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**Hystrix in Greek**

The Ancient Greek term ὕστριξ presents diverse semantics and, to my best knowledge, it demonstrates seven different meanings:

I. (usually used in the plural) ‘swine bristle’. This meaning is undoubtedly original, as ὕστριξ means ‘swine hair’ in the literal sense, cf. Gk. ὄς f. ‘pig’ and θριξ, gen. sg. τριχός m. ‘hair’.

II. ‘swine leather whip, the cat, used as an instrument of punishment’.


IV. ‘hedgehog, *Erinaceus europaeus* L.’

V. ‘sea urchin (class *Echinoidea*)’.


VII. ‘an unclearly defined, animal’.

The available Ancient Greek dictionaries register only some of these meanings. The four-volume Ancient Greek-Polish dictionary has only two meanings: III and I (s.v. ὕστριξ m. f. ‘jeżozwierz, jeżatka czubata, *Hystrix cristata* L.; pl. ‘szczenica świńska’), but registers also II (s.v. ὑστριχίς f. ‘bicz do chłostania niewolników’). These same meanings are given by Oktawiusz Jurewicz. The authors of the Greek-Polish dictionaries generally follow the well-known *Greek-English Lexicon* LSJ, where the same three meanings (III, I, II) appear in the same order. Only one meaning (III) is given in Dvorecky’s two-volume Ancient Greek-Russian dictionary. The Greek-German lexica demonstrate a twofold meaning ‘hedgehog, porcupine / Igel, Stachelschwein’ (IV+III), as well as the sense ‘Stachelpeitsche’ (II) for the apppellative ὑστριχίς. In his *Vocabulario della lingua greca* Franco Montanari has two meanings (III ‘porcupino, istrice’; I ‘setole’), but he introduces the third meaning

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(II) in the next entry: ύστριχις – ‘frusta (per punire gli schiavi)’; med. ‘mallatia alla coda dei cavalli’

Thus it is necessary to review anew the semantics of the Greek word ύστριχις.

Ad I. The etymological meaning ‘swine bristle’ (usually in the plural, ύστριχες) seems to be attested securely in a comedy by Plato the Younger. The comedy in question is not preserved, but the relevant fragment is quoted by Clement of Alexandria:

Τῶν γὰρ τετραπόδων οὐδὲν ἀποκτείνειν ἔδει ἡμᾶς τὸ λοιπόν, πλὴν ὑῶν· τὰ γὰρ κρέα ἥδιστ’ ἔχουσι καὶ τοὺς γίγνεται πλὴν ύστριχες καὶ πηλὸς ἡμῖν καὶ βοή.

In his play Feasts Plato, the comedist, says truly suitable words: Among the quadrupeds no animal has to be killed by us, except pigs, because pigs have very tasty meat, and alive pig gives us nothing other than bristle (ὑστριχες), dung and squeaking.

Ad II. The most certain attestation for the second meaning derives from the so-called Liber Suda (10th cent. A.D.):

ὑστριχίς· ἐκ δέρματος μετ’ αὐτῶν τῶν τριχῶν μάστιξ

[...] Hystrix – whip made of leather together with the hair [my translation – K.T.W.].

The whip made from pig’s leather and bristle was alternatively called ύστριχις in the Attic dialect.

Ad III. Herodotus and Claudius Aelian speak clearly about the Libyan fauna, thus the meaning ‘crested porcupine, Hystrix cristata L.’ seems relatively certain. Herodotus mentions υστριχες in a long list of the exotic animals of Libya:

καὶ βασσάρια καὶ βασσάρια καὶ βασσάρια καὶ κριοὶ ἄγριοι καὶ δίκτυες καὶ θώες καὶ πάνθηρες καὶ βόρυες καὶ κροκόδειλοι ὅσους τριπήχεες χερσαίοι...

...foxes, hyenas, porcupines, wild rams, the dictys, jackals, panthers, the borys, land crocodiles three cubits long...

