

A Dravidian Etymology for *Makara* - Crocodile

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Abstract: The Indus valley Bronze Age saw the flourishing of the largest agriculture based civilization in the ancient world, and reached its classical era about 4200 years ago. The seals unearthed throughout the 20th century CE cover a wide geographical area of the Indus Valley Civilization (IVC) and the glyptic art featured in the IVC seals show the importance of land and aquatic fauna in the cultural life. The characteristic fish sign pointing to the Dravidian language spoken by the elite Harappans has long been explored from the days of Fr. H. Heras, SJ. However, the importance of crocodiles in IVC culture is just coming to light [1]. Ananda K. Coomaraswamy was the first scholar to show that *makara* in the earliest stages referred to the Indian crocodile. This paper explores the importance of the crocodile as an equivalent of *Proto-Varuṇa* portrait in the IVC religion, and its relationship with the tiger-goddess, *Proto-Durgā* by analyzing the linked imagery in IVC art. A Dravidian etymology for the Sanskrit word, *makara* from (i) the names of the marsh crocodile in all the Dravidian languages, and (ii) the names of the crocodile in Sindh and Gujarat regions is offered. In particular, it is shown that the names in South Munda languages prevalent in Orissa are loan words from Dravidian, and they do not form part of the Austroasiatic heritage.

1.0 Makara – Indian crocodiles

Three species of crocodiles exist in India, (a) the mugger - marsh crocodile, (b) the saltwater or estuarine crocodile and (c) the long-snouted gharial. Ancient Tamil literature is cognizant of all the three species and names them as (a) *mutalai* (b) *karā* and (c) *viṭaṅkar/iṭaṅkar* respectively (Section 3.0 in this paper). Only specialists can differentiate between muggers versus saltwater crocodiles. Essentially, we can see only two types of crocodiles in sculpture and, the absence of the long snout “elephant-trunk” marks it as a non-gharial, as a broad-snouted mugger or saltwater crocodile. All the types of crocodiles are known as *makara* in Indian literatures, and are found in temple sculptures of south India as door lintels, vehicle of the river Ganges, water spouts of Śiva-lingas or the sanctums, and also as makara banner of the love god, *Kāmadeva*. The Sangam text, *paripāṭal*, describes rich mansions painted with the amorous couple *Rati-Kāmadeva*. A gold signet ring found in 1991 from Karur in the Indo-Roman trade route, in Kongunadu is dated to first century CE [2], and comparing it with the later Rati-Manmatha sculpture from Mathura near Delhi suggests a similar motif. The god of love, *Kāmadeva*, has the banner of a gharial, called *makara-dhvaja* which occurs first in the Dravidian south. It can be seen in sculptures from Badami (6th century, Chalukya, [3]), Uttaramerur (750 CE, Pallava,[4]) and Ellora Kailashanatha temple (800 CE). Ellora temple is the northernmost sample of Dravidian architecture inspired from Pattadakal which itself is modeled upon Kanchi Kailashanatha temple [5]. The scooping out of a granite hill and creation of Ellora Kailashanatha is inspired from Kaḷukumalai in Pandya country.

A. K. Coomaraswamy [6] and J. Ph. Vogel [7, 8] were the first scholars who pointed out the evolution of makara from Indian crocodiles. Some early sculptural evidence of makara as crocodiles is given in Figures (1 – 3). The fundamental sense of the word makara as ‘crocodile’ is proved by the evidence from the modern Indian languages. In Hindi, Gujarati, Marathi, and Sindhi, the crocodile is called magar, in Panjabi and Kashmiri magarmacch, in Bengali and Nepali, makar. Telugu has makaramu, while in Tamil sangam literature (Kalittokai) it is called makaram. When Draupadi is abducted by Jayadratha, the king of Sindhu, she curses saying “You will see the army of yours scattered by the sons of Pandu and all its warriors slain as a jewel-laden ship in the ocean breaks asunder on the back of a makara.” (Mahabharata, III, 270, 19). Saltwater crocodiles go into the sea for considerable distances, and this has grown in Indian mythology making makara as fantastical sea-monster of the ocean threatening the

mariners with shipwreck and death [pg. 564, Ref. 8]. Panchatantra stories involving makara and monkey depicted in Buddhist temples near Borobudur clearly show makara as crocodiles.



