Abstract

_Pseudo-nitzschia nanaoensis_ sp. nov. is described from waters around Nan'ao Island (South China Sea), using morphological data and molecular evidence. This species is morphologically most similar to _P. brasiliiana_, but differs by a denser arrangement of bulae, interstriae, and poroids, as well as by the structure of the valvocopula and the narrow second band. _Pseudo-nitzschia nanaoensis_ constitutes a monophyletic lineage and is well differentiated from other species on the LSU and ITS2 sequence-structure trees. _Pseudo-nitzschia nanaoensis_ makes up the basal node on the LSU tree, and forms a sister clade with a group of _P. pungens_ and _P. multiseries_ on the ITS2 tree. The ability of cultured strains to produce domoic acid was assessed, including its possible induction by the presence of a copepod and brine shrimp, by liquid chromatography–tandem mass spectrometry. However, no strains showed detectable domoic acid.