



***Vosmaeria* Fristedt, 1885 (Porifera, Demospongiae, Halichondriidae): revision of species, phylogenetic reconstruction and evidence for split**

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Abstract

All species of *Vosmaeria* are re-described using type and additional material. The phylogenetic relationships between *Vosmaeria* ssp. and other demosponge taxa are reconstructed based on 28S-rDNA sequences analyses. *V. crustacea*, the type species, is widely distributed in the NE Atlantic and characterized by a thinly encrusting growth form, the location of ostia and oscula exclusively on papillae, a dense and firm ectosomal skeleton, the absence of subectosomal aquiferous cavities and the blunt distal tips of tylostyles. Hydrochemical conditions may account for the smaller spicule size of the White Sea population compared to those in the North and Barents Sea. *V. reticulosa*, known from the Chilean and Peruvian coasts, is distinguished by a massive growth form, a reticulated ectosomal skeleton, the absence of papillae, the scattering of ostia and oscula over the surface, the presence of subectosomal cavities and the acerate distal tips of tylostyles. *V. levigata*, known exclusively from the English Channel, shares the absence of papillae and the acerate distal tips of tylostyles with *V. reticulosa*, but the only surviving material consists of dissociated spicules slides, and consequently its status remains unclear. On the basis of substantial morphological differences we propose to split *Vosmaeria* into two monospecific genera – *Vosmaeria*, with type species *V. crustacea*, and *Johannesia* gen. nov., with type species *V. reticulosa*. Both genera clearly belong to Halichondriidae based on the tangential arrangement of the ectosomal skeleton, the presence of oxeas. Molecular phylogenetic analyses support a split into two genera and confirm the classification of both within the Halichondriidae.

Key words: Taxonomy, molecular phylogeny, Porifera, Halichondriidae, *Vosmaeria*, *Johannesia* gen. nov.