LXII.—ON A FURTHER RECORD OF MICRELAPS MULLERI BOETTGER FROM SYRIA

By J. C. BATTERSBY. Department of Zoology, British Museum (Natural History).

This species was first recorded from Jerusalem as Calamidarum, n. g. sp.? by Müller in 1878 [1] and in 1880 Müller's specimen was described and figured by Boettger [2] as Micrelaps mulleri. Since then it has often been reported from Palestine but there is only one record of its occurrence in Syria: Lortet, 1883 [3], says "This pretty little species is fairly frequently seen in the environs of Lattakieh " (Translation). Despite this indication that the species is common in the area there had been no other record from Syria until a specimen was collected at Tripolis by Mr. M. Thompson and presented to this Museum in 1952. Tripolis is between the Lortet locality, Lattakieh, and Palestine and Mr. Thompson said he brought in this specimen because it was an uncommon snake and the only one he had seen. This conflicts with Lortet's observation.

Others, too, appear to have had doubts about the status of the species in Syria for Haas [4] says that it "is so far known from Palestine only: the only locality beyond the boundaries of Palestine is Lattakieh (fide Lortet in Tristram). Werner does not mention this species as occurring in Syria. We have, therefore, no clear idea about its range; our localities are situated in the Central Hills (Jerusalem), at the south-western end of Lake Tiberias . . . ; and in Upper Galilee ".

This new specimen from Syria confirms that the species does, in fact, occur to the north of Palestine and it is interesting to note that both the localities in Syria are low-lying coastal ones, whereas it appears not to occur in the coastal plain in the southern part of its range.

The scale counts for the species are given by de Witte and Laurent [5] as ventrals 251-275; subcaudals 26-33; the new specimen has a lower ventral count, 244, with 32 subcaudals. It is a male, total length 392 mm.; tail 34 mm. As stated by Boettger [2], p. 138, the condition of the first temporal is variable; in this specimen it is not in contact with the postocular, on one side, being separated from it by the fifth upper labial.

References.

MÜLLER, F. 1878. Verh. Naturf. Ges. Basel, 6, p. 655.
BOETTGER, O. 1880. Ber. Senekenb. Ges., p. 137, pl. iii, fig. 2.

LORTET. 1883. Arch. Mus. Lyon. 3, p. 184, pl. xix, fig. 2.
HAAS, G. 1951. Bull. Research Council Israel, 1, 3, p. 89.

[5] DE WITTE & LAURENT, 1947. Mem. Mus. Roy. hist. Nat. Belq. Brux. (2) 29, p. 29.

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LXIII.—SYSTEMATIC NOTES ON THE PIAGET COLLECTIONS OF MALLOPHAGA.—PART IV.

> By Theresa Clay, British Museum (Natural History).

[Continued from Ann. & Mag. Nat. Hist. (12), iv, p. 1168, 1951.]

Colpocephalum (sensu Piaget).—1.-Z.

Colpocephalum importunum Denny, 1842, sensu Piaget. (1880, p. 548, pl. xlv, fig. 8.)

Type host: Ardea [c.] cinerea Linn.

Piaget's host: Type host.

B.M. †: 2 & 3, 3 QQ Ciconiphilus, slides nos. 1095-6, from type host.

The only specimen labelled C. importunum now in the Denny collection is a headless nymph and obviously is not that from which Denny made his description and figure. There is little doubt, however, that his original specimen was a Ciconiphilus. The earliest name for the Ciconiphilus species on Ardea cinerea is C. decimfasciatus (Boisduyal & Lacordaire); Piaget's specimens, which agree with authenticated material from the type host, must stand under this name.

Present status: Ciconiphilus decimfasciatus (Bois, & Lacord.).

Colpocephalum incisum Piaget. (1880, p. 569, pl. xlvii, fig. 9.)

Type host: Phaëton flavirostris (de Madagascar). Error. B.M.: 1 & Actornithophilus, slide no. 1286, from type host.

Piaget's specimen is the distinctive type of Actornithophilus found on the genus Anous, and is presumably a straggler from one of the species of this genus. Two species, Anous stolidus and A. tenuirostris, are found on Madagascar from where the alleged host came, and it is probable that one of these is the true host of incisum. The proportions of the † British Museum (Natural History) Collection.

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head of Piaget's single specimen differ from those of a small series from A, stolidus. Further material from this and the other species of Anous must be examined before the correct host of incisum can be found or the synonymy of A, milleri (Kell. & Kuw.) from Anous stolidus galapagensis and A, epiphanes (Kell. & Chapman) from A, stolidus pileatus settled.

Present status: Actornithophilus incisus (Piaget).

Colpocephalum intermedium Piaget. (1880, p. 521.)

An unnecessary nomen novum for C. tricinctum Nitzsch; Piaget did not think that the name tricinctum was appropriate and said that he preferred intermedium.

Colpocephalum latifasciatum Piaget. (1885, p. 130, pl. xiv, fig. 2.)

Type host: Rhynchops flavirostris Vieillot.

B.M.: 15 Colpocephalum, slide no. 1287, from type host.

Piaget's specimen was possibly a straggler on the alleged type host (one of the Charadriiformes) as nothing like it is known from any member of that order.

Present status: Colpocephalum latifasciatum Piaget.

Colpocephalum Leptopygos Nitzsch, 1874, sensu Piaget. (1880, p. 553, pl. xlvi, fig. 3.)

Type host: Ibis sacra = Plegadis f. falcinellus (Linn.).

Piaget's hosts: Type host and Ibis melanocephala (falcinellus)—Threskiornis melanocephala (Latham).

B.M. : 13, 19 Colpocephalum, slide no. 1288, from Ibis melanocephala from Java.

Leiden: 233 Colpocephalum, slide no. 262, host as on B.M. slide.

