

On the etymologies of Ancient Greek *κίννα*, *κιννάβαρι*, *κιννάμωμον* and  
Hattic *kinawar et al.*: steps towards further discoveries

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September 2020

## Abstract

A hypothesis that the Ancient Greek word *κίννα* (*Hordeum murinum*, “wall-barley”, the ears of which often turn crimson<sup>1</sup>, whereas true barley ears do not turn red) and the *κῖνν(ᾶ)/κίνν(α)/κιν(ᾶ)/κιννά* elements in Ancient Greek *κῖννάμωμον/κίνναμον/κινάμωμον* and *κιννάβαρι/κιννάβαρις*<sup>2</sup> (meaning “cinnabar”, which is mercury sulfide/mercuric sulfide, a naturally occurring compound of the chemical elements mercury and sulfur, from which an important but toxic vermilion pigment was obtained<sup>3</sup>; cinnabar is also the form in which mercury is most commonly found in nature, and so most of the mercury of the ancient world was obtained by processing it out of cinnabar) share the same etymon with the *kina-* element in Hattic<sup>4</sup> *kinawar* (the Hattic word for copper) and Hurrian<sup>5</sup> *kinahnu/kinahhu* (meaning red and/or purple); and that the second element in *κιννάβαρι(ς)* (*-βαρ-*) shares the same etymon as the second element in Hattic *kinawar* (*-war* being the second element). Also included in this paper is the hypothesis that the meaning of *κιννά* was blood (and also red and/or various shades/hues of red, with the semantics including purple and violet and shades of purple and violet, and reddish-brown shades/hues as well) from an older group of connected meanings which will be explained in this paper.

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1 *Hordeum murinum*: The inflorescence measures 3--12 cm, 7--16 mm wide, and is green to glaucous, sometimes red or brown at maturity.

2 Both *κιννάβαρις* (masculine form) and *κιννάβαρι* are attested. Also attested is the form *τεγγάβαρι* (*tengabari*).

3 Earliest attestation of *κιννάβαρι(ς)* is in Theophrastus' work, *On Stones*, where it is attested as *κιννάβαρι*, and which seems to be applied to several different substances, one of which is mercury sulfide/cinnabar. Most likely *κιννάβαρι(ς)* could also refer, at times, in some Ancient Greek usage, to red lead (lead tetroxide). And the word was known to also be applied to a red resin obtained from certain trees, a red resin which was known as “dragon's blood” in India. The resin is extracted from many different tropical tree species commonly called dragon trees. These may come from the plant groups *Calamus*, *Croton*, *Pterocarpus*, *Daemonorops* or *Dracaena*. The dragon's blood known to the ancient Greeks and Romans was mostly collected from *Dracaena cinnabari*, and the product was mostly imported from ancient Socotra, an island located off the coast of the tip of the Horn of Africa, near the mouth of the Red Sea, and more specifically between the Guardafui Channel and the Arabian Sea.

4 Hattic is an ancient extinct language of ancient Anatolia (central to eastern and northern Anatolia), which is currently an isolate language, since it has not yet been grouped with any other language.

5 Hurrian is an ancient extinct language of ancient eastern Anatolia; the area south of Lake Van; and parts of ancient Syria. Hurrian is grouped with Urartian/Urartian in a Hurro-Urartian/Hurro-Urartian language family, which has not yet been definitely linked to any other language family.

Keywords: *Ancient Greek, Hattic, Hurrian, Anatolian, Proto-Indo-European, Peri-Indo-European*

## 1. Hurrian, Akkadian and Hattic examples

In ancient Hurrian texts, we find the term *kinahnu*, which is thought to mean red or purple or a shade of red or purple. In Akkadian we find *kinahhu* meaning “purple”<sup>6</sup>. The Akkadian word is most likely a Hurrian loanword<sup>7</sup>. In Hattic we find *kinawar* meaning “copper”. I’m not sure why the Hattic word for copper contains a word also found in Hurrian, but I’m sure that that is in fact the case. Whether the Hattic word is a loan from Hurrian (or a loan from a sister language of Hurrian) or whether the Hurrian words are loans from Hattic, or whether both picked up the words from another language not grouped with Hattic or Hurrian, is as yet undetermined, but those questions are among the questions that will be studied in this paper.

In 1936, Ephraim Avigdor Speiser<sup>8</sup> put forward the theory that the name of Canaan derives from Hurrian Kinahhu/Kinahnu. That has not been ruled out yet; but that theory of Speiser’s, whether it’s correct or not, does not concern my work in this paper. In fact, the Hurrian and Akkadian examples themselves are rather superfluous, and the Akkadian example in any case is quite certainly a Hurrian loanword.

## 2. Ancient Greek and Sanskrit and Iranian examples

It is unclear from what language(s) did *κιννάβαρι(ς)* and *κῖννάμωμον* enter the ancient Greek dialects (Herodotus stated that the word *κῖννάμωμον* is of Phoenician origin; and in Hebrew the word is found as **קִינָמוֹן** = *kinamón* or *qinamón*). It cannot even yet be ruled out that Hattic may have had a sister language which was one of the pre-Greek Aegean languages which the early Indo-European Greeks encountered in Greece and/or on some Aegean islands and/or in Thrace. However, I will in this paper hypothesize that it is “more likely” that *κιννάβαρι(ς)* and *κιννάμωμον* and *κίννα* (*Hordeum murinum*) entered the Greek language at a somewhat later date (later than the time of the intermingling of Greek with pre-Greek in pre-Mycenaean times), and that the words were imported from Anatolia or Syria (but not from a Semitic language; Hurrian, which was not Semitic, was spoken in parts of Syria as well).

The components of Ancient Greek *κιννάβαρι(ς)* (aside from the Greek suffix “ι(ς)”) were (at least before the publication of this paper) considered to be of unclear meaning and unclear origin. Is the word of Hattic origin, from

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6 See *A Concise Dictionary of Akkadian*, edited by Jeremy A. Black, A.R. George, J.N. Postgate, Tina Breckwoldt. Pg. 158.

7 Ibid. pg. 158.

8 Ephraim Avigdor Speiser and Robert H. Pfeiffer, *One Hundred New Selected Nuzi Texts*. 1936.

*kinawar*? Or was the Hattic word a loanword from another language? Or was only one part of *kinawar* a loanword in Hattic? And which part was native to Hattic, which part was a loan? If the *-βαρ-* element was a loan, was it a loan from Sumerian, where *-bar* is often found as a noun base and/or a noun suffix<sup>9</sup>? Or was it not from Sumerian? What did/what does the *-βαρ-* part of the word mean?

Could the *-βαρ-* element be from Proto-Indo-European, or from a language that was a sister language to Proto-Indo-European (both languages descending from a common ancestor)? The form *-βαρ-* in this context at first appears to be reminiscent of two PIE root words: 1) PIE *\*b<sup>h</sup>uH-*, "to become, grow, appear", from which many Indo-European words derive, such as English "be"; Latin "fi"; and 2) PIE *\*b<sup>h</sup>er-*, "to bear". In what way do *-βαρ-* and *-war* (the latter extracted from Hattic *kinawar*) suggest a possible connection to PIE *\*b<sup>h</sup>uH-*, "to become, grow, appear"? It is possible that the *-βαρ-* in *κιννάβαρι(ς)* and the *-war* in *kinawar* meant "being" or "thing" (with copper and cinnabar both being a "red-being" or "red-thing" or "blood-like thing"), in which case those forms would be very similar in sound-form and meaning to PIE *\*b<sup>h</sup>uH-*, "to become, grow, appear", and could possibly have an etymological kinship to that PIE root: perhaps deriving from that root, or from an older root which is the ancestor of all three forms.

