



## A checklist of oligochaetes (Annelida) from Taiwan and its adjacent islands

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### Abstract

This checklist lists 98 species and subspecies of oligochaetes (Annelida) that have been reported so far as members of the natural fauna of Taiwan and its adjacent Lanyu (Botel Tobago), Gueishan (Turtle) and Penghu (Pescadore) Islands. Terrestrial oligochaetes have been studied for over a century since 1898, particularly intensively in the past ten years. They are represented by 72 species of which 42 (58.3%) species and subspecies are endemic to Taiwan. They belong to the families Moniligastridae, Glossoscolecidae, Lumbricidae, Octochaetidae, Ocneroдрilidae, and Megascolecidae. Megascolecidae is the most dominant family with 63 species, comprising 87.5% of the terrestrial Taiwanese earthworms reported so far. Aquatic oligochaetes have been investigated for about a decade since 1995, and are represented by 26 species. Of them, 25 are in the family Naididae (including Tubificidae) and *Eiseniella tetraedra* in the family Lumbricidae.

**Key words:** Naididae, Moniligastridae, Glossoscolecidae, Lumbricidae, Octochaetidae, Ocneroдрilidae, Megascolecidae, oligochaetes, Annelida, Taiwan

### Introduction

Since Goto and Hatai (1898), over a century ago, described two earthworm species, *Perichaeta takatorii* Goto and Hatai, 1898 (synonymous to *Amyntas aspergillum* (Perrier, 1872)) and *Perichaeta candida* Goto and Hatai, 1898, from the Taipei area, terrestrial oligochaetes in Taiwan had been slowly studied to 1999 (Michaelsen 1922; Kobayashi 1938; 1939a, b; 1940a, b, c; Gates 1959; Tsai 1964; Kuo 1993; 1995; Chen & Shih 1996), when 26 nominal species were reported in the list of Shih *et al.* (1999). Most of the specimens were collected from coastal plains and their adjacent hills. In the past ten years, due to increasing accessibility to mountain regions by the rapid improvement of the inland transportation, and increasing awareness on conservation of biodiversity and natural resources, the earthworm investigation has progressed more rapidly. The investigations were not only carried out on the island of Taiwan (Tsai C. F. *et al.* 1999; 2000a, b, c; 2001; 2002; 2003; 2004a, b; Tsai S. C. *et al.* 2000; Chang *et al.* 2001; Chen J. H. *et al.* 2002; Chuang & Chen 2002; Chuang *et al.* 2002; Shen *et al.* 2002; 2003b; 2005a, b; Chen & Chuang 2003; Chen I. H. *et al.* 2003; 2004; Chang & Chen 2004; 2005a, b; Chang 2005; James *et al.* 2005), but also expanded to the adjacent Lanyu (Botel Tobago) (Shen & Tsai 2002a, b), Gueishan (Turtle) (Chen *et al.* 2003) and Penghu (Pescadore) (Shen *et al.* 2005a) islands. The number of nominal species increased to 35 (12 endemic and 23 exotic) in the list of Tsai *et al.* (2000a) and to 71 species in the list of Blakemore *et al.* (2006).

In the list of Blakemore *et al.* (2006), the vermiculture earthworm, *Eisenia fetida* (Savigny, 1826), and *Amyntas asiaticus* (Michaelsen, 1900) from two local reports of Kuo (1987) and Chang (1992) on