Piaget's figures seem to have been drawn from the male and female Colpocephalum in the B.M. collection, although the shape of the head is somewhat different; it is doubtful whether Piaget ever saw specimens from the type host of Nitzsch's species. Authenticated specimens of Colpocephalum from the type host, presumably leptopygos, are quite distinct from Piaget's material, which is the species normally found on Threskiornis melanocephala.

Colpocephalum Longicaudum Nitzsch, 1866, sensu Piaget. (1880, p. 534, pl. xliv, fig. 6.)

Type host: Columba tigrina — Streptopelia chinensis tigrina (Temminek). Piaget's host: Columba domestica.

B.M. and Leiden: No specimens.

Piaget's figure agrees with the female types (from the same host) of C. turbinatum Denny and his description and figure can be taken to

represent this species. Nitzseh's species comes from a different host and is not necessarily conspecific.

Present status: Colpocephalum turbinatum Denny.

Lectotype of C. turbinatum Denny: φ in the B.M., slide no. 728; paratypes: $4 \Im \varphi$, slides nos. 729–732.

Colposephalum longipes Piaget. (1880, p. 524, pl. xliii, fig. 7.)

Type host: Eclectus puniceus=Lorius roratus (P. L. S. Müller).

B.M.: 3 \$\text{Q} K\(\text{elerimonopon}\), slide no. 1093, from type host.

In a previous part of this series (Clay, 1949, 830) it was shown that there was considerable doubt about the authenticity of the hosts of all the species of $K\acute{e}lerimenopon$, and it was suggested that perhaps members of the Megapodiidae were the true hosts. Since then further material of this genus has been examined as follows: 2 $\varphi \varphi$ from skins of Megapodiius r. reinwardt and Alectura lathami purpureicollis (Megapodiidae) and five specimens from Psittaciformes as follows: 1 φ from skin of Kakatoe galerita, 1 φ and 2 nymphs from fresh specimens of Psittacula krameri collected by the present writer in Rajputana, India and 1 φ from the same host-species (a zoo bird) seen through the kindness of Mr. B. K. Tandan. The last two records rule out the possibility of $K\acute{e}lerimenopon$ being restricted to the Megapodidae.

The above specimens taken from the parrots and *K. longipes* (Piaget) differ from the type species and all other specimens of this genus examined in the absence of posterior or lateral prolongations of any of the abdominal pleurites and in having the distal anterior angle of the second antennal segment prolonged as in *Hohorstiella*. Further reliable host-records of species of this genus are greatly needed.

Present status: Kélerimenopon longipes (Piaget).

Lectotype: ♀ in the B.M., slide no. 1093.

Colpocephalum longipes Piaget. (1885, p. 125.)

Colpocephalum caudatum var. longipes Piaget (nec Piaget, 1880).

Type host: Chunga burmeisteri (Hartlaub).

B.M.: 3 & & 6 QQ Colpocephalum, slides nos. 1146-8, from type host. These specimens differ from any Colpocephalum seen from the Cariamidae and are almost certainly stragglers from a member of the Falconiformes. They appear to be the same as caudatum Giebel.

Present status: Colpocephalum caudatum Giebel.

Lectotype of longipes Piaget: 3 in the B.M., slide no. 1147.

Colpocephalum maculatum Piaget. (1880, p. 516, pl. xliii, fig. 1.)

Type host: Polyborus (Caracara) brasiliensis=Polyborus plancus brasiliensis (Gmelin).

B.M.: 533, 5 9? Colpocephalum, slides nos. 464–466, from Caracara brasiliensis.

Leiden: 2 分, 2 平 Colpocephalum, slide no. 243*, from the same host.

* Specimens not remounted, see Part I, p. 812, 1949.

Piaget's specimens agree with authenticated material from the type host. C. polybori Rudow, 1869 from Polyborus planeus is almost certainly the same species, and the earliest name.

Present status: Colpocephalum polybori Rudow.

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Lectotype of Colpocephalum maculatum Piaget: 3 in B.M., slide no. 464a.

Colpocephalum majus Piaget. (1880, p. 519.)

Colpocephalum caudatum var. major Piaget.

Type host: Gypogeranus serpentarius Sagittarius serpentarius (J. F. Miller).

B.M.: 13, 5 12 Colpocephalum, slides nos. 1149-50, from type host. Leiden: 13, 1? Colpocephalum, slide no. 242*, from type host.

These specimens agree with authenticated material from the type host. and with Giebel's description of cucullare (1874).

Present status: Colpocephalum cucullare Giebel.

Lectotype of Colpocephalum majus Piaget: 3 in B.M., slide no. 1150.

Colpocephalum majus Piaget. (1880, p. 538, pl. xliv, fig. 10.)

Type host: Megapodius rubripes var. Duperreyi-Megapodium r. reinwardt Dumont.

B.M.: $1 \circ Colpocephalum$, slide no. 1290, from type host.

This name being pre-occupied by majus Piaget (1880, 519), it was renamed majesticum by Harrison (1916, 51).

Present status: Colpocephalum majesticum Harrison.

Colpocephalum majus Piaget. (1880, p. 549.)

Colpocephalum importunum var. major Piaget.

Type host: Ardea garcetta=Egretta garzetta (Linn.).

B.M.: 233, 244 Ciconiphilus, slides nos. 1100-1, labelled "Colpo-

cephalum importunum N. var. P.", from type host.

Although there is no varietal name on the slides there is little doubt that these are the specimens on which Piaget based his description; he frequently did not add new varietal names to his labels. Piaget's name being invalidated by major Piaget (1880, 519), Eichler (1937, 96) renamed this species boisdurali.

Present status: Ciconiphilus boisduvali (Eichler).

Lectotype of Colpocephalum majus Piaget: & in B.M., slide no. 1100.

