

## Description of a new volute (Gastropoda: Volutidae) from southern Madagascar

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**KEYWORDS.** Gastropoda, Volutidae, *Lyria (Indolyria) pauljohnsoni* sp. nov., Madagascar.

**ABSTRACT.** *Lyria (Indolyria) pauljohnsoni* sp. nov., from Madagascar, is hereby described and compared with its closest relatives *Lyria (Indolyria) brianoi* Poppe, 1999 and *Lyria (Indolyria) patbaili* Bouchet, 1999.

**RESUME.** *Lyria (Indolyria) pauljohnsoni* sp. nov. de Madagascar, est décrite et comparée avec les espèces proches, *Lyria (Indolyria) brianoi* Poppe, 1999 et *Lyria (Indolyria) patbaili* Bouchet, 1999.

### INTRODUCTION

Two years after the description of *Lyria (Indolyria) brianoi* and *L. (L.) patbaili*, fishermen from Fort Dauphin, Madagascar, discovered a third species of *Indolyria* living in the waters of southern Madagascar. The new species definitely belongs to the subgenus *Indolyria* and is very closely related to *L. (L.) brianoi*.

### SYSTEMATICS

#### Class GASTROPODA

Family VOLUTIDAE Rafinesque, 1815

Subfamily VOLUTINAE Rafinesque, 1815

Tribe LYRIINI Pilsbry & Olsson, 1954

Genus *Lyria* Gray, 1847

Type species: *Lyria nucleus* (Lamarck, 1811)

Subgenus *Indolyria* Bail & Poppe, 2001

Type species: *Lyria (L.) lyraeformis* (Swainson, 1821)

***Lyria (Indolyria) pauljohnsoni* sp. nov.**

Figs 1-6

**Type Material.** Holotype MNHN, Paris. Length: 37.3 mm. Maximum width: 17.1 mm. ex coll. P. Johnson, Great Britain.

Paratype 1 Coll. G. T. Poppe. Length: 35.5 mm. Maximum width: 17.5 mm. Animal and operculum dried inside.

Paratype 2 Coll. J. Conde. Length: 32.5 mm. Maximum width: 16.1 mm. Animal and operculum dried inside.

**Type Locality.** Madagascar, Fort Dauphin area.

**Range.** Only known from the type locality.

**Habitat.** Unknown.

**Description.** The shell has an ovate, elongate shape and is thick and solid. The spire is very small and covers less than a third of the shell length. The protoconch is broad and has about 2 whorls and presents in fresh specimens a silky gloss. The transition into the teleoconch is gradual and only visible due to the occurrence of faint axial plicae. The holotype has a protoconch of 3.2 mm at its base. This is very large compared to the total shell width. The teleoconch consists of 4.5 flattened whorls. On the first teleoconch whorl, just behind the protoconch, there appear a few faint axial ribs which rapidly become very weak and irregular on the next whorl. The overall appearance of the body whorl is smooth. On the back of the last whorl, situated close to the siphonal canal, all three type specimens show 7-9 hardly discernible spiral grooves. The outer lip is thickened all along the peristome and flares at its lower half. The parietal path bears several plicae of which 3, situated near the siphonal canal are very strong. On the posterior end of the aperture, there is a channel, which is about 1.2 mm in width and 5 mm in length. The suture is deep, almost channelled. The outer surface has a silky gloss and the interior of the aperture is very glossy. The parietal callus is thick for the genus and covers the fasciole. The colour pattern is complex: the protoconch whorls are light brown with a tinge of purple, the teleoconch whorls have a purple-brown base colour with 3 spiral bands of interrupted cream and black blotches. Below these spiral bands there is another, parallel, spiral band, in which the black blotches are mirrored by cream blotches. This is especially visible in the holotype. Both the paratypes are not so dark coloured: the shells are cream-chocolate and the spiral bands are

less obvious. On the thickening along the peristome appear 7-9, very dark coloured spiral lines. They become very prominent and continue on the thickened outer lip and form brown spots on the inside of the lip. The outside of the siphonal canal is darker coloured than the rest of the shell.

**Animal and radula.** Unknown. Animal dried inside in both paratypes. Operculum present, about 10 mm in length.

**Differential diagnosis.** *L. (I.) pauljohnsoni* differs from *L. (I.) brianoi* at first glance by the presence of an obvious much larger channel on the posterior side of the aperture. *L. (I.) brianoi* has distinct axial ribs while the shell is smooth in *L. (I.) pauljohnsoni*. The number of plicae on the parietal shield is much larger and more obvious in *L. (I.) brianoi*. While *L. (I.) brianoi* most often has an orange-brown colour, *L. (I.) pauljohnsoni* is much more chocolate with a pinkish shine. The spire in the latter species is much smaller compared to the total shell length.

*L. (I.) patbaili* is, in general, twice as large as an average *L. (I.) pauljohnsoni*, it has only a faint channel on the posterior end of the aperture, is axially ribbed, has a different colour pattern and a much longer spire.

**Remarks.** This new species, at present known from the type material and one very beach-worn shell, belongs to the subgenus *Indolyria*, which is characterised by thick shells with a very large

protoconch. This subgenus is limited to the Indian Ocean.

**Derivatio nominis.** The shell is named in honour of Paul Johnson, Great Britain, active volute-collector who donated the holotype to the MNHN, Paris.

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#### SELECTED REFERENCES

- Bail, P. 1993. Le genre *Lyria* Gray, 1847. Part I. *Xenophora* 61 : 6-23.
- Bail, P. 1993. Le genre *Lyria* Gray, 1847. Part II. *Xenophora* 64 : 4-19.
- Bail, P. & Poppe, G.T. 2001. *A Conchological Iconography: A Taxonomic Introduction to the Recent Volutidae*, Conchbooks, Hackenheim, Germany: 50 pp.
- Poppe, G.T. 1999. New Volutidae of the Indian Ocean and Australia. *Malacologia*, 29 : 3-7.
- Poppe, G.T. & Goto, Y. 1992. *Volutes*, Ancona, Italy: 348 pp.
- Weaver, C.S. & duPont, J.E. 1970. *The Living Volutes, a Monograph of the Recent Volutidae of the World.*, Delaware Museum of Natural History, Greenville, USA: 375 pp.

1-6. *Lyria (Indolyria) pauljohnsoni* Poppe & Terryin, sp. nov.

1-3. Holotype MNHN, Madagascar, Fort Dauphin area. 37.3 mm.

4-5. Paratype 1, coll. G.T. Poppe. 35.5 mm.

6. Paratype 2, coll. J. Conde: 32.5 mm.

7-8: *Lyria (Indolyria) brianoi* Poppe, 1999. Madagascar, Fort Dauphin area, 80-150 m.

7. 31.2 mm. 8. 28.1 mm.

9. *Lyria (Indolyria) patbaili* Bouchet, 1999. Madagascar, Fort Dauphin area, 80-150 m, 65.1 mm.

