
***Ceratocorys mariaovidiorum* P.Salgado, S.Fraga, F.Rodríguez, P.Riobó & I.Bravo is a junior synonym of *Pentaplacodinium saltonense* K.N.Mertens, M.C.Carbonell-Moore, V.Pospelova & M.J.Head**

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Recently, two species were independently described that are shown here to be heterotypic (taxonomic) synonyms. The first, *Pentaplacodinium saltonense* K.N.Mertens, M.C.Carbonell-Moore, V.Pospelova & M.J.Head 2017 was described in *Harmful Algae* 71 (online and in print with the pagination pp. 66–70) in Mertens *et al.* (2018). This name, representing a new genus and species, was introduced using new morphological observations, as well as new Large Subunit (LSU), Internal Transcribed Spacer (ITS) and Small Subunit (SSU) ribosomal DNA (rDNA) sequences obtained from freshly isolated plankton samples from the Salton Sea (California, USA), and culture material (strains CCMP404, CCMP1720, CCMP1721, CCMP3241 and CCMP3243) established from cells from the Salton Sea (California, USA), Biscayne Bay (Florida, USA), and Indian River Lagoon (Florida, USA). A scanning electron photomicrograph image of a planktonic cell from the Salton Sea (Mertens *et al.* 2018, plate 3A) was designated as the holotype. The effective online date of publication by Mertens *et al.* (2018) was 16 December 2017 (as verified by the publisher's Version of Record).

The second name, *Ceratocorys mariaovidiorum* P.Salgado, S.Fraga, F.Rodríguez, P.Riobó & I.Bravo 2017 was described in the *Journal of Phycology* (online with the pagination 1–12) by Salgado *et al.* (2018) and is based on new morphological observations and previously published ITS/5.8S rDNA sequences of two strains, CCMP404 (Salton Sea) and CCMP1720 (Biscayne Bay). The authors designated an SEM stub from the CCMP404 culture strain (Salton Sea) as the holotype. The effective date of online publication by Salgado *et al.* (2018) was 29 December 2017 (as verified by the publisher's Version of Record).

Since the same strains (CCMP404 and CCMP1720) were used to describe *Pentaplacodinium saltonense* (Mertens *et al.*, 2018) and *Ceratocorys mariaovidiorum* (Salgado *et al.*, 2018) and the holotypes of both species are based essentially on cells from the Salton Sea with identical sequences, we are in no doubt that these two names are synonymous. As priority for the effective date of publication is based on the Version of Record (Art. 30.2 and 30.3, International Code of Nomenclature for Algae, Fungi, and Plants; McNeill *et al.* 2012), *Ceratocorys mariaovidiorum* is thus a junior synonym of *Pentaplacodinium saltonense*.

Mertens *et al.* (2018) introduced the genus name *Pentaplacodinium* to accommodate the following observations:

1. Molecular biology demonstrated a clear separation and significant distances in the three presented phylogenies (LSU, ITS and SSU rDNA) from both *Ceratocorys* and *Protoceratium* Bergh (Mertens *et al.* 2018, figures 5–7 on p. 71–73).
2. Morphologically, the genus is superficially similar to *Ceratocorys* because it has five precingular plates. The differences are:

- a. There is only minimal contact between plates 1'' and *6'', whereas in *Ceratocorys* this contact is very long (Mertens *et al.* 2018, plate 3, figure A on p. 64).
- b. The anterior sulcal plate (Sa) in *Ceratocorys* is unusually well-separated from the first apical plate (1') (Carbonell-Moore 1996), as opposed to *Pentaplagodinium* (Mertens *et al.* 2018, pl. 3: fig. D on p. 64).
- c. A roundish body cell. Most *Ceratocorys* species are polygonal, with the exception of *C. guerretii* which is oval.
- d. No pronounced appendages present as in *Ceratocorys*. Antapical 'spines' observed by Salgado *et al.* (2018, fig. 4a on p. 6) on the hypotheca of *Pentaplagodinium saltonense* are here considered artefacts of culturing, since this feature has not been observed *in situ* in the Salton Sea or other localities studied by Mertens *et al.* (2018).
- e. Resting cysts have not been linked to any *Ceratocorys* species.
- f. The difference in the reported number of sulcal plates between *Pentaplagodinium saltonense* and *Ceratocorys mariaovidiorum* needs clarification. Mertens *et al.* (2018) observed six sulcal plates in *P. saltonense*, whereas Salgado *et al.* (2018) observed seven. The number of sulcal plates observed in *Ceratocorys* species varies between five and ten (Carbonell-Moore 1996, p. 7).

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