XXV.—Classical Mythology in the Systema Naturae of Linnaeus

JOHN L. HELLER

UNIVERSITY OF MINNESOTA

A study of some 250 trivial names applied by Linnaeus to the various species of the genus Papilio, and all recalling persons of classical mythology, shows that Linnaeus must have drawn them mainly from two sources, the *Fabulae* of Hyginus and the *Syntagmata de Deis* of Giraldi. In turn, knowledge of these sources enables us (1) to detect with some certainty cases in which Linnaeus was either careless in reproducing the form of a given name, or, more rarely, (2) undertook to coin new names, and (3) to throw some light on Linnaeus' use of mythological names elsewhere.

When Carolus Linnaeus set about the task of preparing the tenth edition of his Systema Naturae, he decided to apply to animals as well as plants the principles of a new binary system of nomenclature with which he had experimented in several preceding works. This simple but extremely significant reform involved finding for each species a single distinctive catch-word, or "trivial name," which was then printed in the margin opposite the number and the names, generic and specific, of the creature. Since the "specific name," according to the custom honored in Linnaeus' previous usage and justified in such works as his Critica Botanica, was really not a name at all, but a diagnostic phrase often eight or nine words in length, the new "trivial names" proved exceedingly useful in brief references, and soon came to replace the diagnostic phrases, until now naturalists find it necessary to give only the two words, which they call the generic and specific names, to identify any species described in their handbooks.1

¹Some modern authorities are quite misleading when, in one and the same breath, they condemn the long diagnostic phrases of the pre-Linnaean naturalists and praise, as the foundation-stone of the modern system of nomenclature, canon 256 of Linnaeus' Fundamenta Botanica (Amsterdam, 1736): Perfecte nominata est planta nomine generico et specifico instructa. For it is clear that the "specific name" contemplated here was just such a long phrase. Compare Linnaeus' statement, in the Critica Botanica (Leyden, 1737) under canon 291, that he would allow himself not more than twelve words to compose a specific name; see also the clear words of the introduction (by Sir Arthur W. Hill) to the excellent Entlish translation of The "Critica Botanica" of Linnaeus, prepared by the late Sir Arthur Hort (London, 1938, Publications of the Ray Society, 124), xii-xiii; best of all, compare the penetrating study, "On the Descriptive Method of Linnaeus," by H. K. Svenson, Rhodora 47 (1945) 273-302, 363-88, esp. 275 and note 5, 292-97, 372-77. For this reference, I

The application of this new principle to the animals catalogued in the first volume of the tenth edition of Systema Naturae (Stockholm, 1758) confronted Linnaeus with many problems. This paper is concerned with the remarkable device by which he assigned distinctive and appropriate names to the nearly 200 species of the genus PAPILIO known to him at the time. What he did, in the first place. was to honor the butterflies with names nearly all of which recall persons of classical mythology, and, in the second place, to distribute these names in certain categories, in such a way that the trivial name should immediately suggest one of the several natural groups into which he chose to subdivide this unwieldy genus. Thus, P. Hector was a member of a group to which he gave the name "Equites Trojani," P. Diomedes of the group "Equites Achivi," P. Apollo of the group "Heliconii," and so forth. A variant of this device may be seen in his treatment of the closely related and still more unwieldy genus PHALAENA. Here the first two groups have names of miscellaneous origin, including some that are classical, like that of the showy and familiar Cecropia moth. Within each of the other groups, however, all the trivial names have the same ending. All the species of the group "Geometrae pectinatae" have names

am indebted to my colleague, Professor Carl O. Rosendahl. Linnaeus himself, in his *Philosophia Botanica* (Stockholm, 1751), introduced the new system very casually and almost apologetically, by substituting the heading "Differentiae" for the old section "Nomina Specifica" (of the Critica Botanica) and by inserting a few words (which I have set off in brackets) into the old canon 257: Nomen specificum [legitimum] plantam ab omnibus congeneribus (159) distinguat; [Triviale autem nomen legibus etiamnum caret]. In the discussion below, he added a paragraph: NOMINA TRIVIALIA forte admitti possunt modo, quo in Pane suecico usus sum; constarent haec

Vocabulo unico

Vocabulo libere undequaque desumto.

Ratione haec praecipere evicti (sc. sumus), quod differentia saepe longa evadit, ut non ubique commode usurpetur, et dein mutationi obnoxia, novis detectis speciebus, est. . . . Sed nomina Trivialia in hoc opere seponimus, de differentia unice solliciti. The rest of the old section on "Nomina Specifica" he left unchanged, but he applied trivial names to plants in his Species Plantarum (Stockholm, 1753), and occasionally to animals in his catalogue of the Museum Regis Adolphi Friderici (Stockholm, 1754). "Pan Suecicus" was an academic dissertation published in 1749 (Amoenitates Academiae, tom. II).

I am much indebted to the Graduate School of the University of Minnesota for a small grant which was of material aid in gathering some of the data presented in this paper. For many other services, especially in procuring for me, through Inter-Library Loan, copies of books which are rare in this country, I am very grateful to Mr. Harold G. Russell and the members of his staff in the Reference Room of the Library of the University of Minnesota and to the cooperating libraries, and I am happy to acknowledge the help of Dr. Eugene S. McCartney in verifying for me a few references to books in the Library of the University of Michigan. See also note 51.

ending in -aria, those for the group "Geometrae seticornes" end in -ata, "Tortrices" in -ana, and so on. Evidently, Linnaeus had devoted much thought to these matters. If, as a great contemporary charged, Linnaeus was indeed acting like a second Adam, arbitrarily assigning names to all of God's creatures, he did not do so without some consideration for the convenience and the aesthetic sensibilities of his readers.²

It needs no demonstration that in this age references to classical mythology were sought after as an embellishment not merely in poetry, but in technical and scientific writing as well. Sandys noted that the first publication of the first learned society of Scandinavia bore the fanciful title, Daedalus Hyperboreus.³ Some of Linnaeus' own publications were similarly titled, including two which have led to a modern by-word. Linnaeus was only following a contemporary fashion when he entitled his descriptive list of the plants native to Sweden, Flora Svecica, exhibens plantas per regnum Sveciae crescentes . . . (Stockholm, 1745); 4 but the companion volume, Fauna Svecica, sistens animalia Sveciae regni . . . (Stockholm, 1746), has set a fashion for us, so much so that few realize that we owe the English word fauna, with its partner flora, to Linnaeus, and still fewer trouble to ask what the person Fauna meant to him.⁵ Again, in his *Critica Botanica* (canon 237), Linnaeus commended the use of generic names taken from poetry or mythology, and distinguished (canon 244) between such words already used

- ² Albrecht von Haller cited in T. M. Fries, Linné, Lefnadsteckning (Stockholm, 1903) 2.271; compare the English adaptation of this work by B. D. Jackson, Linnaeus (London, 1923) 277. Linnaeus apparently recognized the arbitrary nature of his "trivial names" (see above, note 1), as indeed he did for generic names, but the pains which he took to preserve tradition where possible, and at all costs to avoid inappropriate generic names, are well illustrated in the Critica Botanica; see the article by Sir Arthur Hort, "Linnaeus and the Naming of Plants," Blackwood's Magazine 230 (1931) 682-700. The discussion under canon 238 (page 78) of the Critica is especially significant: dico me potius servare velle nomen, quod nullam cum genere obtinet connexionem, quam quod contrarium est alicui speciei sui generis, uti numerosa existunt.
- ³ Published in 1716. The society, Collegium Curiosorum, later became the Societas Regia Scientiarum Upsaliensis; see Sir J. E. Sandys, A History of Classical Scholarship, Vol. III (Cambridge, 1908), 348.
- ⁴ Cf. Linnaeus' earlier Flora Lapponica (Amsterdam, 1737), and works by other authors (Flora Danica, 1648; Flora Noribergensis, 1700; Flora Prussica, 1703; Flora Jenensis, 1718) cited by C. A. M. Lindman, Carl von Linné såsom botanist (Upsala, 1907), 9 note 2 (note 3 on page 10 of the German translation published simultaneously at Jena).
- ⁵ The *New English Dictionary* ascribes the first modern use of the word *Fauna* to Linnaeus, as above, and identifies the person as "a rural goddess, the sister of Faunus." See below, note 29.

as generic names for plants by the ancients (e.g. daphne, isis) and those which he himself had adopted, including atropa, phyllis, and, notably, dryas, najas, and nyssa. For the animals, he provided no such convenient list, but among the generic names used in this edition of the *Systema Naturae* we find the mammals lemur and manis, the birds diomedea, phaethon, and tantalus, the fishes zeus and pegasus, the molluscs doris, tethys, nereis, and many others.⁶

