ANALGOID MITES (PROCOTOPHYLLOIDIDAE) FROM THE DICAEIDAE
(AVES: PASSERIFORMES)†

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Abstract

Four species of Monojoubertia Radford, 1950 (Proctophyllodidae, Proctophyllodinae) are (re)described: M. securigera (Trouessart, 1885) [= Proctophylloides (Alloptes) securiger] from Dicaeum hirundinaceum, Australia; M. parvisecurigera, sp. n., from D. hirundinaceum, Australia; M. marquardti, sp. n., from D. concolor, Thailand and D. cruentatum, Indochina; M. cristata, sp. n., from D. celebicum, Celebes.

The Dicaeidae, or flowerpeckers, are a family of fifty-four species occurring in Australia, southeast Asia, the Philippine Islands, and east to the Solomon Islands. The species are somewhat gregarious and nonmigratory. In the limited collections of feather mites from these birds I have four species of Monojoubertia Radford, 1950. These species form a small species complex in which the males are robust, have distinct pregenital apodemes, and have setae d, small and inserted marginally or ventrally, and the females have the pregenital apodeme semicircular and extended beyond setae c2 (chaetotaxal signatures follow Atyeo and Gaud, 1966; for generic diagnosis see Atyeo and Gaud, 1971).

Two mite species on Dicaeum hirundinaceum in Australia are practically indistinguishable except for the genital regions of the males. Two other species, taken from different species of Dicaeum and in different geographical regions, are also extremely similar to each other; again, the primary differences between them are the male genital regions. The phenomenon of two similar species on different hosts of the same genus is not unusual, but to find two almost indistinguishable species on one host is rare. The two Monojoubertia species from Dicaeum hirundinaceum have not been collected on the same host individual.

Monojoubertia securigera (Trouessart) comb. n.
Figs. 1-4, 7-9


Type data.—From Dicaeum (= Microchelidon) hirundinaceum, Australia; location of type: unknown.
Neotype designation.—Male from Dicaeum h. hirundinaceum, Oenpelli, NORTHERN TERRITORY, Australia, April 17, 1948, H. G. Deignan; the neotype is deposited in the U.S. National Museum of Natural History, Washington, D.C., U.S.A.

The type specimens of Proctophylloides (Alloptes) securiger are apparently lost and Trouessart’s (1885) description of the species could refer to any of the four species included in this study. Pertinent phrases of the original description are:

"... chaque lobe terminé par une feuille transparente sécuriforme ... croisée avec celle du côté opposé; un poil grêle est inséré sur cette feuille même.... Organe genital [= genital sheath] grand, pyriforme, surmonté d’un pénis grêle, long et flagelliforme, rabattu en arrière.... Sur Microchelidon hirundinaceus d’Australie."

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Male

Length, including gnathosoma and lamellae, 337μ; width, 193μ. Idiosoma with hysterosomal shield tapering to setae e; series of protruding lateral plates posterior to legs IV; crossed terminal lamellae bearing setae pai and d, dorsally and reduced d, ventrally; epimerites I U-shaped, weakly connected; genital organ 92μ in length, extending to adanal discs; setae d, and a in trapezoidal arrangement and inserted on weakly joined subgenital (opisthogastric) shields. Legs 5-segmented although genua and femora of legs III-IV appear partially fused; tarsus IV with apicoventral claw and 3 setae.

Female

Length, excluding terminal appendages, 383μ; width, 154μ. Idiosomal dorsum typical of Proctophylloides species with setae d, inserted on anterior hysterosomal shield away from midline; epimerites I as in J; large, semi-circular pregenital apodeme surrounding setae e, genital discs, and oviporous; epimerites IIIa + IV well developed and weakly connecting latigynial plates posterior to terminations of pregenital apodeme; epimerites IVa large; terminal cleft rectangular, approximately 50μ x 7μ.

Comments

Five males and five females were available for study from the type host from Queensland or New South Wales (incomplete collecting data) and from Northern Territory (neotype data). Even though the Trouessart Collection and other collections have been personally examined, the designation of a neotype may be premature. However as two closely related species occur on the same host, it seems practical to stabilize the name securingera.

Figs. 7-9.—Monoioberia securingera (Trouessart): (7, 9) ventral and dorsal aspects of female; (8) enlarged oviporus region.

