

# A new species of *Hyalolithus* from Upper Miocene sediments in Sicily

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In modern oceans, diatoms are the most important primary producers involved in the biogeochemical cycling of silica. However, the role of other siliceous phytoplankton may have been severely underestimated due to the tiny and delicate mineralised structures that make up their cell coverings. These structures were once considered to be too dissolution prone to be preserved in the underlying sediments, but it is now known that they may be preserved under exceptional conditions. So, a thorough investigation of these smaller siliceous components in a wide range of marine sediments is warranted in order to improve our knowledge of their palaeodiversity.

Following the identification and subsequent study of *Hyalolithus*, a living siliceous haptophyte (Yoshida et al., 2006; Jordan et al., 2015), fossil specimens were encountered in Middle Eocene tropical/subtropical sediments (Abe et al., 2016). This latter discovery suggested the possibility of finding additional specimens in other time intervals. As part of our ongoing studies of fossil silicoflagellates, we conducted a detailed LM/SEM investigation of the type materials of Ehrenberg (notably Late Miocene samples from Caltanissetta, Sicily). These samples contained the siliceous scales of a new species of *Hyalolithus*, which possesses two peaks of differing size and, as yet, no ‘tumor’-like structure.

## References

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