternatively, may also connote kol, tiger; rebus: kol, smith or forge]

Substantive: *dolan* ‘a large house built of brick or stone having a flat terraced roof’ (Santali) *d.olo* gain, profit; an important business (G.)

Glyph: *d.hol* ‘a drum beaten on one end by a stick and on the other by the hand’ (Santali); *d.hol* ‘drum’ (Nahali); *dhol* (Kurku); *d.hol* (Hi.) *dhol* a drum (G.)

Glyph: *dola* ‘a kind of palki’

Glyph: *dol* ‘a company, party, detachment’

Glyph: *dol* ‘likeness, picture, form’ [e.g., two tigers, two bulls.]

Glyph: *d.ol* ‘the shaft of an arrow, an arrow’

Glyph: *d.ol* ‘an iron bucket for drawing water from a well’; *dolkha* ‘a large leaf cup or basin’ (Santali) *d.ol* a bucket, a pail (G.)

Glyph: *dhori_* a bull (G.) fr. *dhairiyam* fit for a yoked carriage; fr. *dhur* a yoke (Skt.)

Glyph: *dhoro* a parapet wall (G.)

Glyph: *khad.ra* ‘emaciated, bones appearing under the skin, hair thin’ (Santali)



me_dhi, me_t.hi, me_t.i, me_n.t.i = a pillar in the middle of a threshing-floor to which oxen are bound; a post to which cattle are tied; a prop for supporting the shafts of a carriage (Ka.lex.) **me_t.i, me_n.i** = the plough-tail (Ka.); **me_di** (Te.); **me_r.i** (Ta.Ma.)(Ka.lex.) **med.hi_-bhu.ta** = being the central point round which everything turns (Skt.lex.) A zebu bull tied to a post; a bird above. Large painted storage jar discovered in burned rooms at Nausharo, ca. 2600 to 2500 BCE. Cf. Fig. 2.18, J.M. Kenoyer, 1998, Cat. No. 8. cf. **kut.hara** = the post round which the string of the churning-stick winds (Skt.lex.) **khun.t.o** = a peg; the anchorage fee (of a ship); the handle of a hand-mill (G.lex.) **khu~t.iyo** = an uncastrated bull (used in Ka_t.hia_wa_d.); a man versed in witchcraft; a wizard (used in Surat district)(G.lex.)

kut.ha_ru = an armourer (Skt.lex.) **kut.ha_ra** = a tree; an axe, a sort of hoe or spade;

kut.ha_ru = a monkey (Skt.lex.) **khun.t.um** = the portion of a tree, or a plant, left in the ground; a stump (G.lex.) **baka** = a kind of heron or crane; **an apparatus for calcining or subliming metals or minerals**; name of Kubera; **baka-yantra** = name of a particular form of retort (Skt.lex.)

me_t.i = a big man, a chief, a head (Ka.Te.Ta.); loftiness, greatness, excellence, superiority (Ka.Te.); **me_t.t.imai** (Ta.)(Ka.lex.); **me_t.i** = a head-servant (Ka.Ta.)(Ka.lex.) **me_t.i, me_t.ari** = a chief, head, leader, lord, the greatest man (Te.lex.) **met.ha** (cf. **men.d.a**), **med.ha, men.t.ha** = an elephant-keeper (Skt.lex.) **me_dini_sura** = a bra_hman.a; **me_dini_s'a** = a king, a prince; **me_dini** = the earth, land, ground (Ka.); **me_daka** = spirituous liquor used for distillation (Ka.); **medho_hota** (**medhas_hota**) = a sacrificial priest; name of a brahmara_ks.asa; **me_de, me_dha_** = understanding, intelligence, wisdom; **me_dha** = a sacrifice (Ka.lex.) cf. Ahura-mazda; **-mazda** possibly derived from **medha**, sacrifice. Cf. **meda** [Skt. **medas**, fat, marrow] fat, marrow (G.lex.) **meli** (EI 9) same as **med.i** = a kidnapper of victims for sacrifices; **mel-s'a_nti** (SITI)(Tamil, Sanskrit) = chief priest of a temple (IEG).

Human-faced markhor and other glyphs

mlecchamukha = copper (Skt.); what has the copper-coloured complexion of the Greek or Mahomedans].
mer-ya = a rock; mer-ayu = to shine, glitter (Te.lex.) **mer** = a kind of large copper or brass pot (G.lex.) cf.
melukka = copper (Pali); mleccha = copper (Skt.)

The Sanskrit gloss *mlecchamukha* is a compound of: *melh* + *mu~h* (antelope + face); rebus: *melukka* 'copper'
+ *mu~ha* (iron or mineral) ingot smelted.



c-023 Seal. Double-axe + other arms and armour

med.a, mi_d.ha_, men.d.ha_, men.d.hi_ = a ram (P.lex.) **med.hra** = a ram; membrum virile,, penis (AV); **med.hraka** = the penis; a ram; **men.d.ha, men.d.hra** = a ram (Skt.lex.)

mer.ha = twisted, crumpled, as a horn (Santali.lex.)]

The goat is shown with horns twisted back which also finds a rebus representation: **mer.go** = with horns twisted back; **mer.ha, m., mir.hi f.** = twisted, crumpled, as a horn (Santali.lex.) **mer.ha, mer.ha mir.hi** = adj. twisted backwards (horns of buffalo), having horns twisted backwards (buffaloes)(Santali.lex.Bodding) **mer.ho** = adj. having horns twisted backwards (Mundari.)

Substantive: *meruku* glitter, luster, polish (Ta.); *merugu* shine, luster (Te.); *mer_acu* glitter (Te.); *me_r* to shine (stars)(Kuwi); *merxa_* sky, heaven (Kur.); *mergu, merge* sky, heaven (Malt.)(DEDR 5074). The early meaning could be: 'silver'.

Substantive: *me~rhe~t* 'iron'; *me~rhe~t icena* 'the iron is rusty'; *ispat me~rhe~t* 'steel', *dul me~rhe~t* 'cast iron'; *me~rhe~t khan.d.a* 'iron implements' (Santali) *med.* (Ho.)(Santali.lex.Bodding) **mer.ed, me~r.ed** iron; **enga mer.ed** soft iron; **sand.i mer.ed** hard iron; **ispa_t mer.ed** steel; **dul mer.ed** cast iron; **i mer.ed** rusty iron, also the iron of which weights are cast; **bicamer.ed** iron extracted from stone ore; **balimer.ed** iron extracted from sand ore; **mer.ed-bica** = iron stone ore, in contrast to **bali-bica**, iron sand ore (Mu.lex.)

mer.hao = to entwine itself, wind round, wrap around, roll up (Santali.lex.) [Note the endless knot motif].

Substantive: *me_r.i* plough-handle, plough (Kuwi); *me_r.i* plough, plough-tail, handle of a plough (Ta.); *me_r.i, me_n~n~al* plough-tail (Ma.); *me.y* handle of plough (Ko.); *me_t.i, me_n.i* plough-tail (Ka.); *me~d.i, me_d.i* hind part of handle of a plough (Te.); *me_r.i* plough handle, plough-tail (Kond.a); *me_ri* plough handle (Kuwi)



Glyph: *mer.go* 'rimless vessels' (Santali) [Note the rimless pot – **U** sign]

mi~d.ho = braid in a woman's hair (S.) **med.hi, mid.hi_, men.d.hi_** = a plait in a woman's hair; a plaited or twisted strand of hair; an ewe (P.lex.)

[Note: The horns of the goat shown on m1179 are comparable to the horns of the lady ligatured to the body of a tiger].

Seated ram figurine from a large copper/bronze pin. The pin attachment from below the figurine has broken off since it was originally discovered but a portion of it stands like a post behind the left shoulder of the ram. Lost-wax casting. Mohenjodaro DK 0781 AC. National Museum, Karachi. Mackay 1938: 300-1, pl. LXXIV, 18-19; 5.38 cm. high, 5.5 cm. long. (After fig. 8.26, Kenoyer, 2000)

Hollow, seated ram figurine with hole in the centre of the back. Punctuated incised designs and with some appliqué. Terracotta. Mohenjodaro DK 9404. National Museum, Karachi. Mackay 1938: 188, 640, pl. LXVI.23.



merom hopon = a kid (Santali) hopa, hopna = small, little, used as a name; hopon = offspring, child, young, to bring forth young (Santali)

mer.h, mer.ha_, me~d.ha_ ram (H.), med.hia_o (Dh.Des.) ram, goat, sheep (G) mid.iyo = having horns bent over forehead (G.)(CDIAL 10120). **me~r.a_**, **me~d.a_** = ram with curling horns (H.)(CDIAL 10120). me_t.am = goat (Ta.lex.) [cf. the pictorial motif of antelope with head turned backwards]. **merom me~t** = the goat's eye (Santali.lex.) **mes.a** = ram (RV 8.2.40) **mer.om** = a goat; mer.om jel = the hind of the ravine deer, *gazella bennettii*; mer.om **boda** = a

he-goat; mer.om en:ge = a she-goat; mer.om khasi = a castrated goat; paeda mer.om = large flap eared goat; pat.hi mer.om = a she-goat before it has a kid; ram khasi mer.om = a hermaphrodite goat; mer.om jel = goat's flesh; mer.om hopon = a kid (Santali.lex.) **badar** selep jel = the buck; merom goat (Mun.d.ari. Birhor. Ho); me (Nicobar) (Santali.lex.Bodding) me_t.ha ram (Skt.); met.ha_ ram (H.)(CDIAL 10310). **men.d.ho** [Dh. Des. **min.d.hia_o** fr. Skt. men.d.hra, men.d.h, a ram; Skt. medhya a goat, fr. medha a sacrifice] a ram; a sheep (G.lex.) **mer.ho**, **mer.o** ram for sacrifice (N.); **mersa_g** ram (A. -sa_g <? cha_gya herd of goats (Skt.); sa_ga_ flock of sheep or goats (M.)(CDIAL 5011); cf. saga denoting pha_tries or clans in Gond.); me_n.d.ha ram (Skt.); men.d.a ram (Pali); men.d.aka made of a ram's horn, e.g., a bow (Pali); men.d.ha_, men.d.a_, men.d.hi ram (Or.); med.d.ha, memd.ha, memd.a, mimd.ha, mimd.haga, ram (Pkt.); me~d.ha_ ram (P.M.); me~d.ho ram (G.); mad.aya_ ram (Si.); met.ha_ ram (H.); mi_d.d.ha_, mi~d.ha_ ram (P.); mer.a_, mer.i ram (B.); **mer.h, mer.ha_**, me~d.ha_ ram (H.); mejhuka_ ram (H.)(CDIAL 10310). me_ha ram (Skt.); meh ram (H.); mei wild goat (WPah.); mya~_pu_t^ the young of sheep or goats (K.); me_s.a ram; me_s.i_ ewe (RV.); me_ha, miha (Skt.); me_hati emits semen; me_d.hra ram; penis (Skt.); me_sa sheep (Pkt.); mis'ala (Ash.); mes.el ram (Kt.); mes.e ram, oorial (Pr.); mes., mes.alak ram (Kal.); mes (H.); me_s.asya sheep-faced (Sus'r.)(CDIAL 10334). mu_n, mu_n^ sheep's wool; munul^ woollen (K.)(CDIAL 10335). me_s. skin-bag (Bur.); mesa_ dressed and coloured sheepskin (P.); mes'i_ sheep-faced (M.)(CDIAL 10343). me_ke she-goat; me_ the bleating of sheep or goats (Ka.); me~_ka, me_ka goat (Te.); me.ke id. (Kol.); me_ke id. (Nk.); me_va, me_ya; she-goat (Pa.); me_ge goat (Ga.); meka_, me_ka id. (Go.); me_xna_ (mixyas) to call, call after loudly, hail (Kur.); mqe to bleat (Malt.); mr..e_ka ? (Te.); me_lh ? (Br.); meka- goat (Skt.)(DEDR 5087). [The m(b)- initial form in Proto-indic may explain the following etyma, with b-, bh- initials:] bhe_d.ra, bhe_n.d.a ram (Skt. < Austro-as. perhaps me_d.ra~ bhe_d.ra collides with Aryan me_d.hra in me_n.d.hra penis, ram (Skt.)(CDIAL 9606). be_d.a sheep (D.); bhed.a id. (K.); bhed., bhid. id. (L.); bhed. id. (P.); bhed.i_, bhed.a_ id. (P.); d.hled.d., bher. (p). bher.a_) sheep and goats (WPah.); bher.o ram (Ku.N.); bher.i ewe (Ku.N.); bhera_ sheep (A.); bhe~ra_ sheep (A.); ram (Bi.); bher. ram (B.H.); bher.a_ sheep (B.Or.); ram (Bhoj.); bher.i ewe (B.); sheep (Or.); bhe~ri sheep (Or.); bhe~r. sheep (Bi.); bhe~r.i_ ram (Mth.); sheep (Aw.); bhe~r.o ram (Mth.); bher.i_, bher.a_ ram (H.); bher.i_ ram (G.)(CDIAL 9606). bhaid.aka of sheep (Skt.); bhe_d.a sheep (Skt.); bira_t.h, bhi_r.o he-goat (Tor.); biar she-goat (Ash.); byar (Pr.); bur (Bshk.); bhi_r.o he-goat (Phal.)(CDIAL 9604). bhe_d.ravr.ti sheepfold (Skt.); bhe_d.rakut.ika_ sheepfold (Skt.); bhar.o_r.i_ sheepfold (WPah.); bharva_r. shepherd or goatherd (G.)(CDIAL 9606-08). min. sheep (Dameli.Kaf.Gawar-Bati); mina_l ram (Bshk.); min.d. ram (To_rwa_li_); min.d.a_l markhor (To_rwa_li_); mindhal ram (Chili_s); ye_r.o-min. ram (Savi.); min.d., min. ram; min.d.o_l yearling lamb, gimmer (Phalu_r.a.)(CDIAL 10310). [The semantic re-inforcement, 'yearling' in

min.d.o_l 'yearling lamb (Phal.) is relatable to the poss. Proto-indic form for the numeral 'one' muXi or MuXiC with d as the likeliest consonant. cf. Zide, N.H., Studies in the Munda Numerals, p.26. cf. midh 'one' (Savara). [The duplication in ye_r.o-min. ram (Savi.) is also remarkable, exemplifying the flow and the confluence of the language-streams [me_n.d. ~ (1) min.; (2) e_t.]: cf. e_t.a ram (Te.); mer.o ram for sacrifice (N.) (DEDR 5152). The Sv. compound form apparently denotes the special nature of the Proto-indic m(b)in. 'ram', that it is, like e.r. male buffalo, bull for 'sacrifice'. cf. tir e.r buffalo calf at Toda calf sacrifice (Ko.) (DEDR 917).] e_d.a a kind of sheep (Ka_tySr.); e_d.i_, e_d.aka a sheep, or goat (MBh.); aid.a ovine (MBh.); aid.aka a kind of sheep (S'Br.); id.ikka wild goat (Skt.); [< Drav.]; el.aka ram wild goat (Pali); el.aka_, el.ika_, el.ike_ (Pali); ed.aka ram (As'); ed.aka_ ewe (As'); hed.'i sheep ? (NiDoc.); he_t. she-goat (Br.); e_la, e_laya ram (Pkt.); e_liya_, e_d.ya_, e.d.akka (Pkt.); e_r.a_, e_r.o_, yer.o, zer.o ram (Pas'); e_r.i_, yer.i_ ewe (Pas'); ye_r.e, yer.o_lik sheep (Shum.); e_r.a, ye_r.a (Gaw.); i_r (Bshk.); oi (Tor.); i_ (Mai.); yer.o, e.r.ia (Sv.); yi_r.o (Phal.); e_r.i (Sh.); eli-pavharu goatherd (S.); el.uva_ goat (Si.); -- X me_s.a-: e_s sheep (Sh.); e_d.aka sheep (Skt.) (CDIAL 2512). e_d.ika ram (Te.); e_t.a ram (Te.); e_d.u goat (Tu.); ye_t.i_, e_t.i she-goat (Go.); e_r.a_ she-goat (Kur.); er.e id. (Malt.); o_d.a goat (Pe.Kui.Kuwi); u_d.e id. (Mand.); a.d.i (Kod.); a_d.u (Ka.); o.d. (To.); a.r. (obl.a.t.-) goat (Ko.); a_t.u goat, sheep (Ta.Ma.); ya_t.u id. (Ta.); a_t.t.-a_l. shepherd (Ta.); a_t.t.uka_ran id. (Ma.) (DEDR 5152). a_t.t.u-k-kit.a_y ram, he-goat (Ta.lex.) me_t.am, me_t.akam, me_t.tiram (prob. < me_d.hra); me_r.am, me_r.akam (Ta.) < prob. me_s.aka ram; vempari me_r.aka me_r-r-i (Ci_vaka..521) (Ta.lex.) me_s.a m. ram; me_s.i_ ewe (RV.); me_d.hra ram (Skt.); me_sa sheep (Pkt.); misala (Ah.); mes.el ram (Kt.); mes.e ram, oorial (Pr.); mes., mes.alak ram (Kal.); mes (H.)--X bhe_d.ra; mya~_pu_t^u young of sheep or goats (K.); mei wild goat (WPah.); meh ram (H.) (CDIAL 10334). Sheepskin: mesa_ dressed and coloured sheepskin (P.); me_s. skin-bag (Burusha_ski); mes'i_ sheep-faced (M.) (CDIAL 10343).

mehra_b = an arch; a vault; a building in the form of a segment of a circle (G.lex.) [cf. the arch surrounding a spoked wheel sign on texts on zebu seals; note the arch over two antelopes shown – face to face -- on the Failaka seal]. Note: Inverted **U** glyph.

