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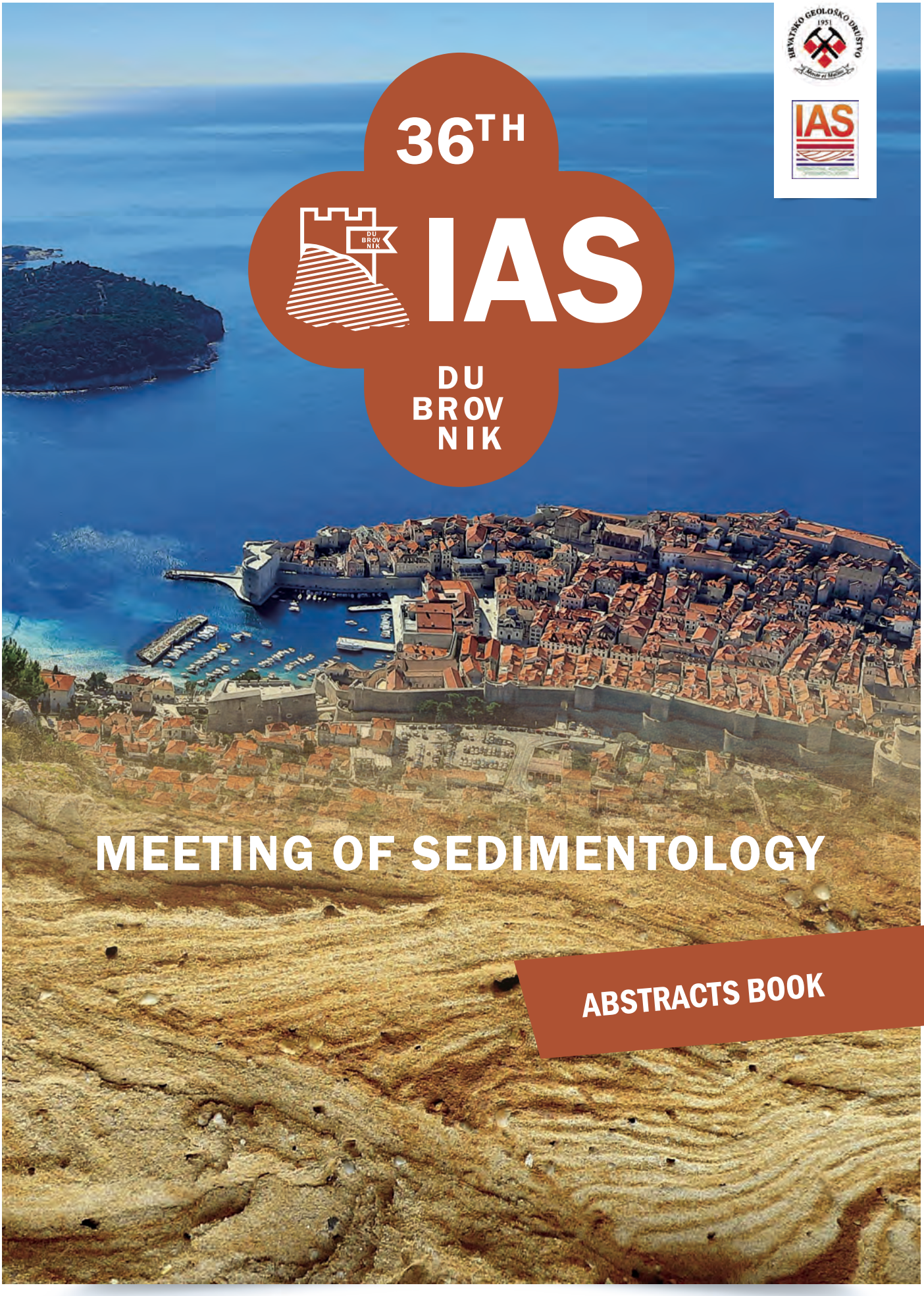

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ABSTRACTS BOOK

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Theme 12. Stratigraphic markers and archives

General Session

Oral presentation

Plankton stratigraphy provides a mid-Paleogene age constraint for the Dalmatian Flysch in External Dinarides foreland basin

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Flysch marks the synorogenic deposition in external foreland fold-and-thrust belts (FATB) around the globe. Thus, a precise estimation of its stratigraphic range is crucial for reconstructing the orogenic histories in these belts. Dinarides FATB is a young orogen settled between the Alps and the Hellenides in SE Europe originating from the NE-wards subduction of the Adriatic plate under the Eurasia. The youngest onshore flysch deposits termed the Dalmatian Flysch mark the position of the External Dinarides foreland basin (EDFB) stretching both over its interior High Karst as well as its exterior Dalmatian tectonic unit. There is an ongoing discussion on its stratigraphic context, contrasting a Paleogene with a Neogene age. Such a difference in age estimation provides severe uncertainties for the reconstruction of tectonic and paleogeographic constrains. In particular, the Neogene age of the Dalmatian Flysch would imply the coexistence of contractional and extensional tectonics in the Miocene of External Dinarides; the latter marked by establishment of numerous intramountain basins encompassing a long lasting lacustrine environment of the so-called Dinarides Lake System. To test the hypothesis on such coexistence, 76 sediment bulk-samples have been collected from 31 sites of the Dalmatian Flysch referred to by current literature as Miocene. They are distributed along a 400-km-long axial transect of the EDFB in Croatia, Bosnia–Herzegovina, and Montenegro between cities of Pag in the NW and Ulcinj in the SE. In contrast to previous studies, we use the calcareous plankton stratigraphy integrating nannoplankton and foraminifera records. Our preliminary results detected neither the presence of Miocene, nor of Oligocene assemblages in the samples. This result is supported by the occurrence of well-preserved planktonic foraminifera including the Middle to Late Eocene stratigraphic markers *Globigerinatheka barri*, *Hantkenina compressa*, and *Morozovelloides crassatus*. The corresponding stratigraphic interval is corroborated by the calcareous nannoplankton assemblages comprising index species such as *Sphenolithus furcatolithoides*, *Cribrocentrum reticulatum*, *C. erbae*, and *Furcatolithus obtusus*. Accordingly, the present data prove a marine offshore deposition in the EDFB during the Oligocene and the Miocene improbable.