

Comments on the proposed conservation of usage of the specific name of *Eudendrium tenellum* Allman, 1877 (Cnidaria, Hydrozoa) by the designation of a neotype
(Case 3315; see BZN 63: 8–11)

(1) P. Schuchert

Muséum d'histoire naturelle, 1, route de Malagnou, CH-1211 Genève, Switzerland

Marques & Vervoort proposed to designate a neotype for *Eudendrium tenellum*, despite the original type specimen still existing. The original type material of *E. tenellum* is of limited use as it lacks hydranths, but its nematocysts agree with the assertion that it is conspecific with *E. capillare* Alder, 1856 (based on my own observations of the type specimen and also a conclusion tentatively given by Marques & Vervoort). Although the nominal species *E. tenellum* was not objectively recognisable, several authors, although not a significant number, referred material to this species, mostly without examining the taxonomically essential nematocyst capsules. Without this information, the species identification within *Eudendrium* is not possible (this includes *E. capillare*). While many of the previous records are likely to have been of *E. capillare* (although most of these records cannot now be checked), some records were recognized as belonging to other species with different nematocysts, including *E. tenellum* described by Hirohito.

Because only a few records of *E. tenellum* are actually based on nematocyst types, I disagree with Marques & Vervoort that *E. tenellum* sensu Hirohito is a well known and widespread species and that this usage should be stabilized. Hirohito's *E. tenellum* has a polysiphonic colony, while *E. tenellum* is otherwise portrayed as monosiphonic. This suggests that most other records of *E. tenellum* are unlikely to belong to the same species as Hirohito's material. I am not convinced that the use of *E. tenellum* sensu Hirohito corresponds to general usage as claimed by the authors. I think it is likely that many previous records of *E. tenellum* were in fact of *E. capillare*—possibly as many or even more as of *E. tenellum* sensu Hirohito—which makes it preferable to maintain the original type fixation.

Eudendrium tenellum was originally described from the western Atlantic, from a region that also falls within the known distribution of *E. capillare*. By designating a specimen from Japan as the neotype, the scope of the original distribution of *E. tenellum* will be completely changed. This is certainly undesirable. Furthermore, the Code requires that a neotype should come as nearly as practicable from the original type locality.

I therefore suggest that the current type fixation is maintained and *E. tenellum* be treated as a subjective synonym of *E. capillare*, while Hirohito's material be assigned to a new nominal species.

To summarise why I oppose the application by Marques & Vervoort:

- (1) the original type and the proposed neotype come from biogeographically very distant areas (tropical W-Atlantic versus temperate N-Pacific);
- (2) the original type material still exists and provides sufficient data to allow *E. tenellum* to be tentatively synonymized with the well known species *E. capillare*;
- (3) many records of *E. tenellum* probably refer to *E. capillare*, and do not match well with the species scope of the proposed neotype material;

- (4) *E. tenellum* sensu Hirohito cannot be considered a widespread and well-known species and should be assigned to a new nominal species.

(2) A.C. Marques

Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, R. Matão, Trav. 14, 101, 05508-900, São Paulo, SP, Brazil

In his comment (above), Schuchert objected to the proposal to designate a neotype for *Eudendrium tenellum*, arguing that the original type specimen is still existing, although it is of limited value. His arguments are (1) that the original type and the proposed neotype come from biogeographically very distant areas (tropical W-Atlantic versus temperate N-Pacific); (2) that the original type material still exists and provides sufficient data to allow *E. tenellum* to be tentatively synonymized with the well known species *E. capillare*; (3) that many records of *E. tenellum* probably refer to *E. capillare*, and do not match well with the species range of the proposed neotype material; (4) that *E. tenellum* sensu Hirohito cannot be considered a widespread and well known species and that this material would be better assigned to a new nominal species.

The solution proposed by Schuchert, included in item (4) above, would also resolve the taxonomic problem although in a different way. I do not object to Schuchert's solution but some considerations in his arguments and other facts may lead to a decision.

Concerning item (1) above, the original application (Marques & Vervoort, 2006) made clear that the neotype we proposed for *Eudendrium tenellum* was not in accord with the original sense of the author, but would satisfy the use of the species in the sense of subsequent authors. It follows that the geographic location of Allman's holotype is not a concern in the solution of the problem, as argued by Schuchert. This was the reason why we proposed a neotype from Japan, because the material is well preserved and reflects the morphology of the species as used by authors since 1950 (as far as I know, the binomen *E. tenellum* is cited in 22 references since 1950, but only five by three different authors include descriptions). Furthermore, neotypes from other localities were proposed in analogous cases (e.g. Lindner & Calder, 2000; see also Opinion 1986, BZN 59: 51, March 2002).

Concerning item (2) above, the description of *Eudendrium tenellum* Allman, 1877 (p. 8, pl. 4, figs. 3-4) is incomplete and could refer to many species in the genus *Eudendrium*. The nematocysts of the type material of *E. tenellum* may indeed corroborate the hypothesis that the species is conspecific with *E. capillare* Alder, 1856 (see Naumov, 1960, p. 224; Christiansen, 1972, p. 290; Marques & Vervoort, 2006, p. 9; and Schuchert's comments). However, the same cnidome and trophosomal morphology of *E. capillare* is observed in many other species of *Eudendrium* that would require sexual characters to be clearly diagnosed (see discussion in Marques, 2001, pp. 349-350). As a consequence, specimens of *E. capillare* are recorded for many places, being considered possibly cosmopolitan (Watson, 1985, p. 185; Marques, Peña Cantero & Vervoort, 2000, p. 201). Therefore, the synonymy of *E. tenellum* with *E. capillare* must be regarded as tentative as highlighted by Marques & Vervoort (2006, p. 9).