Fig. 10.—(1-4) Monoioberia securingera (Trouessart): (1, 2) ventral and dorsal aspects of male; (3, 4) enlarged genital region. (5, 6) Monoioberia purvisiiTrouessart, sp. n., enlarged genitalic region. Setal designations: a, anal; c, central; h, lateral hysterosomal; peri, peri, external and internal postanal.
**Monojoubertia parvisecurigera** sp.n.
Figs. 5, 6

*Type data.*—From *Dicaeum h. hirsutum*: 3 holotype, 50 paratypes, Port Darwin, Northern Territory, Australia, November 7, 1920, C. M. Hoy. The holotype is deposited in the U.S. National Museum of Natural History; paratypes are deposited in the Australian National Insect Collection and the University of Georgia.

The males of *Monojoubertia securigera* and *M. parvisecurigera* have similarly shaped and short terminal lamellae, lack crests or carinae on tarsi IV, have setae *d*, inserted on the ventral idiosoma at the bases of the lamellae, and occur on the same species of bird. Compared with the following two species, *M. securigera* and *M. parvisecurigera* have shorter opisthosomata. Thus, the subgenital shields are shorter, the distance between the genital arch and anal disc is less and the general shape of the hysterosoma is changed. Although the females are inseparable, the males of *M. parvisecurigera* and *M. securigera* may be differentiated as follows: the genital organ of the former species is short (~65 μ) and bent ventrad at the apex and in *M. securigera* the genital organ is long (~90 μ) and is not bent at the apex (compare Figs. 5, 5).

**Male**

Length, including gnathosoma and lamellae, 386 μ; width, 207 μ. Idiosoma and legs as in *M. securigera* except genital region; genital organ 65 μ in length, extending to level of setae *c* or *a*.

**Female**

Indistinguishable from other females listed in this paper.

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**Monojoubertia marquardi** sp.n.
Figs. 10, 11, 13, 14

*Type data.*—From *Dicaeum concolor*: 3 holotype, 23 paratypes, Khao Soi Dao Tai, Chanthaburi, THAILAND, April 5, 1966; the holotype is deposited in the U.S. National Museum of Natural History and the secondary types are deposited at the University of Georgia.

The two new species, *Monojoubertia marquardi* and *M. cristata*, are similar in having two, long subgenital shields, long terminal lamellae, each tarsus IV with a prominent crest or carina, and setae *d* short and inserted marginally. The species described here has a flagelliform genital organ extending to the bases of the lamellae whereas in *M. cristata* the genital organ does not extend to the posterior limits of the subgenital shields.

**Male**

Length, including gnathosoma, excluding lamellae, 363 μ; lamellar length, 72 μ; idiosomal width, 183 μ. Idiosoma with hysterosomal shield widened anteriorly and posteriorly; lateral margins posterior to legs IV without projections; terminal lamellae regular, leaflike, with only setae *par* inserted at bases; setae *d* inserted on idiosomal margin midway between lamellae and protuberances bearing setae *l*; epiomerites U-shaped, weakly connected; genital organ 157 μ in length and extending to bases of lamellae; setae *c* and *a* in trapezoidal arrangement and borne on long, divided subgenital shields. Legs I–III 5-segmented, legs III–IV with genua and femora fused; tarsus IV with prominent carina, 1 dorsal and 2 ventral setae (Figs. 13, 14).

**Female**

Indistinguishable from females of other species listed in this paper.
WARREN T. ATYEKO

Monojoubertia cristata sp. n.

Fig. 12

_Type data._—From _Dicaeum celebicium_: ♂ holotype, 3♀ paratypes. CELEBES, August 2, 1917, H. C. Raven; 1♂ paratype, same data as holotype except collected August 22, 1917. The types are deposited at the University of Georgia.

The differences and similarites of this species to those previously described have been stated. The crested posterior tarsi and the moderate length of the genital organ are sufficient to distinguish _Monojoubertia cristata_.

_Male_

Length, including gnathosoma, excluding lamellae, 297μ; lamellar length, 55μ; idiosomal width, 159μ. Idiosoma and legs similar to _marquardti_ except slightly smaller, terminal lamellae irregular, genital organ 60μ in length and extending to setae _a_.

_Female_

Indistinguishable from females of other species listed in this paper.

REFERENCES


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**Monojoubertia cristata** sp. n.

**Fig. 12**

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**References**


