



Two new species of minute land snails from Madagascar: *Boucardicus monchenkoi* sp. nov. and *B. ambindaensis* sp. nov. (Caenogastropoda: Cyclophoridae)

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Boucardicus Fischer-Piette & Bedoucha, 1965 is considered to be a very diverse group of the land caenogastropods endemic to Madagascar and consisting 197 recognized species and 5 subspecies. Except two species described by Edgar Albert Smith (1892, 1893), all these taxa were introduced by Édouard Fischer-Piette and Kenneth Emberton with coauthors, mainly since 1993 (Fischer-Piette & Bedoucha, 1965; Fischer-Piette *et al.*, 1993; Emberton, 1994, 1998, 2002, 2009; Emberton & Pearce, 1999; Emberton *et al.*, 2010). Fischer-Piette & Bedoucha (1965) placed 6 species in *Boucardicus*, the snails with conic shell, mainly moderately small (height and width are about 10 mm in type species). They also established one more new genus with a single new species—*Madecataulus* Fischer-Piette & Bedoucha, 1965, of the moderately small snails with fusiform shell (height about 10 mm, width—5 mm). Two more new species were placed in *Madecataulus* later (Fischer-Piette *et al.*, 1993, Emberton, 1994), but this genus was rejected and united with *Boucardicus* by Emberton & Pearce (1999). At the same time since 1999 several minute snails with pupilloid-like shell (height 1.5–3.5 mm) and mostly with specific apertural structures were placed in *Boucardicus* together with much larger snails that are quite different also in the shape of shell and structure of aperture (Emberton & Pearce, 1999; Emberton, 2002; Emberton *et al.*, 2010). Two new species related to these *Boucardicus* pupilloid-like forms were revealed recently during our studies and described here—*B. monchenkoi* sp. nov. and *B. ambindaensis* sp. nov.

Material

Materials were collected in 1991, 2001 and 2006 by 4 different collectors (see type locations below). Types are kept in Collection of terrestrial molluscs of I.I. Schmalhausen Institute of Zoology of National Academy of Sciences of Ukraine (Kiev) [IZAN] and in Malacology Collection of Australian Museum (Sydney) [AMS]. Specimens collected in Western Madagascar under permit issued by the Ministry of Environment of Madagascar, number 173/06.

Systematics

Gastropoda Cuvier, 1795

Caenogastropoda Cox, 1960

Architaenioglossa Haller, 1890

Cyclophoroidea Gray, 1847

Cyclophoridae Gray, 1847

Alycaeinae Blanford, 1864

***Boucardicus* Fischer-Piette & Bedoucha, 1965**

Boucardicus Fischer-Piette & Bedoucha, 1965: 63; Emberton, 2002: 19.

Madecataulus Fischer-Piette & Bedoucha, 1965: 70 (type species *Madecataulus goudoti* Fischer-Piette & Bedoucha, 1965 by original designation).

Type species: *Acroptychia notabilis* Smith 1892 by original designation.

***Boucardicus monchenkoi* sp. nov. Fig. 1a.**

Type locality. Coastal grassland near Hotel Dauphin (Avenue Gallien), Tôlanaro city (formerly Fort Dauphin), south-eastern Madagascar.