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7 Plato, Com., fr. 28, See Supplementum comicum, ed. J. Demiańczuk, Kraków 1912, p. 76–82.
Aelian’s description of ὑστριξ, though obviously lacking scientific precision, refers to the porcupine:

όνόγων ἀκμαῖς καὶ ὀδόντων διατομαῖς θαρροῦσι καὶ λύκοι καὶ πάρδοι καὶ λέοντες · τὴν δὲ ὑστριχα ἀκούω ταῦτα μὲν οὐκ ἔχειν, οὐ μὴν ὑπὸ τῆς φύσεως ἀμυντηρίων ἀπολελεῖθαι ἐρήμην. τοῖς γοῦν ἐπιοῦσι ἐπὶ λύμῃ τὰς ἄνωθεν τρίχας ὡς βέλη ἐκπέμπει, καὶ ἐκεῖναί γε πηδῶσι, ὥσπερ οὖν ἐκ τινος ἀφειμέναι νευρᾶς.13

Strength of claws and sharpness of fangs make bears, wolves, leopards, and lions bold, whereas the porcupine, which (I am told) has not these advantages, none the less has not been left by Nature destitute of weapons wherewith to defend itself. For instance, against those who would attack it with intent to harm it discharges the hairs on the body, like javelins, and raising the bristles on its back, frequently makes a good shot. And these hairs leap forth as though sped from a bowstring.

In his different account on a similar subject the animals in question are called “Libyan” expressis verbis (Αἱ ὑστριχες Αἱ Λιβυκαί14), thus there can be no doubt that the identification of Aelian’s ὑστριχες as porcupines is correct.

Also Aristotle, referring to a work by Democritus of Abdera (fr. 150), seems to mean porcupines, as is to be seen in his text:

Δύνανται δ’ αφίεναι οἱ ἄραχναι τὸ ἄραχνιον εὐθὺς γενόμενο, οὐκ ἔσωθεν ὡς ὡν περίττωμα, καθάπερ φησὶ Δημόκριτος, ἀλλ’ ἀπὸ τοῦ σώματος οἷον φλοιόν, ἢ τὰ βάλλοντα ταῖς θριξίν, οἷον αἱ ὑστριχες.15

Spiders have the power of emitting their web as soon as they are born, not from within their bodies, as if it were an excrement, as Democritus says, but from the surface of their body, like the bark of a tree, or like the ejected spines of some animals, as the porcupine.16

The Polish translator Paweł Siwek has jeże (pl. ‘hedgehogs’) in his rendition of Aristotle’s work17. However, Aristotle says that ὑστριχες belong to animals which throw off their hair (τὰ βάλλοντα ταῖς θριξίν), thus the passage refers to porcupines rather than to hedgehogs.

Ad IV. The fourth meaning (‘hedgehog, Erinaceus europaeus L.’), as well as the second one, can be safely established on the basis of the aforementioned entry in Liber Suda:

ὑστριξ· ἐκ δέρματος μετ’ αὐτῶν τῶν τριχῶν μάστιξ. ὑστριχίδι μαστιγῶν Ἀριστοφάνης Βατράχοις. ἡ ὑστριξ, ἄκανθοχοιος, ἒχχυνος χερσαίος.18

14 AELIAN, XII, 26.
18 Suda, Y, 692, p. 684 (s.v. ὑστριξ).
Hystrix – a whip made of leather together with the hair. ‘Flogging with the whip’ – thus Aristophanes in his Frogs. Or hystrich – “prickly pig”, the earthen hedgehog.

The same meaning can be easily inferred from a list of synonyms for ‘hedgehog’ in Liber Suda:

Χοιρογρύλλιος· ὑστριξ, ἀκανθόχοιρος, τουτέστιν ἐχῖνος χερσαίος.²⁰

Choirogryllios – hystrix, “prickly pig”, that is the earthen hedgehog.

It should be emphasized that the meaning ‘hedgehog, Erinaceus Europaeus L.’ cannot be a late innovation of the Greek language (Liber Suda dates back to the 10th cent. A.D.), as it may be attested as early as in Aristotle’s times (4th cent. B.C.). The Greek scholar from Stagira, talking about animals which hibernate, gives the following information:

Τῶν δὲ ζωότόκων καὶ τετραπόδων φωλοῦσιν οἱ τε ὑστριχες καὶ αἱ ἄρκτοι.²¹

Among viviparous quadrupeds the porcupines [sic!] and bears hibernate.

It is obvious that this passage cannot refer to porcupines, which live in the warm zone of the Mediterranean area and never have to hibernate. This fragment may describe only hedgehogs or alternatively badgers (see my discussion below, ad VI).

Another passage by Aristotle seems more problematic. The text runs as follows:

Καὶ ἡ ὑστριξ δὲ φωλεῖ καὶ κύει ἴσας ἡμέρας, καὶ τάλλα ὡσαύτως τῇ ἄρκτῳ. Κύουσαν δ’ ἄρκτον ἔργον ἐστὶ λαβεῖν.²²

The female porcupine also hides away for the winter, and is pregnant for the same length of time, and otherwise does as the she-bear. It is no easy business to catch a bear when pregnant.

