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Studies on *Cydnidae* of the Australian Region. VII. On the genus
Aethus DALLAS, 1851*
(Heteroptera: Pentatomoidea)

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ABSTRACT. A revision of the species belonging to the genus *Aethus* DALLAS and distributed in the Australian Region is presented. Nine species previously assigned to the genus are excluded from it; only two, *A. parvulus* SIGNORET and *A. philippinensis* DALLAS, are the genuine representatives of the genus. Lectotype is designated for *A. parvulus* SIGNORET. Notes on the morphological variability of *A. philippinensis* are also given. Key to the two species is provided.

Key words: Entomology, Australian Region, revision, *Heteroptera*, *Aethus*

INTRODUCTION

There have been eleven species of burrower bugs described within or later assigned to the genus *Aethus* DALLAS (*Cydnus* auct.) in the Australian Region, so far. These were: *Cydnus sepulchralis* ERICHSON, 1842 (transferred to *Aethus* DALL. by DALLAS, 1851, then to *Adrisa* AMYOT & SERVILLE by STÅL, 1876); *Cydnus dilatatus* SIGNORET, 1881 (transferred to *Aethus* DALL. by SIGNORET, 1882); *Aethus parvulus* SIGNORET, 1882; *Aethus philippinensis* DALLAS, 1851; *Aethus pygmaeus* DALLAS, 1851 (transferred to *Geotomus* MULSANT & REY by SIGNORET, 1881, then to *Fromundus* DISTANT by LIS, 1994); *Cydnus australis* ERICHSON, 1842 (transferred to *Aethus* DALL. by DALLAS, 1851, then to *Macroscyrtus* FIEBER by SIGNORET, 1881); *Cydnus piceus* WESTWOOD, 1837 (transferred to *Adrisa* AMYOT & SERVILLE by STÅL, 1876); *Cydnus transversus* BURMEISTER, 1834 (transferred to *Macroscyrtus* FIEB. by SIGNORET, 1881);

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Cydnus gestroi SIGNORET, 1881; *Aethus ovatulus* DALLAS, 1851; *Cydnus thoreyi* SIGNORET, 1882.

Recent precise redefinition of the genus *Aethus* DALLAS (LIS, 1994) supported by studies on the primary type material of its Australian species made it clear that only two of the eleven above-mentioned species (*A. philippinensis* and *A. parvulus*) are genuine representatives of the genus *Aethus*. The remaining species pertain to other genera of the tribe *Geotomini* and will be treated elsewhere (LIS, in prep.).

Depositories: University of Opole [Jerzy A. LIS Collection], Opole, Poland (JAL); Museum für Naturkunde, Humboldt-Universität, Berlin, Germany (MNHU); Muséum National d'Histoire Naturelle, Paris, France (MNHN); Nationaal Natuurhistorisch Museum, Leiden, the Netherlands (NNML); National Science Museum, Tokyo, Japan (NSMT); Natural History Museum, London, England (BMNH); Naturhistorisches Museum Wien, Vienna, Austria (NhMW); Zoological Museum, Amsterdam University, Amsterdam, the Netherlands (ZMA); Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Hamburg, Germany (ZIZM).

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TAXONOMY

KEY TO THE SPECIES

1. Clypeus subapically with a pair of peg-like setae (fig. 1); costa with a single setigerous puncture (fig. 2); smaller species, body length about 4.0 mm:
..... *parvulus*
- Clypeus subapically without setae (fig. 3); costa with 2-12 setigerous punctures (fig. 4); larger species, body length exceeding 5.0 mm in length:
..... *philippinensis*

Aethus parvulus SIGNORET, rest. comb.

(figs. 1-2)

Aethus parvulus SIGNORET, 1882: 33.

Cydnus parvulus: LETHIERRY & SEVERIN, 1893: 67.

