
Capilliphycus gen. nov.; validation of “Capillus T.A.Caires, Sant’Anna & J.M.Nunes,” inval. (Oscillatoriaceae, Cyanobacteria)

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“*Capillus* Caires, Sant’Anna & Nunes” was introduced as a new generic name for two species of Brazilian benthic marine cyanobacteria, including two newly described species (“*C. salinus* T.A.Caires, Sant’Anna & J.M.Nunes” *inval.* and “*C. tropicalis* T.A.Caires, Sant’Anna & J.M.Nunes” *inval.*) and two species yet to be formally described from India and the USA.

Article 20.2 of the ICN (Shenzhen Code; Turland *et al.* 2018) specifies that the “... name of a genus may not coincide with a Latin technical term in use in morphology at the time of publication unless it was published before 1 January 1912 ...”. The second-declension noun *capillus* (*m*, a hair, or a head of hair) falls under the aegis of a “Latin technical term” (Gandhi, pers. comm.) thus rendering our genus name and the included species invalid.

The genus name *Capillus* Granata, 1908, currently included in *Index Nominum Genericorum [Plantarum]*, where it is ascribed to Fungi *incertae sedis*, is valid as it was introduced prior to 1 January 1912 (Granata 1908: 3) so that “*Capillus* T.A.Caires, Sant’Anna & J.M.Nunes” *inval.* would be illegitimate even if it were valid. *Capillus intestinalis* Granata, the type, was described as a fungal parasite of the intestinal tract of millipedes and is considered now to belong to the class Ichthyosporia (phylum Choanozoa; Ruggiero *et al.* 2014).

We here replace “*Capillus* T.A.Caires, Sant’Anna & J.M.Nunes” *inval.* with a valid genus name and describe the two new species assigned to this genus.

***Capilliphycus* T.A.Caires, Sant’Anna & J.M.Nunes, gen. nov.**

Replaced designation: “*Capillus* T.A.Caires, Sant’Anna & J.M.Nunes” (in Caires *et al.* 2018: 295).

Description: Thallus forming extensive fasciculate mats or small clusters, brown, brown-green, olive-green to dark green, dark blue-green to black. Filaments straight, isopolar, unbranched, (8-) 12-30 (-465) µm diam. Sheaths hyaline or bright yellow to yellow-brown, firm, thin or thick, sometimes lamellated. Trichomes not or slightly constricted at the cross-walls, not or slightly attenuated towards ends, (6.6-) 10-21 (-24) µm diam., sometimes some trichomes become contorted to form the necridial regions. Cells 1.4-5.6 (-6) µm long, 1.2-11 times wider than long. Cross-walls often granulated, sometimes with large granules. Apical cells rounded, conical, conical-rounded, flat-rounded, truncate, rarely capitate, sometimes thickened, without calyptra. Hormogonia formed by fragmentation perpendicular to the longitudinal axis of the trichome helped by necridic cells, or in diagonal position, in this case helped or not by necridic cells.

Type: ***Capilliphycus salinus* T.A.Caires, Sant’Anna & J.M.Nunes, sp. nov.** below.

***Capilliphycus salinus* T.A.Caires, Sant’Anna & J.M.Nunes, sp. nov.**

Replaced designation: “*Capillus salinus* T.A.Caires, Sant’Anna & J.M.Nunes”, *inval.*, *Algae* 33(4): 295, fig. 2.

Description: Thallus fasciculate, forming extensive mats, brown. Filaments straight, 14-16.4 µm diam. Sheaths hyaline, thin or slight thick, firm. Trichomes cylindrical, slightly constricted at the cross-walls, and sometimes slightly attenuated towards ends, 12.1-14.6 µm diam. Discoid cells, 1.7-2.5 µm long, 5.8-7 times wider than long. Cell content dark-green, granulated. Cross-walls granulated, sometimes with large granules. Apical cells rounded, conical-rounded, conical, flat-rounded, without thickening. Hormogonia formed by cross-wise diagonal fragmentation of the trichome, helped or not by necridic cells.

Holotype: Brazil, Bahia State, Pedra do Sal Beach, Salvador city, 12°57'06" S, 38°20'42" W, Coll. T.A. Caires and E.S.T. Pina 842, Oct 12, 2015 (**ALCB** 114379).

Capilliphycus tropicalis T.A.Caires, Sant'Anna & J.M.Nunes, *sp. nov.*

Replaced designation: "*Capillus tropicalis* T.A.Caires, Sant'Anna & J.M.Nunes", *inval.*, *Algae*. .
An International Journal of Algal Research, 33(4): 295, fig. 3.

Description: Thallus fasciculate, forming small clusters, black. Filaments straight, 12-15.8 µm diam. Sheaths hyaline, thick, firm, frequently lamellated. Trichomes slightly constricted at the cross-walls, 10.1-12.9 µm diam., someone occasionally becomes contorted to originate the necridial regions. Cells 1.4-2.1 µm long, 1.2 times wider than long. Cell content green, sometimes granulated, and with numerous gas vesicles. Cross-walls granulated. Apical cell rounded or conical-rounded, rarely capitata. Hormogonia formed by straight fragmentation helped by necridic cells, or in diagonal position, in this case helped or not by necridic cells.

Holotype: Brazil, Bahia State, Camaçari City, Arem bepe Beach, 12°44'27" S, 38°09'00" W, Coll. T.A. Caires 794, Jan 21, 2015 (**ALCB** 114392).

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