Alternatively, a kinship to PIE *\*b<sup>h</sup>er-*, "to bear" is possible; in which case *kinawar* and *κιννάβαρι(ς)* would have meant "red-bearing" or "blood-bearing". And as with the previously mentioned PIE root-word, the Hattic *-war* and the Greek *βαρ* may not derive from PIE *\*b<sup>h</sup>er-*, but instead from a root-word ancestral to PIE *\*b<sup>h</sup>er-*.

I think that a more likely theory---the most likely so far---is that *-βαρ-* meant "dragon/snake/serpent" in an as yet unidentified and unclassified language of ancient Anatolia and/or some lands surrounding Anatolia, and *κιννάβαρ* meant "blood (of the) dragon"/"blood (of the) serpent/blood (of the) snake"<sup>10</sup>. Part of the evidence for my hypothesis is that at some point in Ancient Greek, the word *κιννάβαρι(ς)* was also applied to the red resin of Socotra island's dragon tree, which was also called *αἷμα δρακόντιον* (*haima drakóntion*), "dragon's blood"<sup>11</sup>: I

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9 For those not so familiar with the Sumerian language: Sumerian stands out as a language that had a high number of homonym words, so much so that the ancient Sumerians and/or the Akkadian scribes who were writing Sumerian had to develop a superscript notation system to distinguish the homonyms in cuneiform writing. The element "bar" is one example of a Sumerian morpheme with many different meanings. I'm sure that the *βαρ* in *κιννάβαρι(ς)* and the *-war* in Hattic *kinawar* do not derive from Sumerian, but were instead part of an ancient Sprachbund; there are many words in Sumerian which are akin, Sumerian words which are detailed in this paper.

10 In this connection, see also in ancient Greek (in Theophrastus' work, *On Stones*, for example) the name of the stone *haimatitis* (red jasper? haematite?), which derives from the Ancient Greek word for blood, *haima*. And the English word "iron" may derive from a PIE root that meant "blood".

11 See Jean Tinquier, *Cinnabaris and Dragon's Blood: Ancient "Cinnabar" between Mineral, Plant, and Animal*, in *Revue Archéologique*, Volume 56, Issue 2, 2013, pages 305 to 346. Tinquier either assumed that *kinnabari(s)* had no etymological

hypothesize that the reason that *κιννάβαρι(ς)* was used as a synonym for *haima drakóntion* was because there were some ancient Greeks who knew that that is what *κιννάβαρι(ς)* originally meant; of course, some can say that that is not so, that the only thing linking mercury sulfide and that tree resin was that both were red and both were used as pigments and dyes. I don't believe that that was the only linkage, and this paper explains why I don't believe that.

As will be detailed further, the Ancient Greek element *κιννά-* in *κιννάβαρι* and also seen in *κιννά* (*Hordeum murinum*) had an older meaning of "blood", and was either a word of Proto-Indo-European origin or found in both the Proto-Indo-European language and in some Peri-/Semi-Indo-European languages, and perhaps also in some clearly Non-Indo-European languages (such as Hattic). I do not believe that *κιννά(-)* in its meaning of "blood" was native to Ancient Greek's PIE inheritance (see my discussion of the etymology of *κιννά* further in this paper), though Ancient Greek did have some kindred words, but which were in a different part of the semantic range.

The *βαρ* word meaning "dragon/serpent/snake" is even more Non-Greek than the previous term *κιννά* discussed in the paragraph above, though it is very likely Indo-European (possibly, for example, from PIE *\*wer-*, "to wind, twist, turn, bend, curve", referring to the movements and body of a serpent/snake). So the entire word *κιννάβαρ/κιννάβαρι* was very likely a loanword from an Indo-European language of Anatolia, or a language that was Semi-Indo-European/Peri-Indo-European, a sister language to Proto-Indo-European.

This Indo-European language or Semi-IE language may have had some contact with and influence on Sumerian, and vice-versa: Sumerian and Hattic had some influence in the area of vocabulary on Proto-Indo-European/Eteo-Indo-European. Unless the not-small list of Sumerian and Indo-European lexical correspondences represent a linguistic parallel deriving from some psychological-linguistic (the way their minds developed and associated certain morphemes to refer to certain things and certain abstractions) similarities without there having been much contact between the groups; but it is not known to what extent such psychological-linguistic correspondences occur (but globally common nursery words and many similar onomatopoeic words are proof that to some extent it happens, and perhaps more so among more closely related ethnic groups of the past).

It's quite likely that the word *Bar* meaning "dragon/serpent/snake" derives either directly from PIE *\*wer-*, "to wind, turn, twist, bend", or from an exactly parallel word in a Non-Indo-European language; or from a root-word

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link to "dragon's blood", or the idea never occurred to him that there could be an etymological link to such a conception.

which was ancestral to the PIE root word. The Sumerian word *bir* meaning “locust” and the *bir* portion of the Sumerian word *bir-gir* (which meant “scorpion”) is akin to the snake word *-βαρ-*; because I’ve found (I have identified this root in Sumerian, if no one before me has) that *bir* was a Sumerian root/lemma that meant “bent, curved, twisted, winding; to bend, curve, twist, wind”. The *gir* part of *bir-gir* is already known to have meant “sharp/pointy/sharp point” in Sumerian (parallel to an Indo-European form *gir-* with the same meaning, from PIE *g<sup>w</sup>ṛH-*). So *bir-gir* meant “curved spike”, “curved stinger”, referring to both the curved stinger and the curved tail of the scorpion (the Ancient Greek word *σκορπίος* itself is most likely from PIE *\*(s)ker-*, “to turn, bend, curve”, I believe).

The reason that *bir* meaning “locust” also derives from this Sumerian root is because of the very bent hindmost legs of the locusts/grasshoppers. Likewise, the Latin word *locusta* (the source of English “locust”) was hypothesized by Julius Pokorny to derive from the PIE root *\*lek-*, which also meant “to bend, twist, be jointed”, referring to the locusts/grasshoppers hindmost legs (the English word “leg” also derives from PIE *\*lek-*, as was determined at least since the time of Pokorny’s work). I’m sure now that Pokorny was right about that.

It’s also true that in many languages, such creatures perceived as/or actually harmful were given names which sometimes shared the same etymology, so especially in ancient people’s minds, snakes, scorpions and even locusts were closely associated (see also how long and worm-like/snake-like the locust’s abdomen portion is, sticking out the way it does). Indeed, both Pokorny<sup>12</sup> and De Vaan<sup>13</sup> and surely others think that Latin *lacerta* (=lizard, and the source of the English word “lizard”) is a close cognate to Latin *locusta*, deriving from the same root (though De Vaan does not derive the words from any root, he thinks that *locusta* and *lacerta* are close cognates). So there we have an association between lizard and locust; as with the Sumerian case though, the association is not at a very close level, but goes back to an old root word that referenced similar qualities of the lizard and the locust: both are very fast-moving, agile, and their agility and speed derive from their limbs: even the lizard’s legs are jointed and skewed in a peculiar way, not the mammalian way; so the link/connection was/is their bent/skewed legs/limbs which propel them so fast, and the lizard’s body, snake-like, curving, bending, twisting, also propels it. Sumerian *bir* (“locust”) had the variant forms *bur* (“locust”), and *buru* (“locust”).

Now I’m going to detail the many additional Sumerian words on which I base/with which I developed my

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12 Pokorny, Julius (1959), *Indogermanisches etymologisches Wörterbuch [Indo-European Etymological Dictionary]*, in German, volume II, Bern, München: Francke Verlag, p. 673.

