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A Redescription of *Dennyus major* (UCHIDA)  
from the Needle-tailed Swift  
*Hirundapus caudacutus caudacutus*

(Mallophaga) †

Hiroshi NAKAGAWA

ハリオアマツバメに寄生するハジラミの 1 種

*Dennyus major* (UCHIDA), 1926 について

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農学集報

第5卷 第1号(1959, 7) 別刷

Reprinted from Journal of Agricultural Science Tokyo Nogyo Daigaku

Vol. 5, No. 1 May, 1959



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INTRODUCTION

In 1926, UCHIDA described a new species of Mallophaga based on two females, two males and nymph from the needle-tailed swift (*Hirundapus caudacutus caudacutus*), and he erected a new genus *Takamatsuia* for this species on the strength of the larger size of body, the shape of abdominal segment VIII & IX in both sexes and the male genitalia.

Generally the swifts or APODI are being parasited by two amblycerial genera of Mallophaga; *Eureum* and *Dennyus*. *Takamatsuia*, which is more closely related to *Dennyus* than to *Eureum*, was listed by EWING (1930) as a synonym of *Dennyus* without any discussion or actual examination of the specimens, and HOPKINS & CLAY (Checklist of the Genera & Species of Mallophaga 1952,) were in agreement with EWING. Recently CARRIKER (1954) reviewed the genus *Dennyus* and gave a sympathetic statement on the generic position of this species; he said, "I am of the opinion that this species may be entitled to subgeneric rank, but without actual examination of specimens I hesitate to do this".

I have also been undecided as to the generic rank of this species, that is, whether it belongs in true *Dennyus* or in un-recognized *Takamatsuia*. Certainly it presents peculiar characters in the modified segments of both sexes. The original description is excellent, but it does not give some important characters such as the shape and the chaetotaxy of the prosternal plate and so on, so that I have wished to examine the actual specimens. Fortunately I obtained a single female of the species from the type host through the co-operation of Mr. Takeshi KAWAI of the Entomological Laboratory of Tokyo Agricultural University. As will be shown later in this paper, on the whole it may safely be placed in *Dennyus*, but it is the most distinctive of all known species of the genus. *Takamatsuia* should, therefore, be regarded as having subgeneric status to accommodate *D. major* (UCHIDA).

† Manuscript received February 5, 1959.

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## ACKNOWLEDGMENTS

I am deeply indebted to Drs. Kiyoshi ASANUMA and Seinosuke UCHIDA and Prof. Hiromasa SAWADA for their encouragement and guidance. I am also deeply indebted to Mr. Takeshi KAWAI for collecting this interesting louse. I wish to express my hearty appreciation to Dr. Theresa CLAY of British Museum (Nat. Hist.) for reading through of MS and for a gift of neoparatypes of *D. hirundinis* (L.).

## DESCRIPTION

*Dennyus* (*Takamatsuia*) *major* (UCHIDA), 1926.

Type host: *Hirundapus caudacutus caudacutus*

*Takamatsuia major*; UCHIDA, 1926, J. Coll. Agric. Tokyo, 9: 32, figs. 10, 11.

*Dennyus major*; EWING, 1930, Proc. U.S. Nat. Mus., 77 (20): 8.

*Dennyus major*; HOPKINS & CLAY, 1952, Checklist of Mallophaga, 115.

*Dennyus major*; CARRIKER, 1954, Proc. U.S. Nat. Mus., 103: 543.

*Dennyus major*; NAKAGAWA, 1957, Shin-Konchu, 10 (12): 41.

Examined Material. A female from the type host shot in Hokkaido, in July, 1958. Pale yellow brown in colour in material preserved in alcohol. The largest species in the genus. Length 3.4 mm.

*Head.* The general shape resembles closely that of *D. spininotus* from *Cypseloides fumigatus*. Head is over 1.5 times as wide as long, with antero-lateral sides flatly convex; with much expanded temple. Chaetotaxy illustrated in Fig. A; frons with two marginal setae and some minute setae, two of which being situated bilaterally to a median line; laterally with four setae; pre-antennal area with two long setae and a shorter seta. Temple with four pustulated setae, three median setae and two microsetae. Occipital margin with two pairs of setae. In addition to the above setae, there are three smaller spines as shown in the figure. In *D. hirundinis*, type species of the genus, from the European swift, these hairs are not spine-like. Genal plate with 7 or 8 pairs of setae, of which the lowermost are the longest and are placed outside the plate.