Colpocephalum majus Piaget. (1885, p. 119, pl. xiii, fig. 2.)

Colpocephalum dissimile var. major Piaget.

Type host: Haliactus leucogaster (Gmelin).

B.M.: 3 33, 4 99 Colpocephalum, slides nos. 643-5, from type host.

Present status: Colpocephalum majus (Piaget), nec Piaget, 1880.

Lectotype of C. majus Piaget: 3 in the B.M., slide no 643.

Colpocephalum Maurum Nitzsch, 1866, sensu Piaget. (1880, p. 564, pl. xlvii, fig. 4.)

Type hosts: Sterna fissipes: Chlidonias n. nigra (Linn.) and Larus tridactulus - Rissa t. tridactyla (Linn.).

Theresa Clay on the Piaget Collections of Mallophaga

Piaget's hosts: Sterna nigra=Chlidonias nigra (Linn.) and Sterna cantiaca == Thalasseus sandvicensis (Latham).

B.M.: 13, 12 Actornithophilus, slide no. 1291, from Sterna nigra.

The following species of Actornithophilus have been described from the hosts given above : --

A. piceus (Denny), 1842 : Thalasseus s. sandvicensis.

A. maurus (Nitzsch), 1866: Chlidonias n. nigra and Rissa, tridactyla,

A. sulcatus (Piaget), 1880: Chlidonias n. nigra.

A. piccus (Denny) is represented in the Denny collection by the single type-male, and is an example of the large Actornithophilus found on the Laridae. The type of A. sulcatus (Piaget), as shown below, is a nymph of the same group of large Actornithophilus. Two figures of A. maurus (Nitzsch) in the Nitzsch manuscript (volume v, pages 17 and 47) show that it belongs to the same species group as the two previous species.

As the type of *sulcatus* is a nymph the most satisfactory solution would seem to be the restriction of Nitzseh's species by designating Chlidonias nigra at the type host, and making sulcatus a synonym of maurus.

Present status: Actornithophilus maurus (Nitzsch).

Colpocephalum minus Piaget. (1880, p. 539, pl. xlv, fig. 1.)

Type hosts: Megapodius rubripes var. Gilberti=M. nicobariensis gilberti G. R. Gray and var. Freycinetti=Megapodius freucinet Gaimard.

B.M.: 13 Menopon, 299 Kelerimenopon, slide no. 1295, from var. Gilberti; 4 \ Kelerimenopon, slide no. 1296, from var. Freycineti.

Leiden: $2 \mathcal{Q}$, 1 nymph Kélerimenopon, slide no. 263, from var Gilberti.

This is a composite species; the figure of the whole female being taken from the Kélerimenopon specimens, that of the terminal segments of the male, from the *Menopon*. As the female is figured more fully, one of that sex on slide 1295 is selected as lectotype. This and the other species of Kélerimenopon are discussed above under C. longines.

Present status: Kélerimenopon minus (Piaget).

Lectotype: Q in the B.M., slide no. 1295a, from Megapodius nicobariensis gilberti.

> Colpocephalum minus Piaget. (1885, p. 128.)

Colpocephalum trochioxum var. minor Piaget.

Type host: Ardea russata=Bubulcus ibis (Linn.).

B.M.: $4 \frac{6}{66}$, $8 \frac{6}{14}$ Ciconiphilis, slides nos. 1367-70, from type host.

These specimens agree with authenticated material from the type host. Present status: Ciconiphilus minor (Piaget), nec Piaget, 1880. Lectotype: 3 in the B.M., slide no. 1367.

Colfocephalum nanum Piaget. (1890, p. 257, pl. x, fig. 10.)

Type host: Larus canus Linn.

B.M.: 13 Colpocephalum, slide no. 1294, from type host.

No species of true *Colpocephalum* have been seen from any of the Laridae, and this specimen is most probably a straggler.

Present status: Colpocephalum nanum Piaget.

Colpocephalum notatum Piaget. (1885, p. 126, pl. xiii, fig. 9.)

Type host: Dicholophus cristatus=Cariama cristata (Linn.).

B.M.: 255, 446 Colpocephalum, slides nos. 1297-8, from type host. These specimens differ from others taken off the type host, which are probably C. breve Giebel; sufficient material is not yet available from Cariama to decide whether Piaget's specimens are stragglers or represent a second species of Colpocephalum on this host.

Present status: Colpocephalum notatum Piaget.

Lectotype: of in the B.M., slide no. 1297.

COLPOCEPHALUM OBSCURUM Giebel, 1874, sensu Piaget. (1880, p. 551, pl. xlvi, fig. 1.)

Type host: Ardea egretla — Casmerodius albus egretla (Gmelin).

Piaget's host: Type host.

B.M.: 15 Colpocephalum, slide no. 1207, from type host.

Colpocephalum obscurum Giebel and all other species of Menoponidae described from this host are Ciconiphilus, and have been discussed under Menopon sulcatum Piaget (Clay, 1949, 915). Piaget's single male Colpocephalum is not, therefore, conspecific with obscurum; his description and figure should be ignored and certainly not given a new name.

Colpocephalum occipitale Nitzsch, 1866, sensu Piaget. (1880, p. 547, pl. xlv, fig. 7.)

Type host: Anastomus coromandelicus=Anastomus oscitans (Boddaert). Piaget's host: Anastomus lamelligerus Temminek.

 $B.\overline{M}.: 1 \circlearrowleft, 1 \circlearrowleft Colpocephalum$, slide no. 1299, from Anastomus lamelligerus.

Piaget's specimens agree with authenticated material from A. lamelligerus. There are, however, two species of Colpocephalum on this host and Piaget's is not conspecific with one of them, C. subzebra Bedford, 1940. C. occipitale Nitzsch, from a different species of Anastomus, appears, from a figure in the Nitzsch MS.. to be similar to subzebra, and, therefore, different from Piaget's interpretation of occipitale. The identity of Piaget's specimens must wait for a revision of the group of species from these and related hosts. Colpocephalum ochraceum (Nitzsch), 1818, sensu Piaget. (1880, p. 560, pl. xlvi, fig. 9.)

