

Anamorphosis and life-history of the millipede *Nopoiulus kochii* (Gervais, 1847), new for Egypt

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Abstract: Monthly samples were taken to determine the anamorphosis and the life-history of the millipede *Nopoiulus kochii*, new to Egypt. Stadial determination was possible from counting the podous and apodous rings, rows of ocelli, and serial additions of defence glands. Sexual dimorphism occurred at stadium IV. Maturity is achieved at stadium VII. Few males, however, attained maturity at stadium VI. Further moultings of adult stadia occur so that additional adults are found from stadia VII to XIV. *N. kochii* breeds at the age of six months.

Kurzfassung: Anhand von monatlichen Probeentnahmen wurde die Anamorphose und die Entwicklungsgeschichte des Diplopoden (Doppelfüßler) *Nopoiulus kochii*, einer für Ägypten neuen Art, untersucht. Eine Bestimmung der einzelnen Entwicklungsstadien war möglich durch die Ermittlung der Anzahl der podialen und apodialen Ringe und der Anzahl der Ocelli, und durch die Anordnung von Abwehrdrüsen. Sexualdimorphismus entwickelt sich im Stadium IV, und die Geschlechtsreife wird im Stadium VII erreicht. Einige Männchen erreichen die Geschlechtsreife schon im Stadium VI. Im Adultstadium kommt es noch zu mehrfachen Häutungen, so dass in den Stadien VII bis XIV weitere Adultformen auftreten. *N. kochii* pflanzt sich im Alter von sechs Monaten fort.

Keywords: Diplopoda, Blaniulidae, anamorphosis, life-history, *Nopoiulus kochii*.

Introduction

Most of the literature on the millipede *Nopoiulus kochii* (Gervais, 1847) deals with its taxonomy, morphology and economic importance (see e.g. ENGHOFF & SHELLY 1979, HOPKIN & BLOWER 1987, MOHAN & MOHANASUNDARAM 1988). To our knowledge, nothing has been published about its anamorphosis and only little on its biology. In this paper we describe the anamorphosis and the life-history of this species from observations in Egypt.

Material and methods

Study area. The present study was conducted at the Botanical Garden of the Faculty of Science, Alexandria University. Two adjacent very similar sampling sites were selected: a rectangle about 120 m² and a triangle about 15 m². Both sites were bordered for use by setting plant pots. The pots were placed side by side, having narrow tunnels in-between. The tunnels were usually covered by 0–2 cm layer of leaf litter from the trees *Ficus sycamore*, *F. pseudosycamorus*, *Magnolia grandiflora*, *Plumeria acutifolia* and *Raphiolipec* sp. which shade the area during most of the day.