

# Characteristics of subaerial exposure surfaces marking terrestrial periods during Late Cretaceous to Early Palaeogene carbonate platform evolution, the island of Brač (Croatia)

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*Source / Izvornik:* **Abstracts book / 36th International Meeting of Sedimentology, 2023, 76 - 76**

**Conference paper / Rad u zborniku**

*Publication status / Verzija rada:* **Published version / Objavljena verzija rada (izdavačev PDF)**

*Permanent link / Trajna poveznica:* <https://um.nsk.hr/um:nbn:hr:169:995146>

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*Download date / Datum preuzimanja:* **2024-05-09**



*Repository / Repozitorij:*

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MEETING OF SEDIMENTOLOGY

ABSTRACTS BOOK



12–16 June 2023, DUBROVNIK, CROATIA

**36<sup>th</sup> International Meeting of Sedimentology**  
**June 12–16, 2023, Dubrovnik, Croatia**

# ABSTRACTS BOOK





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**Publisher:** Croatian Geological Society (HGD)

**For the publisher:** Slobodan Miko

**Editors:** Igor Vlahović and Darko Matešić

**Language Editor:** Julie Robson (Scotland, United Kingdom)

**Digital layout:** Laser Plus d.o.o

**Cover design:** Ana Badrić

**eISBN:** 978-953-6907-79-3

**Theme 2. Shallow-marine carbonate depositional systems and carbonate platforms****General Session**

## Poster presentation

## Characteristics of subaerial exposure surfaces marking terrestrial periods during Late Cretaceous to Early Palaeogene carbonate platform evolution, the island of Brač (Croatia)

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Upper Cretaceous to Lower Palaeogene shallow marine carbonates are the youngest deposits on the Brač Island and contain numerous subaerial exposure surfaces marked by karstification and soil formation. The most prominent emersion surface marks regional unconformity and occurs at the top of the shallow marine Sumartin fm.

Four correlative sections on different parts of the island reveal temporally and spatially differential exhumation of parts of the former shallow Adriatic Carbonate Platform (AdCP). From west to east the locations are: Cape Gomilica, Likva Cove, Babin Loz Cove and Cape Debelo Čelo. Irregular unconformity in the Cape Gomilica section cuts the upper Maastrichtian part of the Sumartin fm. and is marked with up to 1 m thick transgressive breccia. Overlaying palustrine carbonates (micrites with gastropods including *Stomatopsis* sp., charophyta remains and dasyclad algae) are followed by upper Palaeocene limestones rich in miliolid foraminifera (including *Haymanella* sp.). At Likva Cove unconformity truncates lower Danian part of the Sumartin fm., shows irregular relief and up to 2.5 m thick breccia bed composed of terrestrial carbonate clasts (black pebbles, calcretes, clasts with rhizoliths, *Microcodium* aggregates, alveolar septal fabric) imbedded in clayey calcareous and reddish matrix. The overlaying palustrine carbonates with rare *Kayseriella decastroii* are of late Danian age. At Babin Loz Cove palaeokarst surface is developed in mid-upper Maastrichtian Sumartin fm. and characterized by circular dissolution potholes several metres deep filled with reddish bauxitic material and lithoclasts of terrestrial carbonates. The overlying foraminiferal limestones are of Eocene age. At Cape Debelo Čelo unconformity truncates the Maastrichtian part of the Sumartin fm. and is overlain with 10 m thick carbonate breccia (reworked terrestrial carbonates) followed by palustrine limestones, and finally by shallow marine carbonates.

Terrestrial periods recorded in the Upper Cretaceous to Lower Palaeogene Brač carbonates are the result of a gradual development of a forebulge in front of the emerging Dinaridic orogen. They record a regional change from the Mesozoic semi-isolated AdCP to complex Palaeogene carbonate ramp system as well as change from the warm humid climate to semi-arid conditions.