Linnaeus nowhere justified his choice of trivial names, either for plants or animals, but it is very evident from his practice that classical mythology was again a favorite source. Before returning to the butterflies, we may notice a few species of other genera. For SIMIA, under which (Syst. Nat. 1¹⁰.25, note) Linnaeus quotes Ennius (ap. Cic. Nat. deor. 1.97): Simia quam similis turpissima bestia nobis, there are Satyrus (Syst. Nat. 1¹⁰.25), Silenus (26), Faunus (26), Diana (26), Hamadryas (27), Jacchus (27), Oedipus (28), Midas (28). There is a Nisus under FALCO (92) and a Ciris under EM-BERYZA (179). Under ANAS, Linnaeus adopted a synonym, used by Gesner and others, as a trivial name, Penelope (126). For a species of TURDUS with the description: E terra elevatus cantilena spectatorem rapit in sui admirationem, he chose the name Orpheus (169). COLUBER has an Atropos (216), an Aurora (219), and a Pelias (224). The insect-genus MONOCULUS does not fail to include a Polyphemus (634) and a Telemus (635); compare Od. 9.509. SPHINX, a close relative of PAPILIO and PHALAENA, includes among its species not a few with names drawn from mythology: the Harpies Ocypete (489) and Thyelia (sic 492), the Fate Atropos (490), the Furies Alecto, Megaera, and Tisiphone (492); the impious sinners Tantalus, Tityus, and Ixion (493), with whom we may be tempted to associate Elpenor (491) as another famed sojourner in the underworld; lastly, Phegea, Creusa, Polymena, and Cassandra (494) — all daughters of Priam.7 Finally, among the species of

⁶ Not all of these names were original with Linnaeus. For tantalus (Syst. Nat. 1¹⁰.140) he cited Klein av. 127 (Jacob Theodor Klein, Historiae avium prodromus, Lübeck, 1750) and for zeus (267) his friend Artedi (Ichthyologia, Leyden, 1738). The forms Atropa and Diomedea are best explained as due to Linnaeus' preference, other things being equal, for feminine substantives ending in -a; cf. Crit. Bot. under canon 238 (on generics derived from names of botanists), canon 237 (where Atropa is correctly referred to Atropos), and under canon 248: Terminatio vocabuli insolita nulli non ingrata est . . . Hinc pro Centaurio, Euphorbio, Helenio ,dixi Centauriam, Euphorbiam, Heleniam, dum aliis generibus, quam quibus imposita prius, praefigerentur; si vero locum non mutare debuissent, nec nomina tetigissem.

⁷ Phegea and Polymena are not well known, but see below, p. 342.

SCARABAEUS there are several whose mythological names suggest gigantic size: Hercules, Atlas, Aloëus (345), Typhoeus (346) and Mimas (347, cf. Hor. C. 3.4.53), Molossus (347, cf. ? Hor. Serm. 2.6.114), and Gigas (348). Into this series Linnaeus aptly inserted Simson (345), and, somewhat less appropriately, Actaeon (345).

Most of these names are familiar enough, such as any school-boy could have supplied. Moreover, it must be said that there are also signs that Linnaeus' accuracy was not above what might have been expected of an ordinary school-boy. In the *Critica Botanica* (under canon 237), Atropos is identified as *una furiarum*, a fact which may explain her presence in the list above. If Thyelia in the tenth edition of the *Systema Naturae* (1.492) was merely a misprint for Thyella, the error was compounded in the twelfth edition (Vol. I, Stockholm 1767), where the name appears (803) as Theylia. When we find two Harpies in this list, we may suspect that the novel names Celerio and Ello (491) conceal two other Harpies, Celaeno and Aëllo.⁸ But since, in the case of the genus SPHINX, there is no indication that all of the names that are capitalized⁹ are to be understood as mythological, we should doubtless be charitable enough to refrain from such conjectures.¹⁰

The case is otherwise when at last we return to PAPILIO. With a very few exceptions, which are easily distinguished from the rest,¹¹ the names here are certainly mythological, as is shown either by such names for the groups as "Equites Achivi" or, occasionally, by an explicit footnote. Thus, for the group "Barbari," Linnaeus has a footnote (*Syst. Nat.* 1¹⁰.487): Barbarorum nomina ab Argonautis desumsi. It seems obvious that for these names Linnaeus must have referred to a written source. His lists include such obscure persons as the Argonauts ("Barbari") Ancaeus, Cepheus, and Idmon, the Danaids ("Danai candidi") Glaucippe and Hecabe, or

⁸ The two are repeated without change in *Syst. Nat.* 1¹².800. See below, note 29. Many similar errors indicate that to Linnaeus the graphic symbols -e- and -ae- represented the same sound.

⁹ In this paper I feel justified in following Linnaeus' practice in the matter of capitalization, rather than the convention of modern zoologists, who usually begin all specific names with a small letter.

¹⁰ Nevertheless I cannot refrain from suggesting that the unknown name Salmachus, on the same page (493) as Tantalus, Tityus, and Ixion, is a conflation of three names, that of the nymph Salmacis (cf. Ov. *Met.* 4.285 ff.), of the sinner Salmoneus (cf. Verg. *Aen.* 6.585, in close company with Tisiphone, the Aloïdae, Tityus, and Ixion), and of his brother Sisyphus (Serv. *Aen.* 6.616). For a possible second case of such confusion, see below, note 40.

¹¹ See below, note 46.

the nymphs ("Nymphales") Bolina and Janira. On the other hand, there are signs that here too he may have made some slips. among the "Equites Achivi" we meet a Steneles (Syst. Nat. 110. number 39, altered in Syst. Nat. 112. number 30 to Stelenes), and a Jurtina (Syst. Nat. $1^{10}.104 = Syst. Nat. 1^{12}.155$) among the "Nymphales." We should certainly conjecture that these names conceal Sthenelus and Juturna, respectively, and if this were any other genus, we should attribute the errors simply to Linnaeus' failure to remember accurately names which perhaps he had not seen since his school days. In this case, however, if we find names that are altogether unknown, as indeed we do, and others that seem to be erroneous, we should first try to determine which authorities he took for his guide, before concluding either that Linnaeus sometimes coined names for the occasion, or that he was often subject to strange lapses from accuracy. For it is quite possible that he was simply reproducing errors on the part of his sources.¹²

If, then, we could determine the sources from which Linnaeus drew his mythological names for the species of PAPILIO, we should be in an excellent position to gauge his habits of accuracy with respect to these names, and thus to gain a point which would be helpful in considering other Linnaean names of importance both to the scientist and to the historian of science. Fortunately, I think the sources can be determined, and though we shall find both that Linnaeus did make mistakes, and did coin a few names, we shall also be able to conclude that these flaws are not so numerous as might

12 This point will be obvious to those trained in the methods of literary and historical criticism, but it has not always been appreciated. Linnaeus used the word APHIS to denote an insect genus (Syst. Nat. 110.451 ff.) which he placed next to CIMEX. Various fanciful etymologies for this word have been proposed (and are still to be found in the standard modern dictionaries), on the theory that Linnaeus coined the word to resemble one or more Greek roots, but A. C. Baker has shown that Linnaeus knew the word as a synonym for cimex in the work of Aldrovandi, one of his distinguished predecessors. See my article, "The Etymology of Aphis," CW 37 (1943) 53-55. Again, the entomologist Geoffroy in 1762 erected a genus under the name Hepa, which Agassiz corrected in 1846 to Nepa; see Neave, Nomenclator Zoologicus, s.v. "Nepa." But Geoffroy had taken the name from Linnaeus, who used that form in the 2nd, 4th, and 6th editions of Syst. Nat., though he replaced it with NEPA in the 10th and 12th editions. Linnaeus, in turn, had simply reproduced an unfortunate misprint in one of his reference-works, Johnston's Historia Naturalis de Insectis. Both editions of this work (1653, page 128; 1657, page 98) have: Scorpius nomen apud Graecos . . . Plinio Scorpio autem, Ciceroni et aliis Hepa, Pandectario Satocellos dicitur. Much work remains to be done on the previous history of the generic names used by Linnaeus.

have been expected, and that he had the wisdom to choose good sources.

The first and most obvious source is the Fabulae of Hyginus, whose fondness for supplying lists of names in connection with each story is well known. Thus, chapter 14 ("Argonautae convocati") names no fewer than 68 of the Argonauts. Many of these names correspond with those given by Apollonius, Valerius Flaccus, the Orphic Argonautica, or Apollodorus, but some are found only in Hyginus, including Neleus, Pirithous, Ixition, and Priasus.¹³ If now we refer to the list of Argonauts in Linnaeus ("Barbari," see list 1 in the Index below),14 we discover that all of Linnaeus' names could have been found in this chapter of Hyginus, if we allow for slight errors in copying, and that four of them, Neleus, Pinthous, Ixilion, and Priassus, correspond very closely to the four Argonauts above, found only in Hyginus. Again, Hyginus in chapter 170 ("Filiae Danai quae quos occiderunt") attempts to name the 50 daughters of Danaus, each coupled with the son of Aegyptus whom she killed on their wedding-night. Only one other such list is extant, that in Apollodorus (Bib. 2.1.5), and there is very little correspondence between the two lists. Wherever the names in Hyginus came from originally, it is clear that the manuscript on which the editio princeps was based was corrupt, and editors have generally refrained from trying to emend this list. 15 Now, the fourth and fifth of Linnaeus' groups are entitled, respectively, "Danai candidi" and "Danai festivi," the fourth containing only names of women, the fifth of men. Linnaeus explains the names thus (Syst. Nat. 110.467 note): Danaorum Candidorum nomina a filiabus Danai Aegypti, Festivorum a filiis mutuatus sum, rather quaintly overlooking one point in the story.¹⁶ When we compare

¹³ Seeliger (in Roscher, Lexikon der . . . Mythologie, s.v. "Argonautai und Argonautensage") provides a convenient list (507 f.) and notes that Neleus, Peirithous, Phocus and Priasus are found only in Hyginus. He omits Ixition, which Rose in his edition (Leyden n.d. [1934]) prints (14.7) as corrupt.