Figure 1. Makara crocodile (Second century BC), Allahabad Museum



Figure 2. Makara from gharial crocodile 575 AD (Chalukya), Aihole, Karnataka



Figure 3. Makara-dhvaja, 750 CE (Pallava), Uttaramerur

2.0 Crocodile in the Indus Valley Civilization

In Mohenjo-daro seals (M-304, M-1181), a deity wearing buffalo horns and sitting in a yogic posture is depicted. It has been called as Proto-Śiva or Paśupati because of the surrounding animals: a tiger, an elephant, a water buffalo, and a rhinoceros (Figure 4). Among the inscribed signs, the appearance of fish has been taken to indicate as star/god due to Dravidian homophonic principle (Chapter 10, [10]). *Gharial* (*gavialis gangeticus*), the long-snouted crocodile living in the Indus waters, and fish have been considered divine by the Indus agricultural society. Both fish and gharial are shown as divinities in the sky in Indus valley seals. Crocodile was the liminal creature par excellence for the Harappans as it negotiates between water and land, and they selected crocodile as a liminal figure to moderate between two spheres, the human and the divine. Being equivalent of Gharial crocodile, it will be shown in this Section that it will be more appropriate to call the deity in Figure 4 as “Proto-Varuṇa”.



Figure 4. The 'Proto-Varuṇa' seal from Mohenjo-daro (M-304)

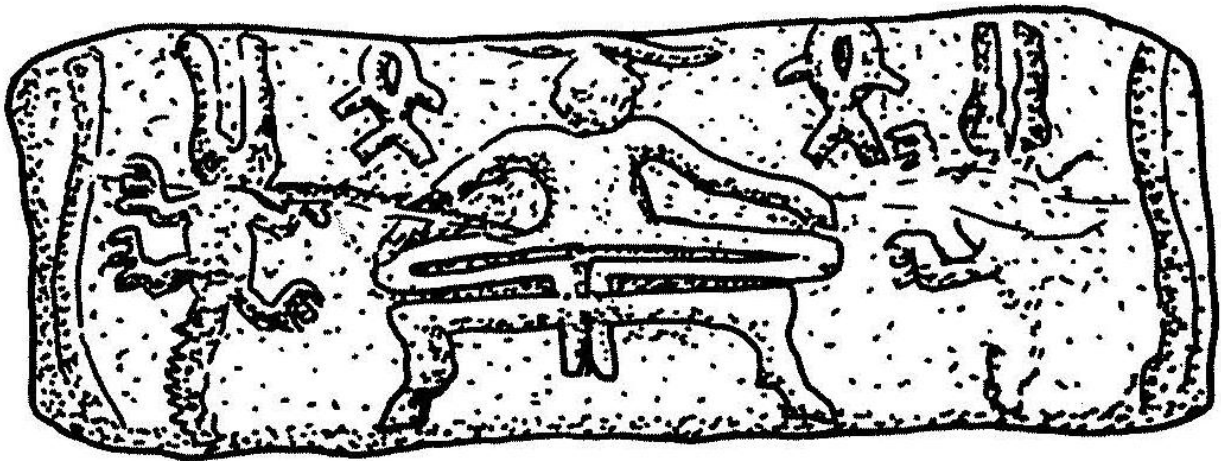


Figure 5. Horned yogin god of water and fertility ('Proto-Varuṇa') surrounded by fishes, gharials and snakes (after M-013, Parpola [10], pg. 186)

