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Epigyne or *epigynum*? Some philological notes*Epigyne* или *epigynum*? Некоторые филологические замечания

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КЛЮЧЕВЫЕ СЛОВА: пауки, Аранеае, женские гениталии, терминология.

ABSTRACT. Marusik [2021] presented a brief analysis of the etymology and usage of the words *epigyne* and *epigynum*, widely used technical terms for the female external genitalia in spiders. Here a number of corrections to his arguments are presented.

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РЕЗЮМЕ. Марусик [Marusik, 2021] дал краткий анализ этимологии и использования наименований *epigyne* и *epigynum*, широко используемых технических терминов для наружных женских гениталий пауков. Здесь предложены уточнения к его аргументации.

The *epigyne* or *epigynum*, the external structures of the female genitalia of entelegyne spiders, provides important characters for species identification and has been used for this purpose since the early 19th century [Kraus, 2009]. Elucidating the etymology and historical use of these morphological terms is certainly of interest; yet, few questions can appear more trivial than the one asked in the title of Marusik’s recent essay “*Epigyne* or *epigynum*: what is correct?” [Marusik, 2021] — the answer appears obvious: one just needs to consult a dictionary or the writings of competent recent writers, and the correct choice should be clear.

Marusik, of course, knows this, and he indeed concludes that, while in French or German a single spelling is obviously preferred — *épigyne* or *Epigyne*, respectively — in English both spellings, *epigyne* and *epigynum*, are equally correct. This would be all there is to say about this topic.

But there is more to this question than initially meets the eye: in examining the history of this anatomical terminology one can reveal some common misunderstandings about the formation of Latinized scientific terms, which regularly gain importance in the context of the interpretation of Latinized scientific nomina according to the International Code of Zoological Nomenclature (ICZN). When discussing the etymological background of the arachnological terminology, Marusik [2021] makes a number of serious grammatical mis-

takes, which invalidate his central conclusions about the correct use of the terms. As similar arguments are often applicable when making nomenclatural decisions based on the ICZN, it is perhaps of wider interest to present the correct derivation of the terms here, even if the terminology of morphology is not subject to the same strict legislation as that of taxonomy.

Marusik [2021] considers 3 related pairs of terms: *Epigyne* vs *epigynum*, *epiandrus* vs *epiandrum*, and *epigaster* vs *epigastrum*. These are discussed in turn, the first one in a little more detail, as the same general lessons apply to the other two.

Epigyne vs epigynum

Marusik [2021] is correct when he states that both these terms are ultimately derived from the Greek words *ἐπί* (on, upon, above) and *ἡ γυνή* (female; used as macrocosmic synecdoche for the female sexual organ). He is, however, completely mistaken when he proposes that the resulting word is a noun of feminine gender both in Latin and Greek. When Audouin [1826: 104] first introduced the term “l’*épigyne*” into the arachnological vocabulary he obviously used a French word. This was derived by nominalization from the French adjective *épigyne*, very widely used in French botanical texts of the time and adopted in various forms in all major European languages (e.g., Brisseau-Mirbel 1802: [161 [printed 116]]; Römer [1816: 199] Aquilino [1820: 156]; Dierbach [1820: 100]; Martynov [1820: 233]; Gray [1821: 129]; Richard *in* Bory de Saint Vincent [1824: 554]). This adjective, which describes the diagnostic arrangement of the stamina relative to the ovary in one of the major subdivisions of the plant kingdom in the hugely influential classification of Jussieu [1789], would have been familiar to any French naturalist of the time. It was derived from the neo-Latin three-ending adjective *epigynus/epigyna/epigynum*, and this in turn is a Latinization of a hypothetical Greek adjective *ἐπίγυνος/ἐπίγυνα* (or *ἐπίγυνη*)/*ἐπίγυνον* meaning “on top of the female (part)” (for the formation of composita like these in the classical Indoeuropean languages see Mikkola [1962: 69ff]).

In French (as in Classical Greek; Donaldson [1848: 169]), nominalization does not require a morphological change of the adjective, and because the word

épigyne begins with a vowel, the intended grammatical gender of the resulting noun is not immediately obvious in combination with the definite article (“*l’épigyne*”). Morphological cues are insufficient for an unambiguous gender assignment in this case [Ayoun, 2018], although it is likely that the word would be considered feminine in analogy to similar-sounding native words (*la farine, la terrine, la piscine*). From combinations with declined adjectives or the indefinite articles (“*un/une*”) one can infer that a majority of French texts indeed use the term as a noun of feminine gender, but some important French-speaking arachnologists use it as masculine (e.g., Lessert [1927: 417]; Berland [1933: 63]), and this use can even be found in the publications of the Muséum National d’Histoire Naturelle in Paris (e.g., Brignoli [1979]; Jäger [2001]). The noun *épigyne* is not included in the authoritative dictionary of the Académie Française, which only lists the adjective, but from a number of analogous cases in the dictionary it is possible to deduce that both gender choices are grammatically possible in French despite the derivation from a feminine noun. For instance, *épigastre, épicarde, éphémère* and *éphèbe*, each derived from the combination of the prefix *epi-* and a Greek feminine noun, are all officially recognized as masculine nouns in French.