Aristotle informs us that the pregnancy of the female hystrix (ἡ ὑστριξ) lasts as long as the pregnancy of the she-bear (ca. 8–9 months). This feature cannot refer to the female hedgehog, which pregnancy is relatively short (slightly over 1

¹⁹ Suda, Ch, 598, vol. IV, p. 835 (s.v. χοιρογρύλλιος). Translation of the passages by the author of this article.

²⁰ Greek χοιρογρύλλιος seems to denote ’east rock hyrax, Procavia capensis syriacus Schreber’, a medium-sized terrestrial animal, living in the Middle East and Africa. It has short ears and tail, resembling a guinea pig (Cavia porcellus L.). In antiquity the rock hyrax was compared with hedgehog, young hare and rabbit. See e.g. D. Duncan, Urchin, coney, rock badger – genus hopping with the choirogrullios, Dand 1, 2010, p. 1–4, http://dandelionjournal.org/index.php/dandelion/article/viewFile/3/45 [25 X 2013].


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month\(^{23}\)). The female porcupine should be excluded for the same reason (ca. 2 to 3 and a half months)\(^{24}\). On the other hand, Aristotle’s description of the hystrix (both the hibernation and the long gestation) seem to square very well with habits of the badger.

It is worth emphasizing that at least at one place Aristotle distinguishes between earthen hedgehogs (οἱ χερσαῖοι ἐχῖνοι) and the animals called ύστριχες (discussed below)\(^{25}\). In this place, ύστριχες seem to refer to some maritime animals (see meaning V). However, meaning III ‘porcupine’ cannot be completely excluded.

Ad V. In the glossary written by Hesychius of Alexandria (5\(^{th}\) or 6\(^{th}\) cent. A.D.) we find the following gloss:

όστριχ: ζῶον ὀστρακόδερμον, ἐνάλιον, βρώσιμον\(^{26}\)

Hystrix – a hard-shelled animal, maritime, edible.

The same meaning suggests itself in a passage by Aristotle in Historia animalium:

Τριχῶν γάρ τι εἶδος θετέον καὶ τὰς ἀκανθώδεις τρίχας, οἱ χερσαῖοι ἔχουσιν ἐχῖνοι καὶ οἱ ὕστριχες · τριχὸς γὰρ χρείαν παρέχουσιν, ἀλλ’ οὐ ποδῶν, ὥσπερ αἱ τῶν θαλαττίων.\(^{27}\)

Nevertheless, all animals which have hair are viviparous (and we must include here as a kind of hair the spiny hairs of hedgehogs and porcupines: these spines serve the purpose of hair, and not of feet as do spines of the sea-urchin).

Ad VI. The meaning ‘badger, Meles meles L.’ for ύστριχ is not evidently attested in the ancient sources for one important reason. Namely, we know no certainly established Ancient Greek term for ‘badger’\(^{28}\). I believe, however, that there are


\(^{24}\) L.J. Dobroruka, op. cit., p. 108, gives the following information regarding the porcupine: No exact data are available on the duration of pregnancy: the shortest estimates are 65 days, the longest 112 days. A similar approximation is given by M. Burton, op. cit., p. 214: gestation 63–112 days.

\(^{25}\) Aristoteles, HA, I, 6 [490b], vol. I, Paris 1964.


\(^{28}\) As far as I know, the following Greek terms can be surmised to denote the ‘European badger, Meles meles L.’: 1. ἄρκος, diminutive ἄρκαλος; 2. ἄφσος or ἄφσ; 3. μελίνη; 4. πικτίς or πυκτίς; 5. τρόχος; 6. ύστριξ. It should be emphasized that the first form ἄρκος m. ‘badger’ (< Proto-Greek *fárkos) was commonly contaminated with ἄρκτος m. or f. ‘bear’. This opposition (ἄρκος ‘badger’ vs. ἄρκτος ‘bear’) was ignored by scholars also in modern times.
at least three premises, that allow us to suggest the meaning in question for Ancient Greek ὕστριξ.

Firstly, Modern Greeks from the Pontic area refer to the badger by means of the term ξυστρίγκι [pronounced: xistrígi] (‘Dachs’), which evidently derives from *ὀξυ-ὑστρίξ. It follows that the term ὕστριξ could also denote the badger in antiquity, at least in the Ionic linguistic area (it is well known that the Modern Greek dialects of the Pontic area demonstrate features typical of Ionic, e.g. they preserves the long vowel η with the value [e]).