In the Indus valley civilization, the crocodile was considered an aspect of the horned deity (Figure 6) and it is often portrayed as a "Master of Animals" in a variety of mass-produced moulds and seals (M-439, M-440, M-441, M-1393, M-1394, M-1395). The crocodile is shown wearing the horns of humpless Unicorn bulls. Significantly, the same kinds of animals adorn the sides of the Gharial god in Figure 6 as in the so called Paśupati or Mṛgapati (Figure 4) seals: *tiger, elephant, rhinoceros and bovid (bison or unicorn)*. Also note the size of the sacred crocodile is much larger than the attendant mammals. The horns of Unicorn bulls in Figure 6 simulating the crown worn by the buffalo-horned deity upon the gharial (Figure 4) indicate the fertility and virility of the crocodile deity. IVC seal, M-298, shows a composite animal with both Unicorn bull and gaur bison heads showing their cultural equivalence, with a fish in the sky above.

In the webpage [11], a note is published, "Terracotta sealing from Mohenjo-daro depicting a collection of animals and some script symbols. This sealing may have been used in specific rituals as a narrative token that tells the story of an important myth." The pan-Indus myth about the crocodile deity in Figure 6 becomes clear when all the imagery in Indus seals with the tiger-goddess are analyzed together with the gharial deity depictions [1]. For example, in the seal H-180, the tiger-goddess is seen

mating with the long snout of the male gharial. In the Gharial as “Master of Animals” seal (Figure 6), there is a man sitting on a branch of the tree and directly below him is a tiger turning its head backwards. This famous IVC pair of tree-man (shaman priest of the goddess?) and the tiger below (M-309, H-163, K-49) provides the important link with the tiger-goddess seals where the same shaman-tiger-tree motif is also depicted (H-176, ...). The god Śiva in Tamil bhakti texts of the first millennium, is extolled as either *nakkar* or *viṭaṅkar* indicating Śiva’s nudity and his virile *lingam* in particular. These epithets for Śiva and his lingam have origin in the names for gharial crocodile (Section 3.0). When *viṭaṅku* is used, it indicates the naked *bhikṣāṭana* youth going rounds in the streets and attracting women: *maṇaikaḷ tōrum talai kai ēnti viṭaṅkarākit tirivatu eṇṇē?* (Tevaram 7.6.1).



Figure 6. Horned Gharial-Varuṇa as “Master of Animals” [11]

Tolkāppiyam grammar does not allot any poetic landscape (*tiṇai*) to god Śiva, but assigns Neytal tiṇai to Varuṇa. The gods assigned for the other four landscapes are Murukan, Krishna-Vishnu, Indra and Durga. This choice is made by the ancient Tamil grammarian because Varuṇa originally played the role later taken over by Śiva. For example, Vishnudharmottaram, III, 52 identifies Manmatha and Rati with Varuṇa and Gauri. The association of Durga-Gauri with Varuṇa can be traced back to Indus civilization (seal H-180). Mughal Indian paintings and modern calendar prints show Śiva as blue-hued which also seems to be a remnant of the Varuṇa connection with Śiva: "*Varuṇa, the lord of waters should be made on a chariot with seven swans, in colour resembling the glossy lapis-lazuli and wearing a white cloth [...]* Towards the left, one should place the emblem of makara, and over the head (should be spread) a very white umbrella. Oh king, on the left lap should be shown the two-handed Gauri his wife, beautiful in all the limbs. On her left hand is the blue lotus and her right one rests on the back of the god" (Vishnudharmottaram, pt. III, ch. 52, translation by S. Kramrisch, 1928, [9]). In the circular halo behind Nataraja icon, makara-s spew out a ring of the cosmos. Śiva wears makara as waist belt or ear ornaments, and some Śiva temples show crocodiles in the ceilings and in makara-toraṇa arches. In the classical Tamil literature, Varuṇa of Neytal tiṇai was known as *aṇaṅku* “the sacred power to cause affliction and suffering” (Akam 207:1, 240:8-9) and several centuries later, god Śiva in Tevaram hymns is also called as *aṇaṅku*. It has been first suggested by Rev. G. U. Pope, then followed by Indologists, that the epithet, *anaṅga*, for Manmatha is rooted in the old Tamil concept of *aṇaṅku*. Significantly in old Tamil literature, only these three male gods mentioned are called by the name, *aṇaṅku*. Like Varuṇa, Manmatha is dark colored.



