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OF THE INDO-AUSTRALIAN ARCHIPELAGO*

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## TREUBIA

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**SHORT COMMUNICATION**

**A NOTE ON THE DISTRIBUTION AND HABITAT  
PREFERENCE OF *Cyclotus longipilus* VON MARTENS, 1865  
FROM THE MAROS KARST AREA OF SOUTH SULAWESI  
(GASTROPODA: CYCLOPHORIDAE)**

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During a recent expedition to study human impact on karst and caves in April and August 2001 and 2002, 25 caves in the Maros, Pangkajene and Bone karst areas of South Sulawesi were visited. Terrestrial snails were collected from the area surrounding these caves, both in primary and secondary forests. Snails were collected from litter layers, or leaf litter, tree trunks, the underside of leaves, rocks, and among mosses along a narrow trail of the forest. Among these snails, the hairy-snail *Cyclotus longipilus*, was found to be rarer than other species of the family Cyclophoridae. Only very few specimens of this species could be collected from some caves such as Balangajea, Patta, Mimpri, and Pattunuang at Maros.

*Cyclotus longipilus* was described for the first time by Martens in 1865, then Sarasin & Sarasin (1899) described the operculum without illustrating it. Kobelt (1902) also described the species and placed it under the subgenus *Pseudocyclophorus*. So did Küster & Kobelt (1913), who also illustrated the shell and operculum, referred to Martens's, as they explained "Abbildung und Beschreibung nach Martens". So far, no systematic study on the occurrence and ecology of this species have been published, except for a brief mention in a checklist prepared by Maassen (1997) which merely listed *Cyclotus longipilus* without providing any additional information. The type locality of this species was given as "Süd Celebes bei Maros" (South Sulawesi nr Maros) without any information about its habitat or locality details (Sarasin & Sarasin 1899, Kobelt 1902, Küster & Kobelt 1913). Based on recent collections of the Museum Zoologicum

Bogoriense (MZB), some first detailed data on the species' habitat and occurrence at the Maros karst area of South Sulawesi are presented here.

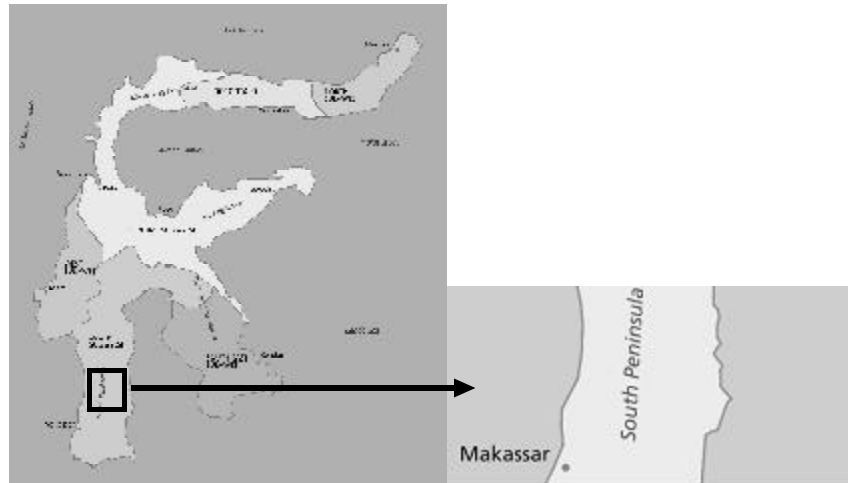


Figure 1. Sampling area at the Maros Karst

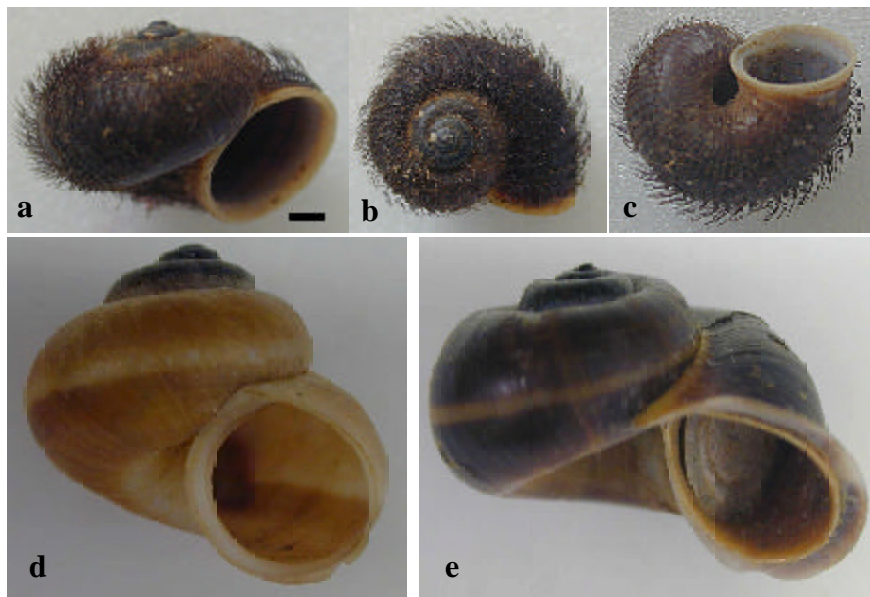


Figure 2. a. Overall view of shell of *Cyclotus longipilus* von Martens, 1865, b. apex, c. open collumela; d. *C. fulminulatus*; e. *C. fasciatus*. Scale 2 mm

