

Basin to reef transition in the Middle Triassic Northwestern Croatian rift related basin (NCTRB)

**Grgasović, Tonći; Smirčić, Duje; Kolar Jurkovšek, Tea; Slovenec, Damir;
Horvat, Marija; Halamić, Josip; Vukovski, Matija; Kukoč, Duje**

Source / Izvornik: **Abstracts book / 36th International Meeting of Sedimentology, 2023, 45 - 45**

Conference paper / Rad u zborniku

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

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:169:782807>

Rights / Prava: [In copyright](#)/[Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2025-03-25**



Repository / Repozitorij:

[Faculty of Mining, Geology and Petroleum
Engineering Repository, University of Zagreb](#)





36TH



IAS

DU
BROV
NIK

MEETING OF SEDIMENTOLOGY

ABSTRACTS BOOK



12-16 June 2023, DUBROVNIK, CROATIA

36th International Meeting of Sedimentology
June 12–16, 2023, Dubrovnik, Croatia

ABSTRACTS BOOK



Organized by:

Croatian Geological Society (HGD) and International Association of Sedimentologists (IAS)



Organizing Committee

Lara Wacha, **chair**, *Croatian Geological Survey, Zagreb*
Katarina Gobo, *University of Zagreb, Faculty of Science*
Nikolina Ilijanić, *Croatian Geological Survey, Zagreb*
Tvrtko Korbar, *Croatian Geological Survey, Zagreb*
Marijan Kovačić, *University of Zagreb, Faculty of Science*
Duje Kukoč, *Croatian Geological Survey, Zagreb*
Borna Lužar-Oberiter, *University of Zagreb, Faculty of Science*
Maja Martinuš, *University of Zagreb, Faculty of Science*
Slobodan Miko, *Croatian Geological Survey, Zagreb*
Davor Pavelić, *University of Zagreb, Faculty of Mining, Geology and Petroleum Engineering*
Kristina Pikelj, *University of Zagreb, Faculty of Science*
Igor Vlahović, *University of Zagreb, Faculty of Mining, Geology and Petroleum Engineering*

Scientific Committee

Igor Vlahović, **president**, *University of Zagreb, Croatia*
Nevena Andrić Tomašević, *Karlsruhe Institute of Technology, Germany*
Bruno Campo, *University of Bologna, Italy*
Sonia Campos Soto, *Complutense University of Madrid, Spain*
Luca Caracciolo, *FAU Erlangen-Nürnberg, Germany*
Blanka Cvetko Tešović, *University of Zagreb, Croatia*
Shahin E. Dashtgard, *Simon Fraser University, Canada*
Andrea Di Capua, *National Research Council – IGAG, Italy*
Goran Durn, *University of Zagreb, Croatia*
Gianluca Frijia, *University of Ferrara, Italy*
Massimiliano Ghinassi, *University of Padova, Italy*
Luis Gibert Beotas, *University of Barcelona, Spain*
Bosiljka Glumac, *Smith College, USA*
Antun Husinec, *St. Lawrence University, USA*
Stuart Jones, *Durham University, UK*
Tvrtko Korbar, *Croatian Geological Survey, Croatia*
Marijan Kovačić, *University of Zagreb, Croatia*
Juan Carlos Laya, *Texas A&M University, USA*
Marta Marchegiano, *University of Granada, Spain*
Cole McCormick, *Pennsylvania State University, USA*
Mardi McNeil, *Geoscience Australia, Australia*
Theresa Nohl, *University of Vienna, Austria*
Shuxin Pan, *PetroChina – NWGI, China*
Guido Pastore, *University of Milano–Bicocca, Italy*
Maximiliano Paz, *University of Saskatchewan, Canada*
Daniel A. Petráš, *Czech Geological Survey, Czech Republic*
Miquel Poyatos-Moré, *Universitat Autònoma of Barcelona, Spain*
Joanna Pszonka, *Polish Academy of Sciences – MEERI, Poland*
John J.G. Reijmer, *Vrije Universiteit Amsterdam, The Netherlands*
Valentina Marzia Rossi, *National Research Council – IGG, Italy*
Arnoud Slootman, *Colorado School of Mines, USA*
Miroslaw Slowakiewicz, *University of Warsaw, Poland*
Thomas Steuber, *Khalifa University of Science and Technology, Abu Dhabi, UAE*
Finn Surlyk, *University of Copenhagen, Denmark*
Michal Šujan, *Comenius University in Bratislava, Slovakia*
Romain Vaucher, *University of Geneva, Switzerland*
Alan Vranjković, *INA Oil Company, Croatia*
Lara Wacha, *Croatian Geological Survey, Croatia*
Guodong Wang, *PetroChina, China*
Pujun Wang, *Jilin University, China*
Valentin Zuchuat, *RWTH Aachen University, Germany*
Nadja Zupan Hajna, *Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia*

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**Special Session 2.1.** Biogeodynamics of Mesozoic marine carbonate depositional systems

Oral presentation

Basin to reef transition in the Middle Triassic Northwestern Croatian rift related basin (NCTRB)

Tonći Grgasović¹, Duje Smirčić², Tea Kolar Jurkovšek³, Damir Slovenec¹, Marija Horvat¹, Josip Halamić¹, Matija Vukovski¹, Duje Kukoč¹¹Croatian Geological Survey, Department of Geology, Zagreb, Croatia²University of Zagreb, Faculty of Mining, Geology and Petroleum Engineering, Zagreb, Croatia³Geological Survey of Slovenia, Ljubljana, Sloveniatgrgasovic@hgi-cgs.hr

In NW Croatia Middle Triassic volcano-sedimentary successions were deposited on the passive continental margin during a period of extensional tectonic related to the Neotethyan rifting. The studied succession in Očura Quarry on Ivanščica Mt is 34 m thick section, divided into three parts. The lower part is composed of dominantly basaltic rocks. In the basal part glomeroporphyritic basalt is overlaid by basaltic autoclastite and peperite. The middle part is composed of cm–dm thick irregularly and wavy bedded calcarenites, in places coarsening upward. Carbonate lithoclasts are mostly micritic limestones with bioclasts. Basaltic lithoclasts are less common, one with the porphyritic to glomeroporphyritic texture, similar to basalt from the lower part; and the other type completely hyaline. There are also thin layers of biomicrites with filaments and radiolarians, thin layers of volcanoclastics, and a thick breccia interval. The upper part is composed of extremely unsorted breccia with slump-texture. Clasts of limestones, calcarenites, and subordinate basalts are supported by fine grained matrix of carbonate and basaltic particles. Within breccia there are abundant framestone clasts containing complex reef community, dominating of sponge *Celyphia zoldana*, with other microorganisms of uncertain taxonomy *Plexoramea cerebriformis* and *Olangocoelia otti*, and others. The investigated section represents sedimentation in the deeper marine environment near the steep edge of the carbonate platform that prograde over it. Basalts found at the base of the section represent submarine effusions, and their fragmentation and reworking. A thick interval of calcarenites with basaltic lithoclasts is formed by shedding of the carbonate material from the nearby platform to the pelagic/basinal areas, indicated by the pelagic limestone interlayers. Chaotic breccia with meter sized fragments of reefal limestones indicates a more proximal position regarding to the shallow marine area from which these clasts were derived. Slump texture emphasizes gravitational processes. The general trend of coarsening upward, as well as the predominance of the framestone clasts in the breccias imply the progradation of the platform over the basinal areas. Similar successions have been described from the neighbouring area.