Figure 7. Varuṇa on Makara
(contemporary painting derived from Vijayanagara empire school)

Prof. Asko Parpola has recently derived both *ghaṛiyāl* and *kumbhīra*, the names of Gharial crocodile in Sanskrit and Hindi, from Dravidian [12]. In Eastern Indian languages such as Bengali, Bihari, and Nepali, the name, *nakar* (Cf. Tamil *nakkar*) is used for the gharial (pg. 417-418, [13]).

The marsh crocodile (*crocodylus palustris*) lives throughout the Indian subcontinent, and the representations of *makara* in early Indian art matches with this crocodile closely (Figure 1). The *makara* (> *magara* in Hindi) crocodile does 'high-walk' for short distances when it comes to the banks of rivers and lakes (Figure 8).



Figure 8. Mugger's 'high-walk'

The *makara/magara* crocodile has four feet, and these are explicitly shown in the following IVC sign. In the year 2011, Parpola has identified the *makara/magara* crocodile sign as distinct from the snake sign: "I still believe that the basic sign should be identified as a snake. But looking at the graphic variants of sign no. 87 derived from it, I now support the interpretation of the extensions being 'feet'. Normally there are four extensions, sometimes arranged into two pairs (i.e., front legs and back legs). The very few exceptions with three or five legs are likely just carving mistakes. My guess is that the sign depicts a reptile with legs (i.e., the crocodile). That the legs are sometimes placed close to the 'head' is due to the crocodile's legs being closer to its head than its tail." (pg. 48, [12]). Also, he connects the sign with Proto-Varuṇa: "In Taittirīya Āraṇyaka 2,19, the heavenly crocodile is called "the lord of all beings (*bhūtānām adhipatir*)", an appellation which further supports identification of this **kaṇ-kāṇi* 'overseer' with the Harappan predecessor of Varuṇa."

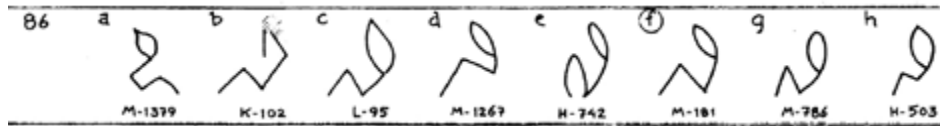


Figure 9a. Indus sign number 86 (Snake – identification by Parpola, [12])

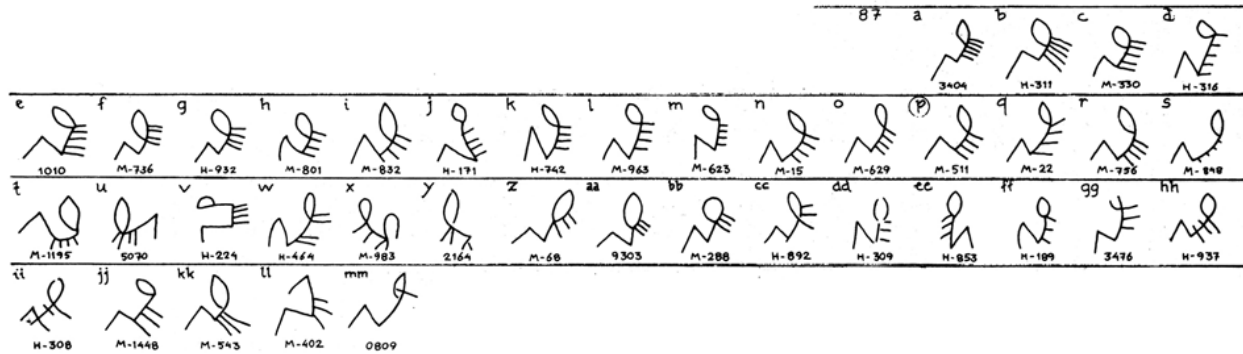


Figure 9b. Indus sign number 87 (Crocodile – identification by Parpola, [12])

