



<http://dx.doi.org/10.11646/zootaxa.3795.4.9>

<http://zoobank.org/urn:lsid:zoobank.org/pub:DD79A12C-68CC-4D69-B20A-9AEFA2A12D38>

First record of *Megacydnus secundus* J. A. Lis, 2002, a representative of Afrotropical endemic burrower bug genus from Uganda, and an annotated checklist of Ugandan Cydnidae (Hemiptera: Heteroptera)

JERZY A. LIS¹ & BARBARA LIS

Department of Biosystematics, Opole University, Oleska 22, 45-052 Opole, Poland

¹Corresponding author. E-mail: cydnus@uni.opole.pl; <http://www.cydnidae.uni.opole.pl>

The Cydnidae (Hemiptera: Heteroptera: Pentatomoidea) is a true bug family with almost 700 species distributed worldwide (Lis 1996, 1999, 2006). These bugs usually dig in the ground (e.g., sand, soil, litter) and, therefore, are commonly known as the burrower bugs or burrowing bugs. Digging in the ground is possible because of several morphological adaptations, including well-developed tibial combs (Lis and Schaefer 2005), coxal combs (Lis 2010), and strong hair-like and peg-like setae on the head margins in larval and adult stages (Lis and Pluot-Sigwalt 2002) (see: Fig. 1A).

The genus *Megacydnus* was described for a new species *M. signatus* from Nigeria (Linnavuori 1993). Almost ten years later the second species of this genus, *M. secundus* from the Democratic Republic of Congo, was described (Lis 2002).

The genus is best characterized by the unique cephalic structure, i.e., narrow amygdaliform eyes situated far from the lateral head margins (Fig. 1B); the eyes in all other Afrotropical genera of the family Cydnidae are protruding and clearly surpass the lateral head margins. Both known species of the genus were keyed by Lis (2002); however, the male genitalia of *M. secundus* have never been described or illustrated; therefore, the photographs of its genital capsule (Fig. 1C-E), aedeagus (Fig. 1G), and paramere (Fig. 1F) are provided.

Material. During studies on the Cydnidae material from the Zoological Museum, Humboldt University (Berlin, Germany), a male specimen of *M. secundus* collected in Uganda was found (Fig. 1A).

The specimen was collected in the Kibale Forest National Park in Western Uganda (detailed data: Kabarole, Kibale Forest National Park, Kanyawara MUBFS; 0°33'N 30°21'E, 1200–1400m, VIII 1997, leg. Chr. Hauser) (**first country record**).

The Kibale Forest National Park, comprising mainly moist evergreen forest, is located close to the Democratic Republic of Congo border. The new locality expands the distribution range of this species about 160 km to the south.

Check list of the Ugandan burrower bugs. Our knowledge of the burrower bug species' diversity in Uganda is very scarce. So far, only ten species representing five genera (all belonging to the tribe Geotomini of the subfamily Cydninae) have been originally recorded from Uganda (Distant 1909; Jeannel 1913; Linnavuori 1993; Lis 1999, 2000). The record presented in this note increases the number of Cydnidae genera reported from Uganda to six, with a total of 11 species.

Cydnidae: Cydninae: tribe Geotomini

1. *Endotylyus brevicornis* Horváth, 1919
2. *Fromundus glaber* (Signoret, 1858)
3. *Geocnethus nitidus* (Signoret 1883)
3. *G. pallipennis* (Dallas, 1851)
5. *G. proximus* (Signoret 1882)
6. *G. spathifer* Linnavuori, 1993
7. *Macroscyrtus brunneus* (Fabricius 1803)
8. *M. reflexus* Signoret, 1883
9. *Megacydnus secundus* J. A. Lis, 2002—**first record**
10. *Paraethus capicola* (Westwood 1837)
11. *P. saprinoides* (Gerstaecker 1873)