13 De Vaan, Michiel, (2008), “locusta”, in *Etymological Dictionary of Latin and the other Italic Languages* (Leiden Indo-European Etymological Dictionary Series; 7), Leiden, Boston.

hypothesis that *bir/bur/bar* was a Sumerian root/lemma which meant “bent, curved, twisted, winding; to bend, curve, twist, wind”. There’s little doubt that I’m correct about that. The next Sumerian word that derives from that root is the *bir* element in Sumerian *birtu* (=castle, fort), which comes from the idea of “walled around/enclosed”, as do many words for town/city/settlement/fort in Indo-European languages and other languages. One other example being Slavic *Grad* (“city, town) from a PIE root *\*gʰerdʰ-* which meant “to enclose, encircle, to gird; enclosure; fence; belt”, from which the English words “gird”, “girdle” and “garden” derive (et al.). Even closer, because from a root whose form was nearly identical to the Sumerian, are Middle Persian *War* (castle) and Avestan *Vara* (“entrenchment, moat”) derive from PIE *\*wer-*, “to wind, twist, turn, bend, circle”.

The next Sumerian word that derives from the Sumerian root I am describing is possibly (not as certain as the others) Sumerian *bar* meaning “fleece (of sheep, lambs, rams)”, because the wool of a sheep is very curled. That word also makes it more likely that the *bir/buru* root also had a variant *bar*. It is also possible though that that Sumerian word for fleece comes from a word for white, *bar/babbar*; but the sources are not clear on whether a Sumerian word *bar* meaning “bright, white” actually existed; if it did, it is often considered that *babbar* is a duplication of *bar* (*bar-bar*→*babbar*). In Sumerian *ud* is another word for “white”, while *udu* is a Sumerian word for “sheep”<sup>14</sup>, and *Utu* is the Sumerian sun/sun-god (the blazing white radiant sun), so a derivation of *bar* (fleece) from the idea of “white” remains a possibility. However, a derivation of *bar* meaning “fleece” from the idea of white (if anybody derives that word so) rather than curled seems to me less likely, after studying the Sumerian set of forms, and considering examples in other languages, such as the PIE root *\*h<sub>2</sub>welh<sub>1</sub>-* (“hair; wool”) being so similar to PIE *\*welH-* “to turn, twist”. A third possibility and fourth possibility are that *bar* meaning “fleece” derive either from a Sumerian root that word that had to do with “peel off”, or one that had to do with “outside” (the wool/hide being the outside of the animal).

The next Sumerian word that derives from the Sumerian root I am describing is *buru*, a homonym to the locust word, but this time meaning “crow; bird of prey; vulture”. The reason *buru* is the word for those kind of birds is because birds of prey and vultures have very curved and hooked beaks, and even the crow has a very curved beak (the upper beak, not the lower). So I have no doubt about my etymology of those words.

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<sup>14</sup>Another Sumerian word for “sheep” is *gaba*: it is possible that both *gaba* and *babbar* derive from “baa-baa” (funny as that may sound!), the sound that sheep make, most sheep having white wool. However, it’s more likely that *gaba* derives from Sumerian *ga* (milk) + *ba* (to give, portion out); the similarity to the sound that sheep make is curious though, but unless a variant *baba* is found, I think the “milk-giver” etymology is more likely; while *babbar* could be a duplication of another Sumerian word *bar* which may have meant “bright, white”; that *bar* word (if it actually existed in Sumerian, the sources are not clear) is an unrelated homonym to the *bar* words that derive from a different root meaning “to turn, twist, bend, curve”.

The next Sumerian word from this root is the *bir* part of *birig* “to roll up; contract oneself; to turn up the nose/contort the lips in the act of sneering/to sneer”. The next Sumerian word is the *-biri* part of *dibiri*, meaning “con artist”/“swindler”, in other words twisted, crooked. The next Sumerian word is the *bir* part of *za bir*, for the reasons seen in the word *birig* (while “za” is a Sumerian word for “tooth”; *za bir* may have also meant “to smile”, from the way the facial muscles and the mouth twist up when people laugh and smile).

The next Sumerian word is the *bir* part of *birgun* (a type of cheese). The connection here is illustrated by the Albanian word *brëndës* (intestines), which is considered to be the most likely source of or cognate to the source of the Romanian word *brânză* (nowadays means feta cheese; sometimes cheese in general; in the plural form especially often means any type of cheese), because the word originally referred to cheeses prepared in a sheep’s stomach by reacting with the rennet inside. The PIE root of Albanian *brëndës* and Romanian *brânză* is I believe the PIE root *\*g<sup>wh</sup>ren-*, “soul, mind”, older meaning “midriff, stomach”, oldest meaning “intestines” and maybe also “brains”; in ancient times, the soul/mind was often believed to be located in the gut or the solar plexus. We still speak of a gut instinct and gut suspicions. The Old Norse word *grunr* (“doubt, uncertainty; cause of suspicion; aspersion”) derives from *\*g<sup>wh</sup>ren-*, as does Ancient Greek *φρήν* (*phren*, meaning “midriff, stomach; the seat of intellect, wits, mind”). The Romanian word *brână* (“girdle, belt, thong”) also derives from *\*g<sup>wh</sup>ren-*, as does the variant form *brâu* (same meanings) and the Albanian cognate *brez* (same meanings). Latin *brandeum* (“shroud; linen; silk”) loaned into Latin from an unidentified language (most likely), also derives from the root perhaps, either from an older meaning of “girdle”, “wrapping around the body”, or because PIE *\*g<sup>wh</sup>ren-* is likely akin to PIE *\*g<sup>whi</sup>H*, “tendon, string, intestine”, the source of PIE *\*g<sup>whi</sup>H-(s-)lo-*, the source of Latin *filum* (“thread, string, filament, fiber”), by way of the intermediary Proto-Italic *\*fi(s)lom*, cognate to Lithuanian *gýsla* (“vein, thread, nerve”; with “intestine” as the likely older meaning, given the similarity of PIE *\*g<sup>whi</sup>H* and PIE *\*g<sup>wh</sup>ren-*; with even older meanings likely including snakes, eels, and worms). The PIE *\*g<sup>wh</sup>ren-* and *\*g<sup>whi</sup>H* as well as PIE *\*g<sup>wet</sup>-/\*gūt-* (a rounded form; stomach; gut) probably derive from or are part of the same cluster as PIE *\*g<sup>wu</sup>-/\*gū-*, “to bend, curve, bow, camber, vault, distend”. The root *\*g<sup>whi</sup>H* (“tendon, string” etc.) is part of that group from the way a length of string or thread twists and turns and curves.

I do not believe it is likely that Latin *brandeum* derives somehow from *bri-*, an Indo-European form which sometimes means “needle”, so that *brandeum* would be “that which is made using a sewing needle”: a mere speculation from Orel<sup>15</sup> which even he realized cannot explain Albanian *brëndës* (meaning “intestines”), so no

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15 Vladimir Orel seems to be the source of that etymology, the same Orel who thought that the Kjolmen inscription is in a

surprise he didn't include that word in his theory.

The second part of Sumerian *birgun*, (*gun*), is most likely either identical with Sumerian *gun* meaning "load" ("loaded in the intestine/stomach") or with the *gun* seen in a Sumerian word for ointment, *ugun*, variant *ugunu*, similar to Latin *ungō* and to the root from which that Latin word derives, PIE *\*h<sub>3</sub>eng-*, "to smear, anoint"; similar also to PIE *\*ongw-*, "to salve".

