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THE HISTORY OF THE NAME *PANORPA* LINNAEUS (MECOPTERA)H. D. Cameron¹

Attempts to understand the origin of Linnaeus' name for the scorpionfly *Panorpa* have come to nought for a very good reason. The word does not mean anything at all.² It is an interesting example of the futility of looking up names in a Latin or Greek dictionary to find their meaning when the history of the word is at all complicated. The word *Panorpa* is born of a series of taxonomic, philological, grammatical, and (perhaps) typographical errors which can be sorted out by a survey of the pre-Linnaean history of the word and of the insect. In order to keep the end in view throughout the argument that follows, the reader may be gratified to anticipate the conclusion that *Panorpa* comes ultimately from the Greek word *parnops* (genitive *parnopos*) meaning 'locust.'

In the pre-Linnaean entomological tradition the scorpionfly was considered to be a kind of mosquito. Aldrovandus (1602:386-7) includes the scorpionfly in his section *De Culicibus*, but he is uneasy about it, and reflects that it might be classed as a *Perla*, by which he means the dragonflies. Many of the insects which Aldrovandus calls *culices* have four wings instead of two, and he naturally feels that some justification is necessary for the way he classifies them. In his comment on the illustrations which accompany the text he says (Aldrovandus, 1602:387):

"The sixth figure, along with the remaining figures that follow it on the first plate of illustrations, is four-winged. These, along with those pictured on the second plate we include among the mosquitoes [culices] despite the number of their wings, because of the shape of the abdomen, which is not nearly so similar to the flies and other like winged insects, as it is to the mosquitoes. . . . I am very doubtful about the insect in the seventh figure, whether it ought to be classified with the mosquitoes, though usually placed among them at the cost of some precision."³

The illustrations (386) and the description (387) leave no doubt that Aldrovandus is in fact talking about the scorpionfly. The description reads:

"Body about as long as your thumb including the conspicuously long antennae: head like that of a fly, snout with a prominent reddish pipe; wide thorax; abdomen marked with yellow and black; to the end of the tail is attached a sort of annulate part [segments 7-11 of the female abdomen] divided apically [the cerci], which the insect contracts and extends at will; four wings spotted with white and black. The last figure similar to the above in every respect, except the tail [now referring to the male], which is curved up like that of a scorpion. The apical segment of this tail is also thicker, and is armed with two thornlike parts [the dististyles or genital forceps]."

Having shown that the scorpionfly was considered a mosquito, we turn to a remarkable and popular book written by a Neapolitan lawyer of the 16th century, Alexander ab Alexandro, titled *Genialium Dierum Libri Sex* or *Six Books of Pleasant Days*, "stuffed with erudition varied and recondite." It is a compendium of ancient lore and anecdote garnered from the classical authors, and arranged in chapters each of which is a short essay gathering together information on a particular question, such as: How many Vestal virgins were there? (5.12); How did the ancients burn their dead? (3.7); What are the names and the significance of each of the fingers of the hand? (4.26); What Theophrastus said about flute music as a cure for snake-bite (2.17). The format follows that of the *Noctes Atticae* of Aulus Gellius (2nd century A.D.), and the *Pleasant Days* is

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²Most recently Montgomery (1973:127) in discussing Linnaean names judiciously says nothing about *Panorpa*.

³The translations from Latin and Greek are my own. The printing of Aldrovandus I have used (1638) has many typographical errors in the Greek, which I have corrected without comment. I have put in square brackets my own explanatory comment, or the transliteration of the original Greek word where that is important.

obviously inspired by Gellius' *Attic Nights*. I know of at least nine editions of this remarkable book between 1522 and 1673, and both Aldrovandus and Moffett used it as a source. Some observations Alexander makes about the cult of Hercules in Boeotia came to have a lasting effect on entomological nomenclature. He says (Alexandro, 1586:1.13):

"The Oetaeans worshipped Hercules Conopius [of the mosquitoes] so that he would not infest the land with mosquitoes [culicibus]. For the Oetaeans called mosquitoes *conopes*. Just as it is said Apollo Culiciarius is worshipped in Attica because he drove the mosquitoes out of the fields. . . . The Boeotians are said to sacrifice to Apollo Pornopion so that he not infest the region with mice. For among them the mouse is called *pornopius*."