Type host: "Avis pluvialis"=Pluvialis apricaris oreophilos A. C. Meinertzhagen.

Pinget's hosts: Vanellus cristatus Vanellus vanellus (Linn.) and Vanellus varius Squatarola squatarola (Linn.).

B.M.: 533, 454 Actornithophilus, slides nos. 1300-1 and 1303-4; 13 Pseudomenopon, slide no. 1302. All slides from Vanellus cristatus.

Leiden: 1? Actornithophilus, slide no. 256,* from Vanellus cristatus. Piaget's figure and description refer to the Actornithophilus specimens; the Pseudomenopon (marked by Piaget as "jeune") is a straggler and can be ignored.

Elsewhere (Clay & Hopkins, 1950, 254) it has been shown that Colpocerphalum ochraceum (Nitzsch) owes its validity to a reference to plate xi in Redi, 1668; and in the same publication (1950) the type host was fixed as Pluvialis apricaria oreophilos. Piaget's specimens are not ochraceum (Nitzsch), but may be conspecific with an already named species.

Colpocephalum pachygaster Giebel, 1874, sensu Piaget. (1880, p. 517.)

Type host: Pandion [h.] haliaëtus (Linn.).

Piaget's host: Type host.

B.M.: 3 33, 4 99 Kurodaia, slides nos. 1316-8, from type host.

Although Piaget neither fully described nor figured this species there are specimens in the collection; it is probable that these came into his possession after the publication of "Les Pediculines". These specimens agree with the type-specimens of Colpocephalum haliaeti Denny, of which C. pachygaster Giebel is a synonym, and with authenticated material from the type host. C. haliaeti Denny is represented in the B.M. Denny collection by $1 \, \mathcal{J}$, $6 \, \mathbb{C}$ and one nymph Kurodaia.

Present status: Kurodaia haliacti (Denny).

Lectotype of Colpocephalum haliacti Denny: 3 in the B.M., slide no. 698.

Собрострации раснурия Piaget. (1890, р. 258, pl. x, fig. 11.)

Type host: Prionites brasiliensis = Momotus momota (Linn.).

B.M.: 13 Psittacomenopon, slide no. 822 labelled Menopon pachypus, from Pronatus brasiliensis.

Although the specimen is labelled *Menopon* and the name of the host incorrectly spelt, there is little doubt that it is the male from which Piaget made his figure of *Colpocephalum pachypus*; the female mentioned in the original description is no longer in either of the Piaget collections. Furthermore, the label also has the name *crassiceps* (crossed out), and as Piaget stated that *pachypus* resembled *crassiceps* he presumably first labelled it with this name. This specimen almost certainly originated from a parrot.

Present status: Psittacomenopon pachypus (Piaget).

Colpocephalum pallidum Piaget. (1880, p. 526, pl. xliii, fig. 9.)

Type host: Plictolophus moluccensis=Kakatoe moluccensis (Gmelin) B.M.: 233, 12 Psittacomenopon, slide no. 734, from type host.

Present status: Psittacomenopon pallidum (Piaget).

Lectotype: \mathcal{E} in the B.M., slide no. 734a.

Colpocephalum Parumpilosum Piaget. (1880, p. 536, pl. xliv, fig. 8.)

Type host: Lophophorus resplendens (impeyanus) - Lophophorus impey anus (Latham).

B.M. and Leiden: No specimens.

Piaget states that this species resembles flarescens and the figure shows a Colpocephalum of that type. No such Colpocephalum has been seen from the type host, and it is likely that it is a contamination from some other bird.

Present status: Colpocephalus parumpilosum Piaget.

Colpocephalum parvicers Piaget. (1880, p. 531, pl. xliv, fig. 4.)

Type host: Lamprotornis aenea = Lamprotornis caudatus (Müller). B.M.: 255, 354 Menacanthus, slides nos. 1319-20, from type host.

Leiden: 255 Mencanthus, slide no. 251*, from type host.

Present status: Menacanthus parvice ps (Piaget), nec Piaget, 1880, p. 446.

Lectotype: 3 in the B.M., slide no 1319.

Colpocephalum Patellatum Piaget. (1890, p. 254, pl. x, fig. 8.)

Type host: Numenius [a.] arquata (Linn.).

B.M.: 3 55, 2 44 Actornithophilus, slides nos. 1323-4, from type host. These specimens agree with authenticated material from the type host.

Present status: Actornithophilus patellatus (Piaget).

Lectotype: 3 in the B.M., slide no. 1324.

Colpocephalum Penicillatum Piaget. (1880, p. 552, pl. xliv, fig. 2.)

Type host: Ibis cristata = Lophotibis cristata (Boddaert).

B.M.: $1 \le 1 \le Colpocephalum$, slide no. 1325, from type host.

Leiden: $2 \stackrel{\text{QC}}{\downarrow}$, 1 nymph Colpocephalum, slide no 261, from type host.

Present status: Colpocephalum penicillatum Piaget.

Lectotype: 3 in the B.M., slide no. 1325.

Colpocephalum pilosum Piaget. (1885, p. 128, pl. xiv, fig. 1.)

Type host: Chauna chararia = Chauna torquata (Oken).

B.M.: 233, 653, 1 nymph Dicteisia, slides nos. 1309-11, from Palamedea chavaria. 233, 14 Dicteisia in the Hyslop collection from the "crested screamer" (one slide also labelled Chauna chavaria) are probably part of the type material as the original material was sent to

Piaget by Hyslop (see 1885, p. 129).

