

**REASSIGNMENT OF *AGABUS EMINENS* KIRSCH TO *AGLYMBUS* SHARP
(COLEOPTERA: DYTISCIDAE) AND REDESCRIPTION OF THE SPECIES**

KELLY B. MILLER

Department of Entomology
Colorado State University
Fort Collins, CO 80525, U.S.A.

Abstract

The species *Agabus eminens* Kirsch is transferred from *Agabus* Leach to the genus *Aglymbus* Sharp. A lectotype is designated for the species and a full description and illustrations of the specimen are provided.

The genus *Agabus* Leach is Holarctic with species occurring as far south as northern Central America in the New World (Larson 1989). Therefore, it seemed unlikely to me that *Agabus eminens* Kirsch, described from Peru, was placed in the correct genus. Upon examination of the type, I discovered that the species belongs not to *Agabus* but to *Aglymbus* Sharp of the tribe Cope-latini. This is evident by the combination of lack of setae on the postero-external angle of the posterior femora, the slender metasternal wings which are deflexed on the outside of the coxa, effacement of the metacoxal lines and general appearance of the type.

Sharp (1882) first considered the possibility that *A. eminens* was incorrectly placed. However, he was unable to attribute it to any genus based on the description. Zimmermann (1920) and Spangler (1981) also questioned the generic placement of the species.

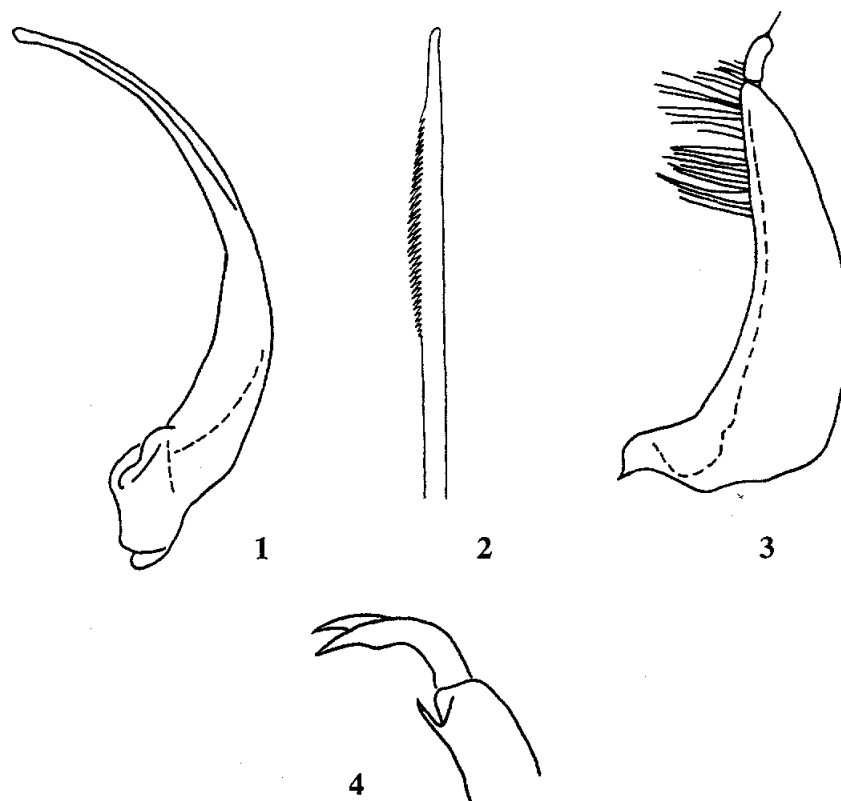
The genus *Aglymbus*, as presently defined, occurs in Africa, Madagascar and South America (Guéorguiev 1968). Previously, eleven species have been reported from South America: nine listed by Guéorguiev (1968), *A. festae* (Griffini), transferred from *Lacconectus* Motschulsky by Brancucci (1986), and a recently described species, *A. bimaculatus* Resende and Vanin (1991). *Aglymbus gestroi* Sharp, reported from Trinidad by Zimmermann (1920) and Blackwelder (1944), is actually an Ethiopian species (Guéorguiev 1968). This information was apparently overlooked by Resende and Vanin (1991). As noted by Sharp (1882), Scott (1912) and Resende and Vanin (1991), specimens of *Aglymbus* are relatively rare in collections. Resende and Vanin (1991) hypothesized that the species may be adapted to undercollected, specialized habitats such as bromeliads.

Because the original description lacked sufficient detail and the type specimen was available to me, I have redescribed and illustrated the species herein. Measurements were taken with the aid of an ocular micrometer in a Wild M3C dissecting microscope. Illustrations were made using a drawing tube mounted to a Wild M3 dissecting microscope.