¹⁴ Though this group stands last in the tenth edition of *Syst. Nat.*, I have placed it first in the Index because of its importance in this connection, and in order to facilitate cross-reference. Added merely *corollarii loco* (*Syst. Nat.* 1¹⁰.458 note), these species, all of which came from India (hence the name "Barbari"?), were reclassified in the twelfth edition and distributed among the other groups, with changes of name from masculine to feminine where necessary.

¹⁶ See Rose in his edition *ad loc.*, aptly quoting Muncker: conferant (sc. Apollodorum) quibus tantum ab re sua otii.

¹⁶ The adjectives appended to *Danai* have no mythological significance, referring rather to the decoration of the wings; see the note on page 458: Danai . . . Candidi *Alis albidis*, Festivi *Alis variegatis*.

Linnaeus' lists (Index 5.a and 6.a) with Hyginus, the striking fact emerges that every one of the names in the tenth edition of the Systema Naturae is found in Hyginus, and many of them are those corrupt forms found only in Hyginus. With two exceptions, moreover, this is true also of the names for the new species of the groups "Danai" added in the twelfth edition of the Systema Naturae (Index 5.b and 6.b). We shall return to these two names (Belia and Misippus) later, but I think the evidence presented makes it clear that Linnaeus must have depended heavily upon Hyginus, at least for the names in these groups. We shall see later that certain of the names in certain other groups must also have been drawn from Hyginus, and indeed, when one realizes the distinctive character of his handbook, more like a classified index than a collection of stories, one suspects that Linnaeus, if he had not been familiar with Hyginus in the first place, would never have formed the project of drawing up lists of names in mythological categories to correspond with his natural groups.

We can be a little more precise. One of the Argonauts named only by Hyginus, and reproduced by Linnaeus, is not found in the early printed editions of Hyginus. *Neleus*, now the accepted reading at 14.21, is Muncker's restoration for *Mileus* of the editio princeps. Linnaeus, therefore, must have used either Muncker's edition (1681) or its equally great successor, Van Staveren's (1742).¹⁷ Since the two agree on nearly every name which Linnaeus appropriated, it is hardly possible to tell which he used; what little evidence there is favors Muncker consistently.¹⁸

There is, however, one other possibility, that Linnaeus might have used a contemporary handbook of mythology which drew from Hyginus in Muncker's edition. I know of only one such, the *Mythologisches Lexikon* of Hederich, which was indeed widely used.¹⁹

¹⁷ Mythographi latini . . . Thomas Munckerus . . . emendavit . . . Amstelodami 1681; Auctores mythographi latini . . . ed. Aug. van Staveren, Lugduni Batavorum 1742. See Rose in his edition (*Hygini Fabulae*), XIX.

¹⁸ See the Index below, Janira (list 7.a) and Janassa (8.b), Linnaeus agreeing with Muncker against Van Staveren's initial *I*-; Orithya (7.a), Linnaeus agreeing with Muncker where Van Staveren has *-yia*; Thysbe (9.b), Linnaeus agreeing with Muncker where Van Staveren has *Thisbe*.

¹⁹ Benjamin Hederich, Gründliches mythologisches Lexikon (Leipzig, 1724); see O. Gruppe, Geschichte der klassischen Mythologie und Religionsgeschichte (Leipzig, 1921), 92 f. I have examined several other dictionaries of this period (e.g. Danet, Dictionary of Greek and Roman Antiquities, London, 1720; first published in French, Paris, 1698), but none meets the requirement above.

Hederich's article on the "Argonautae" does reproduce Hyginus' names, including Neleus, but it also gives the names in all four of the other lists, placing Hyginus' next to last. Hederich's account of the "Danaïdes" likewise cites the names given both by Apollodorus and by Hyginus, but in that order. If Linnaeus had used Hederich, it is likely that he would have drawn all his names from the first list supplied in each case (which would have been ample for his purpose), or at least that he would have chosen some names from the earlier lists which are not to be found in Hyginus. such appear among Linnaeus' "Barbari" or "Danai." 20 On a later occasion, however, when in the twelfth edition Linnaeus transferred some of the "Barbari" to the groups "Plebeji" (lists 9.b and 10.b), he may have utilized Hederich's article on the Argonauts as a source for additional names, for here we do find some names which would be difficult to account for, if they were not intended for Argonauts. and which do not stand in Hyginus' list. With this single exception, Linnaeus seems to have begun his project with Hyginus in mind and to have continued with him as far as possible.

The same conclusion emerges from an examination of Linnaeus' names for the "Equites Trojani" and "Equites Achivi" (lists 2.a, 2.b, 3.a, and 3.b), though the case is not quite so simple. other possible sources for the names of opposing warriors at Troy can be imagined, from Homer on. Though no single source known to me, not even Hyginus, will account for all the names in Linnaeus' two groups, a combination of sources is of course possible. that case, however, no other source provides so many names that are in Linnaeus' lists as Hyginus, or so conveniently as in his chapters (79–127) on the stories connected with the war at Troy. With two exceptions, the names of all the "Equites Trojani" in both editions (lists 2.a and 2.b) are to be found in one or more of four chapters in Hyginus (see the titles cited at the head of Index 2.a). One of the exceptions is Anchises, who is mentioned in adjoining chapters (if Linnaeus needed to look him up); the other is Pammon. a son of Priam (Il. 24.250) who is not listed anywhere in Hyginus' text, but is mentioned in Muncker's note on chapter 90. Similarly, all the "Equites Achivi" in the tenth edition of the Systema Naturae are to be found in one or more of five chapters in Hyginus (see Index, 3.a), except for three names. One of these is Telemachus,

 $^{^{20}}$ Hederich, moreover, always prints initial I- where Linnaeus has J-, e.g. Iason; see above, note 18.

mentioned elsewhere by Hyginus, but probably an addition by Linnaeus himself, like Anchises above, and like Anchises among the Trojan warriors, not too appropriate among the Achaeans. For the other two, I must refer to my notes below (see on Demoleus and Demophon), as also for the names of a few new species added in the twelfth edition (Index, 3.b). At least it can be said that Hyginus appears to be the most likely source for nearly all these names. Even the titles of Hyginus' chapters are significant. Compare those of 115 ("Trojani qui quot occiderunt") and 114 ("Achivi qui quot occiderunt") with Linnaeus' names for his two groups, and the title of 81 ("Proci Helenae") with the otherwise unexplained presence of Helena at the head of the list of Achaean warriors.²¹ Lastly, it must have been from Hyginus' chapter 90 ("Priami filii et filiae") that Linnaeus drew names for some species of SPHINX, for, of the four daughters of Priam mentioned above in my fourth paragraph. two (Phegea and Polymena) are known only from Hyginus.²²

There was one place, however, in which Linnaeus could have received no help from Hyginus. The group "Heliconii" seems to consist primarily of Apollo and the nine Muses, with Aglaja, Mnemosyne, and Piera added in the tenth edition (Index, 4.a), and not a few others, some of them rather strange, in the twelfth edition (4.b). Hyginus, unfortunately, has no list of Muses, but their names would be easily available in many other sources, e.g. the *Mythologiae* of Fulgentius, also edited by Muncker and by Van Staveren.²³ However, we shall show in connection with the next groups ("Nymphales") that Linnaeus must have drawn the names of many of his nymphs from the *Syntagmata de Deis* of Giraldi,²⁴ and many of the puzzles in connection with the "Heliconii" will be solved if we assume that Linnaeus used Giraldi here too. For

 $^{^{21}}$ The shift of Helena to the group "Eq. Troës" in Syst. Nat. $1^{12}.748$ was probably dictated by science, not mythology.

²² Polymena has now disappeared altogether, thanks to Schmidt's restoration of Polymedon at 90.2; see Rose ad loc.

²³ It is perhaps significant that Linnaeus' curious spelling *Terpsicore* occurs in Muncker's text of Fulg. *Myth.* 1.14 (1.15 in modern editions): $\tau \epsilon \rho \psi \iota \kappa \delta \rho \eta$ transliterated as *Terpsicore* in his note, with a comment on the dropped aspiration. Van Staveren reproduces both text and note. But, in view of Linnaeus' carelessness in such matters (cf. Steneles 3.a, Aegistus 3.b, Charithonia 4.b, Pyranthe 5.a, etc.), this point should not be stressed.

²⁴Lilius Gregorius Gyraldus, Historia de Deis Gentium XVIII Syntagmatibus Distincta (Basel, 1548, etc.); see Gruppe, Gesch. d. klass. Myth. 32–34. My references are to the columns of the first volume (containing the Syntagmata) of the edition of Giraldi's Opera Omnia published at Leyden in 1696.

Giraldi's youthful work (originally published in 1511), Syntagma de Musis, brought him much fame and was subsequently revised and included in the larger work as part of the 17th Syntagma. In this section ("De Musis"), we are told that Mnemosyne was the mother of the Muses; with Apollo, they were ten in number; among other cognomina, they were frequently called Heliconiades and Pierides or Pieriae; finally, a point which seems to be distinctive in Giraldi's account, the Graces were associated with them (568c). For the name Aglaja, Linnaeus could easily have turned to the section on the Graces ("Charites, Gratiae," 417d ff.), a section which, perhaps, explains the novel name Charithonia and, certainly, the presence of Thallo, one of the Hours associated with the Graces. Other new names added in the twelfth edition may be explained similarly (see the notes on list 4.b).

