NOTES ON MALLOPHAGAN NOMENCLATURE. I.

By G. H. E. Hopkins, M.A., F.R.E.S.*

The Genotypes of Nitzsch's Genera.

Miss Clay (1938) has dealt with Kéler's attempt to revive certain invalid generic names proposed by Nitzsch in 1818, and I am in full agreement with the greater part of her argument. But unfortunately she, in common with other authors who have dealt with these Nitzschian names, has failed to realize the essential fact that, although most of the specific names published by Nitzsch in his paper of 1818 are *nomina nuda* (and therefore have no standing in zoological nomenclature), some are *nomina nova* for species described by earlier authors; they have references to the previous descriptions and are therefore described† as from 1818, the fact that nearly all of them are synonyms of earlier names not affecting my present point. This fact that not all the specific names proposed by Nitzsch in 1818 are *nomina nuda* is vital to the consideration of the selection of genotypes for Nitzsch's genera, because the Rules prescribe that when no original designation of genotype was made and the original genus contained both described species and species represented by *nomina nuda* only the described species are available from which to make a subsequent selection of genotype. If only one described species was mentioned in the original account of the genus, then that species is the genotype by original designation, regardless of the fact that other species may have been mentioned in the form of *nomina nuda*; if only one specific name was given under the genus (although without description), then that species is the genotype, because in this case the description of the genus is also that of the species and the specific name is not a *nomen nudum*.

I am very much indebted to Dr. Karl Jordan, President of the International Committee on Zoological Nomenclature, for checking and amplifying my reading of the Rules.

Let us now see how these facts affect the attempts which have been made to select genotypes for Nitzsch's genera, but noting very particularly that in these notes I merely examine the position as it is if the Rules of Nomenclature are to be strictly applied. It may well be that workers on Mallophaga may take the view that an application should be made to the International Committee on

* Published by permission of the Director of Medical Services, Uganda.

† Throughout these notes I use the word "described" to mean "published and accompanied by an indication, or a definition, or a description" (Article 25 (*a*) of the International Rules of Zoological Nomenclature).

Zoological Nomenclature for suspension of the Rules in favour of some or all of the invalid selections of genotypes. Pending the result of an inquiry as to the opinions on this point of other workers on Mallophaga, I do not propose to adopt any of the changes shown to be necessitated by strict application of the Rules.

Philopterus and subgenus *Docophorus*.—The following names included by Nitzsch are *nomina nova*, with references to previously published descriptions or figures by other authors: *ocellatus*, *atratus*, *communis*, *leontodon*, *platyrhynchus*, *excisus* and *icterodes*. The selection by Neumann (1906, p. 58) of *ocellatus* as genotype of both *Philopterus* and *Docophorus* is, therefore, perfectly valid.

Philopterus, subgenus *Nirmus*.—Neumann (p. 56) correctly pointed out that *Nirmus* Nitzsch 1818 must fall as a homonym of *Nirmus* Hermann 1804. He proposed for the former the name *Degeeriella*, but without designating a genotype. Johnston and Harrison (1911, p. 326) selected " *D. discocephalus* N." as genotype of *Degeeriella* (and therefore of *Nirmus* Nitzsch *nec* Hermann). Although *Nirmus discocephalus* Nitzsch 1818 is a *nomen nudum*, the action of Johnston and Harrison is valid because the same applies to all the other names included by Nitzsch in *Nirmus*. He mentioned only two names which make any pretence to be anything but *nomina nuda*, these being *attenuatus* and *minutus*. The former has a queried reference to *Ped. ortygometrae* Schrank, but the presence of the query causes *attenuatus* to retain its lack of status as a *nomen nudum*; *minutus* has a definite reference to Redi's pl. iv, fig. 3, but I have already dealt with this case (Hopkins, 1940, pp. 423–424) and shown that *minutus*, also, is a *nomen nudum* because the figure to which Nitzsch refers shows an insect grossly at variance with his own diagnosis of *Nirmus*. Since all the specific names mentioned by Nitzsch are *nomina nuda*, there was nothing to hinder Johnston and Harrison from selecting *discocephalus* (which had meanwhile been described) as genotype of *Degeeriella* and therefore of *Nirmus* Nitzsch *nec* Hermann. As Kéler (1937, p. 315) still advocates the employment of *Nirmus* Nitzsch as a generic name, apparently on the grounds that *Ricinus* is preoccupied in botany and by its use as the specific name in *Ixodes ricinus*, it seems worth emphasizing that neither of these arguments has any basis. Zoological nomenclature has long been entirely independent of botanical (see Article I of the Rules), and the use of a name in a specific sense in no way precludes its use for a genus. Moreover, *Nirmus* Nitzsch 1818 is a totally different genus from *Nirmus* Hermann 1804, because it does not include a single species contained in the latter. It is, therefore, a homonym of *Nirmus* Hermann, and was invalid from its publication.