Aglymbus eminens (Kirsch), **new combination**

Figs. 1–4

Agabus eminens Kirsch 1873:131. Lectotype by present designation—male, in Staatliches Museum für Tierkunde, Dresden, labeled, "Pozuzu, M.



Figs. 1-4. *Aglymbus eminens*. 1) protarsal claws; 2) median lobe of aedeagus, lateral view; 3) median lobe of aedeagus, dorsal view; 4) paramere.

Kirsch [green label]/ Typus [red label]/ Staatl. Museum für Tierkunde, Dresden/ LECTOTYPE *Agabus eminens* Kirsch 1873, designated by K.B. Miller 1997 [red label with double black line border]." The specimen is dissected with the genitalia in a microvial of glycerin mounted on the pin. Kirsch did not indicate how many specimens he had when he described the species nor did he designate a type specimen. Therefore, the single specimen examined from Staatliches Museum für Tierkunde, Dresden is designated as lectotype.

Description. Measurements. Length = 5.6 mm, greatest width = 3.3 mm. *Head.* Medium brown, lighter anteriorly and along posterior border; antennae and palpi yellow. Entire dorsal surface covered with small, isodiametric cells and extremely fine, evenly-spaced punctures; an indented line of setigerous punctures present medial and parallel to margin of eye, setae pale and slightly longer than distance from line to margin of eye; two short lines of setigerous punctures present on each side of frons latero-medial to eye and perpendicular to longitudinal line of body, setae pale and their length similar to those medial to eye. *Pronotum.* Medium brown medially, similar in color to median area of head, lighter laterally and broadly yellow along lateral margin. Entirely covered with small, isodiametric cells and fine punctation as on head; with one well defined sublateral

crease bearing setigerous punctures beginning near antero-lateral angle and extending longitudinally along lateral portion of disc until broadly curving postero-medially, line then interrupted but continued parallel to posterior pronotal margin on each side of midline, area between crease and lateral margin slightly swollen; with one irregular line of setigerous punctures near and parallel to anterior pronotal margin, line vaguely connected at ends with sublateral crease; one fine longitudinal, medial line on disc. Lateral bead fine, terminating well posterad of antero-lateral angle. *Elytra*. Lighter in color than head and pronotum, yellow but darkening in middle of disc. Entire surface covered with isodiametric cells and fine punctation as on head and pronotum; without striae but with two longitudinal lines of widely separated punctures, the first about 1/3 distance from suture and the second about 2/3 distance from suture. *Venter*. Medium brown, yellow on legs, pronotal epipleuron and proepisternum. Protarsomeres 1–3 expanded with four rows of four adhesive setae ventrally, anterior tarsal claw modified (Fig. 1), more strongly bent than posterior claw and slightly expanded medially on ventral margin; mesotarsomeres 1–3 expanded with four rows of four adhesive setae ventrally. Metafemur lacking postero-external row of setae. Prosternal process strongly convex basally, flattened in apical portion, apical portion oval, apex rounded. Metasternal wings slender and deflexed laterad to coxae. Lateral margins of metacoxae and abdominal sterna one, two and three with oblique striolae; metacoxal lines faintly visible, lines strongly convergent medially, nearly touching medial line. *Genitalia* (Figs. 2–4). Median lobe in lateral view (Fig. 2) narrow, slightly expanded at blunt apex; in dorsal view (Fig. 3) with left lateral margin with row of triangular teeth directed obliquely toward base. Parameres (Fig. 4) broad, with terminal segment small.

Discussion

Aglymbus is defined and separable from *Copelatus* Erichson based on the effacement of the metacoxal lines. It is certainly not well-established that the species in this genus represent a monophyletic group. At least some members of the genus possess faint metacoxal lines, including *A. bimaculatus* (Resende and Vanin 1991) and others in South America (Brancucci 1986). *Aglymbus eminens* also possesses faintly visible metacoxal lines. In addition, Guéorguiev (1968) suggested that some members of his *C. haemorroidalis* group may be more appropriately placed in *Aglymbus*. The genus *Lacconnectus* is apparently very similar to *Aglymbus* as well (Brancucci 1986).

The laterally dentate margin of the median lobe of the aedeagus in *A. eminens* is an interesting character of unknown function. Numerous other species of *Copelatus* possess serrate or denticulate lateral margins including *C. caelatus* Guignot and *C. madoni* Guignot.

