

A new *Chrystella* from Mauritius (Gastropoda: Pickworthiidae)¹

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ABSTRACT

A list of all known species belonging to the genus *Chrystella* (Pickworthiidae) is given. A new species, *Chrystella bhikajeei* Moolenbeek & Mussai, 2010 is described from Mauritius, Indian Ocean.

Key words: Indian Ocean, Mascarene Islands, Mauritius, Pickworthiidae, *Chrystella*, taxonomy.

INTRODUCTION

Mauritius is one of the larger islands of the Mascarene Island group and its marine molluscan fauna is rather well known from publications by Liénard (1877), Von Martens (1880), Viader (1937) and Michel (1988).

Recently the Mauritius Oceanography Institute (MOI) initiated a project to prepare a checklist of the marine molluscan fauna of the Mascarenes. The second author invited the first author to participate in this project. During the summer season of 2008, the first author visited both Mauritius and Rodrigues and in cooperation with MOI and Shoals Rodrigues Centre samples were taken around both islands. Shells and sediments were taken on beaches, intertidal rock areas and by SCUBA diving. Many interesting species for this region and several new species were discovered and this paper is the first one in a series on the marine molluscan fauna of this area. It is the description of a new pickworthiid, up to now unique for the sea around Mauritius.

ACKNOWLEDGEMENTS

First of all we are much indebted to the director of Mauritius Oceanography Institute, Prof. Dr M. Bhikajee, for his support to do this research. The first author thanks his wife Wilma van der Hijden, being companion and SCUBA buddy during the diving activities on both islands. The greater part of the sediment samples were sorted by Jos Hoenselaar. For this enormous job we are much obliged to her. Without the assistance of the staff of MOI (divers, boatsman, driver etc.) this trip would not have been so successful. Marien Faber and Bram van der Bijl are thanked for critically reading the English text.

SYSTEMATICS

Class: Gastropoda
Subclass: Prosobranchia
Order: Neotaenioglossa
Superfamily: Rissooidea
Family: Pickworthiidae

Genus: *Chrystella* Laseron, 1956

Type species by original designation:
Chrystella islandica Laseron, 1956.

Known species level taxa in the genus
Chrystella:

Chrystella finckhi (Hedley, 1899); Tutaga Islet, Funafuti (Tuvalu).

Chrystella islandica Laseron, 1956; Christmas Island, Australia.

Chrystella kathyae (Rolán, 1990); Bahia de Cienfuegos, Cuba.

Chrystella multistriata Santos & Franca, 2008; Sergipe, Brazil.

Chrystella steiningeri Janssen, 2004; Kostej, Romania [Miocene fossil].

Chrystella tenuilirata Janssen, 2004; Lapugy, Romania [Miocene fossil].

Chrystella verdensis (Rolán & Rubio, 1999); Sal Rei, Boa Vista Island, Cape Verde Islands.

Chrystella bhikajeei new species (Figs 1-3)

Description of the holotype (ZMA Moll. 4.10.008):-

Shell small, slender, broadly conical, solid, 8 whorls, height 1.6 mm, width 0.9 mm (Figs 1-3). Protoconch of 3.5 whorls: initial part with minute granules, gradually becoming smooth. After first whorl two spirals are formed just above the suture, at about 1.5 whorls a third spiral is formed just below the suture. These spirals become more prominent developing irregular axial knobs on it. After about two

whorls these axials touch each other forming an irregular reticulate pattern. Towards the margin the lower part of the whorl loses its reticulate pattern (a malformation?). The margin of the outer lip is thickened with a wide anterior sinus.

First post nuclear whorl with a smooth subsutural spiral ridge, a strongly knobbed spiral on the periphery and a tiny spiral ridge just above the suture. Penultimate whorl with a subsutural slightly knobbed spiral ridge, a strongly knobbed spiral on the periphery and a smooth ridge just above the suture. Body whorl like penultimate whorl but 4 additional spiral ridges on the lower part. Anterior a small umbilical chink. Aperture round to oval, greater part with a duplicated peristome. Microsculpture of numerous microscopic spiralthreads, which are in fact rows of minute granules. Colour white, protoconch brown.

Type locality:-

Mauritius, Flic en Flac, Cathedral, 20-25 m (station Moo08/02), July 2008.

Type material:-

The holotype and one paratype (ZMA Moll. 4.10.009), both from the type locality.

Distribution:-

Only known from Mauritius.

Etymology:-

Prof. Dr Mitrasen Bhikajee has been Associate Professor at the University of Mauritius. He has also been a consultant to the Commission de l'Océan Indien, UNEP, UNDP and to various firms. He is the vice president of the Western Indian Ocean Marine Science Association which groups more than one thousand marine scientists from eastern Africa and the western Indian Ocean Islands. He joined the MOI in October 2003 as adviser and was appointed director in April 2004. Due to his initiative and support both authors could cooperate and study the marine malacofauna of Mauritius and Rodrigues.

