

## New phallodrilines (Annelida: Clitellata: Tubificidae) from Western Australian groundwater

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### Abstract

Four species of phallodriline tubificids (Clitellata: Tubificidae) from karst aquifers and caves along the west coast of the state of Western Australia are the first records of this subfamily from non-marine waters in the southern hemisphere. *Akteredrilus parvithecatus* (Erséus 1978) and *Pectinodrillus ningaloo* **n. sp.** occur in anchialine groundwater of Cape Range, along with other taxa of marine affinity. *Akteredrilus leeuwinensis* **n. sp.** and *Akteredrilus podeilema* **n. sp.** occur in caves of the Leeuwin-Naturaliste Ridge and Perth Basin respectively and are the first taxa of marine lineage to have been collected from these systems.

**Key words:** Clitellata, oligochaete, Tubificidae, Phallodrilinae, stygofauna, cave fauna, groundwater, Western Australia

### Introduction

Surveys over the last decade have revealed the presence of diverse aquatic invertebrate communities in caves and groundwater aquifers of Western Australia (e.g. Eberhard *et al.* 2005; Eberhard *et al.* 2004; Humphreys 1999a, 2000; Humphreys & Harvey 2001; Jasinska *et al.* 1996; Leys *et al.* 2003). Examination of oligochaetes from these surveys has revealed numerous new undescribed species, including three species of the tubificid subfamily Phallodrilinae, belonging to *Akteredrilus* and *Pectinodrillus*, described below. The mostly marine *Akteredrilus parvithecatus* (Erséus 1978), was also recorded. Phallodrilines are primarily marine interstitial worms, although some estuarine and freshwater species are known, especially in Europe (e.g. Erséus *et al.* 1992; Giani *et al.* 2001; Juget & Chatelliers 2001; Sambugar *et al.* 1999). Erséus (1990a; 1990b; 1993; 1997a; 1997b) and