The next word akin to the Sumerian root I am describing is Akkadian *birru*, meaning "string; net; lattice; trellis". The semantics of the word fit the root perfectly. I do not know whether this word has Semitic "cognates", but even if it does, they all may derive from Sumerian or from another Non-Semitic language. But it's possible, I suppose, that such a word may have once been part of Proto-Semitic.

The next Sumerian words that derives from this root are probably *bar* (the *bar* that referred to an as-yet unidentified type of fish; this is one of the words that has several homonyms in Sumerian) and *bara* (the *bara* that referred to an as-yet unidentified type of fish; this is one of the words that has several homonyms in Sumerian): the as-yet unidentified fish is probably an eel, since eels are among the most common fish found in the Tigris and Euphrates rivers, going back to Sumerian times. These words *bar* and *bara*, perhaps meaning "eel", bring us back to the *-βαρ-* seen in *κιννάβαρι(ς)*, since the form of one is identical to *-βαρ-* and the form of the other nearly so, and since in ancient times the semantic link between serpents, snakes, dragons and fish/sea-creatures was strong, linguistically and in mythology/religion.

There was also in Sumerian a root *mir/mar/mur*, a variant of *bir/bar/bur*, which actually does great in establishing the *bir/bar/bur* variation in Sumerian which I am describing. Both *mar* and *mur* were Sumerian words that meant "worm/earthworm", while *mir* was a type of mythical serpent who in Sumerian mythology was believed to encircle the world, and *mirduna* is one of the Sumerian words for "belt". These Sumerian words are in my opinion akin to Proto-Germanic *\*murhō*, "wild carrot", Proto-Slavic *mьrky*, "wild carrot", PIE *\*mérkuh<sub>2</sub>-* *\*m<sub>1</sub>kwéh<sub>2</sub>*, "carrot/wild carrot", Proto-North Caucasian *m̄ř ǎ̄*, "root, carrot", from the windings and twistings of roots, and the snake-like appearance of a carrot. Ancient Greek *βράκαρα* ("wild vegetables"), already considered to be a Pre-Greek word by Beekes et al., very likely derives from the B-initial form of the root-word (*bir, bar, bur*) which I am describing in this paper.

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Para-Phrygian language, not a Thracian language, and the same Orel who published a no doubt wrong translation of the Kjolmen inscription in the late 1990s, with that Para-Phrygian theory of his in mind.



These hypothetical *Bar* and *Var* and *War* words meaning “dragon/serpent/snake” are also somewhat similar to the Latin word *bēlua* (“beast, monster”); Albanian *bollë* (at least three different meanings: any of various nonvenomous snakes of the family Colubridae or Boidae; the glowworm; and in Albanian mythology, an early form of the Hydra, before it changes to its larger forms); Albanian *bullar* (at least three different meanings: the European glass lizard, *Pseudopus apodus*; the slowworm, *Anguis fragilis*; and also meaning an early form of the mythical Hydra in Albanian mythology); and Romanian *balaur* (“dragon, monster”).

The Latin *bēlua* is considered to very likely be cognate to (not the source of) Albanian *bollë*. Albanian *bollë* is considered to derive from Proto-Albanian *\*belva*, cognate to Latin *bēlua*. The Romanian word *balaur* (“dragon, monster”) does not derive from Latin *bēlua* according to the literature on the subject, and is usually considered to be a Pre-Roman cognate to Latin *bēlua* and Albanian *bollë*. There is no established etymology for Latin *bēlua*, nor for Albanian *bollë*, *bullar* and Proto-Albanian *\*belva*, nor for Romanian *balaur*. Since the British Classicist Geoffrey Kirk stated that *Βελλεροφόντης* (=Bellerophontes=Bellerophon) means “Slayer of Bellerus”<sup>16</sup>, then *Bellerus* is probably a cognate to the Latin and Albanian and Romanian words. The name of a Thracian tribe, the *Triballi*, may mean “three dragons”, since a three-headed serpent occurs on a Thracian metal plaque artwork found in Letnitsa in Bulgaria, in or near Triballian territory (Letnitsa is located in what was Northwestern Thrace/Moesia), and this also links with the Albanian usage, where *bollë* and *bullar* both can refer to an early stage of the mythical Hydra. Albanian *bullar* is believed to derive from *bollë*, but contaminated with the Albanian root *\*bull* ‘to be swollen’, from PIE *\*b<sup>h</sup>el-* “to blow, swell up”. PIE *\*b<sup>h</sup>el-* “to blow, swell up” could be the source of Albanian *bullar*, *bollë*, Proto-Albanian *\*belva*, Latin *bēlua*, Romanian *balaur*, Ancient Greek *phallaina* (“whale”), Ancient Greek *\*Bellerus* and Thracian *balli* if the older meaning was “large beast/dragon/monster”, or even simply because the older meaning was “fat worm”, from “to be swollen, puffy”.

If that is the etymon for those words, then the Latin word was probably a loan from another language, and the Ancient Greek *\*Bellerus* would be a loan for sure. Another possible etymon is PIE *\*wel-*, “to turn” (a root nearly identical to PIE *\*wer-*, “to turn”), and if so then again some of those words would be loans in their respective languages (and the Romanian one would still be from Pre-Roman); however Ancient Greek *phallaina* (source of Latin *ballaena/balaena*) is most likely from PIE *\*b<sup>h</sup>el-* “to blow, swell up”, not PIE *\*wel-*, “to wind, twist, bend, turn”.

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16 Kirk, 1990, p. 178.

Though rhoticism from PIE *\*b<sup>h</sup>el-* “to blow, swell up” or rhoticism from PIE *\*wel-*, “to wind, bend, twist, turn” could be the source of *Bar* meaning “dragon/serpent/snake”, I think that PIE *\*wer-*, “to wind, twist, bend, turn, curve” (source of the Germanic word *worm/wurm*, which meant “worm”, “snake”, “dragon”), is more likely for the *Bar* found in *κιννάβαρι(ς)*; though as described earlier, the word could be from a Peri-Indo-European root, or a root found in both IE and in one or more Non-IE languages: it or an identical/ parallel root was found for sure in Sumerian as the root/lemma *bir/bur/bar* as described above. The many Sumerian forms that fit the semantic and the form strongly suggest that *\*wer-* is the most likely PIE root for the *βαρ* found in *κιννάβαρι(ς)*, if the word is derived from Proto-Indo-European.

Now as I said I would do some paragraphs earlier, I will discuss the etymological possibilities of 1) the *κιννά-* extracted from Ancient Greek *κιννάβαρι(ς)*; 2) the Ancient Greek stand-alone word *κίννα* (*Hordeum murinum*, “wall-barley”); 3) the *κινν(ᾶ)-* extracted from Ancient Greek *κιννᾶμωμον*; 4) and the *kina-* extracted from Hattic *kinawar*.

To establish the etymon, it is necessary to know that there are forms of the word for “cinnabar” in Persian and Arabic which probably share the same etymon with Ancient Greek *κιννάβαρι(ς)*, and very significantly, these forms mostly show the following consonants: 1) -ndš<sup>17</sup>, which is similar to the -nj sound; 2) -ng; 3) -nj; and 4) -nk. These consonants occur in the first syllable of: Persian *šangarf*, *sindšefr*<sup>18</sup>, *sinkarf*; Arabic *kynjar*, *sindšafir*, *sindšarf*, *zingefr*, *zinjafir*, *zinjifra*, *zunjufr*. Old Persian *s-i-k-b-ru-u-š* = *sinkabruš* (=the red carnelian stone) is a cognate as well, and is sometimes regarded as the direct source of Persian *šangarf*.