There is some doubt about the true host of this species: Piaget gives Chauna chavaria in the text but Palamedia chavaria on the slides. This latter name was used by Geoffroy in 1797 for Chauna Chavaria (Linn.) and by Temminek in 1823 for Chauna torquata (Oken). The crested screamer is a vernacular name for Chauna torquata (Oken.) It seems extremely probable that the original Hyslop material was labelled merely "crested screamer", which is Chauna torquata, and that the confusion arose by the later misdetermination of this name as Chauna chavaria: this latter name occurs on one only of the Hyslop slides, is in a different hand-writing, and is probably a later addition to the label. There is some confirmation that the true host of pilosum is Chauna torquata as Piaget's specimens differ from 1 of, 2 pp taken from Chauna chavaria, in the shape of the head and thorax and the last segment of the antenna and resemble Kéler's figure (1938, p. 235) of specimens from Chauna torquata. Simi'arly, the host of Dictesia tristis (Giebel) given as Palamedea chavaria, might have been either chavaria or torquata; it will be shown below that the true host was probably the latter species.

Each of the two species from which specimens have been seen belonging to the two genera of the Anhimidae, Chauna and Anhima, is parasitized by three species of Dicteisia, separable with the naked eye. Kéler (1938, 234-236) figured two of these: one he called Dicteisia tristis (Giebel), 1874, a female (fig. 3, 235) from a collection of 20 99, 9 33 and 2 nymphs from Chauna cristata (which is Chauna torquata (Oken)) from Trinidad, and he implied that the males of this lot were identical with the single male type of Menopon triste Giebel in the Halle collection (now destroyed). There are also two males in the Meinertzhagen collection from Chauna torquata compared with the type of Menopon triste Giebel by Dr. Kéler and found to be conspecific. The types of Colpocephalum pilosum Piaget are conspecific with these specimens and with the female of triste as figured by Kéler (1938, 235, fig. 3); pilosum thus becomes a synonym of triste.

Carriker (1949, 303) is correct in stating that Kéler's figure (1938, 236, fig. 4) is not pilosum and that fig. 3 (ibid., 235) does represent pilosum, but not in suggesting that Kéler had confused the two and that his figure labelled "pilosa" is triste, because Kéler had seen the type of triste and so alone knows which this species is. Carriker (1949, 304) described a new species, D. gracilis, from Chauna chavaria which is almost certainly based on nymphs, as the head shows the Y-shaped suture characteristic of many nymphs of the Menoponidae. The shape of the head suggests that this is the nymph of a species similar to that figured by Kéler as "pilosa Piaget" from C. torquata. However, as tristis seems to be at least subspecifically distinct on Chauna chavaria and torquata, it is possible that this other species is also different on the two hosts. Therefore, before either making "pilosa Piaget" sensu Kéler a synonym of gracilis Carriker or renaming the former species it is necessary to examine further material from Chauna chararia and to identify the adults of gracilis and compare them with Kéler's "pilosa".

The third species found on the Anhimidae is somewhat similar to Kéler's "pilosa" but the narrowing of the posterior segments of the female abdomen is more marked.

Present status: Dicteisia tristis (Giebel).

Lectotype of Colpocephalum pilosum Piaget: \$\partial\$ in the B.M., slide no. 1311.

COLPOCEPHALUM PUNGENS Piaget. (1890, p. 253, pl. x, fig. 7.)

Type host: Calorais panayensis := Aplonis panayensis (Scopoli).

B.M.: 19 Myrsidea, slide no. 1327, from type host.

Present status: Myrsidea punyens (Piaget).

Colpocephalum pustulatum Piaget. (1880, p. 522, pl. xliji, fig. 6.)

Type host: Gypogeranus (Spizaetus) cirratus. Error.

B.M.: 1 Actornithophilus, slide no. 1312, from type host.

The true host of this species is presumably one of the Charadriiformes.

Present status: Actornithophilus pustulatus (Piaget).

Colpocephalum Pustulosum Piaget. (1880, p. 559, pl. xlvi, fig. 8.)

Type host: Machetes pugnax=Philomachus pugnax (Linn.).

B.M.: 13, 2 \mathfrak{P} Actornithophilus, slides nos. 467-8; 13 Austromenopon, slide no. 468, from type host.

Leiden: 1 3, 1 ♀ Actornithophilus, slide no. 255*, from type host.

The figure is obviously that of the Actornithophilus specimens, the single male Anstromenopon can, therefore, be ignored. Piaget's type-material agrees with authenticated material from the type host. Colpocephalum cornutum, Giebel, 1866 (nec C. cornutum Rudow, 1866) from the same host, can, in the loss of the types, be assumed to be the same as Piaget's species. A decision as to whether pustulosus Piaget is the same as umbrinum Burmeister as Piaget believed, and as is suggested by the figure of this latter species (in Giebel, 1874, pl. xiv, fig. 4) must await a revision of the whole group.

Present status: Actornithophilus pustulosus (Piaget).

Lectotype: 3 in the B.M., slide no. 467a.

Colfocephalum quadripustulatum Burmeister, 1838, sensu Piaget. (1880, p. 546, pl. xlv, fig. 6.)

Type host: Ciconia alba=Ciconia c. ciconia (Linn.). Piaget's hosts: Type host and Ciconia nigra (Linn.).

B.M.: 19 Actornithophilus, slide no. 1328, from type host.