There is a feast of errors in this passage, but it is not altogether the fault of Alexander, who took this information from his reading in the Greek geographer Strabo. The editors and translators of the Greek text of Strabo, on whom Alexander was obliged to rely, must bear the responsibility for the errors. In fact Strabo says nothing about mosquitoes, and nothing about mice.

Aldrovandus succeeded in sorting this all out. By comparing the faulty text of Strabo with a passage in Eustathius' 13th century commentary on the *Iliad*, and with a passage of Pausanias, he made the proper corrections, and showed that Strabo was really talking about *locusts*, not mosquitoes at all. It is a splendid job of textual criticism on his part, and involves both restoring the Greek text and correcting the standard Renaissance translation.⁴ It is best to let Aldrovandus speak for himself, but in order to follow the convolutions of the argument it would be well for the reader to keep in mind the following Greek glossary:

1. *kōnōps* (genitive *kōnōpos*): mosquito.
2. *Kornopiōn*: Oetaean dialect for *Parnopios* (4) meaning 'of the locusts,' mistranslated by Tifernas 'of the mosquitoes.'
3. *kornops* (genitive *kornopos*): Oetaean dialect for *parnops* (5).
4. *Parnopios*: epithet of the god meaning 'of the locusts,' mistranslated by Tifernas 'of the mosquitoes.'
5. *parnops* (genitive *parnopos*): 'locust' but mistranslated by Tifernas as 'mosquito.'
6. *Pornopios*: Boeotian dialect for *Parnopios* (4).
7. *pornops* (genitive *pornopos*): Boeotian dialect for *parnops* (5).

Aldrovandus (1602:428) in his discussion of locusts quotes the above passage from Alexander ab Alexandro about mosquitoes and mice, and continues as follows:⁵

"Alexander took this, it seems, from Strabo, [13.1.64] but the corrupt text of this author led Alexander astray. The text—happily for all interested parties—can be amended and restored from Eustathius [34.27]. The corrupt text now reads: "*For from mosquitoes [kōnōpōn] which the Oetaeans call mosquitoes [kōnōpas], Hercules is worshipped among them as Kōnopiōn, thanks to his removal of the locusts [akridōn].*" It should read: "*For from the locusts [parnopōn] which the Oetaeans call [kornopas], Hercules is worshipped among them as [Kornopiōn] thanks to his eliminating the locusts [akridōn].*" . . . That is what Eustathius has, only shorter. "*For the Oetaeans about Trachis are said to worship Hercules Kornopion thanks to his elimination of the locusts [akridōn] or locusts [parnopōn] which they call [kornopas].*" (Eustathius 34.27). It is to

⁴The Greek text was first edited in 1516 by Tyrrenus, and published in Venice by Aldus and Asulanus. It had been translated into Latin much earlier by Guarino da Verona (1374-1460) and Gregorius Tifernas (Gregorio da Città di Castello ca. 1415-1466) under the magnificent scheme of Pope Nicholas V to render the Greek classics into Latin. The first ten books were translated by Guarino and the remainder by Tifernas. This Latin translation was first printed in 1510, became the standard edition of Strabo, and remained so even after the much better edition and translation by Guiljelmus Xylander (Wilhelm Holzmann) was printed at Basel in 1571. Xylander avoided the errors of Tifernas.

