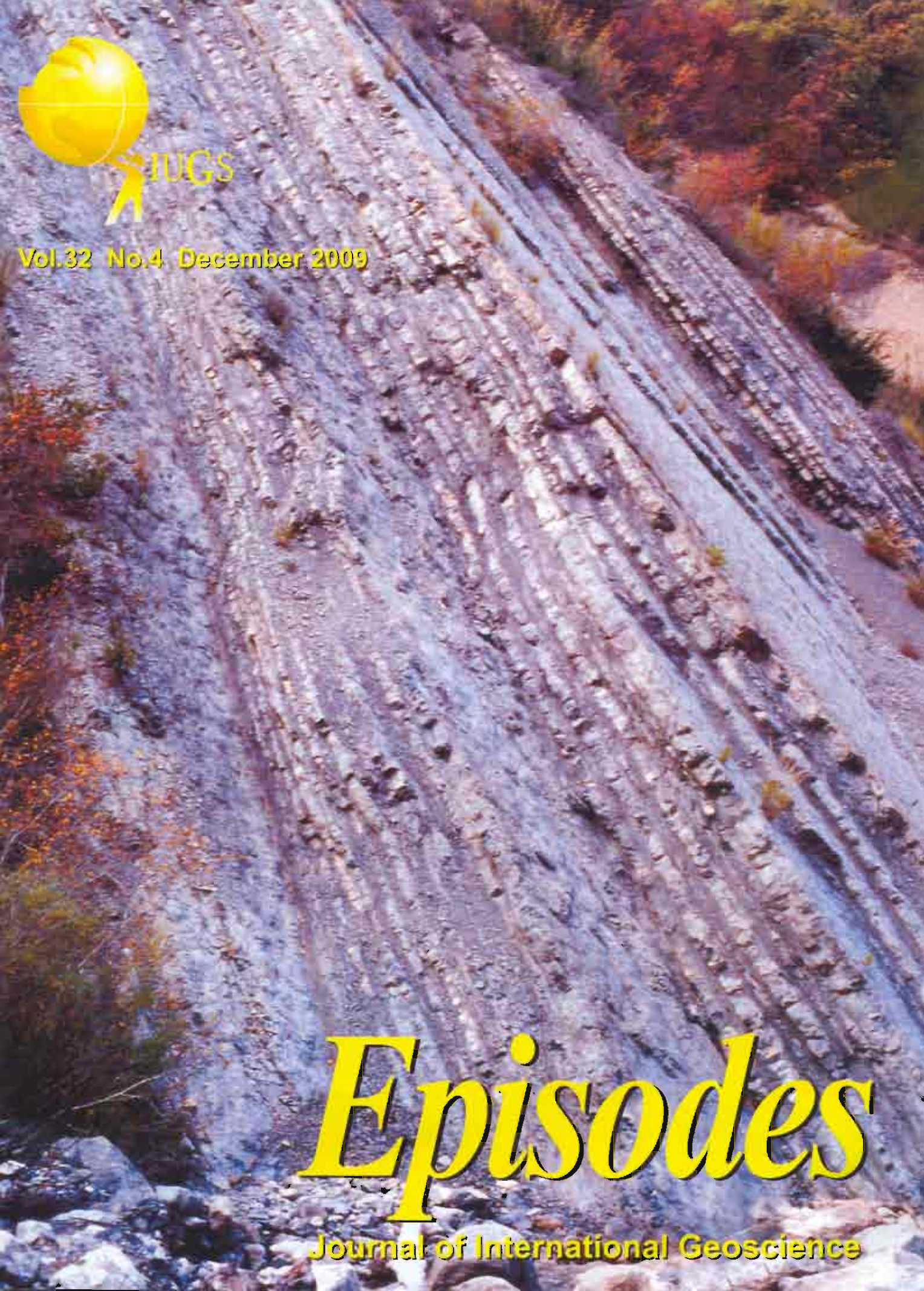

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8th IGCP 506 Symposium on Marine and Non-marine Jurassic: Global Correlation and Major Geological Events

28 August – 3 September 2009, Bucharest, Romania

The 8th Symposium of IGCP 506 was held in Bucharest (Romania) during August-September, 2009. At the 5th IGCP Symposium in Hammamet (Tunisia), a proposal was made by Mihai E. Popa to organize the symposium in Romania and we had agreed.