Philopterus, subgenus *Lipeurus*.—Of the names listed by Nitzsch

under this subgenus, *versicolor*, *luridus*, *squalidus*, *temporalis*, *jejunus*, *ebraeus* and *baculus* all have valid references to prior descriptions or figures. It is, therefore, a thousand pities that Johnston and Harrison (1911, p. 326) designated "*L. caponis* Linn. (syn. *L. variabilis* N.)" as genotype of "*Lipecurus* N." because Nitzsch does not mention *caponis* at all, and *variabilis* only as a *nomen nudum*, so that the selection is invalid. Unfortunately any valid selection would disturb some established genus (*Ardeicola*, *Anaticola*, *Esthiopterum* or *Columbicola*), and none of the other recommendations in Article 30 of the Rules will help a selection in this case. This being so, the least inconvenient course would be to select for elimination a very small genus, such as *Esthiopterum* will be when all the species at present incorrectly included in it are removed. This would leave the group of circumfasciate species included in "*Lipecurus* N." Johnston and Harrison 1911 *nec* Nitzsch 1818 without a valid name, *Lipecurus* not being available because it is an obvious misprint for *Lipeurus*. The fact that the accepted but invalidly-selected genotype, *Lipeurus caponis* (Linn.), is of considerable economic importance and is mentioned very frequently in the literature of economic entomology is a very strong argument for the retention of the genus in its present sense.

Philopterus, subgenus *Goniodes*.—Three of the names mentioned by Nitzsch are accompanied by references, these being *falcicornis*, *stylifer* and *hologaster*. The action of Johnston and Harrison in selecting as genotype "*G. pavonis* L. (syn. *G. falcicornis* N.)" is, therefore, valid.

Trichodectes.—Nitzsch mentions *crassus*, *latus*, *dubius*, *sphaerocephalus*, *scalaris* and *longicornis* with definite references, so Johnston and Harrison's selection of "*T. canis* Degeer (syn. *T. latus* N.)" is valid.

Liotheum and subgenus *Colpocephalum*.—Nitzsch states that he named *Liotheum* in 1806 "in Voigtii, *Magaz. f. d. Naturk*, vol. xii, p. 420," but the sole mention of it in the work to which he refers is as a *nomen nudum*: "Die Gattung Liotheum mihi ist mir hingegen noch auf keiner Eule vorgekommen." In Nitzsch 1818 the subgenus *Colpocephalum* contains only four names, of which *zebra*, *flavescens* and *subaequale* are *nomina nuda*, while *ochraceum* has a definite reference ("Pulex avis pluvialis Redi exp. fig. sup."), so that there is no question that *Liotheum ochraceum* Nitzsch is the genotype of *Colpocephalum* by monotypy, it being the only described species mentioned in the original account of the genus. As *Colpocephalum uniseriatum* Piaget (the genotype of *Actornithophilus* Ferris) is certainly congeneric with *Liotheum* (*Colpocephalum*) *ochraceum* Nitzsch, the genus *Actornithophilus* is synonymous with *Colpocephalum*. The action of Johnston and Harrison (1911,

p. 327) in attempting to select *zebra* as genotype of *Colpocephalum* is, therefore, *ultra vires*.

