

Diachroneic first occurrence of *Marthasterites furcatus* in the Tethyan foreland basins (Outer Western Carpathians)

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The depositional area of Tethyan foreland basins was situated along the SE margin of the NW European Platform, SE from its present location in the outer group of nappes, Western Carpathians. This area was probably connected with the epicontinental sea of the NW European Plate, as it is the case for the Boreal-Tethyan transitional path (Švábenická *et al.*, 2002).

Here, the first occurrence (FO) of *Marthasterites furcatus* was observed at two different stratigraphic levels (Figure 1):

1. Lower Turonian, zone UC6b, Silesian Unit. *M. furcatus* appears between FO *Eprolithus moratus* and FO *Quadrum gartneri*.
2. Middle Turonian, zone UC9a, Waschberg Zone and Ždánice-Subsilesian Unit. Rare *M. furcatus* occurs approximately at the same level as *Lithastrinus septenarius*, after FO *Eiffellithus eximius* and before FO *Zeugrhabdotus biperforatus*.

The first occurrence of *M. furcatus* in the Middle Turonian was also observed in the epicontinental platform sediments of the Bohemian Cretaceous Basin. A seaway between this area and the Ždánice-Subsilesian Unit existed

during the Cenomanian-Coniacian (Stráník *et al.*, 1996). The depositional area of the Silesian Unit was situated further northern (Golonka *et al.*, 2006).

References

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| Stage | nannoplankton zones | WEST EUROPEAN PLATE | | TETHYAN FORELAND BASINS | | | | |
|----------|---------------------|--|-------------|---|---------------|--|------------------------------|--------------------|
| | | BOHEMIAN CRETACEOUS BASIN (epicontinental marine deposits) | | WESTERN CARPATIANS, OUTER GROUP OF NAPPES | | | | |
| | | | | Waschberg Zone, Ždánice-Subsilesian Unit | Silesian Unit | | | |
| TURONIAN | UPPER | UC9 | b UC9b | <i>M. furcatus</i> ** | UC9b | <i>M. furcatus</i> ** | no data | |
| | | | | <i>Z. biperforatus</i> | | <i>Z. biperforatus</i> | | |
| | MIDDLE | UC8 | a UC9a | <i>L. angularis</i> <i>L. septenarius</i> , <i>M. furcatus</i> * | UC9a | <i>L. septenarius</i> , <i>M. furcatus</i> * | <i>L. septenarius</i> | |
| | | | b UC8b | <i>L. angularis</i> <i>L. quadrifidus</i> | | | | |
| | LOWER | UC7 | a UC8a | <i>K. magnificus</i> | UC8 | | no data | |
| | | | | <i>E. eximius</i> | UC7 | <i>E. eximius</i> | | |
| | | UC6 | b UC6b | <i>Q. gartneri</i> | UC7 | <i>Q. gartneri</i> | UC7 | <i>Q. gartneri</i> |
| | | | | <i>E. moratus</i> | | no data | UC6b | <i>M. furcatus</i> |
| | | a UC6a | | | | | <i>E. moratus</i> no data | |
| | | UC5 | UC5c (pars) | <i>H. chiastia</i> <i>E. octopetalus</i> | | UC5c (pars) | <i>Q. intermedium</i> | |

Figure 1: FO *Marthasterites furcatus* in the Outer Western Carpathians and Bohemian Cretaceous Basin. Data compiled by Stráník *et al.* (1996), Švábenická *et al.* (2002) and this work. *rare, **common