

Preface

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Dear Reader,

This is not entirely a new journal; it is a relaunch of an existing journal with a long tradition: the former so-called *Schweizerische Paläontologische Abhandlungen (Mémoires Paléontologiques Suisse)*. Since 1874 the Commission has edited 129 volumes until 2010 that contained monographs covering the whole array of palaeontological research topics from benthic foraminifera to mammals. From now on, we will publish two issues a year, the focus has been enlarged and a chef editor set in action. This standard is required for obtaining an impact factor in the near future and will further guarantee the highest standards for a peer-reviewed journal. We are happy to have an editorial board with internationally renowned experts in their respective fields.

The first volume of the *Swiss Palaeontological Journal* is completely dedicated to a group of invertebrates that have long been in the focus of many neontologists and paleontologists and comes under the title: echinoderm—past, present and the future. The reason is a tribute to one of the most outstanding echinoderm palaeontologists, Hans Hess. For more details please refer to my introductory remarks. I have tried to call upon some of my colleagues in the field of echinoderm palaeontology to make a good head start for the first volume. To my pleasure almost all of them showed a quick and positive reaction to the idea for a special volume. We can offer you now an outstanding collection of papers that convincingly demonstrate the state of the art in this fascinating field of research.

Matthew Borths and Bill Ausich present a study on Palaeozoic crinoids that show the so-called Lilliput effect. Their data indicate a significant reduction in body size after the Ordovician biotic crisis. This leads them to the important conclusion that even from a perspective of deep time, the preservation of our present biodiversity is of utmost importance. Tom Baumiller and Alex Janevski report on the swimming function of crinoid cirri. Using an extant comatulid crinoid as a proxy for a biomechanical model of swimming capabilities of the cirri, they applied it to the famous Jurassic isocrinid *Pentacrinites dichotomus* from the black shales of Holzmaden. A very interesting paper, I myself have long been waiting for such an explanation, but read for yourself. Dan Blake and Roger Portell report on a new starfish from the Miocene of Florida that constitutes the first fossil of the extant family Asterodiscididae. Morphological data and biogeographic distribution point to an origin in the Atlantic Ocean before the closing of the Isthmus of Panama. Steve Donovan teamed up with Dave Lewis to look at endobenthic sea urchins from the Late Cretaceous chalks of Northeastern Europe that serve as hard substrate today. Some of them are reworked after 70 Million years and others are hosts for a different series of endolithic organisms, indeed a tale of strange taphonomy. Janina Dynowski and Jimmy Nebelsick analysed different populations of one of the best-known Triassic crinoid—*Encrinurus liliformis* from the German Muschelkalk. These populations are made up of different ecophenotypes that occur along a shallow-water carbonate ramp. Predatory pressure and differences in current regime might be the driving forces behind. Andi Gale has washed over 1 ton of Late Jurassic clay, following in the footsteps of Hans Hess' earlier efforts to pick and describe the asteroid fauna of the French locality Savigna. The unusually diverse fauna is typical of present day bathyal and abyssal environments

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having lived in Oxfordian shelf seas of about 50 m depth. Excellent photographs underline their fantastic preservation. Hans Hagdorn takes a closer look at the diversification of post-Palaeozoic crinoids. Observed morphologic changes are possibly connected with the adaptation to various benthic habitats and to different modes of life. He sketches an interesting picture of the life strategies of the most important Triassic crinoids from frame builders within bioherms and secondary soft-bottom dwellers to planctonic habitats. Thus demonstrating that already in the Early Mesozoic crinoids had adapted to most of the marine niches. Sabine Stöhr, John Jagt and Adiël Klompmaker report on the first articulated ophiuroids from Neogene deposits in the southern North Sea Basin. The new species is compared to already known specimens from the Cretaceous up to the Neogene. A critical approach towards already published species helps to clarify the fossil record of brittle stars.

On the basis of an excellently preserved arm fragment Christian Neumann and John Jagt describe a new Early Cretaceous astropectinid sea star. One of the groups with which Hans Hess started his palaeontological career. They discuss its taxonomic affinities, as well as palaeobiological interactions that led to its preservation.

A special volume on echinoderms without a contribution by Dolf Seilacher would not be complete. This is the reason why we included the present paper that should be regarded as an essay in honour of Hans Hess. His paper on the developmental transformation in Jurassic driftwood crinoids is looking for alternative models to explain skeletal transformations in Early Jurassic seirocrinids and pentacrinids. Even though it is in contrast to the paper of Baumiller & Janeswki, it is worth reading. And hopefully stirs a bit in the pot of pseudoplanktic ideas. Mike Simms has been looking into stereom microstructure of crinoid columnalia and tries to assess their usefulness for

phylogenetic analysis. He used both fossil and recent material from various stratigraphic levels ranging from the Carnian to the Toarcian including various taxa of the Order Isocrinina, the Order Millericrinida and three extant isocrinid and bourgueticrinid genera. A very novel approach indeed, with some surprising results. Andrew Smith digs deep into the roots of the Jurassic arbacioid sea urchins. Up to now only one individual of the Middle Jurassic taxon *Gymnodiadema* was known. New well-preserved specimens from the Bajocian of Morocco together with the oldest known occurrence of *Magnosia* are the basis of a new phylogenetic analysis. He elusively sheds light on the early evolution of the crown group of arbacioids and their exploration of deep-water settings in the Late Cretaceous. The last contribution by Ben Thuy, Andi Gale and Mike Reich presents a first overview of a new Early Jurassic Lagerstätte from the French Ardennes. The remains of all five extant classes of echinoderms show an outstanding preservation. The morphological assessment of the represented taxa can be given in such details that is rarely seen in fossil material. The Sedan Lagerstätte opens a unique window into the palaeoecology of an extinct shallow-water soft-bottom community. And I am eager to read the sequel.

Finally, I would like to thank all the reviewers, who did an excellent job.

Bill Ausich, Tom Baumiller, Dan Blake, Bruno David, Steve Donovan, Hans Hagdorn, Hans Hess, John Jagt, Andreas Kroh, John Lawrence, Jimmy Nebelsick, Umberto Nicosia, Dolf Seilacher, George Sevastopoulos, Andrew Smith, Mike Simms, Loïc Villier, Gary Webster.

Thanks to all of you, we could handle the timely printing of the first volume of the *Swiss Journal of Palaeontology*.

Most of my sincere gratitude goes to the members of the Commission for the Swiss Palaeontological Memoirs and the Swiss Academy of Science who trusted me to lead our "old" journal into a hopeful and more international future.