Turning to *Liotheum*, Neumann (p. 58) designated *Liotheum zebra* Nitzsch (a *nomen nudum*) as the genotype, Johnston and Harrison (1911, p. 323) incorrectly regarded *Liotheum* as being necessarily synonymous with *Ricinus* because Nitzsch included the genotype of the latter in *Liotheum*, and Clay (1938, p. 206) accepted Neumann's invalid type-selection, and stated correctly the position as it would be if this selection were valid, i.e. that *Liotheum* would have to replace *Colpocephalum*, the genotype of both being *zebra* Nitzsch. As, however, *zebra* Nitzsch 1818 is a *nomen nudum* and not available as genotype of *Liotheum*, it remains possible to select any of the described species mentioned by Nitzsch under the various subgenera of *Liotheum*, convenience being the only guiding factor. It seems to me that to transfer the familiar name *Colpocephalum* from the group of species which includes *zebra* to that which includes *ochraceum* would cause infinitely more confusion than to discard the name altogether and replace it with *Liotheum*, which has hardly been used at all. Unless a successful application is made for suspension of Article 30 of the Rules in favour of *Colpocephalum* with *zebra* as genotype, I intend to select *Liotheum* (*Colpocephalum*) *ochraceum* Nitzsch 1818 as genotype of *Liotheum*, thus relegating both *Colpocephalum* and *Actornithophilus* to the synonymy of *Liotheum*; but if such an application should be made and be successful I propose selecting *Liotheum* (*Physostomum*) *nitidissimum* Nitzsch 1818 as genotype of *Liotheum*, thus making the latter an absolute synonym of *Ricinus* De Geer 1778.*

Liotheum, subgenus *Menopon*.—All the names mentioned by Nitzsch under this subgenus are accompanied by references to descriptions or figures, so Johnston and Harrison's selection of "*M. gallinae* L. (syns. *M. trigonocephalum* Olfers, *M. pallidum* N.)" as genotype of *Menopon* is valid.

Liotheum, subgenus *Trinoton*.—Two of the three names mentioned by Nitzsch (*conspurcatum* and *lituratum*) have references, but the note under the latter is merely "Huc forte Ric. Lari Deg. vii, t. iv, f. 12." *Liotheum* (*Trinoton*) *conspurcatum* Nitzsch being the only described species mentioned under *Trinoton* is the genotype of *Trinoton* by monotypy, and Johnston and Harrison's action in selecting it was unnecessary.

Liotheum, subgenus *Eureum*.—Nitzsch mentions only *cimicoides* and *malleus* under this subgenus and both are *nomina nuda*, so that both were available for selection as genotype after their description (by Burmeister, 1838). Johnston and Harrison appear to have

* I have carefully worded this statement so that it does *not* constitute a selection of a genotype for *Liotheum*.

overlooked *Eureum*, but Harrison (1916, p. 21) quotes *E. cimicoides* as genotype. As it seems uncertain whether Harrison's action should be regarded as a formal selection, I hereby select *Eureum cimicoides* Burmeister 1838 as genotype of *Eureum* Nitzsch 1818.

Liotheum, subgenus *Laemobothrion*.—Nitzsch mentions *giganteum*, *hasticeps* and *atrum*, all with references to prior descriptions or figures, so Johnston and Harrison's selection (1911, p. 327) of "*L. maximum* Scop. (syn. *L. giganteum* N.)" as genotype of *Laemobothrion* is valid.

Liotheum, subgenus *Physostomum*.—Of the three species mentioned by Nitzsch under this subgenus the first (*irascens*) is a *nomen nudum*, whereas *nitidissimum* is a *nomen novum* for *Ricinus fringillae* De Geer and *sulphureum* for *Pediculus orioli* Scopoli; all three species are still considered congeneric. I cannot find a formal selection of genotype for *Physostomum*, though Harrison (1916, p. 24) states that it is "*R. nitidissimum* Nitzsch = *fringillae* Degeer." To anticipate any argument as to whether Harrison's action should be regarded as a selection, I hereby formally select *Liotheum* (*Physostomum*) *nitidissimum* Nitzsch 1818 as genotype of *Physostomum* Nitzsch 1818. As Neumann (1906, p. 56) selected *Ricinus fringillae* De Geer as genotype of *Ricinus*, *Physostomum* is an absolute synonym of *Ricinus* De Geer 1778.