Compare the Indus crocodile sign with the pictogrammatic Chinese reptile radical sign, 豸 and in Japanese, the "reptile radical" *ashinakimushi hen*. In English, the marsh crocodiles are called as "mugger" and dictionaries trace "mugger" ultimately to be of Dravidian origin: "A large crocodile (*Crocodilus palustris*) of southwest Asia, having a very broad wrinkled snout. Hindi magar, from Sanskrit makarah,, crocodile, of Dravidian origin." (from *The American Heritage Dictionary of the English Language*, Fourth Edition, 2000 by Houghton Mifflin Company). Let me describe the Dravidian etymology of Sanskrit *makara* (> English *mugger*) from Dravidian languages in the next section.

3.0 Etymology of Makara

A. Parpola in Ref. 12 (pp. 6 & 7) explains the importance of the names for crocodiles in India: "Words for 'crocodile' cannot be reconstructed for the Indo-European and Indo-Iranian protolanguages. [...] Coming from the Eurasian steppes to the Indian subcontinent via Central Asia, Aryan speakers are thus unlikely to have brought inherited words for 'crocodile' when they entered South Asia in the second millennium BCE. This is borne out by the following examination: the only words for 'crocodile' that can be shown to have an Indo-European etymology are descriptive terms recorded by lexicographers or rarely used in literature. An exception is Sanskrit *grāha-* m. (literally 'grabber'), which is of Indo-European origin; it does not, however, have extra-Indian cognates with the meaning of 'crocodile', and denotes other beasts of prey as well (e.g., 'shark', 'snake'). On the other hand, crocodiles were certainly native to the areas inhabited by the Early, Mature and Late Harappans, which comprised almost all of present-day Pakistan and northwestern India from Kashmir to Maharashtra, eastwards to around Delhi. It is in this area that Indo-Aryan speakers first became acquainted with crocodiles and undoubtedly began importing their native names into Indo-Aryan. For this reason, an etymological study of the vernacular names of crocodiles can help answer the vexing question of the language family to which the chief idiom of the Harappans belonged. At the current time, there are three possibilities: (1) Dravidian, (2) Austro-Asiatic, (3) and an unknown substratum. As the following analysis shows, the most important words for 'crocodile' in South Asian languages (except for the admittedly unclear Sanskrit *makara-* and its cognates) have a Dravidian etymology. Austro-Asiatic, on the other hand, does not seem to have any relation to the terms for 'crocodile' used more widely in South Asia. There is only one clearly Austro-Asiatic term.

Proto-Muṇḍa **tajan* or **tajal* 'crocodile'

The only native Austro-Asiatic word for 'crocodile', recorded by Pinnow (1959: 73 no. 31, 263 no. 336, 286 no. 374b, 349 no. 495g), is **tajan* or **tajal* '(broad-headed) crocodile': Santali *tajan*, Muṇḍari *tajan*, Ho *taen*, Sora (Savara) '*tañal-ən*. This word has apparently not been borrowed by Indo-Aryan or Dravidian languages."