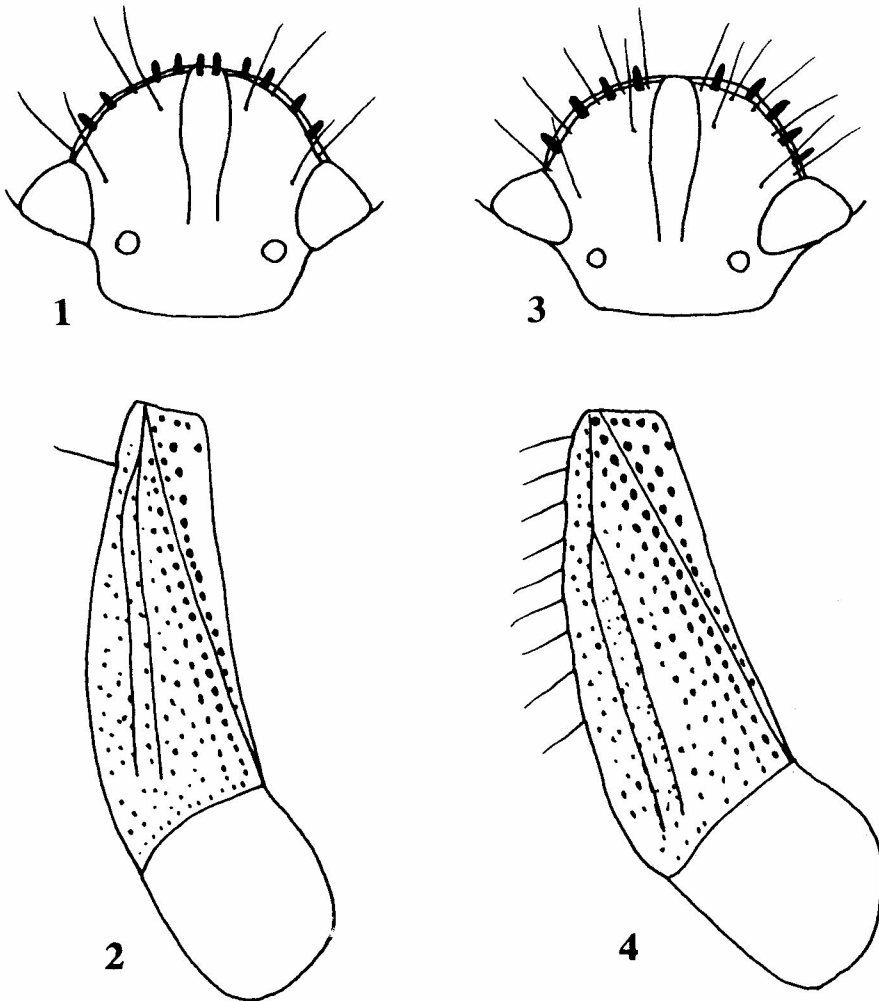
DESCRIPTION

Body dark castaneous; legs, antennae and rostrum pale brown, tarsi yellowish brown.

Head (fig. 1) rounded, dorsal surface impunctate and alutaceous; clypeus as long as paraclypei, subapically with a pair of peg-like setae; each paraclypeus with a submarginal row of 6 setigerous punctures (4 peg-like setae and 2 hair-like setae); eyes

grey-brown, ocular index 2.44; ocelli yellowish brown; antennae with the 3rd segment about 1.4-1.5 times longer than the 2nd.

Pronotum punctured, punctures in lateral parts of a disc slightly larger than those in the posterior half; anterior margin deeply almost angularly insinuated, the posterior broadly rounded; umbones only slightly swollen, not concealing the postero-lateral margins; each lateral margin with 6-7 submarginal setigerous punctures. Scutellum almost evenly punctured, punctures larger than those on pronotum; antero-lateral angles and the basal part impunctate. Propleuron with a few punctures in depression; evaporatoria on meso- and metapleuron large, typical of the genus; apex of peritreme also typical of the genus.



1-2. *Aethus parvulus*; 3-4. *Aethus philippinensis*: 1, 3 - head, 2, 4 - hemelytron

Corium densely evenly punctured, punctures slightly smaller than those on scutellum; clavus with one complete and two partial rows of punctures; mesocorium with two rows of punctures paralleling clavo-corial suture; costa with one setigerous puncture (fig. 2); membrane browned, surpassing the tip of abdomen.

Anterior tibiae expanded apically, outer margin with 6 stout spines.

Sternites laterally transversely wrinkled and weakly punctured.

Total body length: about 4.0 mm, body width: about 2.1 mm.

TYPE MATERIAL EXAMINED

Lectotype female (present designation): Australien, coll. SIGNORET; *parvulus* det. SIGNORET; Type, *parvulus* SIGN., labelled by R.C. FROESCHNER 53 (NhMW).

DISTRIBUTION

Australia.

REMARKS

The lectotype specimen is in very bad condition. Some parts (head with pronotum and left fore leg, anterior wings, and right fore leg) are separated from the main body and glued (together with it) onto one large label. Besides, the pronotum is broken in two pieces.

The figures that accompany SIGNORET's original description of *A. parvulus* (SIGNORET, 1882 - fig. 74) are untrue in some aspects. Lateral margins of pronotum bear 6-7 hair-like setae (not 8-9 as in the SIGNORET's figure), and each paraclypeus bears 6 submarginal setigerous punctures (not 9-10 as shown in SIGNORET's figure).

Aethus philippinensis DALLAS

(figs. 3-4)

Aethus philippinensis DALLAS, 1851: 118; Lis, 1993a: 15, 1993b: 108, 1994: 149.

Cydus Indicus: LETHIERRY & SEVERIN, 1893: 66 [part].

Cydus indicus: SIGNORET, 188: 632 [part].

Aethus indicus: WALKER, 1867: 155 [part]; FROESCHNER, 1967: 12.