In the case of these words, the first distinct lemma in each case is: in Persian/Iranian: *šanga*, *sindše*, *sinka*; in Arabic: *kynja*, *sindša*, *zinge*, *zinja*, *zinji*, *zunju*. The existence of a variant with the initial K sound (see *kynjar* in the Arabic examples) suggests to me that we are dealing with variant forms of a root-word which is also the source of Ancient Greek *κίννα*. See also how *-war/-bar* has shifted to *-fr*, and later to *-rf* in these Persian and Arabic examples.

There is also सिंदूर (= *sindūra*) in Sanskrit referring to: 1) red lead; 2) vermilion pigment; 3) and a tree from which red resin/dragon’s blood was obtained. This Sanskrit word has been hypothesized (not sure by whom) to derive from the Sanskrit lemma स्यन्द् (= *syand-*), which meant “oozing, trickling, distilling, flowing” and also had

17 Š is the sound usually rendered in English orthography as SH, and in IPA as [ʃ], which I’ve placed in brackets.

18 In Christian Keferstein's *Mineralogia Polyglotta* (1849; in German), p. 187, I found the attestations of *sindšefr* in Persian and *sindšafir* and *sindšarf* in Arabic (both from Persian), all meaning “cinnabar”. Supposing Keferstein's forms are not actually attested, that does not impact my theory, which does not rely on those particular attestations.

additional closely associated meanings (“to stream, run, move rapidly”). There is also in Sanskrit

हिंगुल (=Hingūla) meaning “cinnabar”, which is no doubt another variant, deriving from an earlier \*singūla, from the same root as *sindūra* via a different line of transmission.

I myself am certain that 1) Ancient Greek *κίννα* (*Hordeum murinum*, “wall-barley”); 2) the *κιννά* extracted from Ancient Greek *κιννάβαρι(ς)*; 3) the *κίνν(ᾶ)* extracted from *κίννᾶμωμον*; 4) and the *kina-* extracted from Hattic *kinawar* all referred to the blood-like color of: 1) the ripe crimson-colored ears of *Hordeum murinum*; 2) the deep red color of cinnabar and the vermilion color of the pigment processed from cinnabar, and the red resin obtained from dragon’s blood trees; 3) the red of cinnamon; 4) the reddish hue of copper. All these words referred to the blood-like color because the older meaning of the word was “blood”, which came from an even older meaning of “oozing out, flowing out, trickling out, bursting out”, from a root word which was actually very similar to PIE \**key-*, “to set in motion; move”, from which Ancient Greek *κινέω* (*kīnēō*, “to set in motion, move; to urge on, stir on, change”, etc.) and *κίννμαι* (*kīnumai*, “I go, move”) and a number of other Ancient Greek words derive<sup>19</sup>. It’s quite likely that PIE \**key-*, “to set in motion, move” is the actual etymon: the Hattic and Hurrian words could be loanwords; quite likely the Hattic word *kinawar* (copper) was a loanword from an early IE or IE-like language; but the Hurrian words (*kinahnu*, *kinahhu*) are more likely cognates, since other IE cognates seem to exist in Hurrian and Urartan.

In a very similar/nearly identical semantic progression, English “blood” and its Germanic cognates most likely<sup>20</sup> derive from PIE \**b<sup>h</sup>leh<sub>3</sub>-tóm*, in turn from PIE \**b<sup>h</sup>leh<sub>3</sub>-* “to bloom”: the idea of “to bloom” morphed into the sense of bursting or swelling out. Compare Old English *blēd* meaning “a shoot, branch; foliage, leaves, a leaf; a flower, a blossom, a bloom; a fruit”. Old English *blēd* and its Germanic cognates are from Proto-Germanic \**blēduz*, *blōdiz* (“blossom, sprout”), from PIE \**b<sup>h</sup>leh<sub>3</sub>-*, “to bloom”.

So the older derivation for: 1) Ancient Greek *κίννα* (*Hordeum murinum*, “wall-barley”); 2) the *κιννά* extracted from Ancient Greek *κιννάβαρι(ς)*; 3) the *κίνν(ᾶ)* extracted from *κίννᾶμωμον*; 4) and the *kina-* extracted from Hattic *kinawar* is probably, for all four of them, PIE \**key-*, “to set in motion; to move”. But that root-word is the source of many PIE and IE stems, and I have not yet reconstructed the stem form very closely to how it actually would have been, so the following reconstructions are approximate: PIE \**keind-*, \**keing-*, \**kand-* or \**kang-*, and the

19 See Julius Pokorny, *Indogermanisches-Etymologisches-Woerterbuch*, p. 538, for more Ancient Greek cognates and many other Indo-European cognates.

20 This theory about English “blood” and its Germanic cognates deriving from PIE \**b<sup>h</sup>leh<sub>3</sub>-tóm*, in turn from PIE

\**b<sup>h</sup>leh<sub>3</sub>-* “to bloom”, already exists in the literature, though I do not have the name of the originator of this theory or the book it was published in.

stem meant “running, flowing, oozing, trickling, distilling”, and the stem/those stems likely derive from PIE *\*key-*, “to set in motion, move”, or from an even older root, dating back before the Proto-Indo-European language that has been reconstructed.

It is unclear whether PIE *\*key-*, “to set in motion, move” is the source (by way of sibilization of *k* to *s*) of Sanskrit स्यन्द् (=syand) (a Sanskrit lemma discussed a few paragraphs above) and/or of Sanskrit *sindūra* and *hingūla*; the PIE root *\*key-*, may, I hypothesize, have had a parallel form *\*sey-*, or *\*tsey-*, having the same meaning or a very similar meaning (to move, to flow, stream, run, ooze, trickle). One reason that I think a parallel root *\*sey-* or *\*tsey-* existed, is because in Sumerian *su*, variant *si* and *sa*, was a Sumerian word for “blood”, from which the meanings “red; red-orange; reddish-brown; brown” developed. This word is seen in the first part of *sibar*, one of the Sumerian words for “copper”. Those Sumerian words probably derive from an older root meaning “to flow”, which could have had the form *\*sey-* or *\*tsey-*, and could have been part of an ancient Sprachbund in the area.

Note that the lemma *syand-* in Sanskrit and the meanings derived from it do not, from the attestations, show a tendency to refer particularly or exclusively to blood, so in the Sanskrit stem/lemma *syand-* the semantic progression to “blood” was lost or did not develop, but reappeared or developed when *sindūra* was applied to trees from which the red resin called “dragon’s blood” is extracted. However, I believe that the Sanskrit word *sindūra* did not come from the lemma *syand-*, but instead from a common ancestor root, probably via a different language: this explains the different vowel sounds and the fact that the form *sindūra* focuses on nouns that are all red in color (red lead; cinnabar; vermilion pigment; a tree/or trees from which a red dye/pigment was extracted). I also believe that the *sind-* in *sindšaf* (attested in Arabic, from Persian), *sindšarf* (attested in Arabic, from Persian), *sindšefr* (Persian) and the *sind-* in Sanskrit *sindūra* share the same etymon, but were transmitted via different languages and probably from different forms of an ancient root, and this transmission across different languages and involving variant root-forms explains all the variant forms seen in Old Persian (*sinka-* in *sinkabruš*=red carnelian stone), Persian (*šanga-*, *sindše-*, *sinka-*) and Arabic (*kynja-*, *sindša-*, *zinge-*, *zinja-*, *zinji-*, *zunju-*). Proto-Indo-Iranian *\*sind<sup>h</sup>uš* (“river, stream”) derives from the same root, via a kindred language or the same language which was the source of *sindūra*.