The names for crocodiles in the Indus region yields the Proto-Dravidian root word, **mokaray* from which Sanskrit *makara* ("mugger crocodile") is derived. In Hindi, Gujarati, Marathi, and Sindhi, the crocodile is called *magar*, in Panjabi and Kashmiri *magar-macch*, in Bengali and Nepali, *makar*. Telugu has *makaramu*, while in Tamil sangam literature (Kalittokai) it is called *makaram*. In Sinhalese, crocodile or shark name is *muvarā, mōrā*. Old Hindi (Brajbhāṣā) has *makrī* 'female crocodile'. Sindhi *maṅgar-macho* m. 'whale', *maṅguro* 'a kind of sea fish'; the original meaning seems to have been preserved in Baluchi *māngar* 'crocodile', which is a loanword from Sindhi. The Proto-Dravidian root for *makara* is **mokaray*- a verbal noun from the verb, **mok-/moṅku-* 'to eat greedily in large mouthfuls, eat voraciously, devour, gobble, swallow' (DEDR 5127 + 4897). **mokara/moṅkara* from Dravidian becomes *makara* or *maṅguro* (in Sindhi) because the short vowel phoneme -o- in *mokara* is not present in Indo-Aryan languages. The transformation from *mokara* > *makara* can be compared with, for example, Tamil *kokku/koṅku* 'curvy, hence heron' changes to Sanskrit *kaṅka* 'heron'. For -g- in *magara* instead of -k- in modern Indo-Aryan languages, let me give two examples: (a) *takarai* is an aromatic plant whose perfume extract is placed on the heads of women described in Sangam literature. Sanskrit *tagara* < Dravidian *takarai* and this Sanskrit *tagara* borrowing from Dravidian is ancient as D. T. Potts has identified *tagara* flower in IVC seals (Cf. *takar* 'mountain goat' because *takar* males engage in duel with their heads. The word in English, Tahr is derived from old Tamil "*takar*"). (b) *nagara* "abode, town" (DEDR 3568) from *nakar-* "to move slowly, to creep" and this verb *nakar-* gives birth to the gharial names, *nakar/nakkar* explained later. The Dravidian verb, *mok-/moṅk-* transforms to *moc-/moṅc-* in south Dravidian languages. Hence Kannada and Telugu have *mosale* or *mosali* (< **mokaray*), and Tamil and Malayalam derives its *mosale* > *motalai* > *mutalai* from the same verbal root, *mok-* with -r- > -l- alternation in the South. The saltwater crocodiles (*crocodylus porosus*) are called *karā* or *karām* in Sangam literature, and this original Tamil name is derivable from *karai* "sea shore" (DEDR 1293). *Karāva* is the name of fishermen in Sri Lanka, and Sinhalese stories compare these folks with crocodiles, presumably because both have an amphibian life on land and sea. The names, *karā: karām* can be compared with Tamil plant names such as *kurā: kurām, viḷā: viḷām, yā: yāam* etc. Both marsh and saltwater 'flat-faced' crocodiles are called *maṭṭha-magara*, but the gharial is called *soṇḍa-magara*, according to the Jaina text Paṇṇavaṇāsutta (Parpola, [12]). *maṭṭha-* 'flat-faced' is from DEDR 4660, and *soṇḍa* denotes the long snout of gharial and is derivable from *tuṇṭam/taṇṭu, cuṇṭu/coṇṭu* 'snout' (DEDR 3311 and 2664). It is very significant that all South Munda languages in East India retain names derived from the original Dravidian form **mokara/moGgara* (< **mok-/moṅk*) and Munda linguistics department, University Hawaii lists them: Kh <maGgar>, <moGgor> 'crocodile', Ju <moGgo>, Sa.<maGgaR>, H.<mAgArA>, O.<mOgOrO> etc., [14]. Compare the crocodile names of Munda tribes which they borrowed from Dravidians in East India with the crocodile names by Gujarati tribes who venerate crocodiles as Mogra Dev (E. Fischer, H. Shah, *Mogra Dev: Tribal crocodile gods*, 1971, Ahmedabad). *mogra* < *mogara* < *mokara* 'crocodile' is comparable with *nakra* < *nakar-* 'gharial' (East India).

