



<http://dx.doi.org/10.11646/zootaxa.3710.4.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:9E655A9A-88EA-4E86-8525-27477BDBEBF6>

A remarkable new *Nilotonia* species (Acari, Hydrachnidia, Anisitsiellidae) from percolating water of a cave in Cat Ba island in Halong Bay, Vietnam

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Abstract

Both sexes of *Nilotonia sketi* sp. nov. are described from percolating water of a cave in Cat Ba island in Halong Bay, Vietnam. The IV-L-6 of the new species is characterized by a line of longer ventral setae, and presence of two longer distoventral setae. The systematic position of *Nilotonia* species attributed to the subgenera *Dartiella* K. Viets, 1929 and *Dartonia* K. Viets, 1929 are discussed. The latter subgenus is re-defined and *Dartiella* is proposed as its junior synonym. Two new subgenera, *Gereckonia* (type species: *Nilotonia turcica* Özkan & Soysal, 1989 from Turkey) and *Davetonia* (type species: *Nilotonia perplexa* Cook, 1967 from India) are erected.

Key words: Acari, new species, taxonomy, subterranean water, Vietnam

Introduction

Up to now, only few species have been described from surface waters of Vietnam (Goldschmidt and Koehler 2007; Tuzovskij 2009a, 2009b, 2013) and the groundwater fauna from Vietnam (and its karstic regions) is virtually unknown. Moreover, the subterranean fauna of southern and southeastern Asia is poorly documented. Literature data for hyporheic habitats include only records from India (see Cook 1967; Pešić and Ranga Reddy 2009), whereas published data for phreatic habitats (wells) and caves, and in particular for the epikarst, do not exist.

I describe here a new, blind species of the genus *Nilotonia*, the first stygobiont water mite of Vietnam, collected in a cave on Cat Ba island in Halong Bay, northern Vietnam. The species was collected by an expedition carried out by Boris Sket and Peter Trontelj (Slovenia) who surveyed the fauna of a number of caves in the World Heritage area of Vinh Ha Long (= Ha Long Bay) in northeastern Vietnam (from E106°56' to E107°37' and from N20°43' to N21°09'). Halong Bay is a large area (about 1500 km²) of submerged limestone, with about 2000 islands, that forms one of the best known karstic landscape that was invaded by the sea (Kotellat 2012).

There is a complex and diverse aquatic community of microinvertebrates (dominantly represented by a rich crustacean fauna, especially copepods), which inhabit small fissures and cracks in the so-called vadose (or unsaturated) zone, i.e. the space between fossil cave galleries and the surface (Pipan 2004). However, the upper layer of this zone called the epikarstic zone (typically occurring in carbonate rocks such as limestone) traditionally has been neglected as the primary habitat for water mites. Epikarstic species can be collected in trickles of water percolating from the ceiling and walls of caves as well as in the pools filled with it.

A recent Italian speleological expedition carried out in the Ha Giang region in northern Vietnam, collected several water mite species from rimstone pools or other tiny collections of percolating water from several caves. This material (Pešić and Gerecke in prep.), included several blind species new to science, one of them representing a previously unknown limnesiid subfamily, suggesting that the latter habitat can be treated as the primary one for these species. Probably more new species can be obtained from further investigations in pools of percolation water.