When we turn to the next groups, "Nymphales gemmati" and "Nymphales phalerati," we are puzzled in the first place by the meaning of the title, which Linnaeus did not explain. Since, however, all the mythological names in these groups (Index 7.a, 7.b, 8.a, 8.b) are those of females, and include such heroines as Io, Semele, and Leda, famous as temporary brides of the gods, such familiar Nereids as Galathea, Orithya, and Panope, and, among many others difficult to classify, a few who, like Aegeria, Cyrene, and Jurtina (i.e. Juturna), must be classed as nymphs, we may assume that Linnaeus meant "Nymphales" to be understood as "Nymphae," a word which he could not use because it already had a well established technical meaning among entomologists.26 Many of the names are quite familiar, and could have come from many sources, including Hyginus, who has a convenient list of the Nereids (praef. 8). Many others, however, are not in Hyginus, so that Linnaeus must have used at least one other source. What this source was is revealed by a peculiar series of names (Syst. Nat. 110, species 132-138): Rumina, Levana, Prorsa, Lucina, Maturna, Cinxia, Paphia. Setting aside the epithets, for the moment, we ask if there was any

²⁵ The association is not mentioned by Hederich, either under "Musae" or "Gratiae." Cf. Ap. *Met.* 6.24: Horae... Gratiae... Apollo... Musae; the passage may have suggested the name Hedonia (list 7.b) to Linnaeus.

²⁶ See, e.g. Syst. Nat. 1¹⁰.340: METAMORPHOSIS . . . Pupa (Nympha). Nymphae had the additional disadvantage of being feminine, whereas Nymphales could be treated as masculine, cf. Heliconii, Danai. The adjectives gemmati and phalerati refer to the markings on the wings of the butterflies, cf. Syst. Nat. 1¹⁰.458 note: Nymphales . . . Gemmati Alis occilatis . . . Phalerati Alis caecis absque occilis.

single source from which Linnaeus could have learned about these obscure deities of early Roman religion. The only possible answer, I think, is Giraldi's Syntagmata, which does have a section, "Miscellanei dei," containing these names (for references, see the Index, 8.a). One of Giraldi's special objects, moreover, was to collect epithets of the gods.²⁷ Lucina for Juno is familiar enough, but Cinxia for Juno and Paphia for Venus are not; yet they are all to be found in Giraldi. To go on to other names, we now observe that Giraldi's section "Nymphae" (172c ff.) throws welcome light on some of them. The name Lemonias (7.a) can hardly be explained except as a derivative of the epithet Lemoniades (Giraldi 173c; compare Linnaeus' Piera among the "Heliconii" and Pipleis in this list; Giraldi notes that the Muses too were called nymphae, 172e). The story of the nymph Bolina (8.a) is known only from Paus. 7.23.4, but it was duly recorded by Giraldi in a list of nymphs known as individuals, along with Aegeria (7.a) and Juturna. The form Jurtina (7.a), I am sorry to say, must be charged to Linnaeus himself.28 References to other material in Giraldi which may have been utilized by Linnaeus, including translations of passages in Hesiod on the Nereids and Oceanids, will be found in the Index below. I think it is clear that in these groups the work of Giraldi must stand with Hyginus, or even take precedence over him, as a source for Linnaeus' knowledge of classical mythology.²⁹

The distinctive natural characteristic of the species contained in the last two groups, "Plebeji rurales" and "Plebeji urbicolae," is

²⁷ Gruppe, Gesch. d. klass. Myth. 33.

²⁸ The names Aegeria, Bolina, and Juturna (*sic*), along with much other material from Giraldi, are reproduced in Hederich's article "Nymphae," but Hederich has no section which gathers together such names as Rumina, Levana, and Prorsa. The name Lara, however, is included in Hederich's list of nymphs (cf. Ov. *Fast.* 2.599 ff.), but not in Giraldi's, a fact which suggests that when Linnaeus used this name for a new species of the group "Plebeji rurales" added in the twelfth edition (list 9.b), he may have got it from Hederich. See above, p. 341.

²⁹ In connection with some of the names noted at the beginning of this paper, it may be illuminating to cite a few passages from Giraldi: 210b ("Furiae") Harpyiae . . . Aello, Ocypete, Celeno (sic), Thyella; 214g ("Furiae") Apul. De deo Soc.: Animus humanus exutus et liber, stipendiis vitae corpori suo objuratis, hunc vetere Latina lingua Lemurem dictum . . . (215a) Larvam . . . utrumne Lar ait, an Larva, nomine Manem Deum nuncupant; 143f ("Ops. Rhea") Item Labeo et hanc Majam Bonae Deae nomine nuncupatam asserit . . . quin et eandem Bonam, Faunamque, et Opem, et Fatuam, pontificum libris indigitari solitam fuisse. Bonam, quod omnium nobis ad victum bonorum causa est; Faunam, quod omni usui animantium favere putaretur; 444b: Faunus in Latio, qui . . . sororem suam Faunam, eandemque conjugem sacravit.

that they are small in size, as compared with other butterflies.³⁰ Mythologically, it is difficult to find any common bond among the names. Some, indeed, are those of ordinary men who, either in their adventures or through their arts, were associated with mythology, e.g. Arion and Lysippus (9.a), Phidias and Polycletus (10.a), but Cupido and Proteus, who head the respective groups, do not seem to belong here. I can only suggest that Linnaeus chose the name "Plebeji" to fit the natural characteristic of these species, and with such men as Arion and the artists in mind. Later, finding it difficult to select such names, he admitted a few others.³¹ Then when he was forced, in the twelfth edition, to transfer to this place a number of species previously grouped as "Barbari," as well as to find names for many new species, he gave up altogether, and went back to his old categories of Argonauts, Danaids, and nymphs (see lists 9.b and 10.b). And on this occasion, too, there is some evidence that he consulted Hederich's dictionary, as we have seen, instead of Hyginus. For the original lists in the tenth edition, however, Hyginus was still an important source (see the Index); but Hyginus could not have supplied the names of the artists. These were often mentioned in mythological handbooks,³² and most of them are familiar enough; but the artist Philocles (9.a) is known only from Pliny's Natural History (35.15). Since the other artists whose names were borrowed by Linnaeus were all discussed by Pliny, and since Linnaeus must have been thoroughly familiar with this fundamental work, we may well add it to the list of works from which Linnaeus drew his names for the butterflies.

To sum up, this list now includes the *Fabulae* of Hyginus, the *Syntagmata* of Giraldi, Pliny's *Natural History*, and, at least for the twelfth edition, Hederich's dictionary. Of course this list does not exhaust the possibilities, for even in the case of restricted categories like the Argonauts and the warriors at Troy, Hyginus provided more names than Linnaeus could use, so that he must have had

³⁰ Syst. Nat. 1¹⁰.458 note: Plebeji parvi . . . Rurales Alis maculis obscurioribus . . . Urbicolae Alis saepius maculis pellucidis. The adjectives apparently have no mythological significance (cf. above, note 26): Arion and Lysippus are "rurales," Proteus stands among "Urbicolae."

³¹ See below, note 56.

³² E.g., the *Mythologiae* of Natales Comes (Conti), first published in 1551, has a long list of painters and sculptors appended by way of commentary on Daedalus (7.16), including most but not all of those chosen by Linnaeus.

some principle of selection.³³ Probably he preferred those names which were already familiar from his reading of Ovid and Virgil. A few of the names in the lists below can be explained only as insertions from these sources, and there is a notable coincidence between certain romantic or tragic heroines catalogued in various places by Hyginus, and the "Heroides" of Ovid.³⁴

Having thus determined the sources which Linnaeus consulted, I am afraid we must admit, after all, that his knowledge of classical mythology was not too profound, and his accuracy often questionable. One who searches through the following lists will find ample evidence of his carelessness. That Linnaeus was working here, as always, in great haste is shown by the numerous minor changes in spelling made in the twelfth edition, and in its index (not all of them changes for the better, be it noted), and by the fact that on several occasions he had to change a name because he found he had given it to more than one species. But haste will not excuse such a name as Jurtina, which was printed thus in both editions. A better defense is the consideration that he was attempting a difficult task, one that would cause the modern classicist some trouble, a grand tour de force in honor of the butterflies.

The evidence shows clearly, too, that Linnaeus did coin some names. Argiolus (9.a) can only be a diminutive of Argus. Some others reveal a naturalist's interest in genealogy, like Belia, formed from Belus, the father of Danaus (5.b).³⁵ Some other words, whose source or meaning I have been unable to discover, Almana and Fidia among the "Nymphales," for instance, may belong in this class though of course they may also be mere errors. Finally, in at least one name Linnaeus reveals a delightful whimsy. This is Misippus, whose unexplained presence among the "Danai festivi" added in the twelfth edition (number 118, see list 6.b) we have noted above. Since Linnaeus elsewhere defended the practice of

³³ The principle followed for the "Danai" in the tenth edition is obvious from a glance at lists 5.a and 6.a. For the women ("Danai candidi"), Linnaeus chose only names ending in -e, for the men ("Danai festivi"), only names ending in -us. In view of the disorder and corruption evident in Hyginus' chapter 170, this was a wise precaution!

³⁴ See the lists below for Oenone (7.a), Briseis, Dejanira, Hermione, Laomedia (= Laodamia?), Phaedra (7.b), Ariadne, Canace, Cydippe, Dido, Hypermnestra (8.b), Hero (9.b).

