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## A new species of *Lyria* (Gastropoda: Volutidae) from Southern Japan

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### Introduction

A new endemic species of Volutidae, *Lyria* (*Lyria*) *ogasawarana* sp. nov. is described from Chichijima Island, Ogasawara Islands, Japan. This new species is similar to the other Pacific *Lyria*: *L. (Lyria) cassidula cassidula* (Reeve, 1849), *L. (Lyria) deliciosa* (Montrousier, 1859), *L. (Lyria) pattersonia* (Perry, 1811) and *L. (Lyria) insignata* (Iredale, 1940).

These different populations of closely related small species of *Lyria sensu stricto* are scattered in various isolated places of the Western Pacific Ocean. All share the following basic characters of the subgenus: small size (20–30 mm long), tumid purple protoconch, short spire, axial ribs prominent on the spire, swollen body whorl, three anterior columellar plaits adapically followed by small lirae, pattern of fine spiral lines crossing irregular blotches. By all its characters, *L. ogasawarana* n. sp. belongs to this group.

The distribution is broad, widely interrupted, forming isolated ranges: *L. cassidula*, southern coast of Japan; *L. deliciosa*, New-Caledonia and eastern coast of Australia; *L. pattersonia* (= *L. nucleus* Lamarck, 1811), Norfolk Island; *L. insignata*, Kermadec Island.

Despite the considerable distances between these remote locations, their conchological relationship is preserved. They differ only by slight but stable characters that suggest a genetic isolation in process. Consistent explanation for such geographical dispersion remains speculative pending studies of their respective genetic drift.

Abbreviations.

CMC: collection Mitsuo Chino.

CPB: collection Patrice Bail.

MNHN: Muséum National d'Histoire Naturelle, Paris, France.

NSMT: National Museum of Nature and Science, Tokyo, Japan.

### SYSTEMATICS

#### Superfamily VOLUTOIDEA

#### Family VOLUTIDAE Rafinesque, 1815

#### Subfamily VOLUTINAE Rafinesque, 1815

#### Tribe Lyriini Pilsbry & Olsson, 1954

#### Genus *Lyria* Gray, 1847

#### Subgenus *Lyria stricto sensu*.

Type species: *Lyria pattersonia* (Perry, 1821)

Animal. Not available for study.

**Discussion.** This new species can be compared with the other small Pacific *Lyria* (*Lyria*) forming a rather homogeneous but dispersed group (fig. 3B):

*Lyria* (*Lyria*) *cassidula cassidula* (fig. 2C–D, L)—as well as its questionable subspecies *Lyria* (*Lyria*) *cassidula pallidula* Habe, 1962—are geographically the closest, about 1000 km separate the two from *L. ogasawarana*. *L. cassidula* is a very polymorphic species, solid, thick, highly variable in size and coloration. Its dense spiral pattern is often absent or interrupted. Axial ribs extending anteriorly, three to four spiral cords present above the siphonal notch, and three to four strong columellar plaits followed by eight to ten well-marked plicae on the thick parietal callus, outer lip thickened, occasionally expanded outwards, preclude any confusion with *L. ogasawarana*.

*L. deliciosa* (fig. 2E–F, M) is conchologically the most similar, though separated by 5900 km which precludes any genetic exchange for species with direct development. It shares the same set of columellar plaits and, to a lesser degree, the same pattern. It differs by a larger average size (35–40 mm), a more tumid last whorl and by the absence of axial ribs on the last two teleoconch whorls.

*L. insignata*, (fig. 2G–H, N) restricted to Kermadec Island, is similar in the morphology of its outline, sculpture and columellar plaits. It differs by having a thicker shell, a deeper crenelated suture and by a different color pattern consisting of fine dark spiral lines crossing linear brown stains grouped in three bands.

*L. pattersonia* (fig. 2I–J, O) differs by its smaller size (20–30 mm), a more rounded shape and it can be distinguished from the other species by the presence of dense minute spiral striae in the intercostal spaces of the first whorls.

**Remarks.** The distinctiveness of *L. ogasawarana* was first pointed out by Hiroshi Fukuda (1994) as *Lyria* sp. from the Chichijima Islands: Sakaiura, Chichijima, and Hahajima, as well as Anijima, noting the weakness of the axial ribs in comparison with *L. cassidula*.

**Etymology.** Named for the type locality.

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