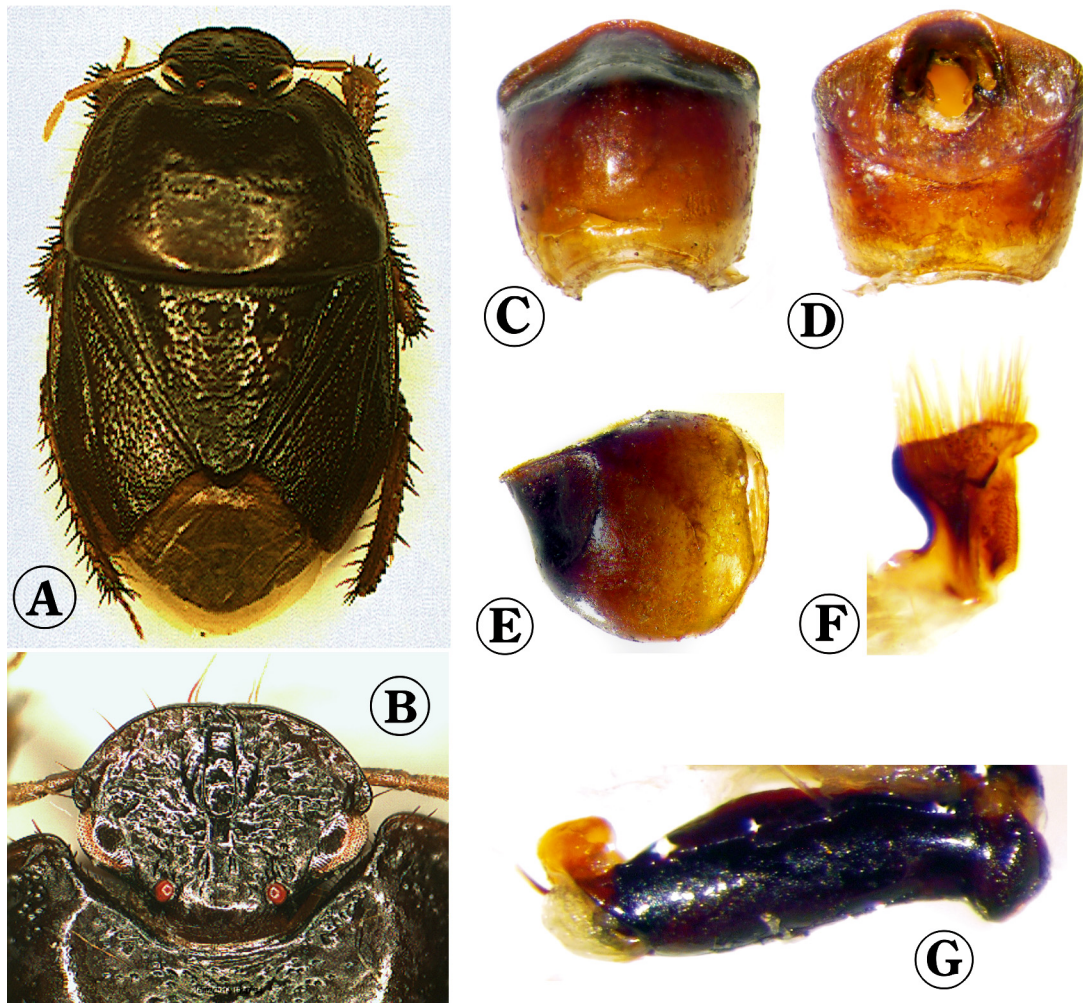


FIGURE 1. *Megacydnus secundus*: A—general habitus, dorsal view, B—head, dorsal view, C–E—male genital capsule (C—ventral view, D—dorsal view, E—lateral view), F—male left paramere, ventral view, G—male aedeagus, lateral view.

Acknowledgements

We thank Dr. J. Deckert (Zoological Museum, Humboldt University, Berlin, Germany) for the loan of the specimen for our study.

References

- Distant, W.L. (1909) Ruwenzori Expedition Reports. 9. Rhynchota. *Transactions of the Zoological Society of London*, 19, 67–84.
- Jeannel, R. (1913) *Voyage de Ch. Alluaud et R. Jeannel en Afrique Orientale (1911–1912). Resultats scientifiques. Insectes Hémiptères I. Pentatomidae*. Librairie André Schultz, Paris, France, 114 pp.
- Linnavuori, R. (1977) Hemiptera of the Sudan, with remarks on some species of the adjacent countries. 5. Tingidae, Piesmididae, Cydnidae, Thaumastellidae and Plataspidae. *Acta Zoologica Fennica*, 147, 1–81.
- Linnavuori, R.E. (1993) Cydnidae of West, Central and North-East Africa (Heteroptera). *Acta Zoologica Fennica*, 192, 1–148.
- Lis, J.A. (1996) A review of burrower bugs of the Australian Region, with a discussion on the distribution of the genera (Hemiptera: Heteroptera: Cydnidae). *Genus (Wrocław)*, 7, 177–238.

- Lis, J.A. (1999) Burrower bugs of the Old World – a catalogue (Hemiptera: Heteroptera: Cydnidae). *Genus (Wroclaw)*, 10, 165–249.
- Lis, J.A. (2000) A revision of the burrower-bug genus *Macroscytus* Fieber, 1860 (Hemiptera: Heteroptera: Cydnidae). *Genus (Wroclaw)*, 11, 359–509.
- Lis, J.A. (2006) Cydnidae Billberg, 1820 – burrowing bugs (burrower bugs). In: Aukema, B. & Rieger, Chr. (Eds.), *Catalogue of the Heteroptera of the Palaearctic Region. Vol. 5. Pentatomomorpha II*. The Netherlands Entomological Society, Wageningen, pp. 119–147.
- Lis, J.A. (2010) Coxal combs in the Cydnidae *sensu lato* and three other related “cydnoid” families – Parastrachiidae, Thaumastellidae, Thyreocoridae (Hemiptera: Heteroptera): functional, taxonomic, and phylogenetic significance. *Zootaxa*, 2476, 53–64.
- Lis, J.A. & Pluot-Sigwalt, D. (2002) Nymphal and adult cephalic chaetotaxy of the Cydnidae (Hemiptera: Heteroptera), and its adaptive, taxonomic and phylogenetic significance. *European Journal of Entomology*, 99, 99–109.
<http://dx.doi.org/10.14411/eje.2002.017>
- Lis, J.A. & Schaefer, C.W. (2005) Tibial combs in the Cydnidae (Hemiptera: Heteroptera) and their functional, taxonomic and phylogenetic significance. *Journal of Zoological Systematics and Evolutionary Research*, 43, 277–283.
<http://dx.doi.org/10.1111/j.1439-0469.2005.00328.x>