



Correspondence

A new species of *Pontarachna* (Acari, Hydrachnidia, Pontarachnidae) from a mesophotic coral ecosystem off Vieques Island, Puerto Rico, Caribbean Sea

VLADIMIR PEŠIĆ¹, TAPAS CHATTERJEE² & NIKOLAOS V. SCHIZAS³

¹Department of Biology, University of Montenegro, Cetinjski put b.b., 81000 Podgorica, Montenegro. E-mail: vladopesic@gmail.com

²Department of Biology, Indian School of Learning, I.S.M. Annexe, P.O. – I.S.M., Dhanbad-826004, Jharkhand, India.

E-mail: drtchatterjee@yahoo.co.in

³Department of Marine Sciences, University of Puerto Rico, Mayagüez, Call Box 9000, Mayagüez, PR 00681, USA.

E-mail: n_schizas@cima.uprm.edu

The water mite family Pontarachnidae Koenike, 1910, the only family of the Hydrachnidia occurring in the marine environment, represents a diverse and widespread, but still neglected group of marine meiofauna. Most marine species live nearshore with the exception of few freshwater species found in estuaries or locations near the sea (Smit 2002; Smit & Alberti 2010). In this paper we describe a new species, *Pontarachna nemethi*, from substrata collected from El Seco, a mesophotic site near Vieques Island off Puerto Rico, from 52–67 m depth, more than 2 times the depth at which Pontarachnidae have been previously collected. The finding of the new species remarkably extended the potential area of the world ocean occupied by the Pontarachnidae.

Following a worldwide survey of the diversity of the family by Pešić *et al.* (in press), most of the presently known 42 species, including the new species described in this paper, are known from the tropical Central Indo-Pacific Ocean. The life history of pontarachnids has been understudied. Basic information on the existence of a larval stage and its host are unknown (Cook 1996) and it is possible that the parasitic larval stage is bypassed (Pešić *et al.* 2011).

The family is represented by two genera: *Pontarachna* Philippi, 1840 and *Litarachna* Walter, 1925. Three species are known from North America (in parentheses their distribution per marine biogeographic provinces are given, from Pešić *et al.* in press): *Pontarachna cruciata* Hall, 1912 from California (Hall 1912) (Warm Temperate Northeast Pacific), *Litarachna degiustii* Cook, 1958 from Caribbean Sea (Bimini, Bahamas—Cook 1958, Curaçao, Netherlands Antilles—Pešić *et al.* 2008) (Tropical Northwestern Atlantic) and *L. caribica* Pešić, Chatterjee & Schizas, 2008 from the southern Caribbean region (Curaçao, Netherlands Antilles—Pešić *et al.* 2008) (Tropical Northwestern Atlantic).

As an extension of a long-term research program (Deep Cres) of the Department of Marine Sciences, University of Puerto Rico, Mayagüez (DMS-UPRM), to characterize the Caribbean Mesophotic Coral Ecosystems (MCEs), surveys and collections were made from MCEs of Puerto Rico during research cruises from 2010 to 2012. MCEs are light-dependent habitats dominated by macroalgae, sponges and scleractinian corals and are found in depths between 50–100 m (Locker *et al.* 2010; Sherman *et al.* 2010). Our benthic group conducted biodiversity surveys with emphasis on macrofauna and meiofauna associated with the MCEs.

Material examined in the present study was collected from El Seco (18°7.331N; 65°11.605W), a relatively unexplored mesophotic reef formation located 8.8 km east off Vieques Island, mostly known for spawning aggregations of the grouper *Mycteroperca tigris* (Sadovy *et al.* 1994). During the 2010 Mesophotic Cruise of DMS-UPRM, divers equipped with Tri-Mix Rebreathers collected substrata (loose rubble, corals, sponges, algae) from 52–67 m depth and placed them in sealed plastic bags. As soon as the samples returned to the surface they were placed on a 1 mm and 0.125 mm sieves. Samples were washed with filtered seawater and the portion of fauna retained on the 0.125 mm sieve was preserved in 95% ethanol. Mites and other fauna were extracted by Alexandra Galindo and the third author with the aid of a stereomicroscope and placed back in 95% ethanol. The holotype and paratypes will be deposited in the Museum of Natural History Basel (NHMB).