There is also PIE *send<sup>h</sup>ro-*, “coagulating fluid, liquid slag, cinder” from which derives English “cinder” and its many Germanic cognates. PIE *send<sup>h</sup>ro-* no question derives from the same ancient root, *\*sey(n)/tsey(n)*, “to flow, stream, melt, run”, which was somehow akin to PIE *\*key-*, “to set in motion, move”; either deriving from PIE *\*key-*, or else both words were part of the Proto-Indo-European vocabulary, either ultimately deriving from one

word or two different similar words.

It's possible that Latin *sanguis* (=“blood”; originally *sanguīs*, from an older *sanguen*) derives not from a hypothetical *\*h<sub>1</sub>sh<sub>2</sub>n-ǵ<sup>h</sup>w-én* from PIE *\*h<sub>1</sub>ésh<sub>2</sub>*; but instead from the root that I am discussing in this paper (from the form of that root that began with the S or Ts sound, not the form with K). And Latin *saniēs* (ichor, pus, blood mixed with pus) might derive from the root as well, and not from a hypothetical oblique stem *\*h<sub>1</sub>sh<sub>2</sub>-én-*, from PIE *\*h<sub>1</sub>ésh<sub>2</sub>r* (though *saniēs* does look like it likely derives from *\*h<sub>1</sub>sh<sub>2</sub>-én-*, an oblique stem of *\*h<sub>1</sub>ésh<sub>2</sub>r*). Balto-Slavic *\*asinga* (“blood”), source of Curonian *šinga* and Sudovian *asing*, has been explained as deriving from PIE *\*h<sub>1</sub>sh<sub>2</sub>n* (“blood”)+ PIE *\*g<sup>w</sup>eyh<sub>3</sub>-* (“to live”) + PIE suffix *\*-o-m*, in a combination *\*h<sub>1</sub>sh<sub>2</sub>n-g<sup>w</sup>h<sub>3</sub>-o-m*. I bring up the possibility that Balto-Slavic *\*asinga* (“blood”) actually derives from the root that I am discussing.

It is also has to be looked into whether Arabic *ḥinnā'* (=henna pigment/dye, and the *Lawsonia inermis* shrub from which the henna pigment is extracted) derives from the root I am discussing, as well as whether Middle Persian *\*hannāy-*，“to smear, anoint” derives from there.

With the stem *kinna/kinga/singa/šanga/zinja/sindša/sindura* etc., we are most likely dealing with a root-word whose oldest form may have been *\*kéy-*, “to set in motion, move”, and which may have also existed in a parallel form *\*sey-*, with the same meaning. This root and such stems were found in the Proto-Indo-European language as well as in some ancient languages of the Anatolian/Lake Van area/Northern Mesopotamian area/Iranian area/perhaps also the Bactrian area and Pakistan area. Some of these ancient languages were most likely languages which were sister languages to the Proto-Indo-European language; some of them were not, such as Sumerian.

With the *κῖνν(ᾶ)* extracted from *κῖννᾶμωμον* there are two possibilities which are more likely than any others: that the *κῖνν(ᾶ)* extracted from *κῖννᾶμωμον* shares the same etymon with the forms discussed in the paragraphs above; or, based on Persian *dārčīn* (=the cinnamon tree), that the *κῖνν(ᾶ)* extracted from *κῖννᾶμωμον* instead derives from Old Chinese *\*Dzin* (*\*Dzin* is a phonetically accurate Latin script rendering of the Old Chinese form of the name of an Old Chinese feudal state which existed from 778 BC to 207 BC, at the time that the Ancient Greek *κῖννᾶμωμον* is first attested), which however became *Θῖνα (Thína)*, *Θῖναι (Thínai)* <sup>21</sup> and *Σῖναι (Sínai)* in Ancient Greek, but did not, as far as can be confirmed, become *κῖν(ν)* in Ancient Greek.

The Persian *dārčīn* (=the cinnamon tree) is attested far too many centuries later than the Ancient Greek

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21 Attested in the *Periplus of the Erythraean Sea*, a Greek manuscript. Current scholarship dates the work to between 40 AD and 70 AD (see John Hill, 2009, pp. 244-245).

*κίννᾶμομον* for it to make a convincing case that the *κίνν(ᾶ)* extracted from *κίννᾶμομον* also derives from \**Dzin*. Persian *dârčîn* is composed of *dâr* meaning “tree” (deriving from PIE \**dóru-*, “tree, wood”); and *čîn* deriving from Middle Persian *čîn*, likely deriving from Ghandari *cina*, from Sanskrit चीन=*cīna*, and Sanskrit *cīna* perhaps derives from (but does not for certain derive from, there are several hypotheses in the literature) Old Chinese \**Dzin*. It is very important to note: the letter *C* used to transliterate the Devangari character च in Sanskrit (and the corresponding character in the Ghandari script) had a pronunciation range from a voiceless palatal plosive to a voiceless palato-alveolar sibilant affricate/voiceless domed postalveolar sibilant affricate: it was never pronounced as a voiceless velar plosive (the hard K sound found in Ancient Greek *κίννᾶμομον*). In the case of the Sanskrit word चीन/*cīna*, च (=C, as described above) was pronounced as a voiceless alveolo-palatal sibilant affricate, which is rendered  $\text{t͡ʃ}$  in IPA. The Ghandari C is in the same range: it is never a voiceless velar plosive.

So in order for that “Chinese scenario” to be the etymon of the *κίννᾶ* element in *κίννᾶμομον*, the existence of a form *Kin* (rather than *Dzin*) is necessary to have existed at that time, or at least a form beginning with a sound that was likely to have become a voiceless velar plosive in Ancient Greek or in an intermediary language (or two intermediary languages) between Old Chinese and Ancient Greek; however, no such forms have been attested.

The form *Qin* (the *Q* is pronounced [\[t͡ʃʰ\]](#), which is simply an aspirated form of  $\text{t͡ʃ}$ ) is first attested many centuries later, not in the time of Old Chinese and Ancient Greek (in Old Chinese, it would have to have been *Dzin*, as described above; while in the ZhengZhang Old Chinese dialect, it would have been *Zin*). Even in the time of Middle Chinese, the form is expected to have been *Dzin*. Not until Mandarin Chinese, after the time of Middle Chinese, is the form *Qin* attested.

In Classical Syriac <sup>22</sup>, cinnamon was known (I don't have the time of the first attestations in Classical Syriac) as *dāršīnī* and *šīndreḡ*, both terms deriving from one or two different Iranian languages (*dār* and *dreḡ* are Indo-European words from the Iranian branch, from PIE \**dóru-*, “tree, wood”), but phonologically modified (Iranian *č* sound became the Aramaic *š* sound, etc.). In Jewish Babylonian Aramaic, cinnamon was known as *daršīnī*. These Classical Syriac Aramaic and Jewish Babylonian Aramaic forms show that *Dzin* became *šīn* in Classical Syriac Aramaic and Jewish Babylonian Aramaic, after being received from an Iranian language, and Iranian received the term from Gandhari or Sanskrit. Likewise, in Arabic the form was *aš-šīn*, and in Arabic the Iranian *dârčîn* became

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22 Classical Syriac is an Aramaic language (part of the Semitic family of languages) that emerged during the first century AD from a local Aramaic dialect that was spoken in the ancient region of Osroene, centered in the city of Edessa, an ancient city in Upper Mesopotamia (not to be confused with the city of Odessa, on the Northwestern coast of the Black Sea in Ukraine; nor to be confused with the city of Edessa in Northern Greece). Classical Syriac flourished from the 4<sup>th</sup> century AD to the 8<sup>th</sup> century AD, and continued to have an important role during the next centuries, but by the end of the Middle Ages it was gradually reduced to liturgical use, since the role of vernacular language among its native speakers was overtaken by several emerging Neo-Aramaic dialects.

dāršīn/dārsīn/dāršīniyy/dār šīniyy/dārašīniyy.