There is little doubt, from the figure of Burmeister's material (in Giebel, 1874, pl. xiii, fig. 7), that his species is a Ciconiphilus. Piaget's female specimen (the male mentioned in the original description is not in the collection) is a straggler, presumably from one of the Charadriformes and his description and figure should be ignored. The Denny collection contains $2 \, \text{GS}$, $1 \, \text{$\mathbb{C}$}$ Ciconiphilus from Ciconia alba, which are presumably the specimens sent to Denny by Burmeister (Denny, 1842, 216) and on which Denny based his figure and description of C. quadripustulatum. As Burmeister worked on the Nitzsch collection it is possible that these specimens are some of the "many specimens" collected from a young stork by Nitzsch in 1814 (see Giebel, 1874, 271), and on which Nitzsch's description and figure (in Giebel, 1874) were made—à confirmation that Burmeister's original description applied to the Ciconiphilus species from Ciconia alba.

Colpocephalum semicinctum Rudow, 1866, sensu Piaget. (1880, p. 528, pl. xliv, fig. 1.)

Type host: Corvus scapulatus=Corvus albus Müller.

B.M.: 455, 457 Colpocephalum, slides nos. 1329-31, from type host. There is no doubt that Rudow's description refers to the typical

Corvine Colpocephalum as represented by Piaget's specimens and figure.

Present status: Colpocephalum semicinctum Rudow.

Colposephalum setosum Piaget. (1880, p. 519.)

Colpocephalum caudatum var. setosa Piaget.

Type host: Helotarsus (Circaëtus) ecaudatus=Terathopius ecaudatus (Daudin).

B.M.: 16, 2 \(\partial\) Colpocephalum, slide no. 1151, from type host.

Present status: Colpocephalum setosum Piaget. Lectotype: 3 in the B.M., slide no. 1151.

Colfocephalum setosum Piaget. (1880, p. 521, pl. xliii, fig. 5.)

Type host: Cathartes (Sarcorhamphus) gryphus=Vultur gryphus Linn. B.M.: $1 \, \beta$, $2 \, \varsigma \varsigma$ Colpocephalum, slide no. 1332, from type host.

Leiden: 13, 1? Colpocephalum, slide no. 294*, from type host.

These specimens agree with authenticated material of one of the species normally found on the type host. This name being pre-occupied

by setosum Piaget, 1880, 519, it was re-named trichosum by Harrison, 1916, 55.

Present status: Colpocephalum trichosum Harrison.

Lectotype of Colpocephalum setosum Piaget: 3 in the B.M., slide no. 1332.

Colfocephalum setosum Piaget. (1885, p. 126, pl. xiii, fig. 8.)

Colpocephalum abdominale var. setosa Piaget.

Type host: Crax carunculata. Error.

B.M.: 13, 2 \(\frac{1}{2}\), 2 nymphs Heleonomus, slides 1375-6 labelled Colpocephalum truncatum, from Grus caruncutata.

There are no slides in the collection labelled either with the varietal name nor with Crax carunculata. The figures obviously represent a species of Heleonomus. The alleged host, Crax carunculata (=Crax globulosa), is a member of the Galliformes, an order from which Heleonomus is not known, nor is there any member of the Gruidae found in the same locality as Crax globulosa. There is, however, a Grus carunculata (=Bugeranus carunculatus (Gmelin)) and it seems likely that this is the actual host of sclosa, a badly written "Grus" might have been interpreted as "Crax". Additional evidence supporting this supposition is the presence in the Piaget collection of the specimens of Heleonomus listed above from Grus carunculata and it is presumed that this material is that on which Piaget based his description of sclosa.

Hopkins (1947, 180) has shown that *Bugeranus carunculatus* is almost certainly the true host of *Heleonomus harrisoni* (Bedford). Piaget's specimens from the same host have been compared and found to agree with the male and female *H. harrisoni* mentioned by Hopkins (*ibid.*), the female being a co-type, and the male one of the original series. Piaget's name being pre-occupied by *setosum* Piaget, 1880, Bedford's name can be used for this species.

Present status: Heleonomus harrisoni (Bedford).

Lectotype of $Colpocephalum\ abdominale\ var.\ setosa\ Piaget:\ 3$ in the B.M., slide no. 1375.

Colpocephalum spinosum Piaget. (1880, p. 537, pl. xliv, fig. 9.)

Type host: Francolinus capensis (Gmelin).

B.M.: 15, 19 Clayia, slide no. 1337, from type host.

Leiden: 15, 2 \updownarrow Clayia, slide no. 252*, from type host.

Present status: Clayia spinosa (Piaget). Lectotype: 3 in the B.M., slide no. 1337.

Colpocephalum spinulosum Piaget. (1880, p. 563, pl. xlvii, fig. 3.)

Type host: Limosa melanura=Limosa l. limosa (Linn.).

B.M.: 13, 12 Actornithophilus, slide no. 1338, from type host.

These specimens agree with authenticated material from type host.

Present status: Actornithophilus spinulosus (Piaget).

Lectotype: 3 in the B.M., slide no. 1338.

Colpocephalum subflavescens Piaget. (1880, p. 571, pl. xlviii, fig. 2.)

Type host: Xenorhynchus senegalensis=Ephippiorhynchus senegalensis (Shaw).

B.M.: $1 \, \mathcal{Z}$, $1 \, \mathcal{Q}$ Colpocephalum, slide no. 1339, from type host.

These specimeus are not conspecific with *tibiale* Piaget nor *oreas* Kellogg and no similar species has been seen from the type host. These either represent a third species of *Colpocephalum* from the type host or they are stragglers from another of the Ciconiiformes.

Present status: Colpocephalum subflavescens Piaget.

Lectotype: 3 in the B.M., slide no. 1339.

Colpocephalum subpachygaster Piaget. (1880, p. 517, pl. xliii, fig. 2.)

Type hosts: Strix noctua=Athene noctua (Scopoli), S. flammea=Tyto alba (Pontopp.) and S. passerina=Athene noctua (Scopoli) or Glaucidium passerinum (Linn.).

B.M.: 3 + 7, 1 nymph Kurodaia, slide no. 1119, from S. noctua; 2 + 9, Kurodaia, slide no. 1120, from S. flammea; 1 + 3, 1 nymph Kurodaia, slide no. 1118 from S. passerina.