Thus, whenever two animals are shown face to face or in opposition, the rebus lexeme could be **me~t, me_dh** [Rebus: **med.hi**, 'merchant's clerk']

Alternative: **mu_ha_mu_hi** adj. adv. Face to face, facing one another. [Note. Two short-bulld bulls face to face.]

saman: = to offer an offering, to place in front of; front, to front or face (Santali) **sa_man** = song accompanying processing of soma in sa_maveda (Vedic)

mel.van.a = mixing; a mixture; **mel.van.o** = a mixture; **mel.vavum** [fr. Skt. mil, to join] to mix, to mingle; to combine; to join together (G.lex.)



mel.e, mid.i = a bush, a clump, a thicket (Ka.lex.) [Note the bush shown in front of a hare on copper tablets].

me_d.amu, me_l.amu = a fight (Te.lex.)

me_t.u = a heap, stack; rick, as of hay (Te.lex.) [Note the glyph of a hayrick – like a phonetic determinant -- shown together with a pair of rams on the platform on which a horned person is seated].

Scorpion

Substantive: *kamar* 'blacksmith'; Glyph: *kamar kidin* 'a

small species of scorpion'

On the front of a wooden sound-box of a lyre found in a Royal tomb of Ur, is painted a scorpion man holds undefined objects in his raised hands. Behind him is a gazelle carrying two beakers that are similar to the gold, electrum, and silver tumblers from Puabi's tomb

kamar kidin a small species of scorpion; *kidin*, *kidin kat.kom* a scorpion; *kidin marmar* a species of centipede (Santali)

Glyph: **kamari**, **kammari** declivity, steep bank, cliff, ravine (Ka.); **kamar** chasm, crack, cleft in the ground caused by drought (Ta.)(DEDR 1229).

***kamra** = the back (Skt.); **krem** = the back (Kho.)(CDIAL 2776). **parikamra* = near the back (Skt.); *parikama* = behind the shoulder (Ash.)(CDIAL 7799v). *kamak* = back (Sang.); *com* = back of an animal (Shgh.); **kamak* = back of an animal (G.M.); *kama neck* (Yghn.)(CDIAL 14356). **kammaru** = the loins, the waist (Ka.M.); *kamara* (H.)(Ka.lex.) [Note the sign emphasizing the backbone]. **kamar** the loins, the waist (G.); **kamarpat.i** a strip of cloth sewn on as a belt to a coat; **kamarpat.o** a belt; a girdle; **kammar** the waist, the loins (G.)

kamra, **kambra** = an over-cloth, wrapper (Santali); *kambal* (H.)(Santali.lex.)

khambroi = overseer, leader, steward, foreman (Santali.lex.)

krame_lakamu, **krame_lamu** = a camel (Te.lex.)

krammar-ilu, **krammar-illu**, **krammar-abad.u** = to turn, return, to go back; *krammar-u* = again; *krammar-incu* = to turn or send back (Te.lex.) [Note the glyph showing an antelope or a tiger turning back]. **kraman.a** = act of walking or going (G.lex.) **krama** = step, series (AV); *krame_n.a* by degrees (R.); *kama* = step, way (Pali); foot, series (Pkt.); **-krem** in *oi~n-krem* and *u~-krem* = upper and lower teeth (Wg.); *karo*, *karu* = pace, a man's pace (P.); *karo karo* = at each pace (P.); *kema*, *kama* = row, succession; *kemen* = by degrees (Si.)(CDIAL 3577). *kra_mati* steps (RV); *kramate_id*. (MBh.); *kamati* = walks (Pali); *kamai* (Pkt.); **kram-** to thresh (Kt.); *kime* (Pr.); *kromik* (Kho.)(CDIAL 3579). **kramkram** = threshing floor (Kt.)(CDIAL 3580). [Note the glyph of a bull trampling someone underneath].

Two animals are shown with characteristic turning of the head backwards. The rebus lexeme is: **krammar-a** = to turn, return (Te.); rebus substantive: **kamar**, 'blacksmith'.

Thus, a tiger with its head turned back is: **kamar** + **kol** (smith-metal); an antelope with its head turned back is: **kamar** + **med.h** (smith-copper).

Inscribed objects showing a tiger and an antelope with head turned backwards

The semantics:

Antelope looking back: **kamar** = smith + **med.h**, **melh** (antelope, **melukka** 'copper', merchant's clerk), i.e. copper-smith.

Tiger: kol 'metal'; **kol** 'tiger'

Hence, **kol** + **kra_d.i** = tiger; rebus: metal sword or large metal axe.

Tiger looking back: **kamar** = smith + **kol** (tiger, **kol** 'metal'), i.e. metal-smith

Black hornet **kra_nd.i** (Kui) [cf. *kr.a_n.d.i*, axe; *kr.a_n.d.i*, tiger]

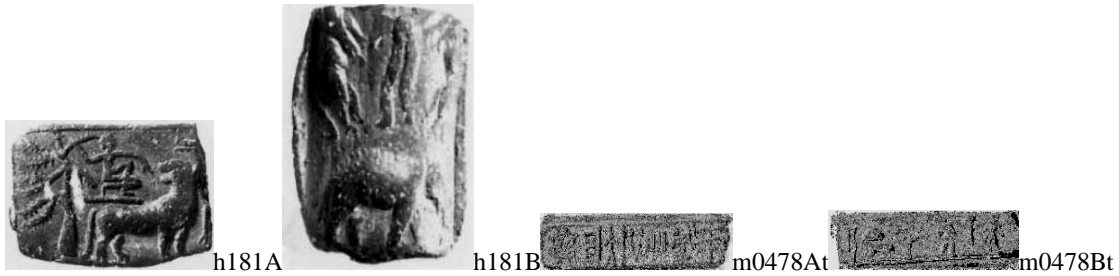
Tiger **kr.a_d.i, kra_nd.i** (Kui) **karan.d.amu** (Te.) sword

karad.e (Ka.) **kra_d.i** (Kui) Large axe

kara_d.o (G.) carpenter's tool used in hewing down large pieces of wood

[karan.d.aka a box in which lin:ga is worn (Ka.)]

Crown karad.a (IL)



Bet Dwaraka (S'ankhodar), a rectangular seal (20 X 18 mm) of conch shell, with a perforated button at the back was found in trench UW6 of Bet Dwarka. A composite animal motif representing the short horned bull, unicorn and goat are engraved in an anticlockwise direction.

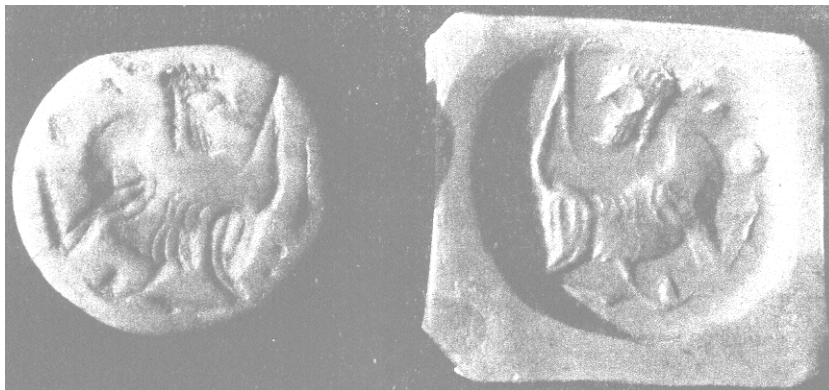


Chanhudaro Seal obverse and reverse. The oval sign of this Jhukar culture seal is comparable to other

inscriptions. Fig. 1 and 1a of Plate L. After Mackay, 1943.



Bactria tablet.



Tepe Yahya. Stamp seal with a tiger with head turned back and tail raised (after Lamberg-Karlovsky 1971).



Kalibangan043 8039 Pict-59: Composite motif: body of an ox and three heads: of a one-horned bull (looking forward), of antelope (looking backward), and of short-horned bull (bison) (looking downward).



m1170a



1382

Antelope

That *me_r.h* is the lexeme represented by an antelope (or mountain-goat) is re-inforced by semantic determinants on some inscribed objects which present (1) an antelope in the context of a glyph of a *figus glomerata* (*med.i*) or (2) the *figus glomerata* leaf (*med.i*) in the context of a pillar (*me_d.i*) to which a bull is tied:



Balakot 05 **medha** = lance-shaft (RV 1.88.3) The animal is a two-horned heifer with pronounced rings on the neck.

On some inscribed objects, the mountain-goat (*me_d.h*) is shown with a human face, perhaps an orthographic marker that the glyph represents a person, **me_d.h**, chief:

Glyph (the heads of the heifer are face-to-face): **me~t me~t nepel** = v. see face to face; v. nepel; note, this is friendly, quite different from *me~t ar me~t* (Santali.lex.Bodding) **me_dhaka**, **me_dhaga** = opposing, quarrel (Pali)(CDIAL 10314). **methati** quarrels with (RV); medhati injures (Dha_tup.); mehn.a_ to reproach (P.)(CDIAL 10315). metti_ friendship (Pali.Pkt.); mitti (Pali); mitti_ (Pkt.); maitra friendly (Mn.)(CDIAL 10340). **mith** = to oppose (Skt.); mithati_ pres. part. f. opposes, quarrels with (RV.)(CDIAL 10128).

me~t = the eye; *me~t kot.i* = the eye brows; *me~t gad.a* = the eye cavity; *me~t pipni* = the eye lashes; *me~t dak* = tears; *me~t sar.im* = the eyelids; *me~t, me~ndok* = inflammation of the eye and appendages; *me~ta~ha~* = the face, countenance (Santali.lex.) met, med (Kherew.); mat (Nicobar); med, mid, mat, met (Semang); met, men (Desisi); met (Pangan); mat, met (Sakai); mat (Stieng, Bahnar, Annam); khmat (Khasi); me (Japanese); in a number of Oceanic (Pacific) languages: mata, meta, mita (Santali.lex.Bodding). *mi_t.n.a_* = to close the eyes (P.); mit.ik = twinkling, moment (N.); mit.i = blinking (G.); mit.n.e~ = to close the eyes (M.)(CDIAL 10119). Mit.akisa = to blink (Ka.)(DED 3969). mel.l.a, mel.l.e = a squinting man, mel.l.agan.n.u, mel.l.egan.n.u = a squinting eye; mel.l.e = rolling, looking obliquely, squinting (Ka.); melle (Te.) (Ka.lex.)

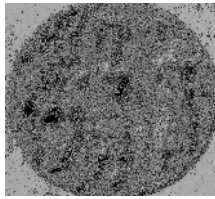


Ox-antelope with a long tail; a trough in front. 6121

med.hi = pillar, support (Pkt.lex.) **me_t.hi, me_t.i, me_d.hi, me_n.t.i, me_dhi** = a pillar, a post; a pillar in the middle of a threshing-floor to which oxen are bound; a post to which cattle are tied; a prop for supporting the shafts of a carriage (Ka.lex.) methi, methi_ = pillar, post, stake (AV 14.1.40); **men.d.** = a low flat top ridge separating fields (H.)(Vedic.lex.) med.h, med.ha_ = post, forked stake (H.); *me_dhi* – post to tie cattle to, pillar, part of a *stu_pa* (Pali)(CDIAL 10317). **meht.ha_** post on the threshing floor (Bi.Patna); **meht.a_, me~ht.a_** = the bullock next the post (Bi.Gaya); *me_this.t.ha* = standing at the post (TS)(CDIAL 10319).

Melukka, copper; melh, goat

On some glyphs, the antelope is held by its neck (**med.a** or **melkha_**):



ur Seal; BM 118704; U. 6020; Gadd PBA 18 (1932), pp. 9-10, pl. II, no.8; two figures carry between them a vase, and one presents a goat-like animal (not an antelope) which he holds by the neck. Human figures wear early Sumerian garments of fleece.

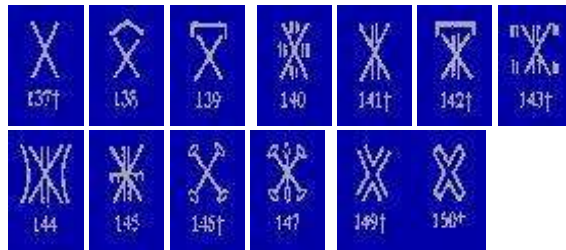
melkha_ throat, neck (Kur.); melque throat (Malt.)(DEDR 5080). This glyph of holding by the throat of the animal is a phonetic determinant of the animal itself: **me_lh** goat (Br.); mr..e ka (Te.); meque to bleat (Malt.); me_ke she-goat (Ka.); goat (Nk.) me~_ka, me_ka goat (Te.); me.ke (Kol.); me_ge goat (Ga.); meka_, me_ka (Go.); me_xna_ to call, hail (Kur.)(DEDR 5087). **med.a** = neck (Te.lex.) met.e = the throat (Ka.); men-n.a, men-n-i (Ta.); menne (Ma.); mid.ar-u = the neck, the throat (Ta.Ma.); met.regat.t.u = a swelling of the glands of the throat (Ka.lex.) [The dotted circle connoting the eye: **khan:gar** 'full of holes'; rebus: **kan:gar** 'furnace']

This is rebus for: **melukka** copper (Pali) [cf.Meluhhan interpreter shown on a cylinder seal; the Meluhhan is shown carrying a goat on his hands.]



Sign 149 may connote lustrous or shining (**val.**) cast iron: **tan.t.a** (hence, **tan.t.ava_l.a**)

Alternative for 'cast iron': **dul** 'to cast in a mould'; **dul me~r.he~t**, **dul mer.ed.**, **dul**; **kot.e mer.ed.** 'forged iron'; rebus: rebus: **d.ol** 'arrow'; rebus: dol 'likeness'; **dola doli** = divisions, sects (Santali.lex.)



[Ligated glyphs: 'mountain range'; 'sprout']

Ligaturing elements of Sign 151 and Sign 152:

damha 'a fireplace'; **d.ha~gar** 'blacksmith'
d.amgi 'hillock'; **d.agar** 'mountain'

pasra = a smithy, place where a blacksmith works, to work as a blacksmith;
kamar pasra = a smithy (Santali)

kamar pasra = a smithy; *pasrae lagao akate se ban:*? Has the blacksmith begun to work? *Pasraedae* = the blacksmith is at his work (Santali.lex.) The furnace used by Dhokra/Maral artisans of Burdwan dist. Bengal (Deripur) was a brick-built structure called **pasra**.

Prastarika = a trader dealing in minerals (Pa_n.ini, As.t.a_dhya_yi 4.4.72; cf. VS Agrawala 1953: 231).

Pra-stara in RV 10.14.4 is interpreted as the grass strewn as a seat for performing the yajñ; cf. AV 16.2.6; TS 1.7.7.4; VS 2.18.18.64; ABr. 1.26; 2.3; S'Br. 1.3.3.5. Pra-stotr. is the name of an assistant of Udga_tr. priest who sings the **Prasta_va**, or prelude to the Sa_man chant (*Vedic Index*, II, p.44) RV 8.81.5 mentions his function as **pra stos.at**; he is mentioned in TS 3.3.2.1; 6.6.3.1; TBr. 8.8.2.3; ABr 5.34; 7.1; S'Br. 5.4.5.22; 12.1.1.6; Ch.Up. 1.10.8.

pajhar. = to sprout from a root; pagra = a cutting of sugar-cane used for planting (Santali.lex.)

Image: saddle with its gear: prak.s.ara iron armour for horse or elephant; pra(k)khara id. (Skt.); **pakkhara** bordering or trimming (of a carriage) (Pali); pakkhara, pakkhara_ horse-armour (Pkt.); pakhara dress given by faqir to layman (S.); pa_khar armour for elephant or horse (H.); saddle with its gear (P.L.); net of flowers for bed-cover, horse-armour (G.); pa_khariyo a species of horse (G.); pa_khar caparison of a horse (M.)(CDIAL 8452). cf. pa_gran. bedding, decorations (G.)(CDIAL 8477). 5607. Images: saddle; balustrade; central platform of a chariot: pa_kar wooden balustrade in a car (Cir-upa_n.. 258, Urai.); car; pa_ central platform of a chariot (Ta.lex.) pa_kan- elephant driver, mahout (Na_lat. i,213); charioteer, muleteer, horseman, rider (Tiv. Periyati. 7,5,2); pa_ga_ (M.)(Ta.lex.);

Main road **da~_r.a_, da_n.d.a** (Or.H.)

tan.d.ava_l.a = cast iron (Ka.); tan.t.ava_l.am = cast iron, iron rail, girder (Ta.)(DEDR 3050). Cf. va_l. ploughshare (Ta.); karava_la sword (Skt.)(DEDR 5376). **va_l.** luster, brightness (Ta.)(DEDR 5377). **da~_twa_l** = ploughman (WPah.); da_ta = mowed (Pa_n.)

d.an.d.a = the loins, waist; d.an.d.oli = a string worn round the waist (d.ora) with a large tassel attached to it (Santali.lex.)

d.an: = a pole; **d.an.d.om** = a handle, shaft (Santali.lex.)