Discussion and remarks:-

This new species can only be compared with *Chrystella finckhi* (Hedley, 1899) from the

Pacific Ocean (Tutaga Islet, Funafuti [now Tuvalu]). In general outline it agrees but the strong knobbed spiral on the periphery simply differentiates the new species from the former. *Chrystella islandica* Laseron, 1956 might be synonymous with *C. finckhi*, however additional material is needed to verify this. All other related Recent species are from the West Indian province.

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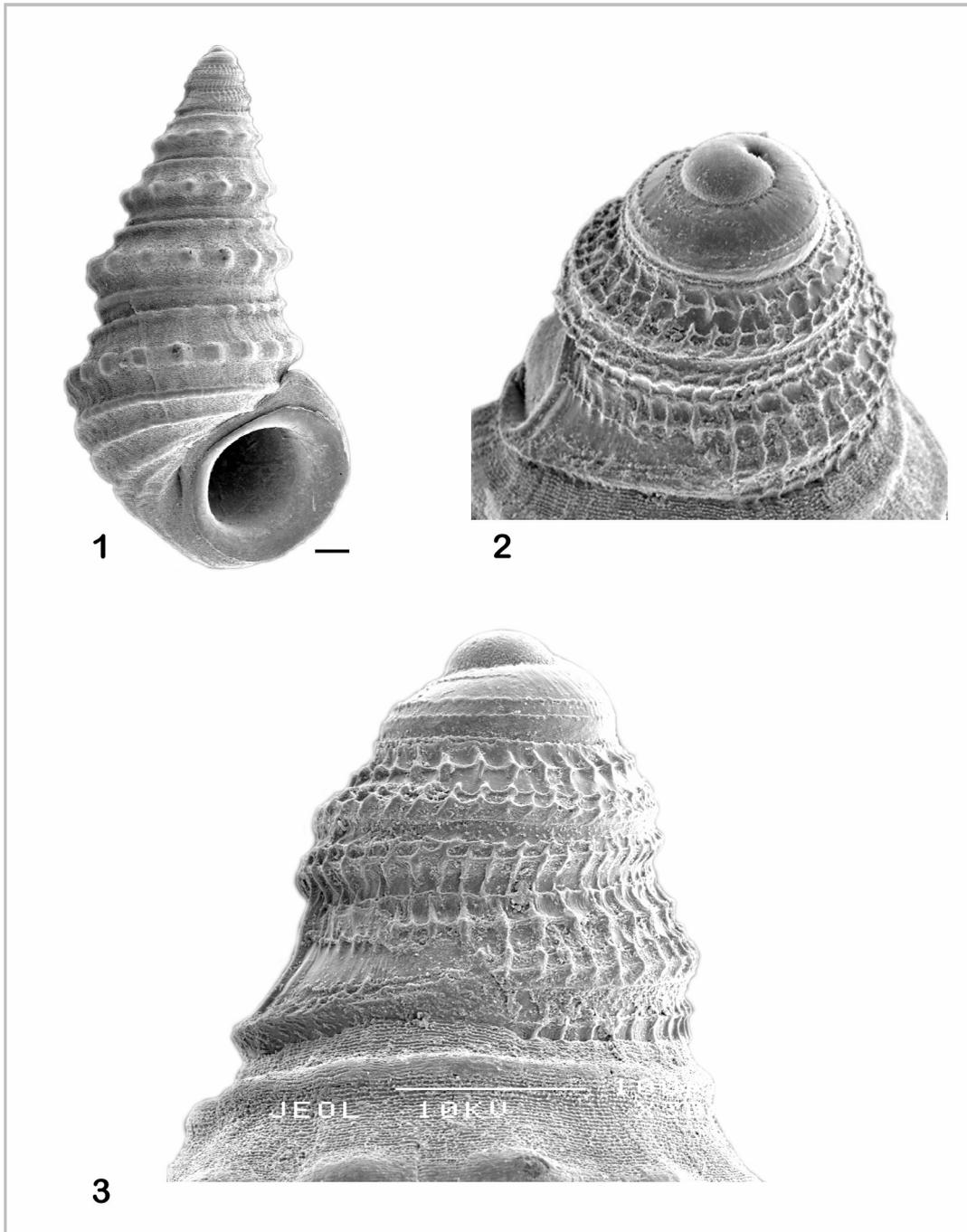
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Figs 1-3. Pickworthiidae, *Chrystella bhikajeei* new species, Mauritius, Flic en Flac, holotype; **1.** Ventral view, height 1.6 mm [scale bar is 0.1 mm]; **2-3.** Protoconch.

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