

## Multivariate Morphon Analysis of *Braarudosphaera bigelowii* during a Holocene interval at Mira (SW Portugal)

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Morphometric analyses of *Braarudosphaera bigelowii* have already been performed by several authors (see Takano *et al.*, 2006). Applying slightly distinct methods, all concluded for the existence of several morphotypes. The question of their specific behaviors and (paleo)ecological meaning, however, remained to be addressed most of the time.

With the Multivariate Morphon Analysis (MMA; Parente *et al.*, 2004; Narciso *et al.*, 2006), one can test on a particular calcareous nannofossil taxon for the existence of distinct morphotypes, with the additional advantage that, simultaneously, their individual behaviors are also described and characterized, opening a door for the understanding of their potential use as individual paleoecological proxies (see Narciso *et al.*, 2006).

For the present study, a Holocene section of a core retrieved from the present-day Mira estuary (SW Portugal) was selected due to its abnormal abundance of pentoliths of *B. bigelowii* during an estimated time interval of 2.5 ky, between 8.5 and 6.0 <sup>14</sup>C yrs cal BP, when the region was a former paleo-ria (Alday *et al.*, 2006).

MMA results suggest the existence of 5 distinct morphotypes, each defined by a particular size interval and a specific behavior along the selected core section. The measurement method, morphotypes, and their paleoecological significance will be presented and discussed.

### References

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