In other Romance languages the corresponding terms are Latinized nouns of masculine gender: *el epigino* (Spanish), *l’epigino* (Italian), *o epigino* (Portuguese), as would be expected for nouns that are neuter in the original Latin or Greek (compare, e.g., *el gimnasio, il museo, o ferro*). A rare exception is seen in Romanian, where *epigina* is a feminine noun.

In German, where the original French term was rapidly adopted by arachnologists, as it had been by botanists, the word is usually used as a noun of feminine gender (“*die Epigyne*”), and only very rare uses as a noun of neuter gender (“*das Epigyne*”) can be found in the early literature [Théis, 1835: 616; German translation of an excerpt from Théis, 1832]. Both choices are equally grammatically correct in German, where the gender of loan words is often indeterminate. In many cases, but not exclusively, it is decided by the gender of the closest German translation, and this seems to have been the case for *Epigyne* (most German words for the female genitalia are feminine in gender). Quite early on, the Latinized variant “*das Epigynum*” (neuter gender) was introduced in the German arachnological literature, from where it presumably entered the English language. Contrary to Marusik’s findings, the earliest use of this variant is not by Herman [1868] in his famous polemics on the function of spider genitalia, but by Ohlert [1867] in his work on the spiders of Prussia. In this, Ohlert was probably influenced by the views of his fellow Prussian, the Danzig schoolmaster Anton Menge, a pioneer in the study of female spider genitalia [Kraus, 2009], who quite correctly considered Audouin’s nominal use of *épigyne* as un-Greek (“*ungriechisch*”; Menge [1866: 27]).

In English, it is more common to mark the nominalization morphologically, and in botanical works the form *epigynium* is sometimes found (analogous to *epithelium*, from the Greek *ἐπί* and *ἡ θηλή*). Use of the neuter form of the adjective is, however, equally permissible as a way of nominalization: thus *epigynum*, both as a Latinized and as an English noun, is perfectly correct to refer to “(the thing that is located) on top of the female (part)”. This also means that both plural forms, *epigyne* and *epigynums*, are equally correct in English texts (as is the regular plural *epigynes*), despite Marusik’s claims to the contrary (for an enlightened and enlightening discussion on the plural formation of Latinized nouns in English, see Pinker [1999: 54]). In all cases, the terms in English are nouns of neuter gender (preferred pronoun: *it/its*), as is the default for all inanimate objects.

Epiandrus vs epiandrum

In this case, Marusik [2021] misstates the etymology more seriously. These terms are derived from the Greek *ἐπί* (on, upon, above) and *ὁ ἀνὴρ* (male; genitive: *ἀνδρός*) (not “andrus”, as Marusik writes). The terms are again derived from an adjective, not from a noun, so Marusik is mistaken when he claims that “the gender is masculine”. The Greek two-ending adjective *ἐπανδρος/ἐπανδρον*, meaning “on top of the male (part)” or “manly”, is Latinized to *epandrus/epandrum* (the *-i-* in the spelling used by arachnologists should be elided according to the rules of word formation in classical Greek and Latin). Nominalization in English and neo-Latin would usually be based on the neuter form of the adjective, and the resulting nouns would be *ep(i)andrum* or *ep(i)andrium*. The latter is the form usually used by entomologists or acarologists, and should probably be the preferred form for arachnologists as well. The term “*epiandrus*” introduced by Marusik is a barbarism and should be abandoned.

Epigaster vs epigastrum

As Marusik [2021] correctly states, these terms are derived from Greek *ἐπί* (on, upon, above) and *ἡ γαστήρ* (belly). But he is again wrong to assume that these are intended as Greek (or Latin) nouns of feminine gender. The terms are derived from the classical Greek two-ending adjective *ἐπιγάστριος/ἐπιγάστριον*, (“on top of the belly”) via the nominalized classical neuter *τὸ ἐπιγάστριον*, for the abdominal wall. Nominalization of the adjective results in the English and neo-Latin nouns *epigastrum* or *epigastrium*, both of which are justifiable, with the latter being more widely used in the medical domain, probably influenced by the classical Greek usage. Marusik’s preferred term *epigaster* is, however, ill chosen and misleading. While the *epigastrum/epigastrium* is, according to its etymology and usage, the region covering the abdomen, the *epigaster* would be a part of the belly (instead of its covering), and the term is indeed widely used to refer to the hindgut.

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