Secondly, the suggested semantics can be deduced from the Hesychian gloss: arkela – an animal; [thus] the Cretans [call] the badger (hyrix)

The meaning ‘badger’ is guaranteed by the Modern Greek (dialect. Cretan) ἄρκαλος m. ‘Cretan badger, Melles meles ssp. arcalus’ (= Hesychian ἄρκηλα), thus ὕστριξ in the Hesychian glossary can denote nothing other than ‘badger’. The meaning ‘porcupine’ is completely excluded, for this animal did not (and does not) live in Crete. The remaining semantems IV (‘hedgehog’) and V (‘maritime animal’) are theoretically possible, but they, as well as ‘porcupine’, introduce semantic confusion and they explain nothing.

Thirdly, Eurasian badgers have their hair that is similar to swine bristle, from which brushes were and are made; thus the possible meaning ‘having hair similar to pig’s’ (ὑστριχες) squares very well with the earlier assumption that the Ionians called the badgers ὕστριχες.

The suggested hypothesis (Ionic ὕστριξ denotes ‘badger’ and not ‘porcupine’ remains in full agreement with the observed facts. The Hesychian gloss contains the word ἄρκηλα in the Ionic form containing the long vowel η (cf. Doric ἄρκηλα, confirmed by the Modern Cretan form ἄρκαλος m. ‘Cretan badger’ and Carpathian ἄρκαλος m. ‘young of the wild animals, esp. of bear, lion or leopard’), as well as

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33 The confusion of ‘badger’ and ‘porcupine’ in Modern Greek is also known. G.P. SHIPP, op. cit., p. 96, gives the following comments to the Hesychian gloss in question: This entry must be brought into a connexion with Cretan ἄρκαλος. It involves a confusion between the porcupine and the badger, for a parallel to which we need go no further than to ἀσβός, which in Macedonia is ‘porcupine’. Hesychius will then be citing the word in the corresponding Attic-Ionic form, presumabley the name of another animal, then giving the Cretan meaning simply.
the glossema τὴν ὕστριχα with the Ionic semantics, which completely agrees with the Modern Cretan meaning ('badger').

What is more, at least two of Aristotle’s texts are easier explained if one posits the suggested semantics ‘badger’ for the term ὕστριξ. The above-mentioned text by Aristotle is worth quoting once more:

Τῶν δὲ ζωτόκων καὶ τετραπόδων φιλούσιν οἱ τε ὕστριχες καὶ αἱ ἄρκτοι.\(^{35}\)
Among viviparous quadrupeds the porcupines and bears hibernate.

It is obvious that this passage cannot refer to porcupines, which live in the warm zone of the Mediterranean area and never have to hibernate. This fragment may only refer to hedgehogs or badgers.

As has been previously said, the crucial passage in the History of Animals was not understood properly:

Καὶ ἡ ὕστριξ δὲ φωλεῖ καὶ κύει ἴσας ἡμέρας, καὶ τἆλλα ὡσαύτως τῇ ἄρκτῳ. Κύουσαν δὲ ἄρκτον ἔργον ἐστὶ λαβεῖν.\(^{36}\)
The female porcupine (ἡ ὕστριξ) also hides away for the winter, and is pregnant for the same length of time, and otherwise does as the she-bear. It is no easy business to catch a bear when pregnant.

Aristotle’s information on the pregnancy of the female hystrix (ἡ ὕστριξ), which is said to last as long as the pregnancy of the she-bear, can denote neither ‘porcupine’ nor ‘hedgehog’, as it refers to the female badger, whose pregnancy may be restrained for some months due to the so-called delayed implantation\(^{37}\). Most researchers agree that the duration of the badger’s pregnancy varies between 7 months and 13–15 months\(^{38}\). In other words, it can be compared with the duration of a bear’s pregnancy (ca. 8–9 months).

In his works devoted to zoological topics Aristotle seems to confuse the two meanings ‘porcupine’ (most popular) and ‘badger’ (local use, probably in Ionia). Such a semantic dispersion is also observed in Modern Greek. The word ἄσβος generally means ‘badger’, but in some areas (in Macedonia) it denotes the porcupine.