Stalk d.a~_t. (B.H.); foot stock of lotus (Mth.); d.an.t.a_ = stick (Bhoj.); t.a_n.d.a_ = dry stalk of ba_jra_ (L.); t.a~_d.a_ (P.) tan.t.iyam = cross-pole (Ta.)(IL 4340) Lute tan.t.u (Ta.)

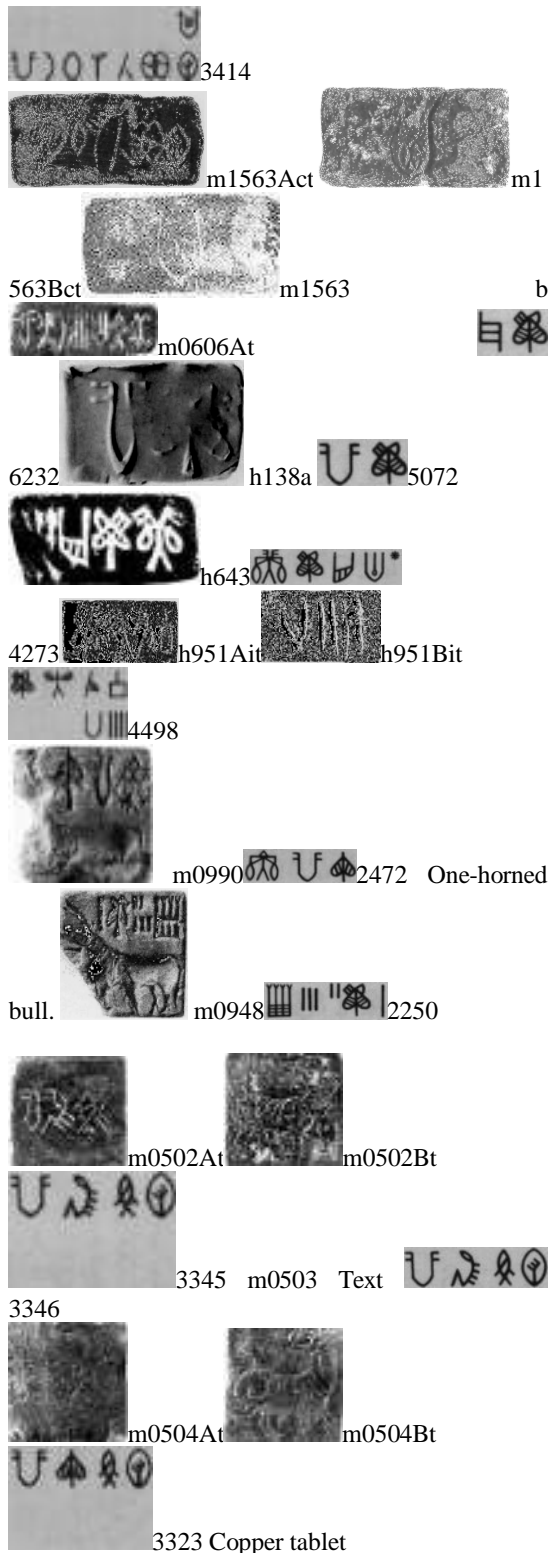
ta_n.t.uni to touch, hit, come into collision, quarrel, fight; ta_n.t.a_vuni to make collide; ha_n.t.u to collide; ta_d.uni to gore, butt; ta_d.u goring; ta_d.elu act of goring or butting; ta_d.uni to gore, butt; ta_d.u goring (Tu.); ta_n.t.i to hit (Kor.); ta_t.u to strike against; ta_d.u to hurt with horns (Ka.)(DEDR 3156). Oppose tan.d.u (IL 4347)

da~_d.o = the backbone (G.)

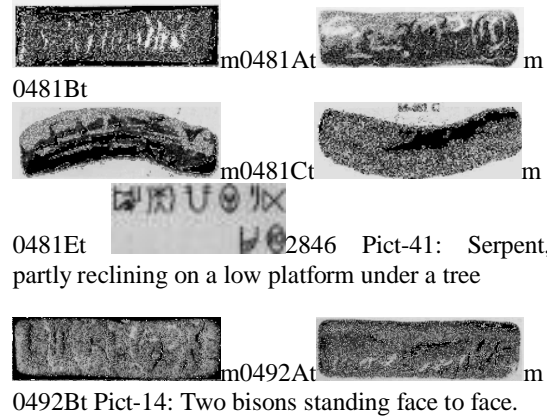
da~_d. part of a tank at each of the embankments where it is prolonged into a narrow channel, often leading to the overflow channel (Santali)

d.an.d.ka, dhan.d.ka = a fish (Santali.lex.) [The next sign after fish, from right, on an epigraph, is a skeleton].

dan.d.ike = a string of pearls (Ka.lex.)



Tall, lanky person/snake



lar.ga tall, long; *lar.an:ka* tall and stout (Santali) *la_t.i* tall, long (Pa.Go.)(DEDR 5187). *va_l* anything long or elongated (Ta.); *va.l* long and narrow (of leaves, shape of face, head (Ko.)(DEDR 5365).

lat.a = horns pointing downwards, having the hair tied in a knot at one side of the head instead of at the back (Santali.lex.)

la_thro = young sapling, soft young branch (N.)(CDIAL 10930).

la_t.i_ = [Skt. *yas.t.i* a stick] a place where timber or fuel is stored and sold; *la_t.* = the vertical pestle of an oil-mill; the axle of a wheel (G.lex.)

lat. = a lock of hair; tangled hair; entangledness; *lat.iya_m* = pl. locks of hair; tangled hair; *lat.avum* = to be entangled (G.lex.) *lat.* = lock of hair (P.)

lat.a_ = creeper (Or.B.); *lund.u* = creeper (K.); *lond.u* = eave-border of the edge of a thatch (usu. Made of birch bark and mud)(K.)(CDIAL 10918). Cf. *lata_* (Skt.) *lata_* = creeper (Pali); *id.* (Mn.); *lai*, *nai* (Or.); *lai_* (S.)(CDIAL 10928).

sukor, **sukar** the planet Venus as evening star (Santali) **cukkai** star (Ta.); **cukka** (Te.); **sukka** (Kol.); **suk'erika** stars (Kui)(DEDR 2646).

sokol fire (Santali)

m0305 (A person in 'yoga' posture on a seal-fragment; two fish signs are seen; the buffalo horns include a head-



dress, bearing a fig branch and there are two stars in the two loops of the horns).

d.han:gar 'blacksmith'

d.a_n:g (IA 26), also spelt da_n:k, corrupt form of t.an:ka (IEG) da_ni_ (IE 8-5; EI 26) officer collecting tax or corn; da_n.ibhoga (HRS), periodical supplies of fruits, firewood and the like by the villagers, according to some; tax for maintaining the collectors of the tax called da_na; same as da_nibhoga-bha_ga (IEG)

d.han: = to be obstructed, impeded, to meet with an obstacle, to be entangled (Santali.lex.) dan:ga = to fight, or strike each other; a free fight; to assault (Santali.lex.) [Thus, the pair of oxen shown in a fighting or butting posture, can be deemed to be a phonetic determinant of d.an:gra = an ox, bullock -- rebus, blacksmith or digger of wells and tanks.]

d.an:ku = a pretty large double drum (Ka.); dan:ke (Te.); d.an:ka_, d.a_n:ka_ = a large kettle drum (M.); d.an:gu = tom-tom beaten by the crier (Te.); tan.t.ora (Ta.); d.avan.d.i_ (Ma.); d.an:gara, d.an:gura, dan.d.ora = public notice by a crier who beats a tom-tom, an oral proclamation; the tom-tom beaten by the crier (Ka.); d.a_n:go_ra_, d.ha_n.d.o_ra_, dha_n.d.o_ra_ (M.)(Ka.lex.)

A synonym of d.an:gar, 'bull' is: it.an:kar, 'alligator'. vr.jina crocodile, nakra, negar..u (Ka.lex.) vit.an:kar crocodile (Varata. Pa_kavata. Na_racin.. 133); it.an:kar crocodile (Kur-icip. 257)(Ta.lex.) Alligator is a pictograph on many inscribed objects.

Ear of maize or corn

sis ear of paddy; bae daklette sis ban: od.oklena = no paddy-ears came out, because it did not rain



(Santali.lex.Bodding) sis = an ear of dhan (Santali.lex.) si_rs.a = head (AV); sisa, sisaka head (Pali); s.i_s. = ear of maize (Bshk.); s.i_s.a ear of corn (Phal.Sh.); s.i_s.u = fir-cone, ear of wheat (Sh.); sisa_ ear of rice emerging from stalk (Or.); sis-kat.ni_ cutting ears without stalks (Bi.); si_s, si_sa_ ear of wheat (Mth.); s'i_s, s'i_~s just-formed

fruit of cucurbitaceous plants appearing as a knob behind the flower (M.)(CDIAL 12497). s'i_rs.aka = an ornament of flowers on the head (Ka.lex.)

sis = lead (Santali.lex.) si_sa = lead; adj. Leaden (VS); si_saka (Ya_jn~.); si_sa lead (Pali.Pkt.); si_saya (Pkt.); si_ho (S.); si_so_ (WPah.); si_so (Ku.); siso (N.); xih (A.); sisa_ (B.); sisa_, si~sa_ (Or.); si_sa_ (H.P.G.); s'ise~ (M.)(CDIAL 13445). sisa = lead; banduk guli do sisa reak = gun bullets are of lead (Santali); si_sa_ (H.)(Santali.lex.Bodding) sisa [Persian she_sha_] lead; solder; a lead pencil (Mundari.lex.) si_sa, si_su, si_saka, si_sapatra, na_ga = lead (Ka.lex.)

[Note: the representation of s'es.asa_yi_ as Vis.n.u reclining on the serpent's body; synonym of s'e_s.a = na_ga which also means lead; hence, the rebus representation of si_sa lead can also be a snake]. S'e_s.a = the thousand-headed serpent s'e_s.a (Ka.lex.)



lo = nine; rebus: lo = iron (Santali)

So, sisa lo (lead, iron); pasra 'sprout'; pajhar. 'furnace'.

Nine cobs of corn (?flowering shrubs). A cob of corn (sprout from a tuber or a flowering shrub?) is stylized like the five fingers of the palm of person (lady?) in the centre. There is a tree to the left. Ram, markhor, antelopes (looking backward) are shown. A standing person has horns. Shahda_d. Impression of a cylinder seal. [After Pl. 209 in: BB Lal and SP Gupta, eds., *Frontiers of the Indus Civilization*].



Steatite vessel. Ur. Two horned bulls and ears of corn (L. Woolley, *Mesopotamia and the Middle East*, London 1961, pl. on p. 50].



Sumer, cylinder seal depicting a row of one-horned bulls and ears of corn (H. Frankfort, *Cylinder Seals*, London, 1939, pl. Vb).

"...the 'unicorn' appears to be a watered-down, much recopied version of the Sumerian and Proto-Elamite one-horned bovine tradiiton." (During Caspers, Harappan Temples--fact of fallacy? *South Asian Archaeology* 1987, p. 248). During Caspers also sees parallel between the ear of corn shown on cylinder seals and the 'standard' shown on the Harappan inscriptions in front of the 'unicorn'.

Susa, Iran; steatite cylinder seal . A bison with head lowered, feeding from a basin. A second bison figure is seen. Inscription on top. Louvre Sb 2425, Musee du Louvre and Pierre and Maurice Chuzeville.

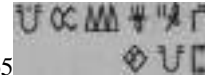
Hill, ligatured hill



m0048a



1186



m0665



1139

4823 [Pottery]



Kalibangan053



8036



Sibri-damb02E

d.agar = little hill (H.); d.a~_g = mountain-ridge (H.); hill-tract (M.)(CDIAL 5423). **dan:ga, d.an:gal** = highlands unsuitable for rice cultivation; dan:gaur.a = a rubbish heap, a heap of rubbish; dan:gi = a part of the slope of a hill (Santali.lex.) d.u~g = hill, pile (M.); d.u~ga_ = eminence (M.); d.um:gara = mountain (Pkt.); d.u~gar id. (Ku.); d.un:guri = hillock (Or.); d.u~_gar id. (H.); d.u~gar id. (G.); d.u~_garu = hill (S.); d.o~gar = hill (H.M.); t.an:ka = peak, crag (MBh.); t.akuru = mountain (S.); t.a_kuro = hill top (N.); t.a_n:gi_ = hill, stony country (Or.); **t.a_n:gara** = rocky hilly land (Or.); t.in: = mountain, peak (A.); t.ek = hillock (M.); t.u~k = peak (G.); t.e~_g = hillock, mound (K.); t.u~g = mound, lump (M.); d.a~_g = stony land (Ku.); d.a_n:ga_ = hill, dry upland (B.); d.a~_g = mountain-ridge (H.); hill tract (M.); da~_g = hill, precipice (H.); da~_gi_ = belonging to hill country (H.)(CDIAL 5423). **d.ok** = high ground, hillock, heap (Kho.); d.hok = large piece of broken stone (H.); d.hu~go = stone (Ku.); d.hun:go (N.)(CDIAL 5603). d.hu~yer = carrier of stone (Ku.)(CDIAL 5604). t.okh = hammering (K.); t.oka = nail, peg (Ash.)(CDIAL 5476).

Substantive: **d.ha~gar** 'blacksmith' [The ligature of a 'ficus religiosa' leaf reinforces the nature of the metal work: *loa* 'ficus religiosa'; *loh* 'iron'; Thus Kalibangan Text 8036 is to be read as: iron-smith.]¹¹

Two special ligatured glyphs: furnace and smithy

There are two glyphs with characteristic ligatures on top: one is a leaf and the other is what looks like the back of a field-rat.



[Is it a bird or an India River Otter? Could it be a scorpion's tail/sting ligatured to a field-rat, a model for

Signs 51 and 52?



See variant in Text 9845 West Asia find]

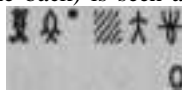
(Sign 51 itself is ligatured with special markers on top comparable to the markers ligatured on Sign 327) This connotes, **bica** 'scorpion'; bica, 'ore'? Or, **kod.el**, 'rat'; rebus, substantive: **kol.el**, 'smithy'.

If the ligatured leaf connotes a **kamat.ha** (rebus: **kampat.amu** 'furnace' (Te.); the ligatured **kod.el** 'rat' may be rebus for kol.el 'smithy'.

Copper, iron ingot

urseal15 A scorpion (?or, some seated animal seen from the back) is seen as the

first sign from left.



9845



Ur Seal impression; UPenn; steatite; bull below a scorpion; dia. 2.4cm.; Gadd, PBA 18 (1932), p. 13, Pl. III, no. 15; Legrain, MJ (1929), p. 306, pl. XLI, no. 119;

found at Ur in the cemetery area, in a ruined grave .9 metres from the surface,

together with a pair of gold ear-rings of the double-crescent type and long beads of steatite and carnelian, two of gilt copper, and others of lapis-lazuli, carnelian, and banded sard. The first sign to the left has the form of a flower or perhaps an animal's skin with curly tail; there is a round spot upon the bull's back. [The first sign looks like an animal with a long tail – as seen from the back and may have been the model for the orthography of Sign 51 as noted in Mahadevan corpus]. "...the most remarkable sign being the first one to the left (in the impression) having the form of a flower or perhaps an animal's skin with curly tail...the round spot upon the bull's back is also curious." (C.J. Gadd, Seals of Ancient Indian Style Found at Ur, in: G.L. Possehl, ed., 1979, *Ancient Cities of the Indus*, Delhi, Vikas Publishing House, p. 119).

The emphasis of the last glyph (as evolved from the back-view of the field-rat of the Ur seal) is on the sting of the scorpion-like ending: *kot.ukka* scorpion's sting (Ta.); *kod.k* to peck (Nk.); *kod.gi* hoe (Go.)(DEDR 2064).