⁵Where Aldrovandus quotes the Greek I have put the translation or the cited Greek word in Italics. Where I have added the transliteration of the Greek word in question, when that is important for the argument, I have put it in Roman type in square brackets.

be noted that the translator [of Strabo, by which Aldrovandus means Gregorius Tifernas] renders *akridōn* as culices [mosquitoes]. Likewise Strabo in the same passage [13.1.64] has: 'Among the Aeolians of Asia a certain kind of mouse is called [Pornopiōn], for so the Boeotians call locusts, and sacrifice is made to Apollo Pornopios.' From the above it is clear that [parnopos] are locusts, and as a synonym of [parnopos] some write [pornopos], and here I let it stand so, although in Pausanias [1.24.8] Apollo is named [Parnopios] not [pornopios.] [Aldrovandus quotes Pausanias 1.24.8 in Greek] *They call him Parnopios because when the locusts [parnopōn] were destroying their land, the god promised to drive them out.* . . . As to the mouse which Strabo says the Aeolians called [parnopiōn]—to be frank, I have nothing to say. But I suspect they were so named either because they fought with the locusts for food, or because they wasted the fields like locusts."

This beautiful and learned argument is characteristic of Aldrovandus' clarity of mind and wide-ranging scholarship. He has demonstrated that the stories about Hercules and Apollo and the mosquitoes resulted from a confusion between *kōnōps* 'mosquito' and *kornops* the dialectal variant for the unusual word *parnopos* meaning 'locust.' He answered correctly all of the questions it was in his power to answer, but with greater knowledge of Greek dialects and comparative Indo-European grammar we can now add some information to his discussion.

The explanation of the dialectal variants can be summarized by considering the Attic form *parnopos* and the Oetaean form *kornops*. They are the same word historically, that is to say, they descend from a common ancestor. Phonemes descending from the ancestral Indo-European voiceless labio-velar phoneme conventionally written *k^w* will appear in Greek as *p*, *t*, or *k* depending on certain conditioning factors. For example the Indo-European root **k^wel-* meaning 'turn, move in a circle' appears in the following three guises in Attic: *polos* 'axle'; *telos* 'end, result'; and in a reduplicated form *kyklos* 'circle.' A given dialect may favor one of these guises over another, and Oetaean has preferred *k* where Attic has preferred *p*, and the variation is no surprise.⁶ The variation in the vowel between the *a* of *parnopos* and the *o* of *kornops* is straightforward, since it is a characteristic of Aeolic dialects in general to show *or* where Attica has *ar*, e.g. Lesbian *kortera*, Attica *kartera*.⁷

Of course the word *kōnōps* 'mosquito' has nothing whatever to do with the complex of words meaning 'locust,' but its superficial resemblance to *kornops* led both the ancients and the savants of the Renaissance to consider them the same. To do this it was necessary to ignore blithely the quantity of the vowels, and the temporary inconvenience of a superfluous *r*, but it was done. Etymology in those days was a much more rough-and-tumble affair. The ancient dictionary of Hesychius (5th century A.D.) was for many centuries a standard reader's aid. In it he glosses *kornōpides* as *kōnōps* and this probably is the direct source for the Renaissance confusion.

But what about the mice? Although he gives a half-hearted suggestion or two, Aldrovandus throws up his hands when confronted with the mouse called locust at Strabo 13.1.64. This textual corruption, which Aldrovandus was not able to emend, has since been removed from modern editions with the help of some inscriptions discovered in the early part of this century. Aldrovandus read: "Among the Aeolians of Asia there is a mouse [mys] called [pornopiōn], for so the Boeotians call locusts, and sacrifice is made to Apollo Pornopios." But it should read: "among the Aeolians of Asia there is a month [meis] called *Pornopiōn*." In other words the month was called the month of the locusts, and the continuation "so the Boeotians call locusts" now makes sense.⁸

It is conceivable, although I cannot point directly to a case, that this "mouse" also

⁶Actually the situation is more complicated than I have pretended in the particular instance of *kornops*, since we would really expect a Boeotian dialect like Oetaean to have *p*. But there are other instances in Boeotian where the velar occurs in preference to the labial e.g. Boeotian *prisigeus* Attic *presbys* 'old man.' For a complete discussion see Schwyzer, 1959:1.298.

