

Algal generic names honouring Johannes Claudius Tempère (1846-1926)

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The genus name *Temperea* has been proposed three times, once referring to a desmid and twice to diatoms. All three were coined to honour Johannes Claudius (also Jean Clodius) Tempère (born Paris, 1846, died Arcachon, 1926), also known as Johannes Albert Tempère and by an early pseudonym “S. Louis”, which was used in the sale of microscope slides usually marked with circular sticker with “S.L.”. A skilled microscopist, he prepared plants and microscopical specimens, particularly of diatoms, in collaboration with a number of eminent French diatomists. Moving to England after the Franco-Prussian War in 1871, he continued to sell plant specimens and prepared slides in collaboration with William West (1848-1914). He also taught French at Storrington School, Sussex, England, before returning to France in 1884. More information is given in an [online article](#) by Brian Stevenson detailing many aspects of his life and times, particularly regarding his commercial relationship with William West.

The first use of *Temperea* is that of Bougon (1896), when he proposed the genus name to accommodate a desmid closely related to *Staurastrum* Meyen ex Ralfs, but “*Elle en diffère en ce qu'elle est absolument dépourvue de toute trace de saillies aux angles.*” [absolutely devoid of any trace of protrusions at the angles.]. He named it *Temperea zonata* Bougon and was the only member of the genus until he transferred *Staurastrum tumidum* Brébisson ex Ralfs (1848) to the genus a year later (Bougon 1897). Here we present a summary of *Temperea* Bougon, lectotypifying the name with the only known drawings of it. Georges Bougon (1847-1912), whose publications appeared as “Docteur Bougon”, was a French medical doctor whose interests ranged from astrophysics to archaeology and who published “*Nature végétales des Euglènes*” (Paris, 1894).

Temperea Bougon, *Le Micrographe Préparateur* 4: 210, 1896.

T: *Temperea zonata* Bougon (monotypic).

Temperea zonata Bougon, *Le Micrographe Préparateur* 4: 210, pl. XX: figs 24, 25 (**lectotype, here designated**, pl. 20: figs 24, 25 in Bougon 1896; here reproduced as Fig. 1).



Fig. 1. Lectotype (here designated) of *Temperea zonata* (Bougon, 1896 pl. 20: figs 24, 25).

Additional species:

Temperea tumida (Brébisson ex Ralfs) Bougon, *Le Micrographe Préparateur* 5: 68, 1897.

Basionym: *Staurastrum tumidum* Brébisson ex Ralfs, *The British Desmidiaceae*: 126, pl. XXI: fig. 6, a-d, 1848.

Notes: this entity is now recognised as *Staurastrum tumidum* Brébisson ex Ralfs.



Although *Temperea* Bougon was included by Fournier (1901) in his *Tableaux analytiques des desmidiées de la France*, the genus was shortly afterwards included in the synonymy of *Staurastrum* by Wille (1909) and West & West (1912), and the name has not been in use since.

In 1908 (in Tempère & H. Peragallo 1908: 54), Maurice Peragallo (1953-1931) described the diatom *Temperea mephistopheles* M.Peragallo (as “*Temperea Mephistopheles* M. Per. n. g. et n sp.”) as having the general aspect of *Skeletonema mediterraneum* (Grunow) Brun but “...*mais le bord porte une rangée de perles ponctuées de forme allongée dans le sens du rayon ; la zone intermédiaire, étroite, porte de fines stries segmentées, et, de la partie centrale grande et finement ponctuée, sortent deux soies divergentes dont les directions sont parallèles mais ne passent pas par le centre de la valve.*” [but the edge bears a row of punctuated pearls of elongated shape in the direction of the radius; the intermediate zone, narrow, carries fine segmented striations, and, from the central part, large and finely punctuated, emerge two divergent bristles whose directions are parallel but do not pass through the centre of the valve]. Maurice Peragallo published many species in the works of his older brother, Hippolyte Peragallo (1851-1921).

Temperea M.Peragallo (in Tempère & H.Peragallo), *Diatomées du Monde Entier*, Éd. 2, fasc. 2-7: 54, 1908. *nom. illeg.* Type (monotypic): *Temperea mephistopheles* M.Peragallo.

Temperea mephistopheles M.Peragallo (in Tempère & H.Peragallo), *Diatomées du Monde Entier*, Éd. 2, fasc. 2-7: 54, nos 98—100, 1908. Syntypes: ANSP T & P II 98—100 (Mahoney & Reimer, 1997; they include all five slides, 96—100, from Tamatave, Madagascar, but at the close of the description it is noted that only slides 98—100 are relevant, Tempère & H. Peragallo 1908: 54, 1915: 62), BM 68444—68446.

Note: The genus name is valid but as it is a later homonym, it is illegitimate. The holotype *Temperea mephistopheles* M.Peragallo (Tamatave, Madagascar) may be in the Laboratoire de Géologie, Muséum National d’Histoire Naturelle, Paris (PC), as much of the original material for the second edition of “*Diatomees du Monde Entier*” was found there by Servant-Vildary *et al.* (2001).

Forti (1908: 132) included “*Aulacodiscus miocenicus*” Forti, *nom. inval.* (no description) in a list of fossil diatoms from Bergonzano: The name *Aulacodiscus miocenicus* was formally published a year later (Forti, 1909: 39, fig.). The following year, Forti (1910: 1306) mentioned “*Temperea miocenica*” [invalid, as the genus name was invalid], which was repeated by Tempère & Peragallo (1910: 225), also without a description. Forti (1912: 718) included the genus name in a dichotomous key, which included sufficient detail for valid publication of the genus name. Finally, Forti (1913: 1591) published a full Latin protologue with a reference to the description and the photograph of the species published in 1909 was made, transferring *A. miocenicus* to *Temperea*.

Temperea Forti, *Atti del Reale Istituto Veneto di Scienze, Lettere ed Arti* 71(2): 718, 1912, *nom. illeg.* Type: *Temperea miocenica* (Forti) Forti (= *Aulacodiscus miocenicus* Forti).

Temperea miocenica (Forti) Forti, *Atti del Reale Istituto Veneto di Scienze, Lettere ed Arti* 72(2): 1591, 1913.

Basionym: *Aulacodiscus miocenicus* Forti, *La Nuova Notarisia* 20: 39, 1909.

Forti recognised that the name *Temperea* Forti was illegitimate requiring a replacement name and hence proposed the name *Temperella* (1914: 109, *adnot.*). Mills is frequently cited as the originator of the name *Temperella* (e.g. Round *et al.* 1990: 704) but that name is included as part of the main entry for *Temperea* and has a reference to “Nov. Notaris, 1914, p. 109” (Mills 1935: 1596). The combination *Temperella miocenica* has never been made.



Temperella Forti, *La Nuova Notarisia*, 25: 109 (adnot.), 1914

Temperella miocenica (Forti) Molinari, Guiry & D.M. Williams, *comb. nov.*

Basionym: *Aulacodiscus miocenicus* Forti, *La Nuova Notarisia* 20: 39, 1909.

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