The round spot upon the bull's back can be compared with another hieroglyph, the 'eye' or 'oval representation of a bun ingot':



Chanhudaro Seal obverse and reverse. The oval sign of this Jhukar culture seal is comparable to other inscriptions. Fig. 1 and 1a of Plate L. After Mackay, 1943. A similar glyph of an oval appears together with a scorpion.

lat.t.ho = a lump of gold (G.lex.) *la~_do* = clammy lump (G.); *laddi_* = elephant's dung (Pkt.)(CDIAL 10933). **lad.um** = a goldsmith's tool (G.lex.)

kandhi = lump (Santali.lex.) [Glyph: Antelope + (bun) ingot: *melh* 'antelope'; rebus: *melukka* 'copper'; kandhi 'ingot']

Field rat, bandicoot: kot.t.il cowstall



Kalibangan068A



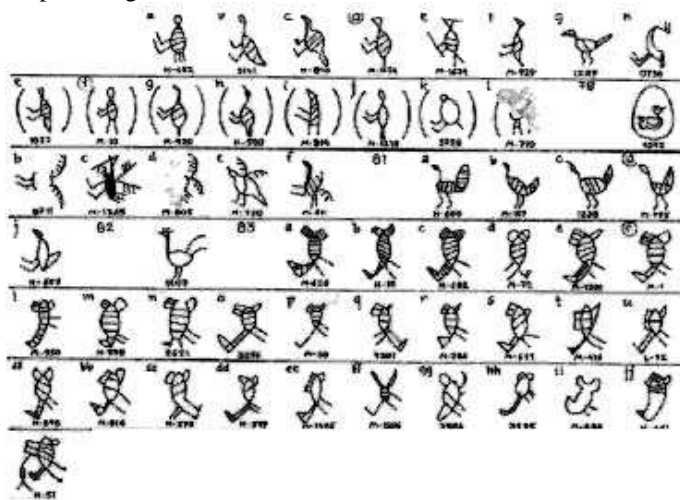
Kalibangan068B



8117

[The reading of the first sign from right on the top line as a 'bird' glyph may not be correct; it may connote the early orthography of a field-rat, shown as a seated animal with a pronounced tail.]

Sign 51 corresponds to Pictorial motif 83 of Parpola's sign list:



[After Parpola, 1994, p. 71: Sign list of the Indus Script, with principal graphic variants.]

That Sign 51 is ligatured to a scorpion [and to be distinguished from a bird] is surmised from the orthography, emphasizing the tail with the pointed 'sting' in most of the variants and on Sign 51 and also from the pictorial motifs which are field-symbols on inscribed objects dominated by the 'scorpion' motif. See, for example, the Nindowari-



damb seal: Nindowari-damb02 bakhor., 'toothed comb'; rebus: **bakhor.**, 'knife, splicer for tassars cocoons'; kamat.ha, 'crab'; rebus: **kamat.ha_yo**, 'carpenter' or kammat.a, 'furnace, coiner, mint'; kod.el, 'bandicoot'; rebus: **kole.l**, 'smithy'. Alternative decoding of Sign 176: Comb

kangha (IL 1333) ka~ghera_ comb-maker

(H.)

Comb **kangha** (IL 1333) ka~ghera_ comb-maker (H.)

kan:g = brazier, fireplace (K.)(IL 1332) Portable brazier **ka~guru**, **ka~gar** (Ka.) whence, large brazier = **kan:gar** (K.)



h305A



h305B Text 5460



h703At

h703Bt



4595



m1549At



m1549Bt



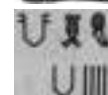
h305A



h305B Text 5460



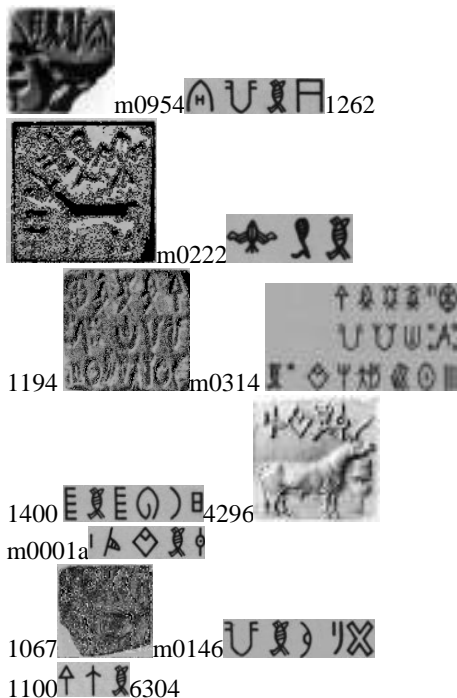
h788At



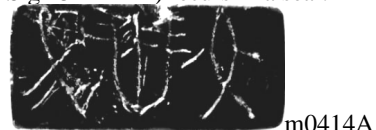
4683



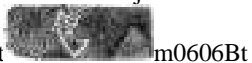
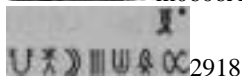
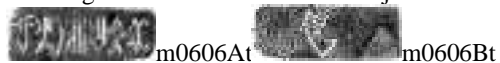
h788Bt



Sign 51) recurs in a seal:

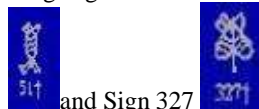


Seal with incision on obverse m0414B 2004 The middle sign could be interpreted as a ligature of a 'stele' found in the center of a fire-pit on many sites of the civilization and the most frequently occurring glyph denoting the rim of a narrow-necked jar.



Two identical ligatures on two signs

It should be noted that Sign 51 has ligatures on top similar to the ligatures affixed on the 'leaf' sign; only these two signs get such identical ligatures:



Sign 51 and Sign 327

Special ligatures, are like the claws of the 'scorpion' or the 'ears' of a field-mouse (See variant on Text No. 9845: Gadd seal No. 13).

Bandicoot = ko_d.el (Pa.) [**kod.el** = rat (Go.)]

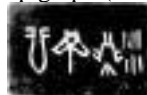
kole.l = smithy, temple in Kota village (Ko.)

If the superscripted ligatures render the Sign 51 to be read as: **kole.l** 'smithy', Sign 32 (ligatured leaf) can also be related to a smithy: **kammat.a** 'furnace' (Te.); **kamat.ha** 'ficus religiosa'; **lo** 'ficus'; rebus, **lo** 'metal'.



Sign 326 and Sign 327 (Sign 326 ligatured with special markers on top). This connotes: lo, 'fig leaf'; loh, 'metal'.

Sign 327 (ligatured leaf) appears on a copper plate epigraph (m1534; text 1703):



34Bct 1703 Composition:

Two horned heads one at either end of the body. Note the dottings on the thighs which is a unique artistic feature of depicting a rhinoceros (the legs are like those of a rhinoceros?). The body apparently is a combination of two rhinoceroses with heads of two bulls (or, nilgai, blue bull?) attached on either end of the composite body.

Nilgai, blue bull: **god.** = bison (Go.); gud.va = nilgai (Pa.); **kod.al** (ma_v_ = a kind of deer; khod.d.a ma_v = blue bull (Go.); gura = bison (Kond.a) (DEDR 1664) go_dalu = pl. horned cattle of any kind; as in: **god.d.ugo_dalu** (Te.lex.); **god.lu** = horned cattle; **go_da** = an ox (Te.lex.) The rings on the neck of the ligatured head: **kot.iyum** 'a wooden circle put round the neck of an animal. Clearly, this glyptic element can be seen as a phonetic determinant.

Substantive: *got.i_* a lump of silver (G.)

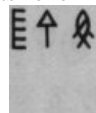
The ligaturing elements of two faces of a blue bull can be read as **god.** 'bison'; rebus substantive **kod.** 'artisan's workshop'.

Thus, Sign 51 and Sign 327 can be interpreted respectively as: (1) **kole.l** 'smithy' for **bica** 'iron ore'; and (2) **kole.l** 'smithy' for **lo** 'metal'.

Leaf



h243B Tablet in bas-relief Pict-78: Rosette



of seven pipal (?) leaves. 4664 *lo* 'figus glomerata'; *lo* 'iron'; *er..u* 'clubs'; Rebus: seven iron clubs. *bakhor.* 'comb'; *bakher* 'homestead'; *d.ol* 'arrow'; *dul* 'cast iron' [cf. Fish signs analysed elsewhere.] *ten:gra hako* 'a species of fish'; *t.an:gi* 'stone chisel' (cast iron chisel?) *eae* 'seven' (Santali); *e_d.u* (Te.); *e_r..u* (Ta.) The circumgraph of four short linear strokes may be a synonym of the 'arrow' glyph:



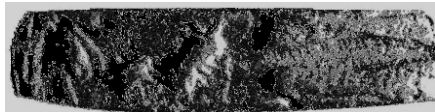
h888Abit 4466



m0602At



m0602Bt



m1430Bt
430C

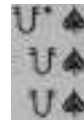


m1



m1430At

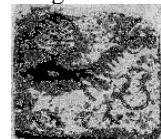
Pict-101: Person throwing a spear at a buffalo and placing one foot on its head; three persons standing near a tree at the centre.



2819 Pict-60: Composite animal with the body of an ox and three heads [one each of one-horned bull (looking forward), antelope (looking backward) and bison (looking downwards)] at right; a goat standing on its hindlegs and browsing from a tree at the center.



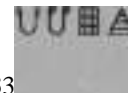
Ox-antelope with a long tail; a trough in front. 6121



Kalibangan026 8071



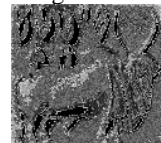
m0233



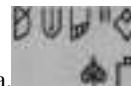
1804



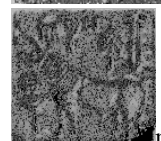
Pict-39 Ox-antelope with a long tail; a trough in front.



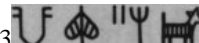
m0258a.



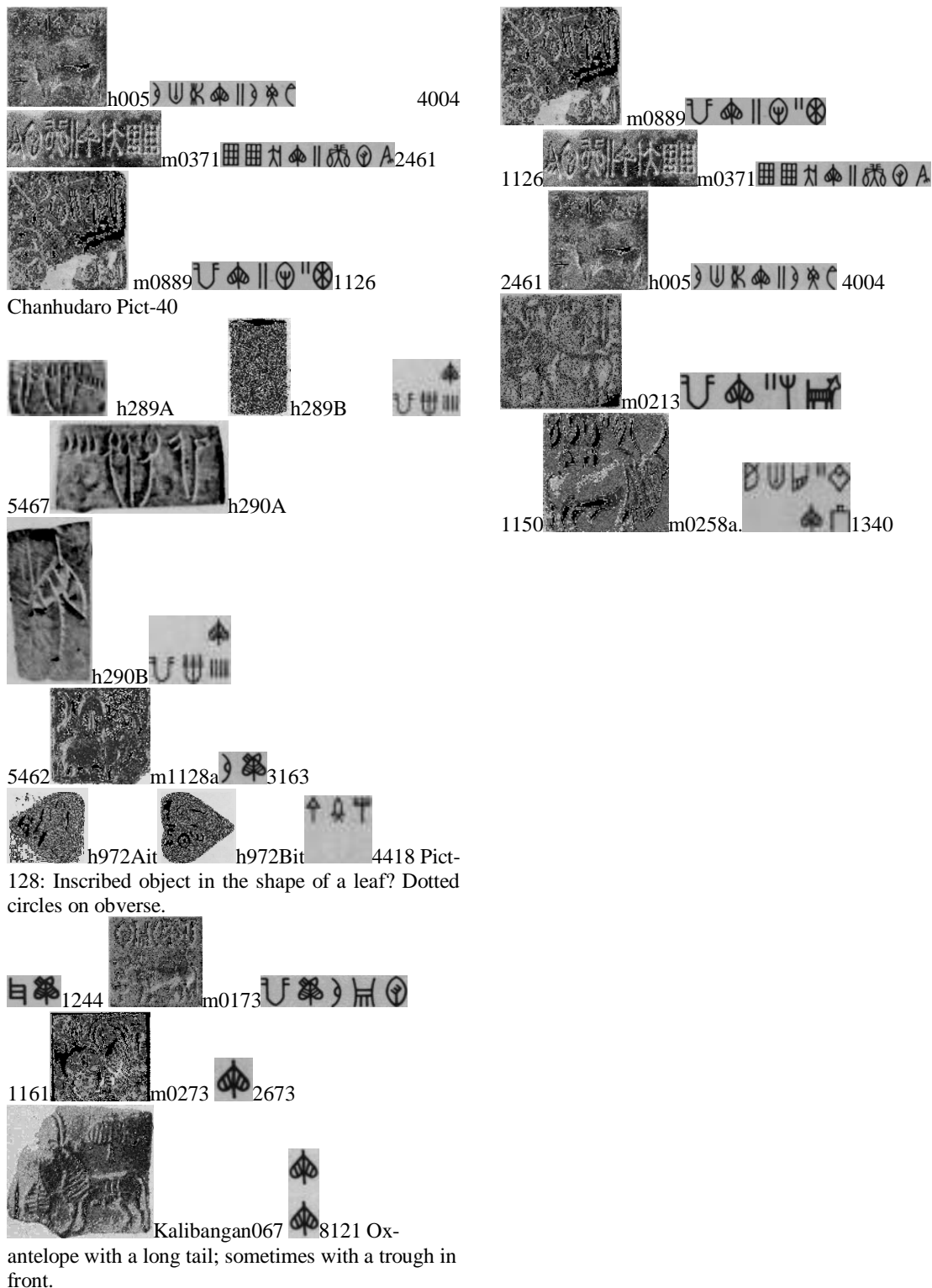
1340

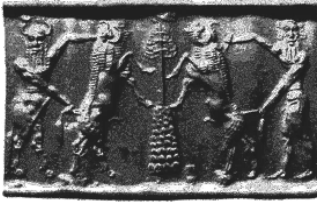


m0213



1150





The bulls flank a mountain topped by a leaf. Scene representing Gilgamesh and Ea-bani in conflict with bulls in a wooded and mountainous country; Cylinder seal impression, Mesopotamia British Museum No. 89308.

ku_t.amu = the summit of a mountain (Te.lex.)

ku_t.akamu = mixture (Te.lex.)

ku_d.ali, ku_t.ami, ku_d.ika = junction (Te.lex.)

ku_t.a_mu = a hall in a house (Te.lex.)

ku_t.ud.u = a stone-cutter (Te.lex.)

ku_t.uva = an army, a host; a collection; ku_t.uvamu_ka = an army consisting of untrained rabble, or irregular troops (Te.lex.)

ku_t.avarusalu = a necklace of four to eight thin gold chains hanging together (Te.lex.)

a_raku_t.a 'brass'.

me_d.i glomerous fig tree, *figus racemosa*; opposite-leaved fig tree, *figus oppositifolia* [Te. = udumbara] (Ka.) *figus glomerata* (Te.); *me_r.i* id. (Kol.) [*Ficus glomerata* Roxb. = *Ficus racemosa* Wall.] (DEDR 5090).

met.t.u mound; *me_t.u* hillock (Ta.); **me_t.u** rising ground, hillock (Ma.); **me_d.u** rising ground, hillock (Ka.) (DEDR 5058). **met.t.a** = hillock (Or.) (CDIAL 10308). **mer** = mountain (Kho.); *me_ruve* = pyramid (Ka.) (CDIAL 10330). [The leaf sign is associated with a hill and also an 'antelope' pictorial motif on inscribed objects].

med. Iron, iron implements (Ho) (Santali.lex.Bodding) **men.d.a** = lump, clot (Or.) (CDIAL 10308). *mer* = a kind of large copper or brass pot (G.lex.) **mer.ed.**, **me~r.ed.**, **me~r.e~d.** iron; en:ga *mer.ed.* soft iron; sand.i *mer.ed.* hard iron; ispa_t *mer.ed.* steel; dul *mer.ed.* cast iron; bicamer.ed. iron extracted from stone ore (Mundari.lex.) **balimer.ed.** iron extracted from sand ore; *mer.ed.* niga an iron cart axle; *mer.ed.-o* of ore, to be reduced to iron; of iron, to be produced from ore; *mer.ed.-bica* = diribica iron stone ore, in contrast with balibica iron sand ore (Mundari.lex.) *me~r.he~t* = iron; *me~r.he~t icena* = the iron is rusty; ispat *me~r.he~t* = steel; dul *me~r.he~t* = cast iron; *me~r.he~t khan.d.a* = iron implements (Santali.lex.)

mehro = a pa_lki_ bearer (G.lex.)

me_t.i, *me_n.i* = the plough-tail (Ka.); *me_di* (Te.); *me_r.i* (Ta.Ma.) (Ka.lex.)

ra_yi = a stone, rock (Te.lex.) **san:gatara_su** = stone cutter (Te.)

Image: turner's point for hollowing with: rachi turner's point for hollowing with (S.); *racch* tools, implements (L.); *racch* that part of loom to which web is attached and along which shuttle plays (P.); *rachu* treddles of a loom, fish net, vessel or utensil for holding or cooking food etc. (S.); *ra_ch* instrument, implement, apparatus, weaver's toothed instrument (H.); **ra_c** tools, implements, furniture, materials (G.); *rathya* pertaining to a chariot (RV.); collection of chariots (Pa_n.); chariot with its team or equipment (RV.); *rathaka_ra* chariot-builder, carpenter (Skt.); *rahaa_ra* id. (Pkt.); *radhe'aro* shoemaker (Dhp.) (CDIAL 10607). *re~ples* tongs (Lith.); *rapas* (demon of) injury (RV.) (CDIAL 10607). *art-* (arty-) to pursue (men, game, etc.) (Ko.); *carp-* (cart-) to drive (Pa.); *sarp-* (sart-) to drive, chase (Ga.); *sarc-* (sart-) to chase (Ga.) (DEDR 2362). cf. *sa_rathi* charioteer (RV.); *saratha* with a chariot (S'Br.); cf. *ratha* chariot, cart (RV.) (CDIAL 10602). **Barber's case of tools:** *richa_han.*, *raccha_n.i.*, *richa_hn.i.* barber's case of tools (L.); *racha_n.i.* (P.) (CDIAL 10608).

rajas = dust; rajasa = dusty, unclean (Vedic.lex.) **rajas** = dust, powder, any small particle of matter (Ka.lex.)
rajassu = any small particle of dust, as a mote in a sunbeam (Te.lex.) **ni_rajā** = free from dust (MBh.);
 n.i_raya = free from dust, pure (Pkt.); niro = pure, unalloyed (S.)

rajas = menstrual excretion; rajasvā = a menstruating woman (Ka.lex.)

ra_ji = a striped snake; ra_jimat, ra_jila = a species of snake (Sus'r.); ra_ji_va = a kind of striped deer (Skt.lex.)