VII. The semantics ‘an unidentifiable, or unclearly defined, animal’ must be assumed in those cases, where the context provides no additional information

\(^{35\text{ Aristoteles, HA, VIII, 17 [600a], vol. III; Aristotle’s History, p. 215 (trans. R. Cresswell).}}}\)


\(^{37\text{ M. Burton, op. cit., p. 114. The author explains it as follows: Mating usually in July but may occur February to October. Cubs born January to May. Does not mean gestation of 7 months as there is delayed implantation. Embryo is only implanted in wall of uterus 7–8 weeks before actual birth and then development proceeds normally. L.J. Dobroruka, op. cit., p. 74, says that In some females latent pregnancy (i.e. temporarily suspended development of the embryo) has been observed, in others the development of the embryo proceeds without interruption. Gestation periods thus vary widely, between 7 and 15 months.}}}\)

\(^{38\text{ P. Sumiński, Borsuk, Warszawa 1989, p. 88: Wszyscy autorzy są zgodni, że ciąŜa trwa nie krócej niź 7 miesięcy, a moŜe trwać nawet 13–15 miesięcy.}}}\)
as to whether the term ὑστριξ refers to the porcupine (III), the hedgehog (IV), or the badger (VI). It is necessary to include here the following examples:

A fragment by Aeschylus, the famous Athenian writer from the 6th–5th cent. B.C., is reconstructed on the basis of the works of Aristophanes of Byzantium, the Greek grammarian, and Aelian. Modern editors give the following text:

ὦ φίλος, χέρας εὐμενής,
τέρψῃ δ’ ἴκτισι καὶ νέβροις ὑστρίχων τ’ ἄβροισι
κομψήθη δὲ τρίτος ξῖν 
μητρὶ [καὶ π]ατρὶ τῷ δὲ.³⁹

In the same place Aelian adds that the name in question was also used by the Athenian tragic poets:

tῶν δὲ ὑστρίχων καὶ τῶν τοιούτων τὰ ἔκγονα ὄβρια καλεῖται · καὶ μέμνηται γε Εὐριπίδης ἐν Πελιάδι τοῦ ονόματος καὶ Αἰσχύλος ἐν Ὀμηρίδες καὶ Δικτυουλικοῖς.⁴⁰

Callimachus of Cyrene, the prominent poet of the Alexandrian epoch (4th–3rd cent. B.C.), mentions in his Peliades [fr. 616 N], and Aeschylus in his Agamemnon [v. 143] and Dictyulci [fr. 48 N].

Callimachus of Cyrene, the prominent poet of the Alexandrian epoch (4th–3rd cent. B.C.), mentions in his hymn to Artemis the animal called ὑστριξ; the meaning is unclear:

καὶ κοίτην ἐλάφοι καὶ ὑστριχος ...⁴¹

the lair of the stag and where the porcupine hath his burrow ....

In the Polish translation Wiktor Steffen gives the meaning dzik, ‘boar’, not confirmed by the lexical material of the Ancient, Medieval and Modern Greek⁴². Though the identification is wrong, it should be emphasized that any translation, including ‘porcupine’, ‘hedgehog’, ‘badger’, would be equally arbitrary.

Conclusions.

The standard dictionaries of the Ancient Greek language usually list three different meanings of the appellative ὑστριξ, namely: I. ‘swine bristle’, II. ‘whip made

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³⁹ Aeschylus, fr. 47a.
⁴⁰ Aelian, VII, 47, vol. II, London–Cambridge Mass. 1959 (with my translation; in trans. of A.F. Schofield: And the young of porcupines and similar creatures are called ὄβρια. It is hardly certain that the ὑστρίχες denote ‘porcupines’ in this fragment).
of swine leather and bristle’, III. ‘hard-shelled porcupine’. It is necessary to add as many as three or four new meanings (IV. ‘hedgehog’, V. ‘sea urchin’, VI. ‘badger’; VII. ‘an unclearly defined animal’) to the previously established ones.

**Abstract.** Dictionaries of the Ancient Greek language distinguish only two or three different meanings of the Greek word ὑστρίξ. The present author analyses all the contexts and glosses where the word in question appears. On the basis of his own analysis he assumes that dictionaries of Ancient Greek should contain as many as seven different semantems: I. ‘swine bristle’, II. ‘swine leather whip, the cat, used as an instrument of punishment’, III. ‘porcupine, *Hystrix cristata* L.’, IV. ‘hedgehog, *Erinaceus europaeus* L.’, V. ‘sea urchin’, VI. ‘badger, *Meles meles* L.’; VII. ‘an unclearly defined animal’.

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