There are four important names for gharial in India from Dravidian, all of them referring to its unique snout and its shape is often compared to the male organ (*lingam*) in Indian languages. A. Parpola has derived both (1) *gharīyāl* and (2) *kumbhīra*, the names of Gharial crocodile in Sanskrit and then Hindi from Dravidian [12]. In East India (Nepali, Bihari, Bengali) (3) *nakar* is the name of gharial [13], directly derivable from the Tamil verb, *nakar-* "to creep, to crawl slowly". Compared to muggers (< *makara*), gharials have much smaller, weak legs and cannot do "high walk" as muggers can (Figures 7, 8). When

gharials come to the shore for sun bathing or for laying eggs, they creep on the banks awkwardly pushing their huge bodies forward. From this Dravidian *nakar*, Sanskrit gets *nakra*-/*nākra*- and Middle Indo-Aryan *nakka*-. In Tamil Tevaram texts, Śiva is called *nakkar/nakkaṇ* due to his nudity traceable to the phallus shape of the gharial snout and its ancient name. Additionally, the devadasi women dedicated to Śiva in the temples were awarded with the honor title, *nakkaṇ* in numerous inscriptions. Wendy Doniger, writing on Śiva as the Erotic Ascetic, describes the god's adventures in the Pine Forest and his erotic aspect reflect the most basic theme of the myth cycle and this seems to be reinforced by his names derivable from gharial names in Tamil and the gharial association with fertility goes back to Indus civilization. The last and very important Tamil name for gharial is *viṭaṅkar/iṭaṅkar*. In old Tamil texts, *viṭai* refers to the virile male of animals - bovinds, caprids, antelopes, elephants. *It is a* verbal noun from *viṭai*- 'to enlarge, to thicken, to stiffen up, to stand with pride'. In the Marutam landscape, the rich landlord enjoying prostitutes is called as *viṭalai, viṭaṇ*. In Tamil, *viṭai*- > *viṭaṅku*- "to be erect (as lingam), male beauty, masculinity, virility, fertile." Compare *viṭai:viṭaṅku* with verb pairs like (i) *maṭai: maṭaṅku* 'water embankment, to block', (ii) *kiṭai: kiṭaṅku* 'animal shed, godown', (iii) *malai:malaṅku* 'to be confused', (iv) *tirai: tiraṅku* 'screen', (v) *iṇai: iṇaṅku* 'to join', (vi) *picai: picaṅku* 'to knead' etc., Śiva is called in Tamil bhakti poems like Tevaram as *viṭaṅkar*, and a lingam (usually emerald) is kept near Somaskanda in *viṭaṅkar* temples which is worshipped with reverence as *viṭaṅkar* [15]. *viṭaṅkar*, standing for either male organ (lingam) or gharial snout, gives rise to Tamil names for gharial, *viṭaṅkar* (> *iṭaṅkar*). This word is borrowed into Sanskrit as a loan from Dravidian: *viṭhaṅka* 'person of dissolute habits, voluptuary' (Cf. *viṭalai* in Sangam poems). In Tamil, *iṭakkar* 'indecent words; terms denoting things or actions too obscene to be uttered in good society'; *iṭakkar-aṭakkal* 'euphemism to use indirect expressions to avoid words relating to sex', *iṭakkar:iṭaṅkar* 'pot' obviously from the protuberance on the male gharial snout, *iṭaṅkar* 'narrow path' are derivable from *viṭaṅkar* with the loss of word-initial v-.

4.0 Summary

The names for the three species of crocodiles native to Indian subcontinent has been analyzed in all Indian languages, and they are shown to be of Proto-Dravidian origin. The importance of Gharial crocodile in the art of the Indus valley civilization is demonstrated, and its four major names (*ghaṛiyāl* and *kumbhīra* in Sanskrit, *nakkar* and *viṭaṅkar* in Tamil) are connected with its unique snout and relationship with the phallic *linga* of Śiva.

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