³⁵ Compare Xuthus, added as one of the "Equites Troës" in the twelfth edition (3.b), whom apparently he looked up in Hederich's article on "Achaeus" (see note 45), as well as such formations as Piera, Lemonias, etc.

coining generic names from appropriate modern words when they suggested classical roots, ³⁶ and since Misippus stands between two other species with names ending in *-ippus* (Plexippus 12.117 and Chrysippus 12.119), and since all three species came from America, I think it is not too fanciful to suppose that the name was suggested by that of a great American river already famous in Europe. If my guess is right, such an act of creation would be the best possible answer to the charge of carelessness.

INDEX

1. "Barbari" of Syst. Nat. 110.485-88, distributed under various groups in Syst. Nat. 112. New classification37 and name (if changed) in parenthesis. References at right to chapter 14, "Argonautae convocati," of Hyginus' Fabulae, sections according to Rose's text. Critical note (if any) indicates variants in the texts of Muncker (M) and Van Staveren (S).

```
186 = 12.83 (Dan. cand. -ta)
Acastus
                                                    H 14.23
Amphion
              177 = 12.187\beta (Nymph. phal.)
                                                    H 14.15
Ancaeus
              175 = 12.184 (Nymph. phal. -aea)
                                                    H 14.14, (alter) 14.16
Bates
              169 = 12.171\beta (Nymph. phal. Butes)
                                                    H 14.9 Butes MS
Ceneus
              181 = 12.111 (Dan. fest. Caeneus)
                                                    H 14.4 Caeneus MS, (alter)
                                                    H 14.23 Ceneus M Caeneus S
Cepheus
              183 = ?12.54\beta (Hel.)
                                                    H 14.14
Eleus
              176 = 12.183 (Nymph. phal. Elea)
                                                   ?H 14.15 see below38
Encedon
              188 = 12.90 (Dan. cand. -nia)
                                                   ?H 14.19 Eumedon MS
Eribotes
              179 = 12.115 (Dan. fest. -te [sic])
                                                    H 14.6
Eurytus
              180 = 12.69 (Hel. -ta)
                                                    H 14.3
Hylas
              173 = 12.179\beta (Nymph. phal.)
                                                    H 14.11
Iason
              171 = 12.38 (Eq. Ach.)
                                                    H 14.1
Idas
              192 = ?12.232\beta (Pleb. rur.)
                                                    H 14.12
Idmon
              174 = 12.182 (Nymph. phal. -ne)
                                                    H 14.11
Iphiclus
              172 = 12.181 (Nymph. phal. -la)
                                                    H 14.2, (alter) 14.17
Ixilion
              191 = 12.57\beta (Hel.)
                                                   ·H 14.7 Ixition MS
Mopsus
              182 = 12.59\beta (Hel. Mopsa)
                                                    H 14.5
Nauplius
              190 = 12.197 (Nymph. phal. -ia)
                                                    H 14.11
              187 = 12.246 (Pleb. rur.)
Neleus
                                                    H 14.21
Pinthous
              189 = 12.114 (Dan. fest. Pinthaeus)
                                                   ?H 14.6 Pirithous MS; see note
```

³⁶ Critica Botanica, under canon 229 (Nomina generica, quae ex Graeca vel Latina lingua radicem non habent, rejicienda sunt): Retineo tamen nomina Barbara, ubi e Lingua Latina vel Graeca derivationis radicem obtinere possum, et tum ut nova apud me valent vocabula. He then listed the barbarous (i.e. modern vernacular) names, most of which he rejected, but he retained a few, such as Carthamus, Datura, and Melochia, and altered Keiri to Cheiranthus, Mamei to Mammea.

³⁷ See above, note 14. Not all of my correlations are indicated in C. Davies Sherborn's *Index to the Generic and Trivial Names of Animals Described by Linnaeus*... (London, 1899, Univ. of Manchester Museum Publications, 25).

³⁸ Not a personal name. The text runs: Augeas Solis . . . filius, hic fuit Eleus.

2.a "Equites Trojani" in Syst. Nat. 110.458-61 = "Equites Troës" in Syst. Nat. 112.744-48. References at right to various chapters (section numbers of Rose) of Hyginus' Fabulae:

90 "Priami filii et filiae, numero 54"

112 "Provocantes inter se, qui cum quo dimicarunt"

113 "Nobilem quem quis occidit"

115 "Trojani qui quot occiderunt"

Variants (if any) in the texts of Muncker (M) and Van Staveren (S).

```
Aeneas
              15 = 12.16
                                   H 112.1, 112.4, 115
              13 = 12.14
                                   H 112.4, 113.1, 115
Agenor
Anchises
              10 = 12.11
                                   H 94; Anchisa 94 tit.
                                   H 90.1, 113.1, 113.3, 115
Deiphobus
              6 = 12.7
Glaucus
              9 = 12.9
                                   H 112.1, 113.2, 115
Hector
              2 = 12.2
                                   H 90.1, 112.2, 112.4, 113.1, 115
Helenus
              4 = 12.4
                                    H 90.1
Memnon
              12 = 12.13
                                   H 112.4
                                   not in Hyginus39
Pammon
              8 = 12.8 \text{ (-om)}
Pandarus
              17 = 12.18
                                    H 112.1
Panthous
              16 = 12.17
                                    H 115
                                    H 91 tit. ("Alexander Paris"), 91.3, 91.4, 92 tit.
Paris
              3 = 12.3
                                      ("Paridis judicium"), 92.2, 92.4; Alexander
                                      90.1, 112.1, 112.4, 113.1, 115
Polydamas
              11 = 12.12
                                    H 115
Polytes
              7 = 12.5
                                    H 90.3 Polites MS
Priamus
              1 = 12.1
                                    H 90 tit., 113.4
Sarpedon
              14 = 12.15
                                    H 112.2, 113.3, 115
Troilus
              5 = 12.6
                                    H 90.3, 113.3
```

2b. "Equites Troës" added in Syst. Nat. 112.744-48. References as above.

```
Helena 19 see "Eq. Ach."
Polydorus 10 H 90.1
```

3.a "Equites Achivi" in Syst. Nat. 1¹⁰.461-65 = Syst. Nat. 1¹².748-54. References at right to various chapters of Hyginus' Fabulae:

81 "Proci Helenae"

97 "Qui ad Trojam expugnatum ierunt, et quot naves"

³⁹ But see *Il.* 24.250; Apollod. *Bib.* 3.12.5, and Muncker's note (repeated by Van Staveren) on chapter 90 "Priami filii et filiae," naming the children of Priam and Hecuba according to Dares and Apollodorus. The names of the first eight species (Priamus, Hector, Paris, Helenus, Troilus, Deiphobus, Polytes, Pammon) are all in Muncker's note (as indeed, in *Il.* 24.249 ff.), and no other used by Linnaeus is, except Polydorus, added in the twelfth edition.

```
112, 113 (see above)
```

114 "Achivi qui quot occiderunt"

Variants (if any) in the texts of Muncker (M) and Van Staveren (S).

```
Achilles
              32 = 12.42
                                       H 97.2, 112.3, 112.4, 113.1, 113.3, 113.4, 114
Agamemnon 21 = 12.22
                                       H 97.1, 113.2, 114
Aiax
               26 = 12.32
                             (Oilei f.) H 81, 97.3, 112.2, 113.2, 114
                        (Telamonius) H 81, 97.3, 112.2, 113.2, 114 Ajax MS ubique
               28 = 12.35 (Anthi-)
Antilochus
                                       H 81, 97.5, 112.4, 113.1, 114 Anti- MS ubique
Demoleus
               35 = 12.46
                                       ? Verg. Aen. 5.260, 265 -eos40
Demophon
               36 = 12.47
                           (Thesei f.) H 48, 59.1, 59.2, 243.6 Demophoon<sup>41</sup>
Diomedes
               22 = 12.23
                                       H 81, 97.4, 112.1, 113.2, 114
Eurypylus
               37 = 12.49
                                       H 81, 97.6, 114
               18 = 12.19 (Eq. Tro.)
Helena
                                      ·H 81 tit., cf. 77-79
Idomeneus
               34 = 12.45
                                       H 81, 97.7, 114
Leilus
               25 = 12.31
                                       H 97.9, 114 Leitus MS
Machaon
               27 = 12.33
                                       H 81, 97.6, 113.3
Menelaus
               19 = 12.20
                                       H 81, 97.1, 112.1, 112.3, 113.3, 114
Nestor
               30 = 12.40
                                       H 97.5
                                       H 81, 97.13, 113.3
Nireus
               38 = 12.28
Patroclus
               23 = 12.24
                                       H 81, 97.2, 112.2, 114
Philoctetes
               40 = 12.29
                                       H 81, 112.4, cf. 102 tit., 102.1; -teta 97.8, 114
Podalirius
               463 \text{ note} = 12.36
                                       H 81, 97.6
Protesilaus
               29 = 12.39
                                       H 81, 113.1, 114
Pyrrhus
               24 = 12.25
                                       H 97.15; Neoptolemus 97.15, 112.4, 113.4,
Steneles
               39 = 12.30 \text{ (Stelenes)}
                                       H 81, 97.4, cf. 108.1 Sthenelus MS ubique
Telemachus
               31 = 12.41
                                       H 95.2 ("Ulyxes"), 125.20, 127
                                       H 97.3, 114
Teucer
               33 = 12.44
Ulysses
               20 = 12.21
                                       H 81, 97.4, 114 Ulysses MS locis cit.; Ulyxes
                                         95 tit., 95.1, 95.2 etc.
```

3.b "Equites Achivi" added in Syst. Nat. 112.748-54. References as above.

| Aegistus | 48 | H 87 tit., 87, 88.7-11, 117.1 -sthus MS |
|----------|----------------------------|---|
| | | $ubique^{42}$ |
| Jasius | 26 (see errata, Jason 749) | ? Atalantae pater H 70 Jas- MS, cf. |
| | | 99.1 Ias- <i>MS</i> |
| Jason | 38 | see "Barbari" |
| Medon | 43 | ? not H 134.4 (Tyrrhenus)43 |
| Orontes | 27 | ? not H praef. 6 (flumen)44 |

⁴⁰ But it is not impossible that Linnaeus meant to write Peneleus, cf. Hyg. 81, 97.8, 114. He may then have confused it with Demophon, immediately following, and Demoleon, whom he had met among the Argonauts, Hyg. 14.30.