The Scientific Committee was represented by: Mircea Sandulescu – Member of the Romanian Academy, Bucharest, Romania, Josef Palfy – Chair of ISJS, Budapest, Hungary and Grzegorz Pienkowski – Co-leader of IGCP 506, Warsaw, Poland. The Organizing Committee included: Mihai E. Popa, University of Bucharest (Chairman), Iulia Lazar, University of Bucharest and Ioan I. Bucur, "Babes-Bolyai" University, Cluj-Napoca, together with Mircea Vian, Bogdan Savescu, Andreea Zaharia, Andreea Parvu, Adrian Munteanu, Andrei Gruia and Dragos Mitrica of University of Bucharest. A total of 24 participants from Romania, Poland, Japan, Hungary, Bulgaria, Thailand and Czech Republic took part in the Symposium. It should be noted, that both leader of the IGCP 506, Jingeng Sha and secretary/co-leader of the project Youngdong Wang of China did their best to attend the Symposium, but visa problems prevented them from joining us in Bucharest. Letter from our leaders was read by the undersigned.

The Symposium session began on 29th of August in the building of Faculty of Geology and Geophysics, right in the centre of Bucharest. 20 talks were presented in the two-day session. In the introduction lecture, Prof. Mircea Sandulescu presented the general outlook of Romanian geology, which was for a large part based on his own outstanding scientific achievements. Then, Jozsef Palfy, Chairman of the Jurassic Subcommission, presented some important issues regarding newly chosen Triassic-Jurassic boundary GSSP at Kujoch, Austria – there are some concerns regarding tectonic deformations and continuity of sedimentation. However, it would be hard to indicate a single GSSP profile which is "ideal" and free of any "defects". Possibility of correlation between marine and non-marine sections is one of advantages of this profile. That subject was continued in the next introductory talk by Gregory Pienkowski (co-authored by G. Niedzwiedzki, L. Marynowski and M. Waksmundzka) entitled: "T/J boundary in Poland – global events and biotic turnovers in continental environments", which provided the results of multidisciplinary studies on the Rhaetian/Hettangian continental boundary in Poland, with some new data important for the marine-continental T/J boundary correlation worldwide. Then Keisuke Ishida took us for a tour to a deep-sea marine environment. In two well-documented presentations (co-authored by M.Yoshioka, F. Hirsch, T. Kozai, Y. Tsujino and T. Sato), he showed Late Jurassic sedimentary successions related to subduction zones with accretion prisms and tuning of age of some radiolarian zones. Assanee Meesook presented some Jurassic sections in Thailand (to be visited during one of excursions of the next Jurassic Congress in China). Karen Bacon and Jennifer McElwain showed how the earliest Jurassic plants (namely, their leafs) might react to the temperature rise. Andrzej Wierzbowski (along with J. Schlogl and M. Krobicki) presented ammonite stratigraphy of unique Kamenets section in Transcarpathian Ukraine, showing (thanks to a very elaborated ammonite zonation and paleomagnetic studies performed by M.Lewandowski) how prominent was a sea-floor spreading from Callovian to Oxfordian times in the Western Tethys. Ioan Bucur (along with E. Sasaran, R. Iacob, C. Ichim and V. Turi) explained micropaleontological content of Jurassic shallow-water carbonate deposits in some Carpathian areas. Next talk by Iskra Lakova (with cooperation of S. Petrova and D. Rabrenovic) showed calpionellid biostratigraphy across Jurassic-Cretaceous boundary in Bulgaria and Serbia. The same stratigraphic range in palynological context (though in a global context) was characterized by Petr Skupien. Iulia Lazar

Participants of the 8th IGCP 506 meeting in Bucharest (29th August 2009). From left to right, **first row:** *Iskra Lakova (Bulgaria), Andreea Zaharia (Romania), Adrian Munteanu (Romania), Iulia Lazar (Romania), Ioan I. Bucur (Romania), Mihai E. Popa (Romania), Karen Bacon (Ireland), Grzegorz Pienkowski (Poland), Artur Kedzior (Poland);* **second row:** *Assanee Meesook (Thailand), Michal Krobicki (Poland), Andrzej Wierzbowski (Poland), Akira Ishida (Japan), Keisuke Ishida (Japan), Alina Floroiu (Romania), Mihaela Gradinaru (Romania), Jozsef Palfy (Hungary), Petr Skupien (Czech Republic);* **third row:** *Dan Grigore (Romania), Robert Tomas (Romania).*

