

FIVE NEW DIPLOMMATINIDAE OF THE GENERA *ARINIA* H. ET A. ADAMS, 1856, *NOTHARINIA* VERMEULEN, PHUNG ET TRUONG, 2007, AND *OPISTHOSTOMA* W. T. BLANFORD ET H. BLANDFORD, 1860 (GASTROPODA: CAENOGASTROPODA) FROM BORNEO

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ABSTRACT: Five new species are described: *Arinia bathyodon* sp. nov., *A. congener* sp. nov., *A. semiconica* sp. nov., *Notharinia xenos* sp. nov. and *Opisthostoma hemituba* sp. nov., all belonging to the family Diplommatinidae. They occur on limestone hills in Borneo: Sarawak (Malaysia) and East Kalimantan (Indonesia).

KEY WORDS: land snails; Malaysia; Indonesia; Borneo

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INTRODUCTION

We describe five new species of the family Diplommatinidae originating from the island of Borneo (Malaysia: Sarawak; Indonesia: Kalimantan). At first sight, they all resemble the genus *Arinia* H. Adams et A. Adams, 1856, but closer inspection of the shells reveals this holds true for three only. The fourth species lacks the diagnostic character of the genus *Arinia*: a constriction in the body whorl which, in *Arinia*, is provided inside with a thickened calcareous ring. Therefore, we place it in the genus *Notharinia* Vermeulen, Phung et Truong, 2007 (*N. xenos* sp. nov.), a surprising novelty at the genus level for Borneo,

well outside the known range of *Notharinia* (Laos and Cambodia). This distribution pattern inspires speculations that this character loss occurred twice and that inclusion of *N. xenos* in *Notharinia* would render the genus polyphyletic, but until the phylogenetic structure of the group is elucidated, we are inclined to the most parsimonious option, which is to include the new species in *Notharinia*. Finally, the fifth species displays, rather inconspicuously, a curvature of the last part of the body whorl (the tuba) diagnostic for *Opisthostoma* W. T. Blandford et H. Blandford, 1860 (*O. hemituba* sp. nov.).

MATERIAL AND METHODS

The material studied derives from the private collection of the first author ('V' in the lists of ex-

amined material below). The holotypes are stored in the Zoological Museum (MZU) of the Universiti