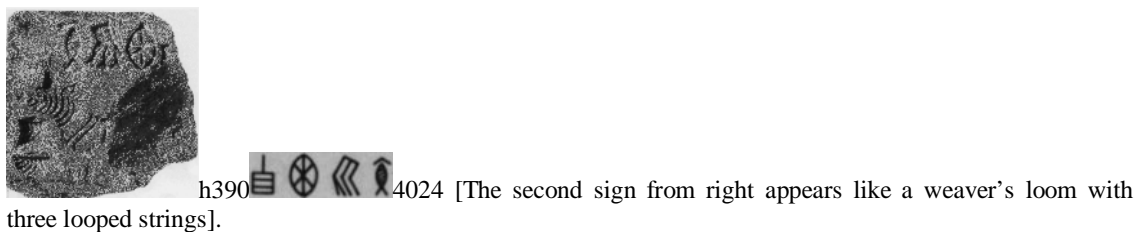
Native metal, iron ore and other minerals







































































Glyph: *balle* a thicket, bush (Tu.); *vallai* extensive thicket (Ta.); *balle* thick bush, thick jungle (Ka.); *vallara*, *vallura* arbour, bower, thicket (Skt.); *vallara* id. (Pkt.)(DEDR 5289). *val.li* climber, creeper (Ta.Ma.); *bal.li* id. (Ka.Kod.Tu.); creeper, esp. the betel wine (Tu.); *valli*, *vallika* creeper, climbing plant (Te.); *valli_* creeper (Skt.)(DEDR 5316, CDIAL 11429).

Glyph: *val.luvan-* a Pariah caste, the members of which are royal drummers, and priests for Paraiyas (Ta.); a priest of the Parayas, a low-caste sage, a caste of slaves (Ma.)(DEDR 5318).



Another glyph which may be rebus for *ten: goc* 'chisel' is *ten*: 'to weave'



BHIMBETKA	ROCK SHELTER								
INDUS VALLEY (HARAPPAN CULTURE)	INDUS SCRIPT SEALS + SEALINGS								
BHIRMOUND, BAHAL, TANJALI SWAT, PATRAHA, NAMBAR, BHAGALPUR, PESHAWAR, AHRAURA	PUNCH-MARKED COINS								
BAHAL, GULBARGA, MACHUATOLI, MATHURA, BENARAS, RAIRH, WADIA, RAMNAGAR, TATHARI	"								
BHAGALPUR, PESHAWAR, BHAGHUA, PURNIA, SWAT, BHIMLIPATAN, PATRAHA, MACHUATOLI, BAHAL, GOSKULUAN	"								
MAMBALAM, MAYURBHANJ, TEREGNA, KOSAM, PESHAWAR, AHRAURA	"								
PATRAHA, BAHAL, BHIMLIPATAN, RAIRH, KAMNAGAR, AHRAURA, PESHAWAR, HASANBADAL, BHIRMOUND	"								
HASANBADAL, PATRAHA, RAIRH, MAMBALAM, AHRAURA, MATHURA, SWAT, BHIRMOUND	"								
MACHUATOLI, LALGANJ, BHIRMOUND, MATHURA, RAIRH, NALDA, AHRAURA, PATRAHA	"								
PESHAWAR, AHRAURA, PATRAHA, TEREGNA, BHAGALPUR, GULBARGA, BHIRMOUND, MAMBALAM	"								

[Pl.38, Mountain range symbol on punch-marked coins in comparison with the symbol on SSVC inscribed objects]

As seen from the last three rows of Pl. 38, the ligaturing of glyphs to the mountain ranges indicates that the ligature elements are minerals found in mountains. e.g. Substantive: *aduru* 'native metal'; glyphs: *adar* 'brahman.i bull'; *ad.aru* 'twigs or branches of tree'. *ke~r.e~ ke~r.e~* call of quail at pairing season; *ce~r.e* a bird; *ke~r.e~ ko~r.e~* an aboriginal tribe who work in brass and bell-metal (Santali)

bulls on the two Gupta sealings have a spherical object between their horns (Pl. IX, 3)...But the sealings from other sites noted above bear either the same device (bull) or have a chakra, peacock, etc...the chakra being reminiscent of the sudars'ana-chakra of Vis.n.u and the peacock of the va_hana of Maha_sena-Ka_rttikeya, the General of the Gods...In literature and later epigraphs, the term dan.d.ana_yaka (or maha_dan.d.ana_yaka) has sometimes been used to denote a military officer or an administrator. Sometimes the term is found combined with other offices (e.g. with kuma_ra_ma_tya and sa_ndhivigrahika). The office could also be hereditary. The title was also, at times, used by the feudatories, perhaps as a mere honorific." (K.K. Thaplyal, 1972, *Studies in Ancient Indian Seals*, Lucknow, Akhila Bharatiya Sanskrit Parishad, Pl. IX, Figs. 1 to 4; pp. 115-118).



1. Clay lump bearing impressions of the seal of the offices of (a) kuma_ra_ma_tya and (b) bala, Ahichchatra_, Antiquity section of the Arch. Surv. of India, New Delhi, no. AC II 4448; 2. Sealing of the military office attached to the Yuvara_ja-bhat.ta_raka, Basarh, Indian Museum, Calcutta, no. A. 11315--NS 6159. (After K.K. Thaplyal, 1972, *Studies in Ancient Indian Seals*, Lucknow, Akhila Bharatiya Sanskrit Parishad, Pl. XIII, Figs. 5 and 6; pp. 110-120).

Sealing bearing the device of a lion and the legend Sena_pati In(dra)...., Bhita, Indian Museum, Calcutta, no. A 12247-NS. 1446. In front of the lion is the symbol, s'ri_vatsa.



dated ca. 6th to

S'ri_vatsa or Nandipa_da glyphs are derived from a pair of fishes as seen on many artifacts and on the necklaces worn by yakshi on sculptures.



S'ri_vatsa symbol [with its hundreds of stylized variants, depicted on Pl. 29 to 32] occurs in Bogazkoi (Central Anatolia) 14th cent. BCE on inscriptions:

The symbol occurs in Mathura (ca. 2nd to 1st cent. BCE) and in Sa_n~ci_ (ca. 2nd -1st cent. BCE).



Sarnath, Rail (AIIS, VNS,

A Nasik cave nandipa_da BCE. [Note: tails joined within two

The evolution described as two fish-tails exquisitely sculpted on Sa_n~ci_ Stu_pa (c. 2nd cent. BCE) and also in Sarnath railings and Bharhut stu_pa:



Sarnath, Va_ra_n.asi, UP, Railing fragment, Sarnath Museum, No. 422 (AIIS, VNS, A27.33)[Pl. XX, 8]

Bharhut Stu_pa, south gate corner pillar, c. 2nd cent. BCE, Indian Museum, Calcutta, 27.72, (AIIS, VNS, 242.34)[Pl. XX, 9]

post, c. 1st cent. BCE, Sarnath Museum No. 420 200.13)[Pl. XX, 10]

inscription has s'ri_vatsa superimposed on symbol and is ascribed to ca. 2nd cent. nandipa_da is made up of two fish-together; s'ri_vatsa encloses a fish fish-tails].



of the s'ri_vatsa symbol is vividly related to a pair of 'fish'. This is apparent from the



Such a composite, ligature glyph is cakra-tris'u_la, a pictograph which is part of the as.t.aman:gala-ha_raka: 1. sa_n~ci (cf. Fergusson Vol. I, p. 124); the wheel is above the panel depicting the life of Buddha in four parts; the wheel has eight petals and twelve spokes, representing the as.t.aprakr.ti and ana_hata cakra; within the trident, two lotuses are inlaid; 2. amara_vati sculpture; two triangular petals are shown near the trident.



Sa_n~ci_stu_pa 1, Northern toran.a, east pillar, c. 1st cent. BCE (AIIS, VNS, 321.29). A pair of fish tails ligatured to form nandipa_da.

The association of s'ri_vatsa with 'fish' is reinforced by the symbols binding fish in Jaina A_ya_gapat.as (snake-hood) of Mathura (late 1st cent. BCE).

S'ri_vatsa symbol seems to have evolved from a stylized glyph showing 'two fishes'. In the sa_n~ci_stu_pa, the fish-tails of two fishes are combined to flank the 'sri_vatsa' glyph. In a Jaina a_ya_gapat.a, a fish is ligatured within the s'ri_vatsa glyph, emphasizing the association of the 'fish' glyph with s'ri_vatsa glyph.



s'ri_vatsa symbol variants found at Kankalitila, Mathura, late 1st cent. BC: Jaina a_ya_gapat.a; in these five specimen, a fish is shown in the middle apparently bound by two snake-hoods on either side; apparently, this ligatured pictorial formed the basis for the evolution of the s'rivatsa symbol almost looking like a stylized trident. (After Pl. 30 C in: Savita Sharma, 1990, Early Indian Symbols, Numismatic Evidence, Delhi, Agam Kala Prakashan; cf. Shah, U.P., 1975, Aspects of Jain Art and Architecture, p. 77).



An identical symbol is depicted at sa_n~ci_stu_pa (Smith, VA, Jaina Stu_pa, p. 15, Pl. VII, L. Buhler, Epigraphica Indica II, pp. 200, 313; Agrawala, VS, Guide to Lucknow Museum, p. 4). The s'ri_vatsa also appears on the chest of a small Jina figure on a_ya_gapat.a (Shah, UP, Figs. 11-12, J. 250 and J. 252, Lucknow Museum). Note the glyphs of two deer at the base; two heads are ligatured to one body, an echo of the orthographic style evolved during the mature periods of the Sarasvati Sindhu civilization.

Yaks.a and Buddhist symbol, toran.a, Sa_n~ci (Ananda K. Coomaraswamy, Part I, 1980, Yaks.as, 2nd edn., Delhi, Munshiram Manoharlal, Plate 10, 2, p.40). Upper part of north toran.a, Sa_n~ci, with a cauri_-bearing yaks.a; showing also a symbol (often but wrongly styled vardhamana). There was originally a Buddha triad consisting of a Dhammacakka between two Yaks.as. First of first century BC. S'ri_vatsa symbol is the centre-piece on this panel.

Yaks.i_ or Devata_, from Bharhut found at Batanmara; va_hanam, a running dwarf. India Office photograph. (Ananda K. Coomaraswamy, Part I, 1980, Yaks.as, 2nd edn., Delhi, Munshiram Manoharlal, pp. 39,40, Pl. 4, Fig. 1). The s'ri_vatsa symbol adorns her necklace close to her neck.

Thus, s'ri_vatsa symbolism is evolved from mithuna or a pair of 'fishes' bound together. The pair of fishes is also a symbol included in the as.t.aman:galaka ha_ra together with other weapons, suggesting that the pair of 'fishes' are relatable to a category of weapons; hake = axe; hako = fish (Munda languages). The pair of fishes may be a symbolic representation of a double-axe.

There are symbol variants of nandipa_ta (triratna) which also are an evolution from the symbolism of two fish-tails joined together, as in the case of s'ri_vatsa symbol. This is seen from the Jaina a_ya_gapat.as of Mathura where a circle is ligatured to the nandipa_da symbol.

BHIMBETKA	ROCK SHELTER PAINTING							
SANCHI (6-2nd 1st cent. B.C.)	EASTERN + NORTHERN GATEWAY							
SARNATH MATHURA (6-1st cent. A.D.)	STONE UMBRELLA							
MATHURA	JAINA - ĀYĀGAPATAS							

[Pl. 33,

Nandipa_da-Triratna at: Bhimbetka, Sa_n~ci_, Sarnath and Mathura]



Sa_n~ci_ Stu_pa (Raisen, MP), c. 1st cent. BCE, Northern toran.a (AIIS, VNS, 321.11) showing the nandipa_da symbol ligatured with s'ri_vatsa symbol.



Sa_n~ci_ stu_pa with a glyph of two fishes ligatured. S'ri_vatsa symbol seems to have evolved from a stylized glyph showing 'two fishes'. In the sa_n~ci_ stu_pa, the fish-tails of two fishes are combined to flank the 'sri_vatsa' glyph. In a Jaina a_ya_gapat.a, a fish is ligatured within the s'ri_vatsa glyph, emphasizing the association of the 'fish' glyph with s'ri_vatsa glyph.

bed.a = either of the sides of a hearth; **be** = two (G.) **be_d.a** = one-eighth part; two-anna piece (Te.)
Glyph: **bed.a hako** = fish (Santali) **hako** = axe (Santali) **be_d.isa** = a sort of carp, the silver-fish, cyprinus chrysoparius (Te.)

Grapheme: **be_d.i** = a chain, a fetter (Ka.Te.)

Native metal, (meteorite or washed) ron ore

Substantive (Washed iron ore): *aduru* native metal (Ka.); *ayil* iron (Ta.) *ayir*, *ayiram* any ore (Ma.); *ajirda karba* very hard iron (Tu.)(DEDR 192). For *aduru*: *acar-u* mud, mire; *acumpu* soft mud, miry place; *ayam* mud, mire (Ta.); *ayam* id. *ayar-u* manure (Ma.); *asalu* mud, mire (Te.)(DEDR 41). *ad.usu*, *ad.alu*, *ad.lu*, *had.lu*, *ad.i*, *ad.e*, *at.il*, *at.la* mud, clay (Ka.); *ad.usu* mud,mire (Tu.)(DEDR 82). *ayavu* washing; *ayakan* washerman (Ma.) *asaga*, *agasa*, *agasiga* washerman (Ka.)(DEDR 36). Cf. stone sand: *bali* iron ore, stone sand ore; *bali hasa* earth containing iron; cf. *luhui* sand stone (Santali)



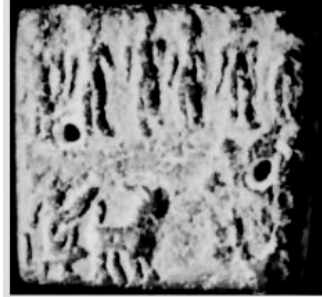
Kalibangan032a Glyph: *adar*, *adar d.an:gra* a brahmini bull, a bull kept for breeding purposes and not put to work (Santali)

adar. odor., adar udur fat and naked, over-grown, unwieldy; *adar. odor.e* calaoena he waddled away (Santali)

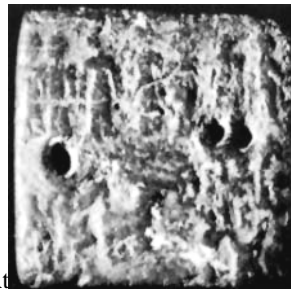
kambala dewlap (VarBr.S.); *kam.bala* dewlap of an ox (Pkt.); *kamari* dewlap (S.); *ka~_bal.* (M.)(CDIAL 2772). Metath. *galma_* dewlap of cattle (L.)(CDIAL 4071). **Bull:** *kambalin*, *ka_mali* (EI 24.IEG.) a bull; prob. a levy on prize bullocks; *yamali-ka_mali*, *yamala-kambalin*, *yamalikambali*, *yamalika_mbali* a tax known from the *Ga_had.ava_la* records (HRS.IEG.); *yamala-patra* treaty of alliance (LP.IEG.); *yamala* two (IEG.)



m1186Acolour 2430 Composition: horned person with a pigtail standing between the branches of a pipal tree; a low pedestal with offerings (? or human head?); a horned person kneeling in adoration; a ram with short tail and curling horns; a row of seven robed figures, with **twigs** on their pigtails.