Shell medium size, solid, opaque, dark brown to black with 4 ½ whorls. Apex smooth and darker, the second and the third whorls sculptured with striae that subsequently become prominent on the body whorl. These prominent ribs are spaced at a distance of about 1 mm, ending and concentrating at the wide-open umbilicus. The number of axial ribs on the body whorls is 43–46 (N = 18), and sculptured with regularly distinct black, long, strong hairs. The length of the hairs is about 3 mm, arranged in about 40 to 45 rows at each axial rib, covering the body whorls densely, especially in fresh shells. Dead shells have usually lost the hairs, only the strong axial ribs remain. Suture deep. Aperture round. Peristome continuous, somewhat thickened and expanded, touching the penultimate whorl. Operculum round, thick and flat, multispiral with a central nucleus and 6 whorls. Animal black, crawling very active at night. Head, tentacles, and sole also black.

**Habitat.** in primary or secondary forest on limestone soil, crawling on the surface of rocks or under leaf litter. Dead shells were found under big rocks in sheltered areas.

**Table 1.** Measurements (in mm), shells from Balangajea cave (N=14); SD, Standard Deviation

	Height (H)	Width (W)	H of body whorl	H of aperture	W of aperture
Mean	14.66	17.50	12.92	9.66	9.63
Range	13.00-15.90	16.00-19.70	11.75-14.40	8.70-11.00	8.70-11.00
SD	0.79	0.92	0.73	0.60	0.59

**Material examined:** MZB. Gst. 12 981 (S. Sulawesi, Maros, Simbang, Desa Sambueja, Balangajea cave, S 05°03'07.8" E 119°41'14.8", Risti coll.30-IV-02: 18 ex.); MZB Gst. 13 578 (S. Sulawesi, Maros, Simbang, Desa Pattunuang, Risti coll, 23-IV-02: 1 ex; MZB.Gst. 12 980 (S.Sulawesi, Maros, Simbang, Desa Pangea, near Patta cave, L.Deharveng & A.Bedos coll.12-VIII-2001: 1 ex.); MZB Gst. 12 984 (S. Sulawesi, Maros, Bantimurung, near Mimpicave, S 5° 0'57.7" E119°37'34.9", Risti coll. 25-IV-02: 1 ex.); MZB. Gst. 12 983 S. Sulawesi, Maros, Camba, Kappang, Sumur Jodoh at Karaenta, Cahyo coll.(2-V-02: 3 ex).

**Distribution.** Sulawesi - only found in South Sulawesi in the southern part of the Maros area, in primary and secondary forest near caves Mimpi, Patta, Pattunuang, Balangajea, and in Karaenta National Park.

**Remarks.** The rather restricted occurrence of *Cyclotus longipilus* in the Maros Karst area, based on the MZB collection suggests a limited dispersal ability of the species. Other species of cyclophorid, *Cyclotus fulminulatus* von Martens, 1864 and *Cyclotus fasciatus* von Martens, 1864 have considerably greater dispersal ability from the lower area in Mattampa, Rumbia, Bantimurung to the hill of Mimpi, Pattunuang, and Balangajea. The preferred habitat of *Cyclotus longipilus* is hill karst such as the area heading to the caves Pattunuang, Patta, Mimpi and Balangajea. Judging from the number of collected specimens, *Cyclotus longipilus* is rarer than *Cyclotus fulminulatus* (Figure 2 d) and *Cyclotus fasciatus* (Figure 2 e) when they occurred together at the same location. The two last species are common and abundant, I collected more than 60 fresh shells of *Cyclotus fulminulatus* and more than 30 of *Cyclotus fasciatus* from one spot respectively, under leaf litters or underside of dead wood. The secondary rain forest at Balangajea seems more suitable for *Cyclotus longipilus*, and 18 specimens of fresh shells were found from one spot, at a sheltered area under big rocks, in the rainy season in April 2001. A living specimen was found during the same season, crawling on a big stone at the secondary forest of Pattunuang, and Karaenta. Also, only one specimen was found at Patta cave as well as at Mimpi cave.

## ACKNOWLEDGEMENTS

The expedition to study the human impact on karst and cave in Maros, South Sulawesi was funded by the ARCBC (Asean Regional Centre for Biodiversity Conservation) and the European Union (Project RE – IDN – 008; 2001 - 2003). My sincere thanks go to reviewers who have read and made suggestions or comments on this manuscript. Also, thanks to Cahyo Rahmadi (MZB) and Yayuk R. Suhardjono (MZB) for their collaboration during the field work.

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