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GIVETIAN FACIES AND BIOTAS IN THE ŁYSOGÓRY REGION OF THE HOLY CROSS MOUNTAINS, SOUTHERN POLAND: PROVEN BENEFIT OF COLLABORATIVE WORKING GROUP STRATEGY FOR MAXIMIZING KNOWLEDGE IN AREA OF DIFFICULT GEOLOGY

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This contribution serves as a foreword to the thematic issue of the *Annales Societatis Geologorum Poloniae*, which includes seven papers, involving 25 authors, detailing a concerted effort to advance and coordinate new information from the less well studied Middle Devonian Skały Formation of the Łysógory Region (= northern region of the Holy Cross Mountains). The basic aim of this thematic issue is to provide an integrated stratigraphic and palaeoenvironmental framework to understand the regional facies of a diverse and varied biota long hidden by surface cover, but now revealed in small outcrops and new excavations. A regional palaeoenvironmental gradient from shallow-water, photic zone reefs to deeper water shaly deposits, known from earlier studies in the nearby Grzegorzowice–Skały section, is confirmed and further characterized in the present thematic issue.

What distinguishes this thematic issue is the coordinated working group approach (seven new contributions, coupled with six prior articles; see the list in the Introduction by A. T. Halamski), which brings a broad spectrum of specialized expertise to sleuth out a maximum of new information from an area of limited outcrop development. This approach needs to be better developed in North American Devonian studies, where the number of accessible outcrops greatly exceeds the number of geological experts and public funds available to do such work. As such, the chronostratigraphic-palaeoenvironmental framework for the Skały Formation is now established from detailed studies of macrofossils, conodonts, palynomorphs, and other taxonomic groups. The collected contributions include a synthetic overview by A. T. Halamski *et al.*, followed by a paper devoted to the characterization of Skały divisional units by G. Racki *et al*. These are followed respectively by studies of component brachiopod faunas and biofacies, aspects of Skały microfaunal-microfacies gradients, new foraminiferal discoveries, and a study of encrusting organisms. For a researcher long versed in the study of lower–middle Givetian deposits in the classic Hamilton Group of New York State, I was genuinely surprised at the newly recognized radiation of multilocular calcareous foraminifera, a group largely unknown to Hamilton workers. Overall, this volume clearly shows that a research team approach and publication bundling has produced important new results.

Ongoing studies of the Eifelian through Givetian succession in the Eastern Americas Realm Province of eastern North America show a distinct succession of long-standing marine biotas, separated by biocrises episodes (Kačák Event and later Taghanic Biocrisis). Although the Miłoszów succession (*Polygnathus timorensis* – basal *Polygnathus rhenanus–varcus* zonal interval) displays a regional expression of the "Old World" Rhenish-Bohemian Provincial biota, it is distinctly post-Kačák in age and appears to temporally approximate the diversity acme of the Hamilton Fauna (Ecological-Evolutionary Subunit), recorded within the middle to upper-middle part of the Givetian Hamilton Group. These strata are notable for displaying the highest diversity of marine taxa in the New York Devonian succession, and they have helped source new ideas, relating to developments in allostratigraphy, the study of taphofacies, and the coordinated stasis concept (see summaries by Brett *et al.* (in press) and Baird *et al.* (in press) in a similar synthetic volume on the Devonian of New York: Ver Straeten *et al.*, in press).

Publication of the group study on the Łysógory Region will produce a new base-level for understanding Rhenish-Bohemian biotas and biofacies gradients within this portion of the Givetian in Poland. In addition, it should serve to render more complete the biotic succession narrative across Europe and to facilitate comparison to the biotic succession in North America and elsewhere.

REFERENCES

Brett, C. E., Baird, G. C. & Zambito, J. J., IV, (in press). Chapter 5: Stratigraphy and facies of the Middle and Upper Hamilton Group (Middle Devonian; Givetian) in New York State and adjacent areas. In: Ver Straeten, C. (ed.), *Devonian of New York. Bulletins of American Paleontology*. doi:10.1130/abs/2022NE-374664

Baird, G. C., Zambito, J. J., IV & Brett, C. E., (in press). Chapter 7: Tully Formation and pre-Frasnian Genesee Group succession. In: Ver Straeten, C. (ed.), *Devonian of New York. Bulletins of American Paleontology*. doi:10.1130/abs/2022NE-374466

Ver Straeten, C. (ed.), (in press). Devonian of New York. *Bulletins of American Paleontology.* [Scheduled for May 2023.]