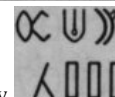
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95: Seven robed figures (with stylized twigs on their head and pig-tails) standing in a row. 4251

Trader, a bazaar shopkeeper

bha_galiyo = a bazaar shopkeeper (G.lex.)
baka_l.a (Ka.); baka_la = a shopkeeper with contemptuous implications (M.)(Ka.lex.) baka_l = [Ar. bakka_l, a greengrocer fr. bakchu_, vegetable] a petty shopkeeper; a va_nia (so called in contempt); baka_lu = fresh vegetables (G.lex.)

bagalo = an Arabian merchant vessel (G.lex.)
bagala = an Arab boat of a particular description (Ka.); bagala_ (M.); bagarige, bagarage = a kind of vessel (Ka.)(Ka.lex.)

bagalo = a stork; a crane (G.)

bagal = the armpit; a side (Ka.); bagala (M.H.)(Ka.lex.) bagala = the armpit; the arm; a side (G.); bagal (Persian)(G.lex.)

ban:gala = kumpati = an:ga_ra s'akat.i_ = a chafing dish, a portable stove, a goldsmith's portable furnace (Te.lex.)

ba_kum, ba_korum = a bore; a large hole (G.lex.)

baghun., bagu_n = A snub-nosed or true crocodile (*crocodiles palustris*) found in India only in one lake in Sindh. It is identical with the species found in the Nile. In the Indian rivers the long-nosed variety (i.e., alligator) alone exists (P.lex.)

ban:gad.i_ a bangle, a bracelet of glass, gold, or other material, worn on the wrist by women (G.lex.) bhagan.a = a bangle (IA 19)(IEG)
ban:gan = bangle (cf. Ka_li_ban:gan, black bangle: name of a site on River Sarasvati banks)

bha_gal.a = a gate in the wall of a town; the precincts of a village; bazaar (G.lex.)

bagal.a_ = name of a certain goddess (Te.lex.)
bagal.a_, bagal.e, vagala_ (Ka.); bakala_, bagal.a_, vagal.a_ (Te.); bagal.a_devi = one of the s'akti deities by means of which one may shut the mouth of an opponent, etc. (Ka.lex.) bakkula = a demon, uttering horrible cries, a form assumed by the Yakkha Ajakala_paka, to terrify the Buddha (Pali.lex.) bahula_ pl. the Pleiades (VarBr.S.); bahulika_ pl. (Skt.); bahul (Kal.); ba_l, baul, balh (Kho.); bol, boul, bolh (Kho.); bale (Sh.)(CDIAL 9195). bahulegal. = the Pleiades or Kr.ittika_s

(Ka.lex.) **bahula_** (VarBr.S.); bahul (Kal.) six presiding female deities: vahula_ the six presiding female deities of the Pleiades (Skt.); va_kulai id. (Ta.)(Ta.lex.) 5719.Image: pleiades: bahulika_ pl. pleiades; bahula born under the pleiades; the pleiades (Skt.lex.) bahule, bahulegal. the pleiades or kr.ttika_s (Ka.)(Ka.lex.)

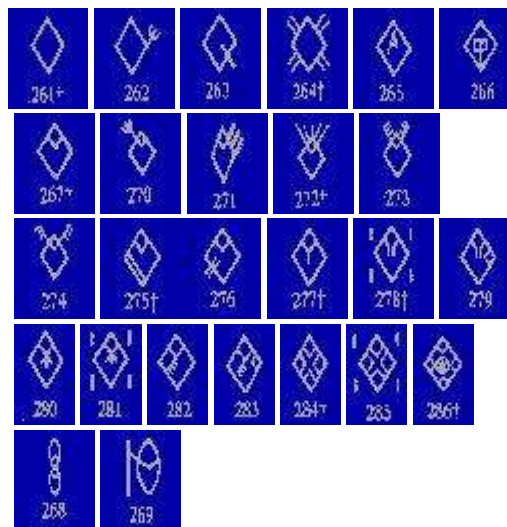
Corset kaccu = a kind of corset worn by Indian women in ancient times (Ta.); bodice to confine the breast (Ma.); kan~cuka (Skt.); kam.cu = woman's bodice (Pkt.); kan~cuka = bodice, armour (Pali); ka~cva_ = a sort of waistcoat (M.); ka~cu_ = bodice, shirt (H.)

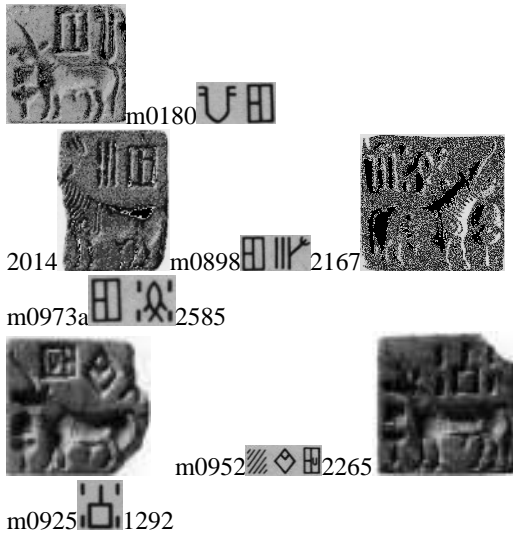
Pleiades kattiya_ (Pkt.); kr.ttika_ pl. (AV.); kattika_ the month October-November (Pali); katiyu~_ pl. (S.); ka_tya_ (M.); khitti_ (P.); kati pl. (Si.) kr.ti (RV.)

kaciya_ = reaping hook (H.) kacca = to be cut off (Pkt.); kartya (Mn.); kattiya_ = scissors, shears (Pkt.); kati_ = goldsmith's or blacksmith's scissors (P.); ka_t (G.); ka_ti_ = scissors (A.)

bagal.u, bogul.u, bol.l.u = barking, crying out (Ka.lex.)

5612.Two-wheeled cart: **bahal, bahali_, baheli_** two-wheeled cart (Bi.); bahal id. (H.); bahli_ two-wheeled cart drawn by two oxen (H.); bahaila cart (OMarw.); vhel, vel bullock-cart (G.); vahala accustomed to the yoke (S'Br.)(CDIAL 11458).





Glyph: *d.olligillu* 'to fall or tumble over; *d.ollu* to fall (Te.)(DEDR 2988).

Glyph: *kachim, kachma, kachmi* tortoise (Santali)

Glyph: *a_s* scales of fish (Santali)

Glyph: *ayan: bin:* the cobra; *d.omba ayan:*, *kabra ayan:* a variety of cobra (Santali)

Glyph: *gad.* receptacle into which the rice to be husked by the *d.hin:ki* is placed (Santali)

Thus, the compound *bali gad.a* (iron stone mine) can be represented by the glyphs: bull + receptacle. Wherever the receptacle occurs (in front of bull, elephant, tiger, buffalo), it may connote rebus: *gad.a* 'mine'

Glyph: *ayil* javelin, lance, surgical knife (Ta.); javelin, lance (Ma.); *ayiri* surgical knife, lancet (Ma.)(DEDR 193).

Substantiv: *khapar* tin, a metal once used largely to make ornaments but now out of use (Santali)

Glyph: *khapri* the skull (Santali)

Glyph: *kaphariau* to quarrel, dispute (Santali)

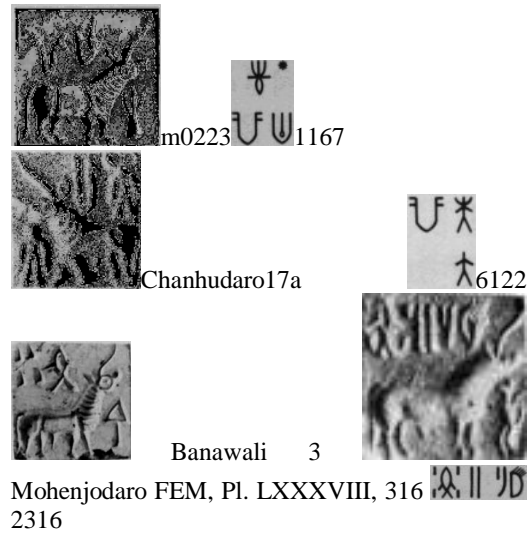
Monkey

mu_ka = an army; a crowd; multitude, host, swarm (Te.)


muhri = a king post (Santali.lex.)

mwehra = image of a village deity (WPah.)


mehara = (EI 33) a village headman (IEG).



[The sign in front of the one-horned bull on seal

m0223 may be Sign 162 ] [Note: On these seals, where one would expect to find a standard device, one finds a surprise: a standing monkey? or a stubble or a standing person or an arrow (spear?).]

The glyphs shown in front of the one-horned bull may all be interpreted as furnaces and other equipment of the artisan's workshop, **kod**.

Sign 162 
Alternative: pasra 'sprout'; pasra 'furnace'
'tanding person glyph' ka_ti 'long trench furnace'
'rrow glyph' kan.d.a; rebus: kan.d.a 'altar, furnace'

mu~h metal ingot (Santali); rebus: **muh** face (Skt.)

muhri, muhril = a clerk, a vernacular clerk (Santali.lex.)

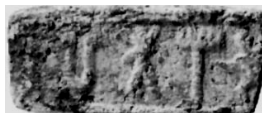
garl = quill of feather (Ko.); **gar-i** wing, feather (Ka.); gari (Tu.); gari, gar-i (Te.); gar, -gara a long

leaf (of millet, corn etc.)(Te.); gar (pl. gad.l)
feather (Kol.); gar (pl. s'il) (Nk.)(DEDR 1394).

gar. = a fort, a palace (Santali.lex.)

kapi = monkey (RV); kapi, kavi (Pali); kavi, kai (Pkt.); kapi (OSi.Bra_hmi_); kiviya_ black monkey (Si.)(CDIAL 2746).

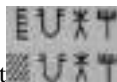
2213. **Hunting axe:** **kapi** hunting axe (Munda); **kepi** battle axe (Santali); **ka-pak** axe (Sakai). **kapi** a hunting axe with or without its handle; **hr.kapi** the smallest kind with an edge straight in the middle and corners horned backwards; **karakond.e** a triangular-bladed axe with straight edge (Pl.III,4); **tabala** an uncommon kind of karakond.e (Pl.iii,5); **ombakapi** an axe with concave edge and corners generally pointing forwards; **pharsi** an uncommon kind of ombakapi (Pl.IV,1); **burukapi** the most common axe with a convex edge or with an edge angularly protruding (Pl. III,6); **gand.as** the largest kind of axe (Pl.IV,2)(Mu.lex.) **kapi** = a battle-axe; bhalua kapi, hoedok kapi; khupa kapi; kheron kapi (small axe); ayar kapi; hado kapi, gudua kapi (broad axe); sikria kapi = potam cupi ten: goc (Santali.lex.)



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m450Bt



2864

[On one side, the lizard is shown; and on the other, the monkey is shown; the epigraph seems to be the same. Thus, it is surmised that the same word may connote both 'monkey' and 'lizard': *dok*] This substantive is: possessions, occupancy: *dok*.

The rebus glyphs which connote this substantive meaning 'possession, occupancy' are:

d.ok the neck; *d.okum* the head (G.) [cf. the rings on the neck of a one-horned bull]

Chanhudaro

6113

Pict-98



Bison (gaur)

trampling a prostrate person (?) underneath. Impression of a seal from Chanhujodaro (Mackay 1943: pl. 51: 13). The prostrate 'person' is seen to have a very long neck, possibly with neck-rings, reminiscent of the rings depicted on the neck of the one-horned bull normally depicted in front of a standard device. [Alternative: Ship, catamaran **pa_r-u** (Ta.Ma.Ka.); pak-r-i = coracle, boat, ship (Ta.) Rebus: copulation **pa_ru** = to copulate, spring (IL 7339)]

khaeda khaidi = to tread on and leave foot marks (Santali.lex.)

kha~edak **kho~edak**, kha~endak
kho~endak *pl.* a succession of pits or mines (Santali.lex.)

raunda = a carpenter's plane (Santali.lex.)

raunda raundi = to trample upon; raunda raundikedako = they trampled it down (Santali.lex.)

me_r.sa = toss, kick with the foot. miti = tread on (Ta.)(CDIAL 10299). mer..e = tossing (Ka.lex.)

me_d.hra = the penis (Ka.lex.) [Note the pictograph showing the penis of the bull which treads on something prostrate].

khu~dna to trample on (H.); **khu~dnu** to trample on (G.); **khum.dai** pounds, grinds (Pkt.)(CDIAL 3717).

kan.d.i = a furnace, altar (Santali.lex.)

kamd.a = to copulate (Santali.lex.) ka_n.du_ = lasciviousness; ka_n.dua_ = lascivious; ka_n.d.ua_i_ = wanton woman (Or.)(CDIAL 2688) [cf. the copulation scenes depicted on many seals and other inscribed objects].

kan.d.a, **ka_n.d.a**, **ka_d.e**, **kan.d.ike** = a stalk, a stem (Ka.lex.)

kan.t.u = the rim of a vessel (Ka.lex.) [cf. **kan.d.**
kanka = rim of a pot (Santali.lex.)]

kan.t.al = a ba_bul tree (G.lex.)
 kan.t.ha_l. = a double-sack (G.lex.)

Bull

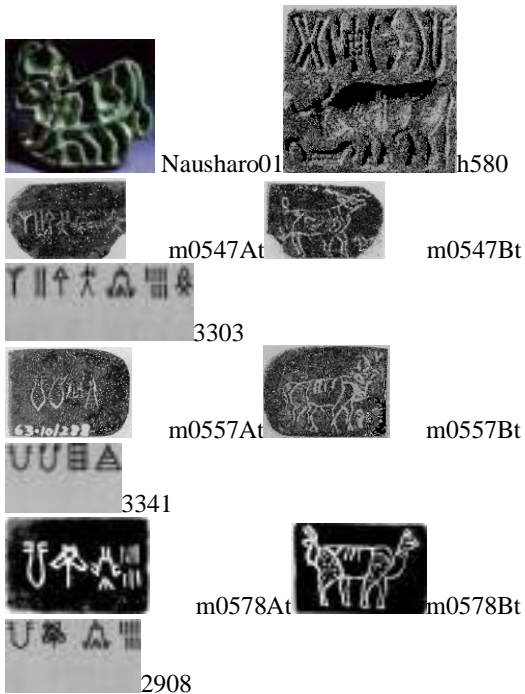
Substantive: **bad.hi** = worker in wood and metal;
 rebus: **baddi_** = ox (Nahali)

Substantive: *bali* = iron ore, iron stone sand; the
 Kol iron smelters wash the ore from the sand in
 the river bed; *balgada* 'sand carried down by a
 flow of water' (Santali)

Glyph: *bel* [Hem. Des. *ba-i-lo* fr. Skt. *bali_vard*] a
 bull; a bullock; an ox (G.)

Glyph: *bal* 'to bore a hole, or to puncture, with a
 red hot iron' (Santali)

Glyph: *bala* 'a wristlet, worn by women' (Santali)



ko_li a stubble of *jo_l.a* (Ka.); *ko_le* a stump or stub of corn (Te.)(DEDR 2242). *ko_r.* a sheaf in the field (Go.); *xo_l* rice-sheaf (Kur.)(DEDR 2253).

ko_l.i banyan, fig, tree bearing fruit without outwardly blossoming (Ta.); an epidendron, grasping plant (some figs are of this nature)(Ma.); *ko_n.i* fig (Ta.); *go_l.i* all kinds of fig trees which bear no apparent flowers; banyan; *ficus elastica* (Ka.); *go_n.i* *ficus elastica*, *ficus religiosa* (Ka.); *go_l.ida* mara banyan tree, *ficus indica* (Tu.)(DEDR 2254). *gullhar*, *gullar* *ficus glomerata* (P.); *gullar* a particular kind of fig tree (N.); *gu_lar* *ficus glomerata* (H.); *gular*, *guler*, *gulro* (G.)(CDIAL 4218). *kur-u-v-a_l* jointed ovate-leaved fig (Ta.); *kurivi-y-a_lan-* a common avenue-fig having stout air-roots, *ficus* (B. 91)(Ta.lex.)

Blacksmith, kol ‘metal’

kor-r-a = black murrel (Te.), kur_icci =
a fish many sharp bones (Ma.)
kur-avai = murrel (Ta.)

kor-r-a = **ram (Ma.)**

Substantive: **koru** a bar of metal (Tu.); **kul.a** bar of metal, bullion (Ka.); **kor..u** bar of metal, bullion (Ta.)(DEDR 2147). **ka_r-u** bar [cf. **vel.l.i-k-ka_r-u** bar of silver, silver bullion]; limit, point, measure or extent of time, often used as an adverbial suffix; ploughshare (Ta.lex.); **tanka-k-ka_r-u** gold in bars, ingot (Ta.lex.) **kor..u** awl (**Tol. Pa_yi. Urai**); **kor..u-k-kat.t.otal** to fasten the share to the plough; **kor..u-t-tat.t.otal** to sharpen the ploughshare (Ta.lex.)

Glyph: *ur-ukku* to jump, leap over (Ta.); *uRk* to run away (Kond.a); *urk* to dance (Kuwi)(DEDR 713).

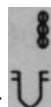
Substantive: *urukku* steel, anything melted, product of liquefaction (Ta.); *urukku* what is melted, fused metal, steel (Ma.); *uk* steel (Ko.); *urku*, *ukku* id. (Ka.)(DEDR 661).



m1406At



m1406Bcolour



2827 Pict-

102: Drummer and people vaulting over? An adorant? Substantive: *bharatiyo* a caster of metals (G.); glyph: *bharad.o* a devotee of S'iva (G.)



terracotta human figures
mehergarh017

kamsa kamsi = jump (Santali.lex.)

kam.sa = bronze (Te.lex.)



Glyph: *gotao* to thread, to string; saire

sutamko gotaca they thread needles (Santali)

Substantive: *got.*, *got.h* The place where cattle are collected at mid-day; *got.ao*, *got.hao* to collect cattle together for their mid-day rest (Santali) *kod.* Artisans' workplace (G.) *gotga.rm* treasurer of the village (Ko.); *kottukka_ran*- head of a company of labourers (Ta.); *gottuga_r-a* headman (Ka.)(DEDR 2091).