Leiden: $4 \subsetneq \bigvee Kurodaia$, slide no. 245*, from S. noctua.

It is difficult to know what bird Piaget meant by S. passerina. This name, as already shown (Clay, 1949, 898) has been used for Athene noctua and Glaucidium passerina; Nitzsch and Giebel almost certainly used the name for the little owl (Athene noctua); Piaget, however, in his list of hosts (1880, 684) gives Strix noctua, Strix passerina and Strix pygmea (the alternative name for Glaucidium passerina). As there is some doubt about the interpretation of the name, the specimens from "S. passerina" will be ignored. The Kurodaia species from Athene noctua is K. cryptostigmation (Nitzsch) (see Clay, 1949, 898), and as the species from Tyto alba has no name, one of the specimens from that host, which are the same as authenticated material, will be designated as lectotype.

Present status: Kurodaia subpachygaster (Piaget).

Lectotype: Q in B.M., slide no. 1120, from S. flammea=Tyto alba.

Colfocephalum subpenichlatum Piaget. (1885, p. 123, pl. xiii, fig. 6.)

Type host: Ibis hagedasch=Hagedashia hagedash (Latham).

B.M.: 1 3, 2 99 Colpocephalum, slides nos. 1341-2, from type host.

The two females in the Piaget collections are not conspecific. As one of these may be a straggler, no lectotype will be designated until the species of Colpocephalum from Hagedashia hagedash have been fully studied.

Present status: Colpocephalum subpenicillatum Piaget,

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Colfocephalum splicatum Piaget. (1880, p. 565, pl. xlvii, fig. 5.)

Type host: Sterna nigra = Chlidonias nigra (Linn.).

B.M.: 1 nymph Actornithophilus, slide no. 1394, from type host.

The species has been discussed above under C. maurum.

Present status: Actornithophilus maurus (Nitzsch).

Colpocephalum temporale Piaget. (1890, p. 252, pl. x, fig. 6.)

Type host: Macroglossus aterrimus=Probosciger aterrimus (Gmelin).

B.M.: 1? Psittacomenopon, slide no. 1308, from type host.

Menopon commissum Neumann from the same host may prove to be a Psitlacomenopon and to be conspecific with temporale.

Present status: Psittacomenopon temporale (Piaget).

Colpocephalum tibiale Piaget. (1888, p. 163, pl. iv, fig. 6.)

Type host: Tantalus senegalensis=Ephippiorhynchus senegalensis (Shaw).

B.M.: 5 33, 733 Colpocephalum, slides nos. 1345-1348, from the

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Through the kindness of Dr. Malaise it has been possible to examine a male and female cotype of Colpocephalum oreas Kellogg and a male and female (probably cotypes) of C. ephippiorhynchi Mjöberg now in the Naturhistoriska Riksmuseum, Stockholm. The hosts of C. oreas were originally given as Herodias alba (=Casmerodius albus melanorhynchos (Wagler)), Ephippiorhynchus senegalensis and Aplopelia larvata. The cotypes in the Stockholm Museum are labelled Ardea alba, but agree with the cotypes of ephippiorhypchi and with authenticated material from Ephippiorhynchus senegalensis. It can be presumed, therefore, that this latter host is the true host of oreas. The specimens labelled C. ephippiorhynchi Mjöberg were taken from Ephippiorhynchus senegalensis in Khartoum and determined by Mjöberg and can be presumed to be part of the type material. C. ephippiorhynchi Mjöberg becomes a synonym of C. oreas Kellogg.

Piaget's type material of C. tibiale comprises two species, neither of which is conspecific with the two species discussed above. One of the species is, however, conspecific with C. ferrisi Bedford, stated in the original description to have come from Ciconia nigra but probably (see Hopkins, 1950, 237) actually from Sphenorhynchus abdimi. This identification suggested a comparison of Piaget's second species with another species normally found on this later host, and it was also found to be conspecific. It seems most likely, therefore, that the true host of tibiale is Sphenorhynchus abdimi. A female of the second species was well figured by Piaget and a female of this species will be selected as lectotype. C, tibiale can be distinguished from ferrisi by the shape of the head in both sexes and in the male by the presence in ferrisi of stout spine-like setæ on the hind margins of the second and third femora.

Present status: Colpocephalum tibiale Piaget. True host probably

Sphenorhynchus abdimi Lichtenstein.

Lectotype: \mathcal{Q} in the B.M., slide no. 1347; paratypes: $3 \mathcal{A} \mathcal{A}$, $4 \mathcal{Q} \mathcal{Q}$.

Colpocephalum Tricinctum Nitzsch, 1861, sensu Piaget. (1880, p. 521.)

Type host: Milvus ater = Milvus migrans migrans (Boddaert).

Piaget's host: Type host.

B.M.: 12, 1 nymph Colpocephalum, slide no. 646, from type host.

Although the single female is teneral it seems to be conspecific with the species normally found on Milvus m. migrans, which can be presumed to be Colvocenhalum tricinctum Nitzsch.

Present status: Colpocephalum tricinctum Nitzsch.

Colpocephalum trimaculatum Piaget. (1880, p. 525, pl. xliii, fig. 8.)

Type hosts: Platycercus palliceps=Platycercus adscitus palliceps Lear, P. barrabandi—Polytelis swainsonii (Desmarest).

B.M.: $3 \not\in \mathcal{C}$, $3 \not\in \mathcal{C}$ Colpocephalum, slides nos. 1069–71 from P. palliceps;

1 & Colpocephalum, slide no. 1072 from P. barrabandi.

Leiden: 13.19 Colpocephalum, slide no. 247, from P. palliceps.