But in the time of the Phoenicians, it is expected (due to a statement by Herodotus) that the tree (and the spice derived from the bark of the tree) was already known as *kinamón* (as is found in Hebrew) or a form very close to that, a form beginning with the hard K sound. So from where does *K-* appear in Hebrew *kinamón*, if *kin-* derives from Old Chinese *\*Dzin*, as some still believe? It therefore seems to me that *kinamón* and Ancient Greek *κίννᾶμωμον* (and its variant forms) quite likely do not derive from Old Chinese *\*Dzin*, since we cannot find confirmation that a form beginning with the hard K sound existed at that time, nor that such a form was likely to be found in a language of the time and region(s), since we have no evidence of such a phonological shift of Dz to K in the languages of the time and the region<sup>23</sup>.

So now here enters my hypothesis: the *κίνν(ᾶ)* in *κίννᾶμωμον* does not derive from Old Chinese *\*Dzin*, nor from any other Chinese term, but instead from the same root-word from which the *κιννά(-)* in Ancient Greek *κιννάβαρι(ς)* and Ancient Greek *κίννα* (*Hordeum murinum*, “wall-barley”) also derive, as does the *kina-* in Hattic *kinawar*, which meant “copper”. There is no question that the ears of *Hordeum murinum* often develop a rich dark crimson red color, as can be seen from a search of images of *Hordeum murinum* online (and as noted in botanical works describing the inflorescence of the plant), a red not seen in true barley, *Hordeum vulgare*.

Now I will discuss an etymological possibility for Ancient Greek *ᾶμωμον* (*ámōmon*), which was a word on its own (probably referring to “black cardamom, *Amomum subulatum*” in Ancient Greek, though it could have referred to a different aromatic spice plant, or to several, including *Amomum subulatum*) and also found in ancient Greek *κίννᾶμωμον* (*kinnámōmon*, meaning “Chinese cinnamon, *Cinnamomum cassia*”, in English) and in Ancient Greek *καρδάμωμον* (*kardámōmon*, meaning “cardamom, *Elletaria cardamomum*”, in English).

The only cognate for Ancient Greek *ᾶμωμον* is considered to be Classical Syriac *ḥamāmā* (from which is derived Arabic *حَمَامَا* = *ḥamāmā*), which is of unknown etymology and unknown origin. I will put forth here a hypothesis that both Ancient Greek *ᾶμωμ-* and Classical Syriac *ḥamām-* derive from a root of similar form (which I cannot reconstruct yet, I would need more cognates) which meant “aroma, breath” and probably also “breeze”. There is in Proto-Indo-European a root *\*hzenh₁-*, “to breathe”, from which is derived Ancient Greek *ἄνεμος* (“wind, breeze, gale”), Latin *animus* (“life-force”, “soul”), Old Frisian *omma* (“breath”), et al. Again, as mentioned in some previous

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23 Eventually in some languages many centuries after the time I am writing of, there did develop words that show the hard K sound and could ultimately come from Old Chinese *\*Dzin* via a number of intermediaries (and many centuries later). Albanian *Kinë*, Danish *Kina*, Finnish *Kiina*, Modern Greek *Kíva*, Icelandic *Kína*, Lithuanian *Kinija*, Norwegian *Kina*, Romanian *China* (ch=k in Romanian, as in Italian), Swedish *Kina*, and some more, all in modern languages.

cases, *ἄμωμ-* and *həmām-* might not derive from that PIE root *\*h<sub>2</sub>enh<sub>1</sub>-*, but instead from a root ancestral to the PIE root. If *ἄμωμ-* derives directly from PIE *\*h<sub>2</sub>enh<sub>1</sub>-*, it could still be a loanword from another Indo-European language: an Anatolian Indo-European language. If *həmāmā* derives from PIE *\*h<sub>2</sub>enh<sub>1</sub>-*, then *həmāmā* is of course a loanword that entered Classical Syriac from an Indo-European language. It is also possible that we are dealing with a Non-IE form of identical meanings and nearly identical form to PIE *\*h<sub>2</sub>enh<sub>1</sub>-*, which is quite likely as well.

It is usually believed that Ancient Greek *κίννᾰμωμον* derives from an earlier *κίνναμον*, which is attested in Ancient Greek, but apparently attested later. The later attestation however does not prove that *κίννᾰμωμον* is the older form. If *κίνναμον* is the older form (compare Hebrew *kinamón*) then the form *κίννᾰμωμον* was modelled on that of *ἄμωμον* (=black cardamon, and probably some other aromatic spice plants as well), and/or, due to folk etymology, on that of *ἄμωμος* (*ámōmos*, “blameless”). If *κίνναμον* is the older form, then there is the question of the etymology of *-(α)μον* (seen in the Ancient Greek word) and *-(a)món* (seen in the Hebrew word): the etymology may be the same as the etymology of *ἄμωμον*, making the substitution of one for the other very natural.

### 3. Additional evidence

There are some additional words that furnish additional evidence for the hypothesis I present in this paper (among the many new etymologies I present in this paper) that the *βαρ* in *κιννάβαρι(ς)* meant “dragon, serpent, snake”. The additional words I refer to are, surprisingly, a number of words in various Eurasian languages that refer to the coriander plant. Bear with me, I know this is coming out of the blue. But I’m actually pretty sure I’ve got it right with these coriander words which I’ve been working on deciphering since early 2019. After ruling out a number of alternative theories as being too unlikely, I now present this work here, as part 3 of this paper.

In early 2019, I found that *kustumbari* (कुस्तुम्बी) was the most or one of the most common names for the coriander plant in Sanskrit. Since then, I had tried deciphering that word and its variant forms in other languages and dialects, and its cognates, all of which have no etymology in the references.

In the year 2020, I found some information that coalesced my new theory on the etymologies of these coriander words, new information which I combined with what I learned from my analysis of *κιννάβαρι(ς)*, (I deciphered *κιννάβαρι(ς)* before I deciphered these coriander words). I found out that coriander plants were believed, in India and in ancient Egypt (and in other parts of the world), to have the power to fight off the ill effects of snake venom (the coriander plant does have the ability to help the body expunge excess heavy metals; and its possible efficacy



against snake-venom has perhaps been studied as well). Likewise, icinnabar was used in ancient India to cure snakebite and other poisonings and is still employed in traditional medicine in India for that purpose (however, mercury is highly toxic). The Indian goddess *Hingula* (from the Sanskrit word for cinnabar) is thus believed to possess powers which can cure poisoning and other diseases.

I then started looking into whether the -bari in *kustumbari* could be the same -bari seen in Ancient Greek *kinnabari*, with both -bari components having the meaning of “snake, serpent”. I could tell from my past research that the *kustum-* portion was not likely to mean “blood”, but I knew from my earlier research that it could have meant “to strike”. So my new hypothesis was that *kustumbari* meant “Striker of the snake”, “Slayer of the snake”, which can be transposed into English as “Snake-Slayer”, “Dragon-Slayer”.

