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The Mesozoic Corals. Bibliography 1758-1993.

Supplement 22 (-2016)

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Summary

This supplement to the bibliography (published in the Coral Research Bulletin 1, 1994) contains 18 additional references to literary material on the taxonomy, palaeoecology and palaeogeography of Mesozoic corals (Triassic - Cretaceous; Scleractinia, Octocorallia). The bibliography is available in the form of a data bank with a menu-driven search program for Windows-compatible computers. Updates are available through the Internet (www.cp-v.de).

Key words: Scleractinia, Octocorallia, corals, bibliography, Triassic, Jurassic, Cretaceous, data bank

Résumé

Le supplément à la bibliographie (publiée dans Coral Research Bulletin 1, 1994) contient 18 autres références au sujet de la taxinomie, paléoécologie et paléogéographie des coraux mesozoïques (Trias - Crétacé; Scleractinia, Octocorallia). Par le service de mise à jour (www.cp-v.de), la bibliographie peut être livrée sur la base des données avec un programme de recherche contrôlée par menu avec un ordinateur Windows-compatible.

Mots-clés: Scleractinia, Octocorallia, coraux, bibliographie, Trias, Jurassique, Crétacé, base des données

Zusammenfassung

Die Ergänzung zur Bibliographie (erschienen im Coral Research Bulletin 1, 1994) enthält 18 weitere Literaturzitate zur Taxonomie und Systematik, Paläoökologie und Paläogeographie der mesozoischen Korallen (Trias-Kreide; Scleractinia, Octocorallia). Die Daten sind als Datenbank zusammen mit einem menügeführten Rechercheprogramm für Windows-kompatible Computer im Rahmen eines Änderungsdienstes im Internet (www.cp-v.de) verfügbar.

Schlüsselworte: Scleractinia, Octocorallia, Korallen, Bibliographie, Trias, Jura, Kreide, Datenbank

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Preface

Numerous hints given by colleagues and new papers edited the previous year yield 18 references for a supplement to the bibliography. For the form of arrangement and abbreviations please refer to the bibliography itself (Coral Research Bulletin 1, 1994).

The supplement

DENG, ZHAN-QIU & WANG, GUANG-SU

2013. Mesozoic corals and sponges from Ge'Gyai and Rutong, Xizang. – *Acta Palaeontologica Sinica*, 52, 2: 202-212; Beijing. N • k • RCH

Three new genera and four new species are described in this paper based on materials from Mesozoic rocks in northwestern Xizang, including coral Paralveolites gegyaiensis gen. et sp. nov., sponge Homochaetetes shuanghuensis gen. et sp. nov., H. rutogensis gen. et sp. nov. and Eupseudomillestroma gerzeensis gen. et sp. nov. The new coral genus Paralveolites is erected based on the possession of crescentical corallite form and a longer septal plate in each corallite with a forklike axial end extending to the axial region. The new sponge genus Homochaetetes is characterized by a longer septum extending to the axial region of tubes. Eupseudomillestroma (gen. nov.) proposed here possesses both the cylindrical and the prismatic tubes with their walls and diaphragms filled up with meshes. [original abstract]

EL-SOROGY, A.S., ISMAIL, A., YOUSSEF, M. & NOUR, H.

2016. Facies development and paleoenvironment of the Hajajah Limestone Member, Aruma Formation, central Saudi Arabia. – *Journal of African Earth Sciences*, 124: 355-364; Amsterdam (Elsevier Sciencific Publishing Company). C • k • SA

The Campanian Hajajah Limestone Member of the Aruma Formation was formed during two regressive episodes. Each of them formed of three depositional facies, from base to top: 1) intra-shelf basin facies, made up of fossiliferous green shale and mudstone with ostracods and badly preserved foraminifers. 2) fore-reef facies, consists of hard, massive, marly coralline limestone. The upper part is rich with low divers, badly to moderate preserved, solitary and colonial corals, and, 3) back reef and near-shore facies, consists of fossiliferous sandy dolomitized, bioturbated limestone with abundant reworked corals, bivalves, gastropods, and aggregate grains. On the basis of field observations , micro- and macrofossils and microfacies analysis, the Hajajah Limestone Member was deposited in distal marine settings below storm wave base in a low-energy environment changed upward to fore-reef framework in an open marine environment with moderate to high energy conditions and terminated with shallow marine facies with accumulation of skeletal grains by storms during regression. [original abstract]

EMERSON, B.

