



Resurrection and redefinition of the genus *Tubella* (Porifera: Spongillidae) with a worldwide list of valid species

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The confusion about the genus *Tubella* began when Carter (1881) relocated three species described by Bowerbank (1863)—*Spongilla paulula*; *Spongilla reticulata* and *Spongilla recurvata* to the genus *Tubella*, and also described *Tubella spinata*. However, Carter ignored Gray (1867) who proposed the genus *Metania* for *S. reticulata* and *S. paulula*, and *Acalle* for *S. recurvata*. Later, Vejdovsky (1888) described the genus *Trochospongilla* comprising species which have only one type of megasclere, without microscleres and birotulate gemmoscleres with rotules that may have unequal size. These features were congruent with some species of *Tubella*. After seven decades, De Laubenfels (1936) returned to the classification proposed by Gray (1867) concerning the genus *Metania*. On occasion, De Laubenfels proposed types species, designating *Spongilla reticulata* Bowerbank, 1863 for the genus *Metania*, and *Tubella paulula* Bowerbank, 1863 (misspelled as *Tubella paulata*) for the genus *Tubella*. Thus, *Trochospongilla* should be considered a junior synonym of *Tubella* but unfortunately this did not happen. Penney & Racek (1968) complicated this scenario when they recommended that the genus *Tubella* should be removed from the sponge classification, since it would be a conglomerate of several species belong to different genera. This recommendation has been followed by recent authors, and the genus *Tubella* is commonly referred as a synonym of the genera *Acalle*, *Metania* and especially *Trochospongilla*. In order to correct this taxonomic misconception, we propose here the revalidation and redefinition of genus *Tubella*.

Class Demospongiae Sollas, 1885

Order Haplosclerida Topsent, 1928

Family Spongillidae Gray, 1867

Genus *Tubella* Carter, 1881

Type species: *Tubella paulula* Carter, 1881 (by subsequent designation, De Laubenfels, 1936: 37)

Proposed new synonymy. *Trochospongilla* Vejdovsky, 1883: 31; Penney & Racek, 1968: 133 (and synonymy therein). *Uruguayia* in part: *sensu* Hinde, 1888: 10 (part); Weltner, 1895: 130 (part); Cordero, 1924: 117 (part); Gee, 1932: 44 (part); Penney, 1960: 60 (part); Penney & Racek, 1968: 143 (part); Belén, 1968: 285 (part).

Not *Uruguayia* Carter, 1881: 100; Volkmer-Ribeiro & De Rosa-Barbosa, 1978: 505 (and synonymy therein).

Uruguayella Bonetto & Ezcurra de Drago, 1969: 356.

Tubella is defined as a sponge with an encrusting growth form. Consistency fragile to moderately hard. Ectosome with spicules in the dermal membrane. Choanosome anisotropic, pauci- or multispicular fibres, more dense at the sponge base. Variable amount of spongin. Megascleres oxeas, strongyles and tornotes, straight or slightly curved, stout or slender, smooth or spiny. Microscleres absent. Gemmules grouped or singly scattered. Gemmules spherical, enveloped in single or multi-gemmular pneumatic pseudo-cage, armoured by megascleres. Foramen present. Gemmular theca monolayered consisting of compact spongin. Gemmoscleres are birotulates minute, short, smooth, stout or slender shaft radially embedded in gemmules. Rotules equal or unequal diameter, entire, circular, often bent, turned in the same direction, usually the upper rotule cup shaped and smaller than the inner.