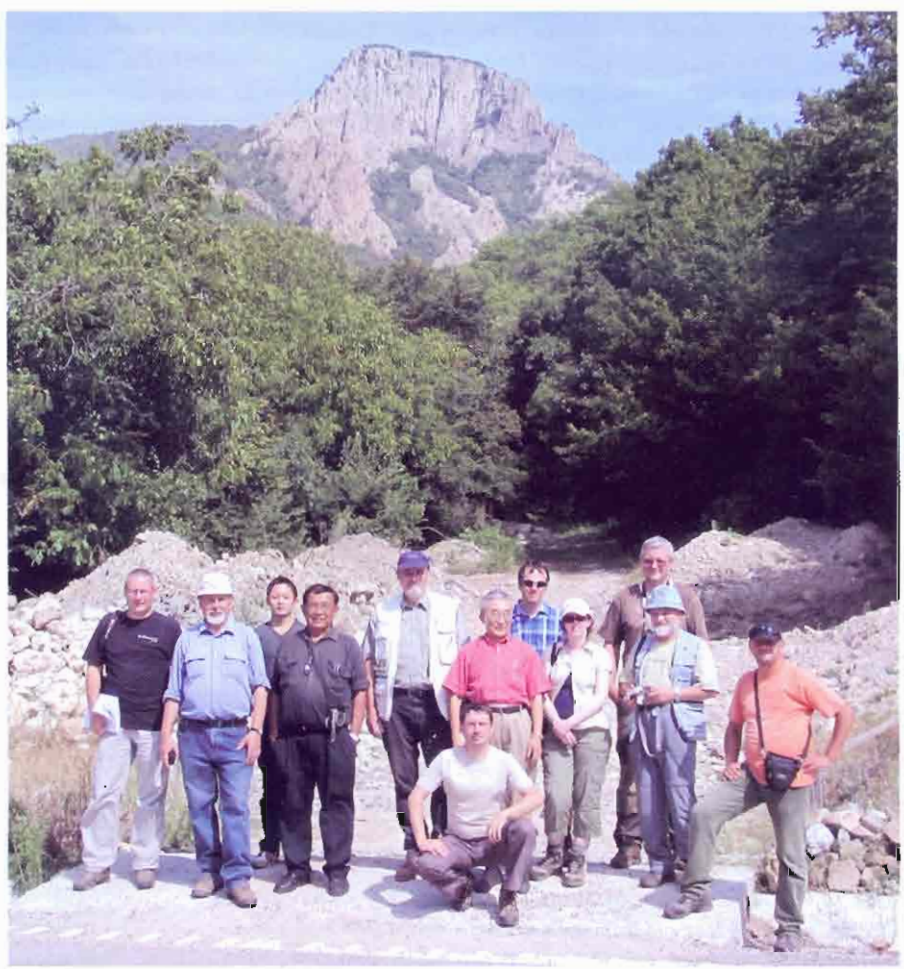
(with coauthors: I. Gheuca, D. Grigore, C. Panaiotu, M. Sandy and M. Stoica) explained in two presentation very interesting paleobiological and sedimentological aspects of Jurassic hardgrounds and paleoecology of *Lacunosella* brachiopods from Eastern Carpathians of Romania. Talk by Mihai Popa and Artur Kedzior on the Lower Jurassic continental formations of the South Carpathians provided an excellent introduction to the field trip. Next day (30th August) talks included presentations regarding Eastern Carpathians: ammonite fauna and ammonite stratigraphy (by Robert Thomas with J. Palfy) and rich Jurassic fossil assemblages (presented by Dan Grigore with I. Lazar and M. Sandy).

Discussion on the current (and final) stage of the IGCP 506 project was held at the end of scientific session and convened by the undersigned. Our project has achieved a series of progress in scientific results and the output published in peer-reviewed journals, special issues, books is considerable. The project has very broad coverage of participants from all inhabited continents and we received the highest score (5) from the annual assessment of IGCP scientific board for our work in 2008. These results would not be received without contribution of every colleague involved. In August next year, we will have the 8th International Congress on the Jurassic System in Sichuan in China, which will naturally conclude the project. Following concluding remarks were indicated:

- How to maintain our cooperation when the IGCP 506 is over? The answer: regional initiatives. They existed before conceiving of the IGCP 506 (like the Polish Jurassic Working Group, joined afterwards by Slovak, Czech and Ukrainian colleagues), they will continue their works and they can expand (example: Belarus, where Polish –Belarussian cooperation in geology has not only scientific dimension).
- Jurassic journal: fruitful activity of the members of Polish Jurassic Working Group, reinforced by the output of 7th Jurassic Congress in Krakow, made of the "Volumina Jurassica" a promising journal, which can achieve a position similar to the "Cretaceous Research". This journal is needed and it should become an official journal of the Jurassic Subcommission. Editing process will be substantially re-organised, but the key to the future success is general support of the Jurassic community.
- Popular book on the Jurassic system worldwide – this very ambitious and valuable idea should be further discussed at the coming Jurassic Congress. It won't be an easy task and certain organization work should be done in terms of summarizing existing knowledge and effective adaptation of the IGCP 506 scientific output.