*Thorax.* Prothorax is of the usual type for the genus; quadrilateral in shape, encircled by a sclerotized band, with one longer seta and two spines on each anterior angle, two long setae on each rounded posterior angle and one on the posterior margin each side. Prosternal plate broad anteriorly, and with a wide marginal band; there is a long seta at each anterior corner of the clearer area and 8 rather heavy short spines irregularly set within it. Mesothorax separated by a curved suture from metathorax; without setae except for a microseta on posterior margin. Mesosternum with about 15 setae. Metathorax bearing a series of setae of various lengths and two spines on the posterolateral margin. There are two spines below the anterior margin and one spine on the lateral margin. Legs are normal for the genus. Hind

femora slender, with a patch ventral setae.

*Abdomen.* Broad, widest at segment V. The setae along the posterior margin of the tergites are thick and closely set, be mixed irregularly with some long setae; there are two longish setae at the posterolateral angle of tergite II to VII. The greater portion of the paratergal plates lies on the ventral side; they are rather narrow and deeply coloured, with 6 or 7 spines on the posterior margin. The dorsal portion of pleurites II to VII contains a sclerotized incassation which has two peaks. Short setae are scattered irregularly over the sternites, and sternite V, VI and VII have a distinct patch of setae on each side, the lower one of which is sparser than the two anterior ones. The posterior margin of tergite VIII is deeply emarginated and the posterior angle projected backwards. The projection forms a ventral lobe which bears 7 setae, of which two are longish. Segment IX is smaller and enclosed within a deep emargination of the margin of segment VIII, and this latter segment has two long dorsal setae on each side and a fringe of slender setae, the lateral setae of the fringe being represented by stout setae. The ventral fringe is very characteristic, as shown in Fig. C; the lateral four setae being fairly longer than other setae of the fringe and plumping up to a point.

*Remarks.* Some ornithologists use the genus *Chaetura* in a very wide sense, while others split it up into a number of genera. The fourth edition (1958) of "A Hand-List of the Japanese Birds" by the Ornithological Society of Japan, included *caudacutus* in the genus *Chaetura*. From an aviparasitological point of view there is objection to this treatment because, as far as an examination of the *Dennyus* species from the needle-tailed swift shows, there are no affinities which would justify the inclusion of this swift under *Chaetura*. Aviparasitology supports the view that the avian genus *Hirundapus* for *caudacutus* should be recognized, as was done by PETERS.

#### Explanation of Figures

The female of *Dennyus major* (UCHIDA):

- A. Head and thorax (dorsal & ventral aspects).
- B. Prosternal plate.
- C. Terminal abdominal segments (dorsal & ventral aspects).

## 摘 要

ハリオアマツバメに寄生するハジラミの 1 種  
*Dennyus major* (UCHIDA), 1926 について

中 川 宏\*

(昭和 34 年 2 月 5 日受理)

一般にアマツバメ *APODI* には固有のハジラミとして、短角羽虱群に所属する *Dennyus* 及び *Eureum* の 2 属が寄生するのであるが、内田清之助博士 (UCHIDA, 1926) はハリオアマツバメに寄生するハジラミの 1 種を記載し本種のために新属 *Takamatsuia* を設立し、そのハジラミを *Takamatsuia major* と命名した。

本属は外国の研究者により無視されてきたが、筆者は東京農業大学昆虫学研究室河合武氏の協力をえて、基本宿主より原記載以後始めて標本を追加することができた。

この標本と *Dennyus* の属模式種 *D. hirundinis* (宿主、ヨーロッパアマツバメ *Apus apus apus*) の新副模式標本及び他種の記載と比較検討した結果、*Takamatsuia major* は概ね *Dennyus* におかれるのが妥当であること、しかし本種において末端節の構造が *Dennyus* の既知種と明らかに異り、近似性をもたぬ事実から、*Dennyus* における一亜属として *Takamatsuia* を認めるべきであるとの結論に達した。

筆者は原記載にないいくつかの特徴を追記すると同時に、鳥類寄生虫学の見地から宿主ハリオアマツバメの分類学上の位置に言及し *Hirundapus* の独立性を論じた。

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