Gyropus.—Nitzsch included in this genus only *G. ovalis* (a *nomen nudum*) and *G. gracilis*, an unnecessary *nomen novum* for *Pediculus porcelli* Schrank. There is no doubt, therefore, that *Gyropus gracilis* Nitzsch 1818 is the genotype of *Gyropus* by monotypy, and the action of Johnston and Harrison (1911, p. 326) in designating *G. ovalis* as genotype is *ultra vires* and invalid. Whether their action should be set aside is altogether a different matter. Mjöberg (1910, p. 292) erected *Gliricola* for *gracilis*, and since that date one genus whose name is compounded with *Gliricola* (*Paragliricola*) Ewing 1924) and no less than six whose names are compounded with *Gyropus* have been erected (*Protogyropus*, *Macrogyropus*, *Allogyropus*, *Heterogyropus*, *Monogyropus* and *Tetragyropus*, all Ewing 1924). To make the change demanded by strict application of the Rules would result in the subfamily Gyropinae ceasing to include any of these six genera and would, in my opinion, "clearly result in greater confusion than uniformity" (provisions for partial suspension of the Rules in certain cases), especially as both *Gyropus ovalis* and *Gliricola porcelli* are of very frequent occurrence in the literature of economic entomology.

Summarizing the above, so far as those genera are concerned in which the existing selections of genotypes are invalid, the position which would be created by strict application of the Rules is as follows:

Lipeurus.—The genotype cannot be *Lipeurus caponis* (Linn.), but must be selected from *versicolor* (*Ardeicola*), *luridus*, *squalidus*, *temporalis* and *jejunus* (*Anaticola*), *ebraeus* (*Esthiopterum*) or *baculus* (*Columbicola*).

Liotheum.—The genotype cannot be *zebra*, but can be selected from any of the species which Nitzsch listed with valid indications in his work of 1818. Thus *Liotheum* can be made the earliest valid name for *Actornithophilus*, *Menopon*, *Trinoton*, *Laemobothrion* or *Gyropus*, or can be made a synonym of *Ricinus*. If a successful application is made for partial suspension of the Rules in such a way as to retain *Colpocephalum* in its present sense, the obvious course will be to get rid of *Liotheum* by selecting the genotype in such a way as to make *Liotheum* a synonym of *Ricinus*.

Colpocephalum.—The genotype, by monotypy, is *ochraceum* Nitzsch, and *Actornithophilus* Ferris is a synonym.

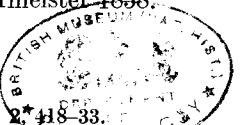
Gyropus.—The genotype, by monotypy, is *gracilis* Nitzsch (=*porcelli* Schrank), and *Gliricola* Mjöberg is a synonym.

I list below the genera in common use which are affected, together with their accepted but invalidly-selected genotypes, the latter attributed to their true author. All workers on Mallophaga are earnestly requested to inform me as soon as possible whether they are in favour of application being made to the International Commission on Zoological Nomenclature for partial suspension of Article 30 of the Rules (on the ground that the strict application of this article would clearly result in greater confusion than uniformity) in favour of any or all of the genotypes mentioned below:

Lipeurus. Genotype *Lipeurus variabilis* Burmeister 1838 (=*caponis* Linn.).

Colpocephalum. Genotype *Colpocephalum zebra* Burmeister 1838.

Gyropus. Genotype *Gyropus ovalis* Burmeister 1838.



References.

Burmeister, H. (1838), *Handbuch der Entomologie*, **2**, 418–33.

Clay, T. (1938), "The Names of Some Mallophagan Genera," *Entomologist*, 71, 206–7.

Harrison, L. (1916), "The Genera and Species of Mallophaga," *Parasitology*, **9**, 1–154.

Johnston, T. H., and Harrison, L. (1911), "Notes on Some Mallophagan Generic Names," *Proc. Linn. Soc. N.S.W.*, **36**, 321–8.

Kéler, S. (1937), "Zur Nomenklatur einiger Mallophagengenera," *Bull. ent. Pologne*, **14–15**, 313–23.

Mjöberg, E. (1910), "Studien über Mallophagen und Anopluren," *Ark. Zool.*, **6**, 1–296.

Neumann, L. G., (1906), "Notes sur les Mallophages," *Bull. Soc. Zool. Fr.*, **20**, 54–60.

Nitzsch, C. L. (1818), "Die Familien und Gattungen der Thierinsekten," *Magazin der Entomologie*, **3**, 261–304.