I was unable to determine if *A. eminens* is a synonym. It does not resemble published descriptions of other species of *Aglymbus*, and no members of that genus have been reported from Peru. However, it may be synonymous with some member of the large *C. haemorroidalis* group. Until *Aglymbus* and *Copelatus* are revised it may not be possible to resolve appropriate generic limits or to positively identify the species of these diverse genera.

Acknowledgments

Thanks to B. Kondratieff and an anonymous reviewer for valuable comments on an earlier version of this manuscript. Also, thanks to O. Jäger, Staatliches Museum für Tierkunde, Dresden, for sending me the type specimen to examine.

Literature Cited

- Blackwelder, R. 1944.** Checklist of the Coleopterous insects of Mexico, Central America the West Indies, and South America. Part 1. Bulletin of the United States National Museum. 185. Smithsonian Institution, Washington, D.C. xii+188 pp.
- Brancucci, M. 1986.** Revision of the genus *Lacconectus* Motschulsky (Coleoptera: Dytiscidae). Entomologica Basiliensia. 11:81–202.
- Guéorguiev, V. B. 1968.** Essai de classification des Coléoptères Dytiscidae. Izvestiya na Zoologicheskiya Institut s Muzei Bulgarska Akademiya na Naukite 28:5–45.
- Kirsch, T. F. W. 1873.** Beiträge zur Kenntnis der peruanischen Käferfauna auf Dr. Abendroth's Sammlungen basirt. Berliner Entomologische Zeitschrift 17:121–152.
- Larson, D. J. 1989.** Revision of North American *Agabus* Leach (Coleoptera: Dytiscidae): Introduction, key to species groups, and classification of the *ambiguus*-, *tristis*-, and *arcticus*-groups. Canadian Entomologist 121:861–919.
- Resende, C. M. and S. A. Vanin. 1991.** *Aglymbus bimaculatus*, sp. n., a new bromeliadiculous beetle from the Atlantic Forest, Brazil (Coleoptera: Dytiscidae). Aquatic Insects 13:123–128.
- Scott, H. 1912.** A contribution to the knowledge of the fauna of Bromeliaceae. Annals and Magazine of Natural History 8:424–461.
- Sharp, D. 1882.** On aquatic carnivorous Coleoptera or Dytiscidae. Scientific Transactions of the Royal Dublin Society 2(2):179–1003.
- Spangler, P. J. 1981.** Dytiscidae [pp. 136–148]. In: Aquatic biota of tropical South America, Part 1: Arthropoda (S. H. Hurlbert, G. Rodriguez and N. D. Santos, editors). San Diego State University, San Diego, California. xii+323 pp.
- Zimmermann, A. 1920.** Dytiscidae, Haliplidae, Hygrobiidae, Amphizoidae [pp. 1–326]. In: Coleopterorum Catalogus (S. Schenkling, editor). pars 71, [Volume IV]. W. Junk, Berlin.

(Received 2 December 1996; accepted 13 March 1997)

The Coleopterists Bulletin, 51(3):288. 1997.

LITERATURE NOTICES

- Ehret, J.-M. 1997.** Révision des espèces du sous-genre *Phrissotrichum* (s. str.) Schilsky 1901 et description d'une espèce nouvelle (Coleoptera Curculionidae Apioninae). Bulletin mensuel de la Société linnéenne de Lyon 66:105–112.
- Bologna, M.A., and G. Aloisi. 1994.** Systematics and bionomics of *Physomeloe* Reitter, 1911, with description of the first instar larva (Coleoptera, Meloidae). Eos 69:45–56.
- Zaballos, J.P. 1994.** Los Carabidos (Coleoptera, Caraboidea) de la sierra de Gredos (España Central). Eos 69:83–99.
- Uéno, Sh-I. 1995.** The Trechinae (Coleoptera, Carabidae) from Northern Vietnam. II. Tropical genera of the Tribe Trechini. Bulletin of the National Science Museum, Tokyo 21:171–188.
- Kuschel, G., and S. L. Chown. 1995.** Phylogeny and Systematics of the *Ectemnorhinus*-group of genera (Insecta: Coleoptera). Invertebrate Taxonomy 9:841–863.
- Wang, Q. 1995.** A taxonomic revision of the Australian genus *Phoracantha* Newman (Coleoptera: Cerambycidae). Invertebrate Taxonomy 9:865–958.
- Balke, M. 1995.** The Hydroporini (Coleoptera: Dytiscidae: Hydroporinae) of New Guinea: systematics, distribution and origin of the fauna. Invertebrate Taxonomy 9: 1009–1019.
- Liberti, G. 1995.** Revisione delle specie italiane del genere *Aplocnemus* Stephens (Coleoptera: Melyridae: Rhadalinae). Memorie della Società Entomologica Italiana 73:153–194.