Type host of this species will be fixed as P. a. palliceps by designating one of the males allegedly from this host as lectotype. However, this species does not belong to the Colpocephalum group, usually distinguished as the genus Psittacomenopon, found on the Psittaciformes, but resembles some of the less modified species of Colpocephalum found on the Falconiiformes: Piaget's specimens are possibly stragglers from a member of this latter order.

Present status: Colpocephalum trimaculatum Piaget.

Lectotype: 3 in the B.M., slide no. 1069.

Colpocephalum Trispinum Piaget. (1885, p. 122, pl. xiii, fig. 5.)

Type host: Theristicus caudatus (Boddaert).

B.M.: 4 33, 4 22 Colpocephalum, slides nos. 1362-4, from type host. These specimens agree with authenticated material from the type host.

Present status: Colpocephalum trispinum Piaget.

Lectotype: 3 in B.M., slide no. 1363.

Colpocephalum trochioxum Burmeister, 1838, sensu Piaget. (1880, p. 550, pl. xlv, fig. 9.)

Type host: Ardea stellaris Botaurus s. stellaris (Linn.). Piaget's hosts: Type host and Ardea purpurea Linn.

B.M.: 13.12 Ardeiphilus, slide no. 1365, from type host: 13.12Ardeiphilus, slide no. 1366, from Ardea purpurea.

Leiden: 15, 12 Ardeiphilus, slide no. 258, from type host.

Piaget's specimens from Botaurus stellaris and Ardea purpurea seem to be conspecific with each other and with authenticated material from the former host. The specimens from the second host are possible stragglers from Botaurus stellaris. The Nitzsch figure (Giebel, 1874, pl. xiii, fig. 8) of the type material of trochioxum Burmeister shows the species to be an Ardeiphilus,

Present status: Ardeiphilus trochioxus (Burmeister).

Colpocephalum truncatum Piaget. (1880, p. 540, pl. xlv, fig. 2.)

Type host: Grus cinerea (communis)=Grus q. grus (Linn.).

B.M. and Leiden: No specimens.

There are specimens of *Heleonomus* in the collection labelled C. truncatum from various species of Grus but none from the type host. There is no doubt, however, that Piaget's figure represents a species of Helconomus.

There is a figure of Colpocephalum macilentum Nitzsch (from the same host) in the Nitzsch manuscript (volume iv, p. 269) showing it to be a typical Heleonomus and it can be assumed that truncatum is conspecific with this species.

Present status: Heleonomus macilentus (Nitzsch).

Colpocephalum umbrinum Piaget. (1880, p. 556, pl. xlvi, fig. 6.)

Type host: Tringa subarquata = Erolia testacca (Pallas).

B.M.: 1 & Actornithophilus, slide no. 1379, from type host.

Piaget's specimen agrees with authenticated material from the type host, and, as he states, differs from C, umbrinum Burmeister as figured by Nitzsch (Giebel, 1874, pl. xiv, fig. 4), allegedly from the same host (see also above under pustulosum). The name thus being pre-occupied by umbrinum Burmeister, Harrison (1916, 56) renamed it umbrosus. The female mentioned in the original description is no longer in the collection.

Present status: Actornithophilus umbrosus (Harrison).

Colpocephalum unicolor Rudow, 1866, sensu Piaget. (1880, p. 535, pl. xliv, fig. 7.)

Type host: Carpophaga samoensis=Ducula pacifica microcera (Bonaparte).

Piaget's host: Carpophaga bicolor=Ducula bicolor (Scopoli).

B.M. and Leiden: No specimens.

Piaget's figure does not represent a species of Colpocephalum of the type found on the Columbidae, nor does it seem to represent a Hohors tiella: it must be considered as generically unidentifiable and should be ignored.

Colpocephalum uniseriatum Piaget. (1880, p. 562, pl. xlvii, fig. 2.)

Type host: Recurvirostra avocetta Linn.

B.M.: 13, 499 Actornithophilus, slides nos. 1380-2, from type host.

Leiden: 1 ? Actornithophilus, slide no. 254*, from type host.

Present status: Actornithophilus uniscriatus (Piaget).

Lectotype: 5 in B.M., slide no. 1380.

Colpocephalum zebra Burmeister, 1838, sensu Piaget. (1880, p. 546, pl. xlv, fig. 6.)

Type host: Ciconia alba=Ciconia c. ciconia (Linn.).

Piaget's host: Type host.

B.M.: 233, 432 Colpocephalum, slides nos. 1383-5, from type host. Nitzsch's figure of zebra (Giebel, 1874, pl. xiii, fig. 6) drawn from the type-material shows that this is the characteristic Colpocephalum species found on the type host: Piaget's specimens belong to the same species Present status: Colpocephalum zebra Burmeister.

References.

CARRIKER, M. A. 1949. Neotropical Mallophaga Miscellany V. Rev. Brasil Biol. 9,

CLAY, T. 1949. Systematic Notes on the Piaget Collections. Pt. I. Ann & Mag. Nat. Hist. (12), 2, 811-838, 895-921.

CLAY, T., & HOPRINS, G. H. E. 1950. The Early Literature on Mallophaga. Bull. Brit. Mus. (Nat. Hist.). Entom. 1, 223-272.

Eichler, W. 1937. Einige Bemerkungen zur Ernahrung und Eiablage der Mallophagen. Sitz. ges. naturf. Fr. Berl. 80-111.

HOPKINS, G. H. E. 1947. Stray Notes on Mallophaga.—VII. Ann. & Mag. Nat. Hist. (11), 13, 170-183.

---. 1950. Stray notes on Mallophaga. - X. Ann. & Mag. Nat. Hist. (12), 3, 230-242. KELER, S. 1938. Uber einige Mallophagen aus Paraguay & Kamerun. Arb. morph. tax. Ent. Berlin-Dahlem, 5, 228-241.

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