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Cyclophorus stevenabbasorum (Gastropoda: Cyclophoridae), a new species from Indonesia

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Abstract: A new *Cyclophorus* Montfort, 1810 is described from Sinarung area, Simeulue Island, Indonesia and compared with *Cyclophorus schepmani* Laidlaw, 1957, *Cyclophorus perdix perdix* (Broderip & Sowerby I, 1829) and *Cyclophorus perdix borneensis* (Metcalf, 1851), the conchologically closest species in this genus.

Introduction: *Cyclophorus* is a large genus within **Cyclophoridae** with many species collected in Indonesia. In January 2016, another species belonging to this genus was collected. It was not included in the works by Dharma (2015), Springsteen & Leobrera (1986), Parkinson et al. (1987), Abbott (1989) and Stanistic et al. (2010). In this article, it is described as new to science.

Abbreviations:

ANSP: Academy of Natural Science Philadelphia, USA

KBIN: Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium

NHMUK: Natural History Museum, London, England

NNT: Collection Dr N.N. Thach

JA: Collection John Abbas

SL: Collection Steven Lie

AL: Aperture length

AW: Aperture width

SH: Shell height

SW: Shell width.

Systematics:

Class: **Gastropoda** Cuvier, 1793

Superfamily **Cyclophoroidea** Gray, 1847

Family **Cyclophoridae** Gray, 1847

Genus ***Cyclophorus*** Montfort, 1810

Type species: *Helix volvulus* Müller, 1774.

***Cyclophorus stevenabbasorum* sp.nov.**

Figs 1-8

Type material: **Holotype** 33.2 mm, ANSP 466243 (Figs 1-2). **Paratype 1:** 30.2 mm, NNT (Figs 3-4); **Paratype 2:** 33.7 mm, NHMUK 20160301 (Figs 5, 6a); **Paratype 3:** 30.3 mm, KBIN (Figs 6b, 7); **Paratype 4:** 36.8 mm (Fig. 8), JA; **Paratype 5:** 30.5 mm, JA; **Paratype 6:** 35.8 mm, SL; **Paratype 7:** 31.9 mm, SL. [Paratypes 5-7 not illustrated; All Paratypes from type locality.]

Type locality: Sinarung area, Simeulue Island, off the northwestern coast of Sumatra Island, Indonesia.

Range and habitat: Only known from the type locality. The specimens were found among thick leaf litter on the ground of a plantation near a mountain.

Description: Shell medium-sized for the genus (width range 30.2 - 36.8 mm), turbinata and dextral. Spire low with adpressed sutures and pointed apex. Body whorl slightly inflated with weak spiral keel at periphery, early whorls much narrower than following whorls and rising vertically from penultimate whorl. Outer surface usually ornamented with many oblique axial stripes, some specimens lack pattern. Shell width (SW) larger than

shell height (SH) with SH 65.6% of SW (see Table 1). Sculpture consisting of fine oblique closely-spaced radial riblets and narrow spiral ribs beyond suture of each whorl. Aperture narrow and long with external pattern visible within and aperture length (AL) 62.3% of shell width, aperture width (AW) 70.1% of aperture length. Outer lip broad, thick, calloused and slightly reflected with upper margin touching the body whorl at a place situated just beneath the spiral keel of the periphery. Base convex with narrow spiral band in the middle, columella wavy and covering most of the umbilicus.

Colour pink with brown stripes, whitish apex, dark brown aperture and pink outer lip.

Operculum horny, multispiral, moderately thin and strongly concave with central nucleus.

No	1	2	3	4	5	6	7	8
SW (mm)	33.2	30.2	33.7	30.3	36.8	30.5	35.8	31.9
SH (mm)	20.7	18.7	22.7	19.1	25.0	20.0	23.5	22.8
SH/SW	0.62	0.62	0.67	0.63	0.68	0.66	0.66	0.71
Mean SH/SW	0.656							
AL (mm)	20.6	19.0	21.1	17.6	22.8	19.5	22.5	20.2
AL/SW	0.62	0.63	0.63	0.58	0.62	0.64	0.63	0.63
Mean AL/SW	0.623							
AW (mm)	14.5	13.3	14.9	12.4	16.5	13.0	15.8	14.4
AW/AL	0.70	0.70	0.71	0.70	0.72	0.67	0.70	0.71
Mean AW/AL	0.701							

Table 1: SH/SW, AL/SW and AW/AL of *Cyclophorus stevenabbasorum*

Comparison: *Cyclophorus stevenabbasorum* sp. nov. can readily be recognised by its long, narrow aperture and the upper margin of the outer lip touching the body whorl beneath the spiral keel of the periphery (not at the spiral keel).

Cyclophorus stevenabbasorum sp. nov. is close to *Cyclophorus schepmani* Laidlaw, 1957 (Figs 9-10) but differs by its narrow (not rounded) aperture, less inflated body whorl, more heavily calloused outer lip, more sinuous columella in the umbilical area and the upper margin of the outer lip touches the body whorl beneath the spiral keel of periphery.

Cyclophorus stevenabbasorum sp. nov. mainly differs from *Cyclophorus perdis borneensis* (Metcalf, 1851) (Fig. 11) by its narrower aperture, pink (not white) and broader outer lip and the lack of a spiral band of alternating brown and white blotches along the sutures.

Cyclophorus stevenabbasorum mainly differs from *Cyclophorus perdis borneensis* (Metcalf, 1851) (Fig. 12) by its narrower and pink (not white) aperture, broader and pink outer lip and its less angulate periphery.

Etymology: This new species is named in honour of Steven Lie and John Abbas for supplying the type material.

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PLATE

1-8: *Cyclophorus stevenabbasorum* sp. nov.

Sinarung area, Simeulue Island, Indonesia

1-2: Holotype (33.2 mm) in ANSP

3-4: Paratype 1 (30.2 mm) in NNT

5-6a: Paratype 2 (33.7mm) in NHMUK

6b-7: Paratype 3 (30.3 mm) in KBIN, with operculum (7b)

8: Paratype 4 (36.8mm) in JA

9-10: *Cyclophorus schepmani* Laidlaw, 1957

9-10a: Photo NHMUK

10b: 33.3 mm,

11: *Cyclophorus perdis perdis* (Broderip & Sowerby I, 1829), 33.5 mm

12: *Cyclophorus perdis borneensis* (Metcalf, 1851) 35.5 mm. Photo Philippe & Guido Poppe.

