



A revision of the taxonomy of *Dendrelaphis caudolineatus* (Gray, 1834) (Serpentes: Colubridae)

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Abstract

The systematics of the wide-ranging southeast Asian colubrid snake *Dendrelaphis caudolineatus* (Gray, 1834) was investigated on the basis of multivariate analyses of morphological and coloration data for 131 museum specimens representing 28 geographically isolated populations. The results demonstrate that the current taxonomy of *D. caudolineatus* underestimates species diversity in the Philippines. The following revisions are implemented. 1) Populations from the Philippine island Palawan and adjacent islands currently referred to *D. c. caudolineatus* (Gray, 1834) are described as a new species, *D. levitoni* **sp. nov.** 2) Populations from the Philippine islands Negros, Panay, Mindoro and Masbate, currently assigned to *D. c. terrificus* (Peters, 1872) and *D. c. luzonensis* Leviton, 1961 are referred to *D. fuliginosus* Griffin 1909, which is revalidated. 3) Populations from the southern Philippine islands Basilan, Mindanao, Cebu, Bohol, Leyte, Samar, Polillo, Kalotkot, Catanduanes as well as Southeast Luzon currently referred to *D. c. terrificus* (Peters, 1872) are referred to *D. philippinensis* Günther, 1879 which is revalidated. 4) The population from Sulawesi is referred to *D. terrificus* (Peters, 1872). Currently regarded as a polytypic species composed of five subspecies, *D. caudolineatus* is here considered to be a monophyletic group comprising eight species. The distributions of these eight species correspond largely with aggregate island complexes formed during periods of reduced sea level during the Pleistocene. However, some deviations indicate post-Pleistocene dispersals across sea barriers.

Key words: Indonesia, Philippines, Pleistocene aggregate island complexes, snakes, Southeast Asia.

Introduction

The colubrid snakes of the genus *Dendrelaphis* Boulenger, 1890 occur widely in South and Southeast Asia (Ziegler & Vogel, 1999). Members of this genus are slender, diurnal species that are predominantly arboreal and feed mainly on lizards and amphibians (e.g. Manthey & Grossmann, 1997; Malkmus *et al.*, 2002). Boulenger (1894), Wall (1921), Meise & Hennig (1932), Mertens (1934), Smith (1943) and Leviton (1968) have in turn revised the systematics of this genus. Lately however, a comprehensive revision of the genus has led to the description of eight new species, the revalidation of three species and the elevation to specific status of one subspecies (Van Rooijen & Vogel, 2008a, b, c, 2009, 2010; Vogel & Van Rooijen, 2007, 2008, 2011a, b, c).

The present paper focuses on the taxonomy of *Dendrelaphis caudolineatus* (Gray, 1834) which inhabits Sundaland, Sulawesi, the Philippines and the Maluku islands. This polytypic species occupies a unique position within its genus, having a stout body and foraging primarily on the ground, skinks being its primary prey (Leviton, 1968; Smith, 1993, Van Rooijen & Van Rooijen, 2007), whereas its congeners are slender and chiefly arboreal. Moreover, it lacks the enlarged vertebral scales that are a prominent characteristic of its congeners. Five subspecies are currently recognized, four of which inhabit the Philippines. The taxonomy of *D. caudolineatus* has not been without controversy, particularly with regard to the Philippine taxa. Taylor (1922) recognized three Philippine species: *D. caudolineatus* (Gray, 1834) from Palawan and Balabac, *D. modestus* Boulenger, 1894 from Mindoro, Negros, Sulu and Palawan and *D. terrificus* (Peters, 1872) from the remaining Philippine islands as well as Sulawesi. Taylor (1922) referred the populations from Mindoro, Negros, Sulu and Palawan to *D. modestus* on the