⁴¹ Muncker, followed by Van Staveren, restored the form in -oon (cf. Ov. Her. 2.1 etc.) in a few places where earlier editions had -on.

 $^{^{42}}$ Linnaeus' choice of this name has an ironic point, in view of his descriptive note on the species: Similis P. Agamemnoni.

⁴³ Cf. Ov. Her. 1.91, Il. 2.727, or the herald at Ithaca, Od. 4.677, 22.357.

⁴⁴ Verg. Aen. 1.113 etc. Like Jasius, this Orontes would not be an eques Achivus.

| Phidippus | 37 | H 81 |
|-----------|----|------------------|
| Xuthus | 34 | not in Hyginus45 |

4.a "Heliconii" in Syst. Nat. 110.465-67 = Syst. Nat. 112.754-58. In the notes at the right, the single letter G indicates one of the Muses discussed by Giraldi, Syntagma XVII, under the heading "De Musis." For other sections of Giraldi, I cite the column and title: see note 24.

```
Aglaja
              44 = 12.53 (Pasithoe)
                                     G 417d ff. ("Charites, Gratiae")
Apollo
              41 = 12.50
                                      G 559c ("De Musis")
Calliope
                                      G
              46 = 12.56
                                      G
G
G
G
Clio
              52 = 12.66
Erato
              54 = 12.70
Euterpe
              49 = 12.61
Melpomene
              55 = 12.71
                                      G 558f, 563g ("De Musis")
              42 = 12.51
Mnemosyne
Piera
              43 = 12.52
                                      cf. G 561b ("De Musis") Pierides, see note 35
Polymnia
              47 = 12.58
Terpsicore
              45 = 12.55
                                      G Terpsichore, see note 23
Thalia
              53 = 12.67
                                      G
Urania
                                      G
              48 = 12.60
```

4.b "Heliconii" added in Syst. Nat. 112.754-58.46 References to Giraldi (G) and Hyginus (H).

| Aedea | 68 | G 556b ("De Musis") 'Αοιδή ⁴⁷ |
|-------------|------------------------------------|--|
| Antiochus | p. 1068 | ? (Aegypti f.) H 170.8 |
| Charithonia | 65 (-tonia index) | cf. G 417d ff. ("Charites, Gratiae") |
| Euryta | 69 = 10.180 (-tus) | see "Barbari" |
| Horta | 54 | G 51g ("Miscellanei Dei") |
| Melite | 57 | G 556b ("De Musis") Μελέτη |
| Mneme | 59 | G 556b ("De Musis") Μνήμη |
| Pasithoe | $53 = 10.44 \text{ (Aglaja)}^{48}$ | ? (Oceanitis) H praef. 6; cf. Hes. Theog. 349 ff., cited in G 175a ("Nymphae") |
| Thallo | 62 | ? (Hora) H 183.4; cf. G 419c ("Charites, Gratiae") |

- 5.a "Danai candidi" in Syst. Nat. 110.467-70 = Syst. Nat. 112.758-65.49 References to Hyginus Fab. 170 "Filiae Danai quae quos occiderunt," with variants in texts of Muncker (M), Van
- ⁴⁶ Cf. Hederich, Myth. Lex. "Achaeus": des Xuthus und der Creusa Sohn, von dem die Achiver den Namen bekommen haben; cf. Apoll. Bib. 1.7.3.
- ⁴⁶ My list of course omits names which are not mythological, e.g. (in this group) P. Ricini 50, P. Psidii 51. Cf. Syst. Nat. 1¹⁰.471: Nomina trivialia a plantis . . . desumpta, ubi obtinenda, primaria sunt. Other similar names in the subsequent groups I omit, tacitly. All the names are recorded in Sherborn's *Index* (see note 37).
- ⁴⁷ Giraldi: Pausanias Musas tres enumerat . . . primam scilicet μελετήν (sic) . . . secundam μνήμην . . . tertiam ἀοιδήν.
- ⁴⁸ Since Linnaeus had inadvertently given the name Aglaja also to another species (8.a), he was obliged to find a new name for one of them.
- ⁴⁰ Besides a number of names derived from plants (cf. note 46), I omit here Eclipsis 12.107, which does not appear to be mythological.

Staveren (S), and Rose (R); $\dagger R$ indicates words marked by Rose as corrupt.

```
Arsalte
             67 = 12.91
                                    H 170.5 †R
                                    H 170.2
Damone
             69 = 12.93
Daplidice
             62 = 12.81
                                    H 170.6 †R
             64 = 12.87
                                    H 170.1
Euippe
Glaucippe
             65 = 12.89
                                    H 170.4
Hecabe
              74 = 12.96
                                    H 170.4
                                    H 170.1
Hvale
              71 = 12.100
Hyparete
             68 = 12.92
                                    H 170.3 Hipp- R
             66 = 12.98
                                    H 170.3 -nte MS †R
Pyranthe
Trite
              70 = 12.97
                                    H 170.2
```

5.b "Danai candidi" added in Syst. Nat. 112.758-65. References as above.

```
83 = 10.186 (-tus)
                                       see "Barbari"
Acasta
                                       cf. H 168.1: Danaus Beli filius . . . , see
Belia
                                         note 35
Cleopatra
              105
                                       H 170.3
Demophile
              82
                                       H 170.4
                                       H 170.6
Electra
              101
              90 = 10.188 \text{ (Encedon)}
Encedonia
                                       see "Barbari"
Eubule
              102
                                       H 170.6
Eupheno
              88
                                       H 170.7 -pheme R
Helcita
              94 (Helicta index)
                                       H 170.6 Helicta MS †R
Hellica
              78
                                       H 170.5 Helice MSR
Idea
              73
                                       H 170.1 Midea R
Monuste
              80
                                       H 170.5 †R
              99
                                       H 170.8 Celaeno R
Palaeno
Philea
                                       H 170.3 Phila R
              104
Pyrene
              86
                                       H 170.7 Pir- R
Scylla
              95
                                       H 170.1
```

6.a "Danai Festivi" in Syst. Nat. 1¹⁰.470-72 = Syst. Nat. 1¹².765-69. References as above (list 5.a).

```
Chrysippus
              81 = 12.119
                                              H 170.1
Enceladus
              77 = 12.112
                                              H 170.2
Hyperantus
              85 = 12.127
                                              H 170.6 †R
Midamus
              75 = 12.108
                                              H 170.5 †R
Mineus
              84 = 12.126
                                              H 170.2 †R
              76 = 12.109
Niavius
                                              H 170.4 †R
              78 = 12.113
Obrinus
                                              H 170.2, -rimu(s) MSR
              86 = 12.239 (Pleb. rur.)
Pamphilus
                                              H 170.4
Perius
              79 = 12.116
                                              H 170.1 \dagger R
Plexippus
              80 = 12.117
                                              H 170.1, 170.7
              87 = 12.122
Xanthus
                                              H 170.3
```

6.b "Danai festivi" added in Syst. Nat. 112.765-69.

| Aeropus | 128 = 10.105 (-pa) | see "Nymph. gemm." (7.a) |
|---------|-----------------------|--------------------------|
| Caeneus | 111 = 10.181 (Ceneus) | see "Barbari" |
| Canthus | 129 | H 170.2 |

| 125 | H 170.6 |
|-------------------------|--|
| 124 | H 170.4 |
| 115 = 10.179 (-tes) | see ''Barbari'' |
| 130 | H 170.7 |
| 118 | not in Hyginus; see above, p. 347 |
| 123 | H 170.1 –1a <i>MSR</i> |
| 114 = 10.189 (Pinthous) | see "Barbari" |
| 110 = 10.184 | see "Barbari" |
| | 124 115 = 10.179 (-tes) 130 118 123 114 = 10.189 (Pinthous) |

7.a "Nymphales gemmati" in Syst. Nat. 1¹⁰.472-76 = Syst. Nat. 1¹².769-76. Selected references to Giraldi, as in list 4 above, and to Hyginus. Most of the sources are indicated merely exempli gratia; see the discussion above, pp. 343 f.