1870. Die Liasmulde von Markoldendorf bei Einbeck. – *Zeitschrift der Deutschen Geologischen Gesellschaft*, 22, 2: 271-334; Berlin. N • j • D

FORNER, E.

2014. Calzadina segurai gen. nov., sp. nov. (Mollusca: Gastropoda) de l'Albià de Cabanes de l'Arc (la Plana Alta, conca del Maestrat). – *Nemus*, 4: 17-26. C • k • E

A new taxon, Calzadina segurai is described. The new species comes from the Albian of Cabanes de l'Arc (la Plana Alta, NE Spain), in the Maestrat basin. The scleractinian Angelismilia magnei Reig 1995 is recorded here for the second time. [original abstract]

KOŁODZIEJ, B., IDAKIEVA, V., IVANOV, M. & SALAMON, K.

2016. New record of endolithic algae syn-vivo associated with an Early Cretaceous coral. – *Carnets de Géologie*, 16, 27: 633-640; Madrid. D • k • BG

Euendolithic microorganisms (boring endoliths) syn-vivo associated with modern corals are commonly reported, but their fossil record is extremely rare. This paper reports the new finding recognized in the colonial scleractinian coral Clausastrea saltensis from the Upper Barremian of Bulgaria. Large microborings (up to 50 µm, most ca. 15-25 µm in diameter) filled with calcite cement are distributed medially along coral septa of some corallites. Borings were produced by microeuendoliths growing from the skeleton interior outward during the life of the coral host. They are compared to traces produced by the recent oligophotic filamentous chlorophyte Ostreobium, which is known to be the most common skeleton-dwelling alga in modern living corals and regarded as neutral or beneficial to the coral. In terms of general morphology, diameter and distribution pattern, the borings are similar to those recently recognized in the Early Cretaceous microsolenid coral. [original abstract]

LÖSER, H.

2016a. Remarks on the genus Angelismilia Reig, 1988 (Scleractinia, Early Cretaceous). – *Treballs del Museu de Geologia de Barcelona*, 21: 29-33; Barcelona. D • k • E

The Early Albian coral genus Angelismilia Reig, 1988 is revised based on one syntype of the type species and topotypical material from the type area. Angelismilia, formerly considered a coral with perforated septa and created without indicating a systematic position, has compact septa and pali. It is placed in the family Caryophylliidae. [original abstract]

LÖSER, H.

2016b. Early evolution of the coral family Siderastraeidae (Scleractinia). – *Paläontologische Zeitschrift*, 90, 1: 1-17; Stuttgart. N • knr

Critical review of Mesozoic and Paleogene fossil type material and morphological comparison with the type genus Siderastrea of the family Siderastraeidae propose that the earliest members of the family date from the Late Valanginian (Early Cretaceous) and gained diversity during the Early Cretaceous. The most common member is the new genus Eosiderastrea, which encompasses all Cretaceous material that was formerly assigned to the extant coral genus Diploastrea. The new genus is characterised by an astreoid, rarely plocoid or cerioid calicular arrangement, a sub-regular septal symmetry representing hexameral, heptameral, octameral and decameral symmetries. The septal blades are made of medium-large trabeculae. Synapticulae are present. Eighteen Cretaceous species are assigned to the new genus. The genus Eosiderastrea occurs worldwide, and ranges from the Late Valanginian to the Santonian. Cretaceous material formerly assigned to Siderofungia is assigned to the new genus Palaeosiderofungia, which is characterised by a thamnasterioid calicular arrangement with calices predominantly arranged in rows and an extended coenosteum. The septal blades are made of medium-large trabeculae; synapticulae are present. There is no septal symmetry. Apart from the type species Thamnasteria exigua, there are another four unnamed species known. The new genus occurs only in the Boreal and Central to Western Tethys, and ranges from the Aptian to Santonian. The occurrence of the extant Siderastrea in the Cretaceous cannot be ruled out. Isolated finds are reported from the Aptian onwards. [original abstract]