⁷For details see Schwyzer, 1959:343.

⁸The existence of such a month is confirmed by two inscriptions Plassart and Picard, 1913:166-168, and Salač, 1927:375-376.

contributed to the misunderstanding about mosquitoes, since it is easy to confuse the Greek *mys* 'mouse' and *myia* 'fly.' Indeed this was done by Geoffroy (1764:2.475) in a well-known and annoying instance. He misnamed the soldier fly *Stratiomyis* instead of *Stratiomyia*. Osten Sacken (1878:48) concluded that Geoffroy intended to translate Réaumur's *mouche armée* (Réaumur, 1734:4.325).

No mice, no mosquitoes, only locusts. But despite Aldrovandus' intelligent corrections, the old tradition persisted, and Thomas Moffett (1634:80) can still say in his discussion of mosquitoes:

"Of the Greek words for mosquito *kōnōps* seems to be the most general, whence the Oetaeans worship Hercules Conopius, because it was believed that he drove the mosquitoes from their land. Alexander ab Alexandro says that in Attica Apollo was called Culicarius [sic]. The Boeotians worshiped Apollo Parnopion because he drove out the mosquitoes, that is to say in their language *pornopas*."⁹

This Greek form *pornopas* gives us the key to the next step, for it and its Attic counterpart *panopas*, both accusatives plural of the third declension, occur very often in the texts we have been discussing. But their nominatives *pornops* or *panops* do not occur. It happens that the first declension also has an accusative plural ending in *-as*, so that the accusative plural of the third declension will look like the accusative plural of the first declension. It is an easy mistake to construct from *panopas* a false nominative singular of the first declension **panopē*. In fact just that was done in the margin of the 1539 translation of Strabo (1539:411). This incorrect nominative would be Latinized as **panopa*, and from that it is an easy step for the faulty memory or the careless typesetter to produce the metathesized *panorpa*, the word as we have it today. A name with more complicated and dubious antecedents than this brummagem confection, it would be hard to imagine.

The two errors of declension and metathesis may of course have taken place in reverse order, or taken place more than once. The earliest instance of the metathesized form I can find is in Swammerdam's *Historia Insectorum Generalis* of 1669 (Swammerdam, 1733:95) a passage repeated with some expansion in the *Bybel der Natuur* (Swammerdam, 1737:277). The form of the word, a Latin nominative plural, is *Panorpes*, and it refers to what Swammerdam calls a *pseudospheca* or "false wasp" which attacks grapes.

It appears that Linnaeus first used the name *Panorpa* in the *Fauna Suecica* (Linnaeus, 1746:128). Linnaeus often played fast and loose with the traditional entomological names, but in this instance he adhered to the usage of his predecessors. Needing a name for the scorpionfly, an insect customarily classified with the mosquitoes, Linnaeus chose a spurious form of a word which, in the faulty tradition available to him, meant just that.

To summarize the history of this word it is necessary to begin with the cult of Hercules in ancient Boeotia. The story that Hercules drove the locusts from the fields became muddled because of the linguistic accident that the Boeotian word for locust *kornops*, which is equivalent to the Attic word for locust *panops*, bears a superficial resemblance to the Attic word for mosquito *kōnops*. Because of this resemblance the story gets transformed until in the Renaissance Hercules drives out mosquitoes instead of locusts, and the 16th century translator of Strabo mistranslates the word *panops*, meaning 'locust' as 'mosquito.' Then from the accusative plural of *panops* a false nominative **panope* is constructed by back-formation. This is Latinized to **panopa*, and then metathesized to *panorpa*. Linnaeus found the word in the entomological literature applied to mosquitoes, and used it to designate the scorpionfly which had been classed among the mosquitoes.

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⁹All of this is repeated by Johnston (Jonstonus, 1653:78).

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