So now here are some of the variant forms of *kustumbari* found in other languages and dialects: *kothimbir*, *kothmir* (both in Marathi), *kothambir*, *koththamalli* (in Senghali), *kothamalli*, *kottamalli*, *ketumbar* (Brunei Malay, Malay and Indonesian language), *katumbar* (Brunei Malay), *ketumbal* (somewhere in SouthEast Asia). Notice the m/b variation (mir/bir/bar/mal/bal), seen in the Sumerian forms I was discussing earlier. These words are already believed to share the same etymology with the Akkadian forms *kisibirru/kusibirru*, also meaning “coriander”; but that etymology was unknown. Now I’m pretty sure I have deciphered it.

Both Akkadian *kisi/kusi* and the Indian forms (the South-East Asian/Indonesian words derive from India) *kustum-/kotham-/koththa-/kotta-* meant “to chop, cut, strike, hit”, from the older meanings of “chop” and “cut”, from the older meaning of “sharp/pointed object/sharp point/tooth”. These words are most likely akin with Ancient Greek *κόττειν* (“to hit”), *κότταβος/κόσσαβος* (an Ancient Greek game where wine-lees were thrown to hit targets), *κόττος* (a “cube”; probably originally a small cube like those used in playing dice, which look like teeth), and *κοττίς* (“back of the head”, from the earlier meaning, I think, of “protuberance”, which links to tooth; also meaning a type of hairstyle involving tufted hair above the forehead which also often extended down over part of the forehead; this meaning also fits due to the semantics of a pointy tuft of hair). Also most likely akin to a name of a Thracian goddess whom the Greeks identified with Artemis: *Kotys*, *Kottyto*, from the meaning of “to strike with a pointed sharp object”, referring to her shooting of arrows.

So here now is the Akkadian, Sumerian and Hittite evidence which matches the Ancient Greek: in Akkadian, *kissatu(m)* meant the “(action of) gnawing”, from a root *kis/kus* which meant “tooth, fang, point, sharp/pointed object”. From that root also comes Akkadian *kasistu* (“gnawer”); *kasimum* (“chopper”, as in a reed-chopper); *kasumum* (“to cut up, chop”); *kasmu* (=chopped); *kasapum* (“to break into bits’, as teeth do with food);

*kasau(m)* (“to chew, gnaw”); *kissalum* (=“ankle”, which is a bony projection, like a tooth); and probably also *kissu*, which in *A Concise Dictionary of the Akkadian language* is defined as “a part of a plough and a part of a chariot”. From Punic/Phoenician, related to Akkadian, most likely comes Latin *cuspis* (point, tip, sting, spear) for which no Indo-European etymology has been established. So I expect that the *kisi-/kusi-* in *kisibirru/kusibirru* most likely meant “chopping”, from the older meaning of “tooth”, and *kisibirru/kusibirru* meant “Chopper of the snake”/“Slayer of the snake”, as did *kustumbari* and its variants and the loanwords derived from it.

In Sumerian, there is *guz* meaning “to bare teeth; gnash teeth; cut; clip”, derived from Sumerian *gug* (“tooth”, one of several Sumerian words for “tooth”: *za, zu, ka* and perhaps *\*ku* being most of the others). The Sumerian words *gu* (variant *ku*), “to eat, feed”, also derive from the *gu/gug/ku/kug* word for “tooth, pointy/sharp object”. The Sumerian word *guz* also meant “tufted”, from the sense of “pointy”. There is also Sumerian *gurus/guru* which meant “trim, strip, cut, clip” from the same root with the variant ending with the -r sound, and the Sumerian word *kur* (“mountain”, from the sense of “pointy”) is another variant of the *ku* form (“tooth; fang; pointy/sharp object”). The Sumerian words *ku/kug, ka/kag, za/zag* and *zu/zug*, all developed the meaning of “gleaming stone/pearl/glass etc.”, from the earlier meaning of “tooth” (the gleam of teeth). There is some affinity with the idea of a stone being a “chopped off piece”. There is also Sumerian *kishik* (=“a thorny bush”) reminiscent of the *kisi-* in Akkadian *kisibirru*.

The Indo-European languages of the Hittites and the Luwians provide us with some similar forms (from parallel root-words) and more information about the semantic developments. In Hittite, *hazziya* meant “to stab, strike, push”; *hazziknu* meant ‘to beat, hit, strike; to fight’; *hattarai* meant ‘to prick’; *hattalwant-* meant “the bolt of a lock”; *hattalu* meant ‘buckle’, referring to the pointy part that is inserted into holes in the belt, or some such pegs/hooks on the buckle; *hattai* meant “to cut off; kill; slay”; *hattessar* meant “hole, trench” (from the sense of cut/scooped out). In Luwian, which I haven’t searched through yet, *hattala* has been translated as “a club (weapon)”, which could also have been a spiked mace.

In Ancient Greek and Mycenaean, the Ancient Greek word *κορίανδρον* (*koriandron*; which Beekes correctly realized preserves a form *koria<sup>n</sup>dro-* that is probably older than the Mycenaean *koria<sup>n</sup>dno-/koria<sup>n</sup>dna-*, which as Beekes says were more likely dissimilations of *koria<sup>n</sup>dro-*) meaning “coriander” (and the source of the English word “coriander”, “cilantro”, and the source of the word for coriander in most European languages) likewise meant “Snake-slayer”, but this time the first part of the word, *kori-/ korí*, meant “snake”, deriving from the same root as Ancient Greek *κορώνη* (“wreath”; “garland”; “crow”, etc.) from PIE *\*(s)ker-*, “to turn, bend, twist, curve” (the

“crow” meaning derives from the crow’s curved beak; not from the sound of the crow). Proof of my derivation is furnished by the fact that in Ancient Greek, *κορίαννον* meant “a ring worn on the forefinger”. As Ancient Greeks forgot the meaning of *κορίανδρον*, the word became *κορίαννον* in some dialects, either confused with the word for a ring or dissimilated so that they became the same.

The *-ανδρον* part of the word comes from another forgotten Archaic Greek word which originally meant “sharp point, pointy object, tooth, spike, stinger” and also “an eminence” (the “eminence” meaning is seen in the Ancient Greek word *ανδρον*, meaning “a raised border”, “any raised bank” of a river, etc.). The stinger meaning is seen in *ανθρον*, which meant “hornet, wasp”. There was also *αντρον* meaning “cave, cavern, grotto”, which like the Hittite word *hattessar* (hole, trench) comes from the “cut out, scooped out” semantic progression. The Ancient Greek word *ανθος* (“flower, blossom, bloom”, and also, importantly, meant “peak”) is also part of this group, because the Proto-Indo-European root *\*h<sub>2</sub>endh-*, thought to mean “to bloom”, comes from the actual/older meaning “to project up/eminence; a bud/tooth/lump/bump/spike/point”.

From the older meaning of “sharp/pointed object” developed the meaning of “to strike with a sharp/pointed object”, seen in the *-ανδρον* part of the word *κορίανδρον*, “snake-slayer”, “snake-striker”; possibly even translatable as “snake-fang”. It may have been called “snake-fang” because it was used against snake-bites. But I think the semantic progression to “striking, slaying” had already happened.

The Ancient Greek word *σκόροδον* (“garlic”) most likely has the same etymology using similar words: a word-base *σκόρ-* referring to snakes and scorpions, from PIE *\*(s)ker-* “to curve, bend, twist”, and *οδον* akin to *όδους*, meaning “tooth, tusk, fang; anything pointed”, from PIE *\*h<sub>3</sub>dónts-* “tooth”, from PIE *\*h<sub>3</sub>ed-* “to bite” (from an older source word meaning “tooth, anything pointy”) plus the suffix *-ónts*. In the case of garlic especially, *σκόρ-* implied any bringers of “poisons/toxins/illness” (before germs were conceived of), not just snakes and scorpions. Garlic was against any such bringers of harmful poisons.

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