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Five new species of *Jaspis* (Porifera: Demospongiae: Tetractinellida: Astrophorina) from Brazil with redescription of the type species *Jaspis johnstonii* (Schmidt, 1862)

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Abstract

The genus *Jaspis* comprises 32 valid species, six of which were previously recorded from the Atlantic Ocean. Two species have already been recorded from the Brazilian coast: *J. johnstonii* and *J. salvadori* (Rio Grande do Sul and Espírito Santo States respectively). Their respective type specimens, deposited at Muséum National d'Historie Naturelle, Paris (*Jaspis salvadori*, holotype) and at Universalmuseum Joanneum, Zoology Center of Natural History, Austria (*Jaspis johnstonii*, syntype) were reexamined, but due to differences in spicule composition these records are considered to be invalid. The present paper describes five new species of *Jaspis* collected on the Brazilian coast (*Jaspis atolensis* **sp. nov.**, *J. iacuitaster* **sp. nov.**, *J. corticomicroxea* **sp. nov.**, *J. variaster* **sp. nov.** and *J. gigoxea* **sp. nov.**) bringing the total number of species worldwide to 36, all of which were compared in tabular format. The type species, *Jaspis johnstonii,* was also redescribed.

Key words: Porifera, Sponges, Western Atlantic, Brazilian coast, taxonomy, *Jaspis*

Introduction

The genus *Jaspis* Gray, 1867, with 32 valid species, is the second largest of the Family Ancorinidae Schmidt, 1870 (Suborder Astrophorina Sollas, 1888). Six species from *Jaspis* have been recorded from the Atlantic Ocean: *J. eudermis* Lévi & Vacelet, 1958 (Azores); *J. griseus* Lévi, 1959 (São Tomé and Príncipe); *J. incrustans* (Topsent, 1890) (Azores); *J. johnstonii* (Schmidt, 1862) (Adriatic Sea, Mauritius Islands, Strait of Gibraltar, Senegal, Israel, Brazil, NW Mediterranean, Azores and Cape Verde); *J. salvadori* Boury-Esnault, 1973 (Brazil) and *J. velezi* (Wintermann-Kilian & Kilian, 1984) (Caribbean).

The two species previously recorded from Brazil (*J. johnstonii* and *J. salvadori*) were found from Rio Grande do Sul and Espírito Santo states, respectively. It is likely that this perceived low biodiversity of *Jaspis* from Brazil is more so related to incomplete sponge species inventories than reflecting true species diversity. Consequently, this study revises the existing Brazilian records, including redescription of the syntype of *J. johnstonii,* and describes five new species collected from the Brazilian coast.

The original description of *J. johnstonii* made by Schimdt (1862) was vague and poorly illustrated, with only measurements of euasters provided. Topsent (1900) redescribed the species in more detail, including illustrations of spicules, but no reconstruction of the skeleton was provided. More recently, Uriz (2002) redescribed *J. johnstonii* based on new material from Spain, but did not reexamine the syntypes and as such the precise identity of the species remained equivocal. Characterization of *J. johnstonii* by Dendy (1916), Topsent (1928) and Lévi (1952, 1965) were also incomplete, with spicule dimensions highly variable between those studies. Previous studies indicate that *J. johnstonii* may be widely distributed, recorded from the Adriatic Sea, Mauritius Islands, Strait of Gibraltar, Senegal, Israel and Brazil. However, this alleged wide distribution might be more related to the paucity of characters found for this species, leading to morphological convergences, with geographic records potentially consisting of several cryptic sibling species. Consequently, in the present work we re-examined and redescribed the

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