A new sinistral turrid gastropod (Conoidea: Mangeliidae) from Taiwan

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Introduction

The examination of six specimens of a most peculiar sinistral turrid species from Taiwan housed at the Muséum National d’Histoire Naturelle Paris (MNHN) led us to the recognition of a new species. These specimens resemble members of the Oenopotinae Bogdanov, 1987 recently placed in the Mangeliidae P. Fischer, 1883 (Bouchet et al., 2011; Puillandre et al., 2011). The distinct anal sinus and protoconch sculpture suggests it belongs to the genus Curtitoma Bartsch, 1941. Unfortunately, no living specimen of the present species is available for anatomical, molecular, and radular examination. Asami (1993) estimated that 99% of living Gastropod species are dextral. Most sinistral species are land and freshwater pulmonates. The discovery of this sinistral species is of particular interest as it is the first sinistral species reported in the family Mangeliidae.

Material and methods

The material studied originated from the TAIWAN 2004 expedition carried out as part of the Tropical Deep-Sea Benthos programme, a joint project of the Institut de Recherche pour le Développement (IRD) and the Muséum National d’Histoire Naturelle Paris (MNHN). Descriptions and measurements are based on shells oriented in the traditional manner: spire up with the aperture facing the viewer. SEM micrographs were taken using an Hitachi S-2400.

Abbreviations

MNHN Muséum National d’Histoire Naturelle, France
MZB Museo di Zoologia dell’Università di Bologna, Italy
NMNS National Museum of Natural Sciences, Taiwan
ZRC Zoological Reference Collection, Raffles Museum of Biodiversity Research, Singapore

a/l ratio of aperture length to total shell length
b/l ratio of shell breadth to total length

Systematics

Conoidea Fleming, 1822

Mangeliidae P. Fischer, 1883

Genus Curtitoma Bartsch, 1941

Type species: Curtitoma hecuba Bartsch, 1941

Bartsch (1941) erected the genus Curtitoma to accommodate species morphologically similar to members of the genera Oenopota Moerch, 1852 and Propebela Iredale, 1918. The type species is Curtitoma hecuba Bartsch, 1941, a synonym...