Cydus ceylonicus MAYR, 1866: 362, syn. with *A. philippinensis* by LIS, 1993b: 108.

Aethus dilatatus: SIGNORET, 1882: 27 [part].

TYPE MATERIAL EXAMINED

Lectotype male of *Aethus philippinensis* DALLAS (designated by LIS, 1993b: 109): Type; 4222; *Aethus philippinensis* DALLAS, Type; *philippinensis* identified by DALLAS; Brit. Mus. Type No. Hem. 295, Lectotype det. J.A. LIS 1990 (BMNH).

OTHER MATERIAL EXAMINED

AUSTRALIA: Queensland, Brisbane, 3 males, 3 females, 18-II-1959, W.J.M. VESTJENS (ZMA); Australie, Queensl., Emerald, 2 females, 2.II.1971, L. OOSTERWEGHEL (NNML); Queensland, Mt-Elliot National Park, 1 female, 2-XI-1972, L. OOSTERWEGHEL

(NNML); Redlynch-Queensland, 4 males 4 females, xi.1938, B.M. 1949-61, R.F. STERNITZKY, Papuan-Australian Exp. B.M. 1949-61 (BMNH); N. Queensland, Inkerman nr. Townsville, 1 male 4 females, 1908-151, W. STALKER (BMNH); Gatton Qld., 1 male 1 female, 17.iii.1963, K.R. CHAPMAN (BMNH); N[ew] S[outh] W[ales], Coffs Harbours, 2 males, 13.xii.1965, O.M. RICHARDS, B.M. 1966-325 (BMNH); Darwin, N. Territories, 3 males, 1914-441, G.F. HILL (BMNH); N. Australia, Alexandria, 1 male 2 females, W. STALKER (BMNH); Rockhampton, Mus. Godeffroy, 3 females (ZIZM); Ost-Australien, Bondoola, 1 female, W. WAGNER vend, 18.VI.1908 (ZIZM); Australie orien., 1 female, Muséum Paris, v. Mueller 2-96 (MNHN); Australien, 25 females 20 males, Mueller 94, det. as *Aethus indicus* (WESTW.) by R.C. FROESCHNER (NhMW); Port Denison, coll. SIGNORET, 1 female, det. as *Aethus indicus* (WESTW.) by R.C. FROESCHNER (NhMW); Victoria Pt., 1 male, 8.87 (BMNH); PLASON, 4 females, det. as *Aethus indicus* (WESTW.) by R.C. FROESCHNER (NhMW); Plason, Austra., 1 female, 1878 II, det. as *A. dilatatus* by SIGNORET (NhMW).

NEW GUINEA: D.N.-Guinea, Simpsonshafen, 3 males 3 females, V.09, H. SCHOEDE S. G. (MNHU); Ned. Nieuw Guinea, Joka aan Sentanimeer, 80m, 1 male, 21-X-1954, L.D. BRONGERSMA, L.B. HOLTHUIS, Museum Leiden (NNML); Ned. Nieuw Guinea, Hollandia, 0-10m, 1 female, 15-X-1954, L.D. BRONGERSMA, L.B. HOLTHUIS, Museum Leiden (NNML); S. Neth. New Guinea, Tanah Merah, Boven Digoel, 17m, 1 female, 9-IV-1956, L.D. BRONGERSMA, Museum Leiden (NNML).

NEW BRITAIN: Nov. Bretagne, 1 male, Lix 1510-89, Muséum Paris (MNHN).

BISMARCK ARCHIPELAGO: Bismarck-Arch., Ralum, 1 female, 1896-97, DAHL S. (MNHU).

INDONESIA: Indonesia, Timor Is., Oesusu, ca. 500m alt., 1 male 1 female, 20.II.1989, K. FUJITA leg. (NSMT).

DISTRIBUTION

Australia, New Guinea, New Britain, Bismarck Archipelago, Solomon Islands, Indonesia, Malaysia, Philippines, Singapore, Nicobar Islands, South India.

REMARKS

It is one of the commonest species of the genus (LIS, 1993b, 1994), and it is morphologically almost identical with two native Oriental species (*A. indicus* and *A. pseudindicus*). *A. philippinensis* differs from the Oriental species in the shape of the male genitalia as described by LIS (1993b).

Presently studied specimens of *A. philippinensis* expand a known range of variability of several morphological characters (body size, ocular index, number of setigerous punctures on costal margins). The smallest studied specimen (male) measured 5.10 mm in length and 2.95 mm in width (5.65 and 3.10 respectively in previously known specimens). The ocular index reaches 3.35 (a range known till now: 2.50-3.10). A number of setigerous punctures on the costal margin of hemelytra varies from 2 to 12 (a range known till now: 6 to 12). The two Oriental species (*A. indicus*, *A. pseudindicus*) are less variable than *A. philippinensis* in respect above-mentioned characters.

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