Glyph: *xotor injo_* a kind of fish (Kur.); *qotro mi_nu* id. (Malt.)(DEDR 2095).

Substantive: *got.* Another name for the Sohrae festival; *got. gai* on the first day of the got. Puja or Sohrae in the evening all the cattle of the village are driven over an egg and the animal which treads on it is called the *got. gai* (Santali)

Orthography of the one-horned bull (ibex, urus) and the standard device

Heifer, pannier, one curved horn, rings on the neck

A vivid orthographic determinant of a one-horned bull is the 'pannier' which sets the context in which the ligatured animal should be 'read' rebus for the ligatured components:

heifer, pannier, one curved horn, rings on the neck;

vahur.o (alt. **damr.i**), **kan.ta_la**, **kod.**, **kod.iyum**: **va_kara**, 'soldier' [alt. **tam(b)ra** 'copper'];
kan.ta_la, 'battle'; **kod.**, 'artisan's workshop'.

Message: copper (battle weapons) from artisan's workshop; alt. soldier with weapons from artisan's workshop.

kot.iyum = a wooden circle put round the neck of an animal; **kot.** = neck (G.lex.) [cf. the orthography of rings on the neck of one-horned young bull]. **ko_d.iya**, **ko_d.e** = young bull; **ko_d.elu** = plump young bull; **ko_d.e** = a. male as in: **ko_d.e du_d.a** = bull calf; young, youthful (Te.lex.)

ko_d.eka_d.u = a young man (Te.lex.) **kot.al** = watchman (Santali.lex.) **kot.t.ika_d.u**, **ko_t.ika_d.u**, **kot.ika_d.u** = watchman (Te.lex.)

kod. = place where artisans work (G.lex.) **kod.** = a cow-pen; a cattlepen; a byre (G.lex.) **gor.a** = a cow-shed; a cattleshed; **gor.a orak** = byre (Santali.lex.) **got.ho** [Skt. **kos.t.ha** the inner part] a warehouse; an earthen vessel in which indigo is stored (G.lex.) **kot.t.amu** = a stable (Te.lex.)

ko_d.i = a kind of flag, an image of garud.a, basava, or other demi-god set upon a long post before a temple; cf. **gud.i**, temple (Ka.lex.) [Note the flag in front of a procession on an inscribed tablet]. **kot.i** = a flag (Ta.lex.)

ko_d.i habba = a certain festival (Ka.); **ko_d.adabbu**, **ko_d.idabbu**, **ko_d.edabbu** = a demon worshipped by Pariahs (Tu.lex.)

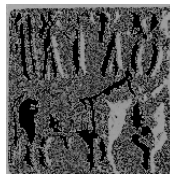
ko_d. (pl. **ko_d.ul**) horn (Pa.); **ko_t.u** (in cmpds. **ko_t.t.u-**) horn (Ta.); **ko.r.** (obl. **ko.t.-**) horns (one horn is **kob**), half of hair on each side of parting, side in game, line marked out (Ko.); **kwi.r.** (obl. **kwi.t.-**) horn (To.); **ko_d.u** horn (Ka.); **ko_r..** horn (Ka.); **ko_d.u** horn (Tu.); **ko_d.u** rivulet (Te.); **ko_r** (pl. **ko_rgul**) id. (Ga.); **ko_r** (obl. **ko_t-**, pl. **ko_hk**) horn of cattle or wild animals (Go.); **ko_r** (pl. **ko_hk**), **ko_r.u** (pl. **ko_hku**) horn (Go.); **kogoo** a horn (Go.); **ko_ju** (pl. **ko_ska**) horn, antler (Kui)(DEDR 2200). Tailless he-buffalo; ox with blunt horns: **ku_r.ai** that which is short; dwarf snake, calamaridae; **ku_r.ai-k-kit.a**, **ku_r.ai-k-kat.a** tailless he-buffalo (Ta.)(DEDR 1914). 1787. Image: horn: **ku_t.a** any prominence: a horn (Ka.); **ko_d.u**, **ko_r..** a horn of animals; a tusk (Ka.)(Ka.lex.) **ko_r..**, **ko_d.u** a horn; **ko_r.ke**, **ko_r.kil.**, **ko_r.kil.im**, **ko_r.ge** id. (Ka.); **ko_d.u kut.t.u** to strike or gore with the horn or with the tusk (Ka.); **ko_d.u** a horn of animals; a tusk (Ka.); **ko_d.u-vi_sa** the allowance of a vis of corn etc. for every bullock-load that comes into town etc.; **kud.u** the state of being crooked, bent (Ka.); **kod.u** (Ma.)(Ka.lex.) **ku_t.a** horn, bone of the forehead, prominence (Vedic); prominence, top (Pali.lex.)

ku_t.a a horn; an ox whose horns are broken; **ku_n.ika** the horn of any animal (Skt.lex.) **sin:ghin** horn projecting in front (Santali.lex.) **ku_n.ika** the horn of any animal; **ku_t.a** bone of the forehead with its projections, the crown of the head; end, corner (Skt.lex.)

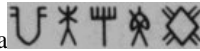
va_har., vohur., **vehar.** young bull (L.); vehir. heifer; va_hr.ka_, vehr.ki_ (L.); **vahar.**, vahir.a_, bahir.a_; vahir., bahir., vahir.i_, bahir.i_ (P.); **bahar.** young bullock (Ku.); bahar (N.); vahas shoulder of an ox (S;Br.); vaha shoulder of an ox (AV); vahata, vahatu = ox (Skt.); vaha shoulder of an ox (Pkt.); ba (A.); vahad.a calf to be trained (Pkt.); vahur.o young bullock (S.); vahur.i_ heifer (S.)(CDIAL 11459).vahu_ = working bullock (L.)(CDIAL 11455). ba_han = draught animal (N.A.B.); va_hana (Pali); va_han.a = driving (Pkt.); ba_han draught or riding animal (Mth.H.)(CDIAL 11610). va_hanika = living by draught animals (Pa_n.gan.a)(CDIAL 11611). va_ha = draught animal (RV)(CDIAL 11607). va_hamu = ox; any beast of burden or draught animal; a horse; drawing, carrying, pulling the shoulder (Te.lex.) va_han.a id. (Pkt.lex.); vaha_n. id. (G.lex.) va_hani_ya = a beast of burden (Skt.lex.) va_kam = va_hana (Skt.)(an animal carrying loads, a conveyance, a carriage, car, chariot, a horse; image of an animal used in temples to carry the idol upon (Te.lex.); vahama_na hala bali_varda = bullocks used in ploughing land (LP, IEG); va_hana = load carrier; a cart, ship (LP, IEG) va_hanika = living by (tending or dealing in) draught animals (Skt.lex.)

Not a mythical bovine

That it is a heifer (and not some mythical bovine) is surmised from (1) a differentiated orthography when compared to an old ox looking down; and (2) an orthographic variant, depicting a bull with two horns which is depicted on Seals m1077 and m0232. Since the semantic accent is on the curved horn, only one horn is shown, **kod.**, 'artisan's workshop'.



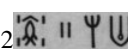
m1077a



2359



m0232



2234

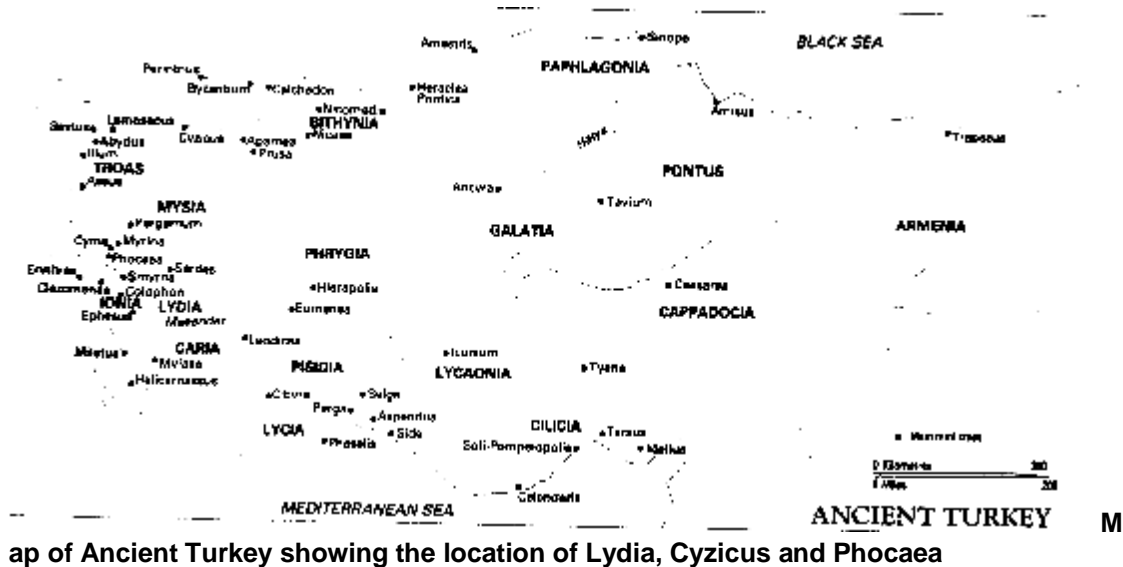
'Unicorn'

with two horns! "Bull with two long horns (otherwise resembling the 'unicorn')", generally facing the standard. That it is the typical 'one-horned bull' is surmised from two ligatures: the pannier on the shoulder and the ring on the neck. [The existence of a two-horned 'unicorn' provides a reasonable basis to infer and decode the 'one-horned' bull as a young heifer.]

Out of a total of 2906 inscribed objects (according to Mahadevan concordance), the one-horned, young bull occurs on 1159 objects; on 900 of these objects, the young bull is shown in front of a standard device. If the inscribed objects 'without texts' are reckoned, the number of inscribed objects discovered according to Parpola concordance are 3692: Collections in India: 1537; Collections in Pakistan: 2138; West Asia: 17.

The enigmatic orthography of the one-horned bull and the standard device is made further complex by the variety of styles used on inscribed objects. It would, however, appear, consistent with the orthographic patterns on many ligatured signs used for inscriptions, that the two pictorial motifs are also 'ligatures'.

Glyph of a one-horned bull on a Lydian coin



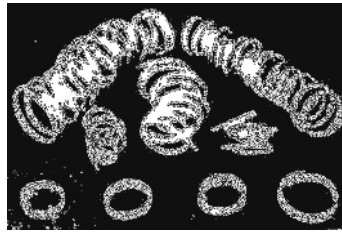
Drawings of ancient impressions of the cylinder seals of Lugalanda of Lagash, circa 2360 BCE. H. Frankfort, 1939, *A documentary essay on*

the art of cylinder seals. The seal depicts an opposition between the lion and the one-horned bullock; the lion is biting into the neck of the bull.

This opposition is explained in the logographs on the early silver coin of Croesus, the King of Lydia. The earliest coins were all made of electrum, an alloy of gold and silver which occurs naturally in some of the rivers of western Turkey, including Pactolus, which ran through Sardes, the capital city of the ancient Lydian kingdom. The electrum coin of the seventh century BCE was a blob of metal distinguished by a single punchmark on one side and a basic pattern often consisting of little more than scratched lines, on the other. The early identifiable designs are animal shapes, including a lion's head, which became the standard badge of the Lydian kingdom, and a seal, known to be the badge of the city of Phocaea. Croesus, King of Lydia was reported to have issued the earliest pure gold and silver coins. One coin has the pictures of the foreparts of a lion and a bull and is dated to a period after the Persian conquest of Lydia in 547 BCE. The Persians issued, by the end of the sixth century, silver sigloi and gold darics (20 sigloi = 1 daric), depicting a royal archer. The cities of Cyzicus and Phocaea continued to issue electrum coins until the fourth century BCE.

Mesopotamians began casting and coiling the world's first cash, silver ring money, at least 4,500 years ago. (Courtesy Oriental Institute, University of Chicago); convenient form of cash: pieces of silver cast in standard weights. These were called **har** in the tablets, translated as "ring" money. At the Oriental Institute, the nine largest coils all bore a triangular ridge, as if they had been cast and then rolled into spirals while still pliable. The largest coils weighed almost exactly 60 shekels, the smallest from one-twelfth to two and a half shekels. [cf. Skt. **sarat**, thread; Hindi **zari**, Tamil carikai = gold or silver thread in textiles; **carat.u** = twisted thread, cord, twine; 2. a necklet of plaited gold thread (Tamil)]

Silver rings: moneylike objects [**ghanagolaka** = alloy of gold and silver (Skt.); **ru_pya** = formerly in the possession of or possessed by Pa_n. 5-3 , 54; wrought silver or gold (Skt.)] The word, **ru_pa** (later rupee during British colonial regime) becomes a coin in the Bharatiya tradition.



Silver rings and coils from

Mesopotamia. After Marvin A. Powell, p. 1489.

“There are objects of metal that have been suggested as precursors of coinage. They may have embodied some aspects of later coins. From the Ur III period comes a group of rings

of silver to favourites of the king, usually on the occasion of their arrival from a journey. The rings numbered from one to five and weighed between 5 and 10 shekels (between about 40 and 80 grams, or about 1.5 and 3 ounces). We do not, however, see that these rings were used in other ways as money. Their production

may have been a convenient way to distribute and to keep silver.

“Text references from the Old Akkadian period through the Old Babylonian refer to the casting of precious metals into rings, and it is certain that such objects were used at least for storing the metals and possibly served other functions of money. The Ur III texts about casting show that the ring did not always contain the full weight of the silver that was supposed to go into it, but such objects were weighed when they were exchanged anyway. The ring as a kind of money appears in the old Babylonian period when one of the wheeling-and-dealing priestesses in the northern city of Sippar referred to land she bought as paid for with her ‘ring (money).’ As with the silver rings of Ur III, there does not seem to have been any other use for the items, if in fact silver rings physically existed and the term did not refer to freely disposable spending money (English ‘pin money’). After the old Babylonian period there is no further textual evidence of rings used as money.

“Other terms continued to be used in ways suggestive of a systematization of exchange. Some silver may have circulated as s’ibirtu (broken) pieces, and beginning with the Middle Babylonian period the term bitqu (a cutting, one-eighth shekel) was used. Other bits were termed nuhhutu (trimmed?) from a verb meaning ‘to trim or clip’; shaving rather than coining may be intended. Some metals were said to have ginu on them, perhaps a mark indicating weight or purity. (Skt. cinha = token, mark)...

“In Old Babylonian Mari and also in the late second millennium at a number of sites there was an exchange of gold and silver cups that may have had a standardized weigh, though exts show that they had to be weighed when they were exchanged. These cups may have had the function of a special-purpose money. At Mari it is clear that the distinction was made between the actual weight of such actual weight of such objects and their value, which usually was higher.

“Two literary texts from Ugarit on the Syrian coast contain comparisons of tears to shekels and to quarters and fifths of shekels, presumably of silver. These references may imply that silver weights were recognizable and had some of the characteristics of later coins.

“At Asshur (modern Qala Sharqat) in northern Iraq, leaden ‘roundels,’ little round bits of lead stamped with a decoration on one side only, from the Middle Assyrian period have been found. It has been proposed that they were used as small change in a system approximating coinage. But we do not have references to them in very large numbers. They may have been more decorations than a means of exchange.

“Texts from Neo-Assyria times refer to stamped ingots of bronze that embody fixed, government-certified weights and may have served as a means of exchange in very large denominations. When mentioned in actual documents, ingots were usually connected with loans from temples, and they may have been issued with loans from temples, and they may have been issued by the temples. Silver ingots of this period from Zincirli (pronounced Zinjirli) in Turkey have incised or stamped inscriptions reading ‘belonging to Bar-rakkub, son of

Panamuwa,' a king known from other documents. Though the inscription might indicate that the objects belonged to the royal treasury, it might mean that the weights of the silver were guaranteed by the king. Three such objects are known; they are disks about 9 centimetres (about 3.5 inches) in diameter and weighing, respectively, 497, 450, and 255 grams (17, 16 and 9 ounces), equivalent to about 60, 50 and 30 shekels. The two found in archaeological contexts were in a palace.

"Another group of ingots that is nearly contemporaneous comes from Nushi-i Jan, southeast of Hamadan in Iran. It includes silver bars, two of which weigh 12 shekels each (about 100 grams). Though ingots with no inscriptions certainly circulated, the existence of the inscribed variety suggests that one of the advantages of later coinage may have been envisaged, the notion that an official certification in the form of a stamped or incised inscription might reduce the need for weighing. Similar ingots of copper have been found without decipherable stamp impressions, and several stamped ones were found in a ship-wreck from around 1300 BCE off Cape Gelidonya in southern Turkey. These are called oxhide ingots because, to facilitate their hanging and transport, they were shaped to look like the cured skin of an ox. Since they varied in size and weight, it is unlikely that those ingots formed part of a monetary system...



Ingot from Cape Gelidonya, Turkey. After: Institute of Nautical Archaeology, Texas A&M University, College Station.