| Aegeria | 98 = 12.143 | G 183a ("Nymphae") Aeg-, G 51c ("Miscellanei dei"); etc., Ov. Fast. 3.275 Eg- |
|----------|--------------------------------|--|
| Aeropa | 105 = 12.128 ("Dan. fest.") | H 86 ("Pelopidae") Aeropa Atrei uxor; cf. (Aerope) 97.1, 246 |
| Almana | 89 = 12.132 | ?? |
| Aonis | 91 = 12.134 | G 561b ("De Musis") Aonides, see note 35 |
| Asterie | 90 = 12.133 | H 53 ("Asterie"), etc. |
| Cyrene | $100 = 12.74\beta$ | G 68b ("Topici dei"), cf. H 14.11 Idmon |
| • | ("Dan. cand.") | Apollinis et Cyrenes nymphae filius; 161, etc. |
| Feronia | 95 = 12.140 | G 71e ("Topici dei"), 126 ("Juno"), etc. |
| Galathea | 99 = 12.147 | H praef. 8 (Nereides) -tea MS, cf. Hes. Theog. |
| | | 243 ff. cited in G 174e ("Nymphae") -tea |
| Helie | 103 = 12.152 | H 154.4 (Heliades), praef. 38 |
| Io | 88 = 12.131 | H 145 ("Niobe sive Io"), etc.50 |
| Iris | 110 = 12.161 | H praef. 35, G 309g ("Iris"), etc.51 |
| Janira | 106 = 12.156 | H praef. 8 (Nereides) Jan- M, Ian- S, cf. Hes. |
| - | | Theog. 349 ff., cited in G 175a ("Nymphae") |
| | | Ianera |
| Jurtina | 104 = 12.155 | G 182e ("Nymphae"), 51d ("Misc. dei") Ju- |
| | | turna |
| Lampetia | 109 = 12.160 | H 154.4 (Heliades), 156 -petie <i>MS</i> |
| Leda | 102 = 12.151 | H 77 ("Leda"), etc. |
| Lemonias | 93 = 12.136 | cf. G 173c ("Nymphae") Lemoniades, see note 35 |
| Ligea | 97 = 12.144 | H praef. 8 (Nereides), cf. Verg. Georg. 4.336 ff., cited in G 175c ("Nymphae") |

⁵⁰ But the vulgar name *Oculus pavonis* noted in *Faun. Svec.* number 776 suggests that the Ovidian version (*Met.* 1.588 ff., esp. 722 f.) was in Linnaeus' mind when he gave the name *Io* to this species and placed it at the head of his series of "Nymphales gemmati" (cf. gemmis caudam stellantibus implet).

51 This is the one trivial name among all the species of Papilio which Linnaeus owed to his predecessors. The first of his synonyms (Syst. Nat. 110. species 110) reads as follows: Richter. mus. 336. Papilio Iris. The book referred to is the Museum Richterianum prepared by the distinguished naturalist Johann Ernst Hebenstreit, published at Leipzig in 1743. Cf. page 336: Papilio, coloribus varians. Iris dictus, ex quercu. Eichen-Schmetterling; le Changeant; der Regenbogenfarbigte Schmetterling. I owe this report to the kindness of Mr. Robert C. Gooch, Chief of the General Reference and Bibliography Division of the Library of Congress.

| Maera | 96 = 12.141 | H praef. 8 (Nereides) |
|---------|--------------|---|
| Oenone | 92 = 12.135 | Ov. Her. 5 ("Oenone"), 5.20, etc. |
| Orithya | 94 = 12.137 | H praef. 8 (Nereides) -ya M, -yia S, cf. 14.8 |
| Pipleis | 108 = 12.159 | G 562b ("De musis") Pimpleiades; cf. Hor. C. |
| - | | 1.26.9 Piplei dulcis |
| Semele | 101 = 12.148 | H 179 ("Semele"), etc. |

7.b "Nymphales gemmati" added in Syst. Nat. 112.769-76. References as above. (Tulbagghia 158 is not mythological.)

```
H 106 ("Hectoris lytra"), Ov. Her. 3 ("Briseis")
Briseis
             139
Dejanira
             154
                            H 36 ("Dejanira") etc., esp. 243.3 ("Quae se ipsae
                              interfecerunt"), Dei- MS, Ov. Her. 9 ("Deianira")
Fidia
             138
Hedonia
                            ?? ἡδονή ? cf. Voluptas, Ap. Met. 6.2452
             153
Hermione
             149
                            H 122.4, 123, Ov. Her. 8 ("Hermione")
Laomedia
             145
                         a. Hes. Theog. 243 ff. cited in G 174f ("Nymphae")
                              Laomedea
                         b. H 243.3 ("Quae se ipsae . . ."), Ov. Her. 13 ("Lao-
                              damia''
Libye
             146
                            H 149 ("Epaphus")
                         a. H 243.3 ("Quae se ipsae . . .") Megaera MS,
Megera
             142
                              Neaera R
                         b. G 210b ("Furiae") Megaera, H praef. 3 -aera MS
                         c. H 32 ("Megara"), 241 ("Qui coniuges suas occide-
                              runt")
                            H 43.3 ("Ariadne") etc., Ov. Her. 4 ("Phaedra")
Phaedra
             150
```

8a. "Nymphales phalerati" in Syst. Nat. $1^{10}.476-82 = Syst.$ Nat. $1^{12}.776-87$. References as above. ⁵³

| Acesta | 127 = 12.191 (-ste) | ?? Verg. Aen. 5.711-718 Acestes- Acesta |
|----------|----------------------------|---|
| Aglaja | 140 = 12.211 | G 420d ("Charites, Gratiae") |
| Alimena | 121 = 12.178 | ?? |
| Amathea | 118 = 12.174 (-ltea index) | a. H praef. 8 (Nereides) Amathea MS, Amathia R |
| | | b. G 180b ("Nymphae") Amalthea |
| Antiopa | 112 = 12.165 | H 7 ("Antiopa"), etc. |
| Atalanta | 119 = 12.175 | H 185 ("Atalanta"), etc. |
| Bolina | 124 = 12.188 | G 180b ("Nymphae") |
| Cinxia | 137 = 12.205 | G 118g ("Juno") |
| Clytia | 125 = 12.189 | Ov. Met. 4.206 ff. Clytie, cf. Hes. |
| | | Theog. 349 ff. cited in G 175a |
| | | ("Nymphae") Clytie |
| Cytherea | 139 = 12.210 | e.g. Hor. C. 1.4.5 ff.: Cytherea |
| | | Venus iunctae Nymphis Gratiae decentes |
| Dirco | 117 = 12.171 (-ce) | H 7 ("Antiopa"), etcce MS |

⁵² For a similar formation by Linnaeus himself, cf. Charithonia (4.b).

⁵³ Besides a number of names derived from plants (cf. note 46), I omit here the following, which are not mythological: C. album 115, C. aureum 116, polychloros 113, similis 128, assimilis 129, dissimilis 130.

| Euphrosyne | 142 = 12.214 | G 420d ("Charites, Gratiae"), H |
|------------|-------------------------|--|
| Lathonia | 141 = 12.213 | e.g. Ov. Met. 1.696 Latonia |
| Leucothoë | 122 = 12.179 | H praef. 8 (Nereides), 14.20 etc. |
| Levana | 133 = 12.201 | G 48d ("Misc. dei") |
| Lucina | 135 = 12.203 | e.g. Verg. Ecl. 4.10, Ov. Fast. 2.249 |
| Maturna | 136 = 12.204 | G 56e ("Misc. dei") Manturna |
| | | Matura |
| Neaerea | 126 = 12.190 | ? H 11 ("Niobidae") Neaera MS in |
| | | notes, R in text |
| Niobe | 143 = 12.215 | H 9 ("Niobe") etc. |
| Panope | 131 = 12.196 | H praef. 8 (Nereides), cf. Hes. Theog. |
| - | | 243 ff. cited in G 174e ("Nym- |
| | | phae'') |
| Paphia | 138 = 12.209 | G 402f ("Venus") |
| Phaetusa | 123 = 12.180 (Phaerusa) | a. Ov. Met. 2.346 Phaethusa |
| | • | b. H praef. 8 (Nereides) Pherusa MS, |
| | | cf. Hes. Theog. 243 ff. cited in |
| | | G 174e ("Nymphae") |
| | | c. H 183.4 (Horae) Pherusa MS |
| Prorsa | 134 = 12.202 | G 50a ("Misc. dei") Prosa, vel Prorsa |
| Rumina | 132 = 12.200 | G 48e ("Misc. dei"), Ov. Fast. 2.412 |
| Venilia | 120 = 12.177 | Verg. Aen. 10.76 |
| | | |

8.b "Nymphales phalerati" added in Syst. Nat. 112.776-87. References as above.

| Adippe | 212 | ??54 |
|-----------|----------------------|---|
| Amphinome | 176 | H praef. 8 (Nereides), G 180f ("Nymphae") |
| Ancaea | 184 = 10.175 (-us) | see "Barbari" |
| Ariadne | 170 | H 43 ("Ariadne"), etc., Ov. Her. 10 ("Ariadne") |
| Camilla | 187 | H 252.3 ("Qui lacte ferino nutriti sunt"), |
| | | Verg. Aen. 11.535 etc. |
| Canace | 173 | H 243.6 ("Quae se ipsae"), etc., Ov. |
| Canacc | | Her. 11 ("Canace") |
| Cydippe | 163 | H praef. 8 ("Nereides"), cf. Verg. Georg. |
| - J F F - | | 4.336 ff. cited in G 175c ("Nymphae") |
| Dia | 207 | H 155.4 ("Iovis filii") Pirithous ex Dia |
| 25.00 | | Eionei filia |
| Dido | 192 | H 243.7 ("Quae se ipsae") etc., Ov. |
| Dido | | Her. 7 ("Dido") |
| Elea | 183 = 10.176 (-us) | see "Barbari" |
| Hyperm- | 198 | H 170.9 ("Filiae Danai"), etc. |
| nestra | | |
| Idmone | 182 = 10.174 (Idmon) | see "Barbari" |

