SUPPLEMENTARY INFORMATION

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Mososaurine mosasaurs (Squamata, Mosasauridae) from northern Italy

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Below we report the microfossil assemblages identified in the matrix of NHMP 5534, NHMP 5536, and NHMV V1001. For the study of nannofossils the samples were prepared from unprocessed material as smear slides, and examined under a light microscope at 1250x magnification. The count of calcareous nannofossils in a prefixed area of about 6–7 mm² (three vertical transects; modified after Backman and Shackleton, 1983) is provided in brackets.

NHMP 5534

The sample contains few calcareous nannofossils in a poor state of preservation and showing marked dissolution. The genera *Micula* and *Watznaueria* (dissolution resistant taxa) are few to common. In particular, *Micula* is represented by 26 specimens. The rest of the assemblage includes: *Arkhangelskiella* sp. (1), *Biscutum* sp. (1), *Broinsonia parca* (1), *Ceratolithoides aculeus* (2), *Cribrosphaerella ehrenbergii* (6), *Eiffelithus turriseiffelii* (1), *Lucianorhabdus cayeuxii* (4), *Lucianorhabdus maleformis* (1), *Microrhabdulus decoratus* (2), *Prediscosphaera* sp. (1), *Retecapsa crenulata* (4), *Uniplanarius gothicus* (8), *Uniplanarius trifidus* (6), *Zeugrhabdotus biperforatus* (1), and *Zeugrhabdotus diplogrammus* (1).

Biozone and Age of Sample

The presence of *U. trifidus* indicates the calcareous nannofossil Zone NC20 of Roth (1978). Additionally, the presence of *U. gothicus* makes possible the correlation of the sample with the interval ranging from the lower to the upper part of this Zone (Gradstein et al., 2012). On the basis of the stratigraphic distribution of *U. trifidus* and *U. gothicus* the age of the sample corresponds to the late Campanian, and ranges from 76.82–72.54 Ma according to Gradstein et al. (2012).

NHMP 5536

The sample contains few calcareous nannofossils in a poor state of preservation and showing evident traces of dissolution. The genera *Micula* and *Watznaueria* (dissolution resistant taxa) are few to common. In particular *Micula* is represented by 28 specimens. The rest of the assemblage includes: *Arkhangelskiella* sp. (1), *Ceratolithoides aculeus* (3), *Cribrosphaerella ehrenbergii* (4), *Eiffelithus turriseiffelii* (1), *Lucianorhabdus cayeuxii* (2), *Microrhabdulus decoratus* (2), *Prediscosphaera* sp. (2), *Retecapsa crenulata* (7), *Uniplanarius gothicus* (2), *Uniplanarius trifidus* (3), and *Zeugrhabdotus diplogrammus* (1).

Biozone and Age of Sample

The presence of *U. trifidus* indicates the calcareous nannofossil Zone NC20 of Roth (1978). Additionally, the presence of *U. gothicus* makes possible the correlation of the sample with the interval ranging from the lower to the upper part of this Zone

(Gradstein et al., 2012). On the basis of the stratigraphical distribution of *U. trifidus* and *U. gothicus* the age of the sample corresponds to the late Campanian, and ranges from 76.82–72.54 Ma according to Gradstein et al. (2012).

NHNV V1001

The sample contains common calcareous nannofossils, having a moderate state of preservation. The assemblage is dominated by the genera *Micula* and *Watznaueria*. *Retecapsa crenulata* is common, whereas the biostratigraphically useful genus *Lithraphidites* is poorly represented. The rest of the assemblage includes: *Ahmuellerella octoradiata* (1), *Arkhangelskiella* spp. (13 specimens), *Biscutum* spp. (4), *Broinsonia* cf. *parca* (1), *Ceratolithoides indiensis* (4), *Ceratolithoides self-trailiae* (17), *Cribrosphaerella ehrenbergii* (8), *Cylindralithus* sp. (4), *Eiffelithus turriseiffelii* (2), *Lithraphidites carniolensis* (1), *Lithraphidites praequadratus* (2), *Lucianorhabdus cayeuxii* (1), *Microrhabdulus decoratus* (10), *Micula praemurus* (4), *Prediscosphaera* sp. (8), *Rhagodiscus* sp. (4), *Thoracosphaera* spp. (2), and *Uniplanarius* cf. *trifidus* (1).

Biozone and Age of Sample

Lithraphidites praequadratus ranges from the upper Campanian to Maastrichtian (e.g., Gardin et al., 2001; Jarvis et al., 2002; Thibault et al., 2012a, 2012b), while *U. trifidus* is distributed throughout the Campanian (Zone NC 20 of Roth, 1978) and *Micula murus* is strictly upper Maastrichtian (from Zone NC23 to Zone NC26 of Roth, 1978). Therefore the presence of *L. praequadratus* and the concomitant absence of *M. murus*

and of specimens confidently referable to *U. trifidus* makes possible a correlation of the sample with an interval ranging from the calcareous nannofossil Zone NC21 to the top of Zone NC22 (Roth, 1978). It should be noted that it is not possible to further constrain the calcareous nannofossil zonal assignment of the sample because the scarcity of *Lithraphidites* does not allow confirmation of the absence of *Lithraphidites quadratus*, the first occurrence of which marks the base of Zone NC 22 of Roth (1978). The inferred age of the sample is Maastrichtian, but not terminal, between 71.31–69.00 Ma according to Gradstein et al. (2012).

The matrix of this specimen could also be investigated for the presence of planktonic foraminifera. The planktonic foraminifera identified include: *Contusotruncana patelliformis*, *Globotruncana* cf. *arca*, *Globotruncana falsostuarti*, *Globotruncana* cf. *insignis*, *Globotruncanella havanensis*, and *Pseudotextularia elegans*. This assemblage corresponds to the interval between the base of the *Radotruncana calcarata* Zone and the lower part of the *Abatomphalus mayaroensis* Zone, which indicates a late Campanian to late (but not terminal) Maastrichtian age (Premoli Silva et al., 2003). This result is consistent with the narrower age range obtained using nannofossils.

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