

On the taxonomy of the coccolithophore genus *Anthosphaera* Kamptner emend. Kleijne

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The genus *Anthosphaera* Kamptner emend. Kleijne is one of the most taxonomically confusing modern coccolithophores and its species level taxonomy has long been in a state of flux. It currently accommodates four formally described species and at least five additional morphotypes, which are assumed to be of species-level (Cros & Fortuno, 2002; Young et al. 2003, 2020). Based on the review of archived Scanning Electron Microscope (SEM) images of our collections, we attempt to rectify the nomenclatural problems and elucidate the obfuscated taxonomy of the genus. Review of included formally and informally described species shows that they are a distinctive group with shared characters, including ten different morphotypes of probable species level. Two of these, including the type species *A. fragaria* and an informally proposed form, *Anthosphaera* type B of Cros and Fortuno, have been shown to form life-cycle associations with heterococcoliths of the *Syracosphaera molischii* type. Hence, all species are transferred to *Syracosphaera* and all morphotypes with *Anthosphaera*-type holococcoliths are now formally described.

References

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