⁵⁴ No such mythological name is known to me. It is probably an arbitrary variant for Cydippe, the name which Linnaeus had given to this European species in Faun. Svec. (ed. 2), number 1066, and which could not stand because he had also (Amoen. Acad. 6.409, number 76) called an Indian species (Syst. Nat. 1¹².163) by the same name. Hence he notes (Syst. Nat. 1¹².212): in Fauna Cydippe perperam pro Adippe legitur. Cf. on Caeneus (10.b), possibly also Pinthaeus (Pinthous) in list 1 as against Pirithous in list 9.b.

| Iphicla Janassa | 181 = 10.172 (-us) 185 | see "Barbari" H praef. 8 (Nereides) Jan- M, Ian- S |
|--------------------|---------------------------|---|
| Lena | 206 | H 157.2 ("Neptuni filii") Euadne ex Lena Leucippi filia |
| Nauplia | 197 = 10.190 (-us) | see "Barbari" |
| Nesea | 199 | H praef. 8 (Nereides) -saea MS, cf. Hes. Theog. 243 ff. and Verg. Georg. 4.336 ff. cited in G 174e and 175c ("Nymphae") -see and -saee |
| Niphe | 208 | ?? |
| Sibilla Tipha | 186 164 = 10.170 (-us) | H 128 ("Augures") Sibylla MS, etc. see "Barbari" |

9.a "Plebeji rurales" in Syst. Nat. 1¹⁰.482-84 = Syst. Nat. 1¹².787-93. References to Hyginus (H) and Giraldi (G) as before.

```
153 = 12.234
                                       ? diminutive of Argus<sup>55</sup>
Argiolus
                                       Ov. Met. 1.624 ff., etc.56
              152 = 12.232
Argus
                                       H 194 ("Arion"), etc.
Arion
              151 = 12.230
              157 = 12.243
                                       33
Athemon
Cupido
               145 = 12.217
                                       Ap. Met. 5.22, etc.
                                       Plin. N.H. 34.61, etc.
Lysippus
               160 = 12.250
                                       H 165 ("Marsyas"), etc.
Marsyas
               149 = 12.223
Phereclus
               159 = 12.248
                                       Ov. Her. 15.22 Phereclea puppe
Philocles
               155 = 12.240
                                       Plin. N.H. 35.15
               150 = 12.229
                                       Plin. N.H. 35.144, etc.
Thamvras
                                       Plin. N.H. 35.72, etc. -nthes
Timantes
               156 = 12.241
```

9.b "Plebeji rurales" added in Syst. Nat. 112.787-93. References to Giraldi (G) and Hyginus (H) as before, and also to Hederich (Hed), especially to show which of the various lists of Argonauts which he cites contains a given name (O = Orph. Arg., A = Apollonius, V = Valerius Flaccus, H = Hyginus, B = Apollodorus). See the discussion above, p. 341.

| Arcanius | 242 | H 170.3 ("Filiae Danai") -nia MS , -dia R^{57} |
|----------|-----|--|
| Boeticus | 226 | ?? H 157.1 Booetus MS, 14.9 Tiphys , |
| | | Boeotius MS |

⁵⁶ See the descriptive note: Praecedenti similis, sed minor . . . Linnaeus had roundly condemned the practice of making new generic names by forming diminutives of old ones (*Crit. Bot.*, under canon 227), but he could justifiably claim some license for his new trivial names (see above, note 1).

56 Reference to Faun. Svec. no. 803, which Linnaeus cites here, makes both the source and the meaning of this name clear. There, one reads: Papilio hexapus... subtus occilis numerosis... Pet. mus. p. 34 n. 318 Papiliunculus caeruleus, occilis plurimis subtus eleganter adspersus... Vulgo Argus oculatus.

⁵⁷ This name is certainly based on the *Arcania* of Hyginus, which indeed appears as the name for this species in *Faun. Svec.* (ed. 2) number 1045, at a place where a Danaid might be expected (the heading "Danai candidi" is unfortunately missing). Linnaeus did not attempt to change the gender of two other names which also appear in the second edition of *Faun. Svec.*, Hero (1047) and Hippothoë (1046). Since he was then still drawing from Hyginus' list of Danaids, it is likely that he found it useful on this occasion too; hence Polybe, above. None of these four names occurs in

```
Echion
              224
                             Hed "Argonautae" AVH (14.3)
                             H 170.6 ("Filiae Danai . . .")
Hero
             255
Hippothoe
             254
                             H 170.2 ("Filiae Danai . . .")
             238
                             Ov. Fast. 2.599, cf. G 440d ("Lares"), Hed
Lara
                               "Nymphae"
Metis
             245
                             Hes. Theog. 349 ff. cited in G 175a ("Nymphae"),
                               Hed "Oceanides"
Neleus
             246 = 10.187
                             see "Barbari"
Pamphilus
             239 = 10.86
                             see "Dan. fest." (6.a)
                             Hed "Argonautae" OAVH (14.8, 14.32) B
Peleus
             249
Philiasus
             233
                             Hed "Argonautae" H Phliasius (14.10) Phliasus
                               MS
Phlaeas
             252
                             Hed "Argonautae" OA Phlaeas V Phleas
Pirithous
             235
                             Hed "Argonautae" H (14.6) see list 1 and note 54
Priassus
             251 = 10.185
                             see "Barbari"
                             H 170.6 ("Filiae Danai . . .")
Polybe
             218
                             Hed "Argonautae" AV
Talaus
             247
             255 = 10.178
                             see "Barbari"
Telamon
                             Hor. A.P. 276, etc. Thespis
Tespis
             236
                             ?? H 11 ("Niobidae") Thera MS om. R
Thero
             219
                             ?? H 157.3 ("Neptuni filii"), etc. Tyro MSR
Thyra
             227
                             H 242.5 ("Qui se ipsi interfecerunt") Thysbe M,
Thysbe
             228
                               Thisbe SR, 243.8 Thisbe MSR, Ov. Met. 4.53 ff.
                               etc. Thisbe
Zeuxo
             231
                             Hes. Theog. 337 ff. cited in G 175b ("Nymphae"),
                               Hed "Oceanides"
```

10.a "Plebeji urbicolae" in Syst. Nat. 110.484-85 = Syst. Nat. 112.793-96. References as above. (Omitting Comma 162, Bixae 165, and Malvae 166)

```
      Phidias
      164 = 12.263
      Plin. N.H. 35.54, etc.

      Polycletus
      166 = 12.265
      Plin. N.H. 34.55, etc. -clitus

      Proteus
      163 = 12.259
      H 118 ("Proteus"), etc.

      Tages
      168 = 12.268
      Ov. Met. 15.558, cf. G 70g ("Topici dei")
```

10.b "Plebeji urbicolae" added in Syst. Nat. 112.793-96. References as above. (Omitting Caeneus 273, corrected [cf. 10.181 = 12.111, list 1, and note 54] in errata to cereus, without capital letter)

| Actorion | 262 | Hed "Argonautae" O, Asterion AVH (14.1, 14.15), Actor |
|----------|-----|--|
| Augias | 257 | H (14.20) Hed "Argonautae" OAH -ias, B -eas (but MSR at H 14.15 |
| _ | a | read -eas) |
| Butes | 251 | Hed "Argonautae" H 14.9, 14.27, see list 1 ⁵⁸ |

the list of Danaids cited by Hederich from Apollodorus. If Linnaeus used Hederich for these names, he was careful to ignore Apollodorus, whose list comes first, and to confine himself to Hyginus. It is more likely that he went direct to Muncker's (or Van Staveren's) edition.

⁵⁸ But there were at least half a dozen other people named Butes (e.g. Verg. Aen. 5.372, 9.647, 11.691), and this identification is very doubtful. In any case Linnaeus may be censured for giving the same name to a species and a variety (12.171 β , see list 1).

| Vol. lxxvi] | | Mythology in Linnaeus 35 | 7 |
|-------------|-----|--|----|
| Niso | 270 | Hes. Theog. 243 ff. cited in G 174f ("Nymphae") Nys and in Hed "Nereïdes" Neso | 0, |
| Oileus | 269 | Hed OAVH (14.7) | |
| Phaleros | 272 | Hed OAVH -us (but MSR at H 14.9 read -os) | |
| Pitho | 266 | Hes. Theog. 349 ff. cited in G 175a ("Nymphae"), He "Oceanides" | :d |
| Protumnus | 258 | ? Verg. Aen. 5.241, H 2.5, etc. Portunus | |
| Spio | 271 | Verg. Georg. 4.336 ff. cited in G 175c ("Nymphae") Spi Hes. Theog. 243 ff. cited in G 174e ("Nymphae") Spi and in Hed "Nereïdes" Spio; Verg. Aen. 5.826 Spio | |
| Thrax | 260 | ? H 14.1 Orpheus , Thrax | |