



## Three new species of earthworms belonging to the genus *Amyntas* (Oligochaeta: Megascolecidae) from Hainan Island, China

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### Abstract

This paper describes three new species of earthworms from Hainan Island, China: *Amyntas trapezoides* **sp. nov.**, *Amyntas conchicapillatus* **sp. nov.** and *Amyntas dongfangensis* **sp. nov.** *Amyntas trapezoides* has no pigment, and has two pairs of spermathecal pores in 6/7 and 7/8 arranged trapezoidally near the mid-ventral line, a complicated glandular region on ventral side of 1/2XVII–1/4XIX, developed prostates and repeatedly curved prostatic ducts close to ventral midline. *Amyntas conchicapillatus* **sp. nov.** has no pigment, and has a pair of large convex smooth shellfish-like papillae in male pore region, only one pair of spermathecal pores in 5/6 and undeveloped thin prostates which closely adherent to the body wall. *Amyntas dongfangensis* **sp. nov.** has a pair of male pores on the centre of a flat-topped conical protuberance surrounded by three to five circular folds, and five pairs of spermathecal pores in 4/5–8/9.

**Key words:** earthworms, Oligochaeta, Megascolecidae, *Amyntas*, new species, Hainan, China

### Introduction

Hainan is the largest tropical island in South China with various animals and plants resources (Deng *et al.*, 2008). Chen Yi collected earthworms from parts of Hainan Island in 1938, and a total of 32 species of earthworm were reported including 22 newly discovered species (Chen, 1938). Three other new earthworm species from Hainan were described in the 1980s (Quan, 1985; Quan & Zhong, 1989). We conducted a wide field survey on earthworm diversity in Hainan in June 2006. In this paper we describe three new species of the genus *Amyntas* from Jianfeng Mountain and Diaoluo Mountain, Hainan, China. They are *Amyntas trapezoides* **sp. nov.**, *Amyntas conchicapillatus* **sp. nov.** and *Amyntas dongfangensis* **sp. nov.**

Jianfeng Mountain is the largest well-preserved intact tropical rain forest in China, located in the southwest of Hainan Island (18°23'–18°50'N, 108°36'–109°05'E). There are eight types of major vegetation distributed vertically from foothills to the highest peak (elevation 1412m), with more than 3000 and 4700 species of plants and animals respectively (Fang *et al.*, 2004; Zeng *et al.*, 1997). Diaoluo Mountain National Forest Park, located in southeastern Hainan Island (18°50'N, 109°50'E), has an East Asian monsoon climate with an average annual temperature of 20°C and precipitation of 2566mm (Wang & An, 1999).

Holotypes and paratypes are deposited in the Shanghai Natural History Museum.

### *Amyntas trapezoides* Qiu & Sun **sp. nov.**

(Figs. 1A, B)

**Material.** Holotype: One clitellate (C-HN008A): China, Hainan Province, Mt. Jianfeng (18°44.45'N, 108°50.32'E), 1020 m. elevation, soil, coll. J. P. Qiu and M. B. Bouché, 5 Jun. 2006. Paratype: Three clitellates (C-HN008B): Same data as for holotype. Other material: Seventeen semiclitellates (C-HN008C): Same data as for holotype.