A varied symposium social programme was arranged by M. Popa and Iulia Lazar. It included visiting the Laboratory of Palaeontology with some historical venues, led by Prof. Theodor Neagu. We heard some very interesting, not only geological stories. Besides, we had a chance to see very valuable palaeontological collections. Ammonite and other collections are very important (some old determinations would need taxonomic revision) and they offer possibility of new comparative studies. Downtown walk in Bucharest was guided by Mihai Popa and on the way we learned how much Mihai was involved in heroic and tragic events of Romanian democratic revolution in 1989/1990. Evening dinner in the lovely and historic University House Restaurant was made even more attractive by Keisuke Ishida, who sang some beautiful Japanese songs. He encouraged the others to join him. We visited National Museum of Geology and the Polytechnic Subway Stations, with polished pavement showing very spectacular sections of rudists of the Urgonian facies.

The field trip guided by Mihai Popa and Ioan Bucur (in several sites assisted by Artur Kêdzior) took almost four days and showed both carbonate and siliciclastic successions of famous Danube Gorge and Resita Basin. To summarize the whole trip, it should be acknowledged that Romanian outcrops of



Participants of the 8th IGCP 506 meeting in the Danube Gorges, next to the Trescovat lava dome (Permian, Danubian Units, 1st September 2009). **From left to right:** ***Michal Krobicki (Poland), Andrzej Wierzbowski (Poland), Akira Ishida (Japan), Assanee Meesook (Thailand), Grzegorz Pienkowski (Poland), Mihai E. Popa (Romania), Keisuke Ishida (Japan), Jozsef Palfy (Hungary), Karen Bacon (Ireland), Petr Skupien (Czech Republic), Ioan I. Bucur (Romania), Artur Kedzior (Poland).***

Jurassic system are truly of a world class! The fact that we were a small group (there were 10 of us participating in the excursion) had also some advantages. We could spend more time in the outcrops and discuss more details.

Very spectacular Danube Gorge offers long sections of several Carpathian nappes, well-accessible from the road, with continuous profiles representing Paleozoic and Mesozoic rocks (along with crystalline rocks). Jurassic outcrops are superb, in many places they contain rich fossils, interesting sedimentary and tectonic structures. Many of those outcrops (like Lower Jurassic fluvial conglomerates of Svinita or pelagic section of Munteana) are potential sites for detailed sedimentological studies, which would certainly provide very elaborated models of different paleoenvironments. As the last complete monographs on some of these sections were published by G. Pop and others a long time ago, there is an opportunity to do new, significant geological investigations based on modern knowledge and methods.

Lower Jurassic (siliciclastic) outcrops are equally good. Thanks to some pharaonic projects of late dictator of Romania, Nicolae Causescu (perhaps, the only positive, though unplanned, effect of his alien ideas), huge section embracing strata from Triassic to Cretaceous was uncovered at Anina (Ponor Quarry). The aim was Pliensbachian-Toarcian bituminous shales, which would not burn and ruins of huge energy plant was left behind – however, with a very valuable geological section. Mihai Popa described a number of Hettangian-Sinemurian fossil plants, their diversity and excellent preservation make this site undoubtedly one of the best in the world.

Mihai also organized a meeting with the local government and business people, aimed at encouraging local authorities to protect geological heritage and showing them opportunities for geotouristic development of this beautiful region. We shared some ideas about development of geotouristic infrastructure in other countries and we met with some encouraging response (particularly, from the business people).

Public relations and publicity were also excellent with local radio coverage. The amount of work and preparation over many months for the Symposium by all the organisers was impressive. Apart from our memories of the events, people and places, there are the tangible proofs of new discoveries, including first dinosaur footprints in Romania! Certainly, they will bring new publications for the IGCP project, of both paleoecological and paleogeographical significance. Certainly, many of the participants of the Symposium will return to Romania to continue scientific investigations and cooperation.

Our Romanian colleagues (particularly, Mihai Popa) are to be congratulated for their superb work. It was one of the smallest (assuming attendance) IGCP 506 symposium, but those who missed it have something to regret about.

Grzegorz Pieñkowski
Polish Geological Institute
Co-leader of IGCP 506
Corresponding Member of International Subcommission on the Jurassic Stratigraphy