"We can infer that because of their heavy weight and their rarity, none of the ingots, and probably none of the rings, served as a common currency for ordinary people. The ingots may have served as standards of value, as a mode of payment for big purchases, and certainly as stored wealth, but it is unlikely that they were a widespread means of exchange. Had they served as such, we would probably have found many smaller ingots in excavated sites. Even though the ingots cannot be regarded as a form of coinage, it is nevertheless important not to claim that 'true' coinage developed only in Greece. Here, as in other areas of cultural endeavour, the Greeks were building on ancient near eastern experience. Coinage was not another 'Greek miracle' but a development from earlier practices, and various moneylike objects may have been forerunners.

"Metallic exchanges. Metallic exchange and exchanges using other money systems are much better attested. For modern people used to economies that function on a single standard, the variety of media for exchange can be confusing. Metals were imported to Mesopotamia but were available on its periphery, and copper, bronze, gold, and silver were all used as money in the sense at least that they were paid for other things. In most periods the money preference was silver, probably because of its greater variability than gold and, hence, its relatively lower value.

"Silver and other metals, were weighed on a scale to determine the amount, and if smaller amounts were needed, the metal block or wire was broken into smaller pieces that were then weighed. Ancient texts do not describe the physical process of weighing, though it is constantly referred to. We derive some of our notion of the process from the etymology of the Akkadian word for silver, *kaspum*, meaning 'the broken thing'; cognate words are found in most of the other Semitic languages, including Biblical Hebrew's *kesep*. [kaiyacital = to be broken-hearted, to be disabled].

"Other terms in Akkadian indicate that broken bits of silver were frequently used, and the process of breaking metals and weighing them is widely attested for precoinage eras in many language. Though this process seems cumbersome to people used to dealing with coins, it continued long after coinage was introduced.

"For example, an Ur III text shows the purchaser of a slave weighing silver:

1 [man?], his name Itur-i[lum], his price 6 shekels of silver, the supervisor of the house of the goddess Inanna weighed out to Lugal-usar, the merchant. (Translation by Piotr Steinkeller, *Sale Documents of the Ur-III Period*, 1989, pp. 172-173).

“During the third millennium BCE, traders from Early Dynastic Shuruppak (Fara) used metals as money; Enkhegal, prince of Lagash-Girsu, used copper and grain; and Uru-inimgina (Urukagina), a later ruler of Lagash-Girsu, required some taxes and fines to be paid in silver.

“In the middle of the third millennium BCE, Ebla (modern Tell Mardikh) in northern Syria had huge amounts of silver, which probably indicates that the metal there was used not just as a unit of value but also as a means of payment. The texts appear to distinguish between amounts of silver used as equivalents of goods, and those that were prices; we do not know what that distinction really meant.

“In other instances before Sargon of Akkad, grain was used as money, and in the obelisk of Manishtushu, recording that kin’s land purchases, the price was calculated both in grain and in silver. Officials were paid in silver, and even workers sometimes got silver in the Old Akkadian period. Copper was used less and less as money and apparently came to be valued solely for its industrial uses.

“In the Ur III period in southern Mesopotamia the government at the city of Lagash-Girsu used barley as a standard to evaluate goods it distributed, but it used silver to pay for goods bought from persons not directly under government control. Rations or salaries were thus paid in grain, and funds, stated in terms of grain, were moved from one government to another. When goods were purchased from private individuals and groups, though, silver was the money of choice. A conversion ratio was conventionally assumed of one shekel (8.33 grams or .3 ounces) of silver being equal to one gur (about 306 litres or 8.5 bushels) of barley; this conversion was a frequently attested price in the period, but it was not the only price. The scribes chose it for its convenience and relative constancy for their internal accounting; by using it, they did not have to refer constantly to the current market price...

“In the same period (third millennium) in another southern city, Umma (modern Tell Jokha), silver was used by merchants on government purchasing missions to buy both domestic and foreign products. The merchant overseers recorded the prices in silver both of goods regarded as capital and of the goods purchased. The capital frequently consisted of grain and other agricultural goods the government produced; the merchants apparently changed it into silver to make their purchases...

An Old Akkadian King buys land

“A monumental text from about 2260 BCE records the king purchasing land from several families. He paid in grain, the price of which was then calculated in silver, along with miscellaneous objects and articles of clothing. But the latter appear only as part of the additional gift to family members selling fields. The first section of the text is as follows:

[] Manishtushu, the king...bought\
[439 iku of land]
[its price]
[1463.1.2 of barley]
[---the price of]
[1 shekel of silver]
[being 1] measure of barley --
its silver (price) is
1.463 1/3 shekels of silver,
the price of the field,
219 2/3 shekels of silver,
additional payment of the field. (From Ignace Jay Gelb et al., *Earliest Land Tenure Systems in the Near East: Ancient Kudurrus*. 2 vols., 1991).

“The Old Assyrian trade used silver as a money when trading textiles and tin, imported via Elam, for Anatolian silver and gold. The traders were apparently private entrepreneurs who made tremendous profits, usually without government interference...

“The ratio between the values of silver and grain continued (upto the first half of the second millennium) to be approximated at one shekel of silver to one *gur* of grain...

“In the Akkadian correspondence preserved at al-Amarna in Egypt, a great deal of exchange is recorded among royal courts of western Asia. Gold was the major commodity Egypt was trading. By then, gold had become the standard of value in international affairs, perhaps due to its increasing availability when Egypt could extract it from deserts east of the Nile and acquire it in tribute and exchange from peoples in Nubia and farther south...

A Third-Millennium Merchant's Account

“The merchants of Umma in the Ur III period reported their capital and their purchases, and gave the silver values of each commodity.” An excerpt from one of their texts follows:

79 shekels, 97 grains of silver, balance carried forward of the sixth year of Amar-Suen

630 pounds of wool, its silver worth 69 shekels

50 pounds wool, its silver worth 58 shekels (registered?) the first time

300 pounds KU.GI-wool, its silver worth 30 shekels
its loss is 10 shekels

via Lu-Enlila

30 gur of dates, its silver 25 shekels

Total: 265 shekels, 88 grains of silver

It is the capital.

Expended from within the above:

89 pounds of a resin, its silver worth 6 shekels, 160 grains

29 1/2 pounds of another resin, its silver worth 2 shekels, 80 grains

...Total 130 shekels: 43 1/2 grains silver.

It is what was expended.



Remainder 135 shekels, 44 1/2 grains.

Balanced account of Ur-Dumuzida, the merchant. (From D.C. Snell, *Ledgers and Prices: Early Mesopotamian Merchant Accounts*, 1982).

Clay tokens. These clay tokens from Susa, Iran, around 3300 B.C., represent (clockwise from top left): one sheep, one jar of oil, one garment, one measure of metal, a mystery item, one measure of honey, and one garment. (Courtesy Denise Schmandt-Besserat)



The world's first coins, made of electrum, a naturally occurring alloy of gold and silver, were minted in Lydia during the seventh and sixth centuries B.C. (American Numismatic Society)

Ephesus, Lydia (time of Gyges (687-652 BCE). The earliest known coin. After N. Angell, *The story of money*, 1929. One of the glyphs is comparable to a bun-shaped copper ingot found in Lothal.

Lydian coins One coin shows an antelope with its head turned backwards comparable to the glyphs which appear on many epigraphs of the Sarasvati Civilization.



[Daniel C. Snell, Methods of exchange and coinage in ancient Western Asia, in: Jack M. Sasson, ed., 1995, *Civilizations of the ancient Near East*, New York, Charles Scribner's Sons, pp. 1487-1497].

Late seventh century BCE Electrum Stater from western Turkey
561-547 BCE Silver stater attributed to Croesus, King of Lydia (ca. 560-547 BC) (After Kurt Regling, 1959, *Ancient Numismatics*, Chicago, Argonaut Inc.)



Opposition between the Lion and the One-horned Bull depicted on early silver coins

The opposition between the lion and the one-horned bull is a representation of **ara** (war, lion); rebus: **ara** = copper (Akkadian). Damr.i 'copper, one-eighth of a pice' (Te. Santali); **damr.a** = heifer, steer (Santali)

Iconography of 'unicorn'; the head and neck are decorated in three different styles: a collar, a hatched face and a hatched neck; the hatched

face style is associated with Harappa and Sarasvati sites; collared neck style is found around Mohenjodaro: Paul C. Rissman, 1989, The organization of seal production in the Harappan Civilization, in: Jonathan Mark Kenoyer Ed., *Old Problems and New Perspectives in the Archaeology of South Asia*, Madison, Wisconsin Archaeological Reports, 2: 159-70.



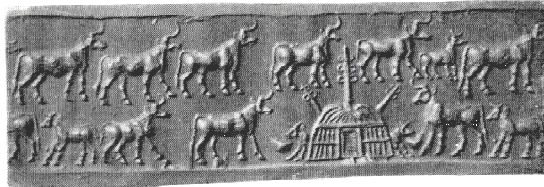
Sibri-damb02a Zebu Cylinder seal. A lion attacks a zebu bull; a person with upraised arms [A lion attacking a one-horned bull is a motif shown on early Lydia coins.]

Sibri-damb03a Zebu on Sibri cylinder seal.

Sumerian Jemdet Nasr seal with 13 unicorns (Sarasvati seal style)(Frankfort, 'The Indian civilization and the near East, *Annual Bibliography of Indian Archaeology*, 1932, p.3, and pl.1) Is this comparable to a pictograph on a Jamdet cylinder seal?:



Cylinder Seal; Louvre, ca. 3000 BCE



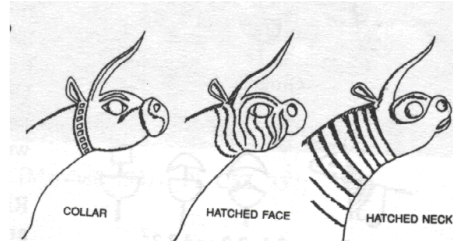
Decorations on the head and neck of the 'unicorn'

The one-horn on a bull is found on Mesopotamian pictorial motifs.

Two bisons standing face to face is a recurring pictorial motif on many tablets and inscribed objects. This motif has a parallel from Nippur plaque of Mesopotamian civilization.



Clay relief stamped with the figure of the Babylonian hero Gilgamesh, holding a vase from which two streams of water flow. (British Museum No. 21204)



Fragment of limestone sculptured in relief with vases from which streams of water flow. (British Museum No. 95477) [Leonard W. King, 1916, *A History of Sumer and Akkad*, London, Chatto and Windus, p.73]



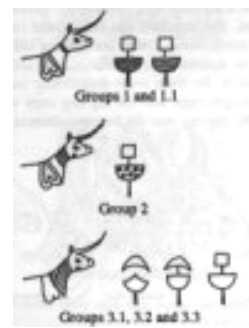
Animals depicted on a gaming board (Mesopotamia)

Engraved shell plaques, Telloh, 3rd millennium BCE (London) [Note the trident, spears and the lion biting into the neck of the one-horned bull].

Three groups of 'unicorn' seals; cf. Franke-Vogt 1992: fig.

13.3

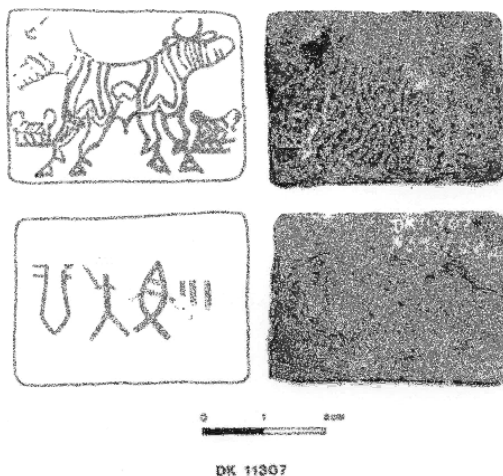
I	a		b		c		d	
II	a		b		c		d	
III	a		b		c		d	
IV	a		b		c		d	



Group 1:

hatched face animal (with zig-zag or straight cage on the standard) is associated with the north, around Harappa and the Sarasvati river

Group 2: (with collared necks and straight cage on the standard) is found in the south, around Mohenjodaro cf. Rissman, 1989: 168. [After Table 1-2 (p. 433) iconographic criteria applied in arranging the 'unicorn' seals in Parpola corpus-2 Collections in Pakistan].



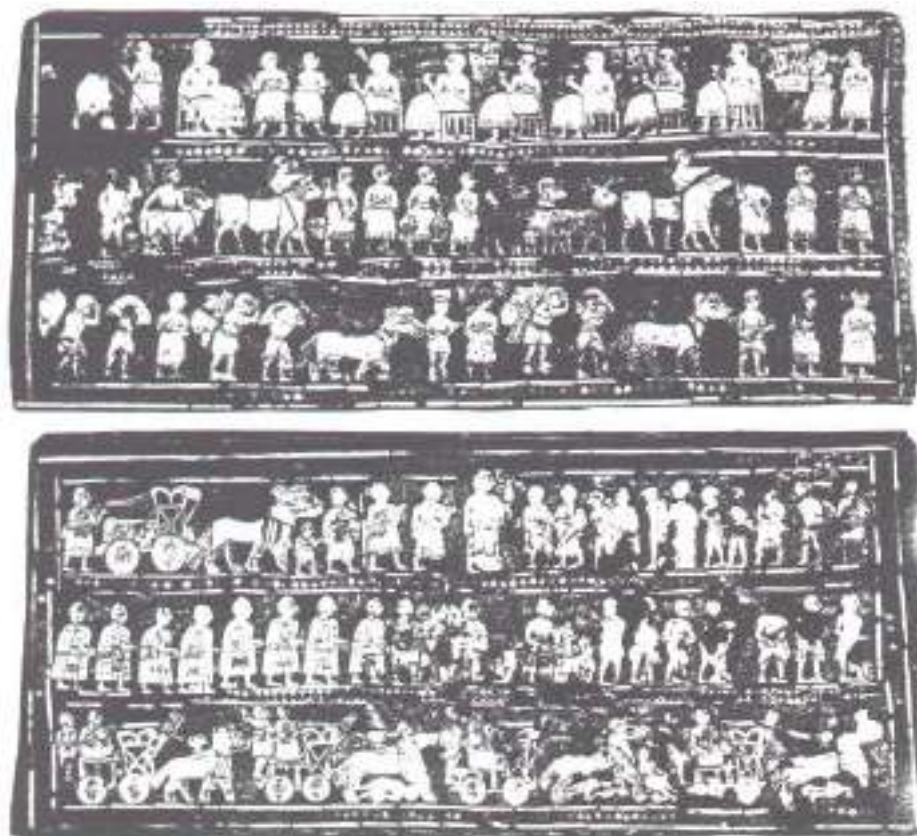
Mohenjo-daro. Copper tablet DK 11307 (SC 63.10/262). "To the incunabula of the Harappan script belongs a hitherto unrecognized depiction scratched into a rectangular reddish 'copper' tablet on deposit in the Study Collection of the Archaeological Survey of India in Delhi...the tablet did not appear in E.J.H. Mackay's excavation report of 1938 for Mohenjo-daro... On the obverse the position of the hooves, legs and the drawing of the shoulders leave little doubt as to the iconography. Two front halves of conjoined bovids point respectively to the left and right. Moreover, flanking this phantastic creature are two 'altars' which otherwise only appear in front of the creature depicted on Harappan seals and copper tablets. The right head is well-preserved. Visible are horns, ears, and vertical stripes, as in the case of the unicorns which appear on Harappan sealstones....Reverse...four signs are intact

and legible..." Paul Yule, Bochum, A new copper tablet from Mohenjo-daro (DK 11307) in: *Interim Reports Vol. 1: Reports on Field Work carried out at Mohenjo-daro, Pakistan 1982-83 by IsMEO-Aachen University Mission*, ed., Michael Jansen and Gunter Urban (Aachen: RWTH-IsMEO, 1984), 69-70].

The copper tablet DK 11307 Mohenjodaro shows conjoined bovids (with 'unicorn' stripes on the face) with two 'altars' in front. Four signs on reverse. (Jansen and Urban, 1987, p. 71). [The stylised pannier on the bovids is an indicator that a 'unicorn' (ibex/urus) is depicted with two horns. The 'altars' may be 'troughs' which normally appear in front of other animal pictorials such as the bison, tiger, elephant or rhinoceros.]

Cylinder seal; Louvre, ca. 3000 BCE





The so-called 'royal standard' from a tomb at Ur: a mosaic of shell figures on a background of lapis-lazuli; height 20 cm. The object is perhaps the sounding-box of a musical instrument.

Side 1: victory celebration; the vanquished bring tribute, wild asses, bales of goods, meat and fish; the king wears his sheepskin shirt and sits on his throne; scenes of drinking and rejoicing; agricultural activity.[Note the one-horned bull and ibex]



Side 2: top register shows prisoners being led before the king; some are naked, others wear kilts with a zig-zag hemline; the king stands on the ground, towering above the others (primus inter pares); top: infantry soldiers wearing helmets and stiff cloaks march to war with spears and battle-axes; bottom: a row of four war chariots going into battle; a leading chariot has its wheels rolling over bodies of fallen enemy soldiers; the charioteer and men with light spears ready to hand in quivers.



Detail from the Standard of Ur depicting the one-horned bull and other scenes.

Sind Ibex (Capra aegagru, Erxleben or Capra