LÖSER, H.

2016c. The Cretaceous corals from the Bisbee Group (Sonora, Mexico; Late Barremian - Early Albian) : suborder Heterocoeniina. – *Paleontología mexicana*, 1, 5: 41-51; Mexico City. D • k • MEX

The current work constitutes the fourth part of the systematic revision of the corals from the Bisbee Group in Sonora, north-west Mexico (Late Barremian to Early Albian) and deals with the suborder Heterocoeniina. Twelve species from three families are reported: Carolastraeidae (genera Heteropistophyllum, Latusastrea, Pleurocoenia and Pleurodendron), Heterocoeniidae (genus Heterosmilia), and Paronastraeidae (genus Tiarasmilia) are described and illustrated. The family taxon Carolastraeidae is applied instead of the problematic family taxon Elasmocoeniidae which was temporarily applied to Heterocoeniina with a bilateral septal symmetry. With the exception of the genus Pleurocoenia, the genera are rare in the Cretaceous and do not show distinct palaeobiogeographic relationships. [original abstract]

LÖSER, H.

2016d. Taxonomy and distribution of the Cretaceous coral genus Eosiderastrea. – *Carnets de Géologie*, 16, 16: 383-416; Madrid. N • k

The new genus Eosiderastrea Löser, 2016 was established for Cretaceous corals formerly assigned to the extant coral genus Diploastrea. It represents the oldest member of the Siderastraeidae family. The genus is characterised by an astreoid arrangement,

occasionally a plocoid or a cerioid calicular arrangement, and a sub-regular hexameral, heptameral, octameral or decameral septal symmetry. The septal blades are made of medium sized trabeculae. Synapticulae are present. Almost a hundred specimens were examined, among them numerous type specimens. In total, 26 Cretaceous species were separated. Fifteen species were assigned to formally established species, three species were compared to one of these species, two species were described as new and the remaining six species were reported in open nomenclature. The genus occurs in the Cretaceous worldwide and ranges from the Late Valanginian to the Santonian. It shows its greatest diversity in the Earliest Aptian and Early to Middle Cenomanian. [original abstract]

LÖSER, H.

2016e. Systematic part. – *Catalogue of Cretaceous Corals*, 4: 1-710, 1763 figs.; Dresden (CPress Verlag). D • k

The fourth volume of the Catalogue of Cretaceous Corals is a taxonomic revision of all Cretaceous coral genera (Hexacorallia and Octocorallia), with an emphasis on the order Scleractinia, which constitutes 96% of the included genera. The revision concentrates on the genus level, but it encompasses as well a critical consideration of the higher taxonomic levels such as order, superfamily, and family. A new classification system and evolutionary model for the order Scleractinia is proposed.

The catalogue covers all genera to which coral species with a stratum typicum in the Cretaceous are currently – following the published literature up to 2015 assigned, – correctly or not (listed material is not taken into account). Therefore, also Jurassic, Cenozoic and even some extant coral genera are considered. Genera to which Cretaceous species were originally assigned (but not anymore), are not included. Current genera of species with a stratum typicum in the Triassic that were – erroneously or not – indicated in the Cretaceous, are excluded. Genera with a type species of which the types have a Cretaceous age are included, whether species were originally or currently assigned to them or not. Some genera are included even if they do not fulfil these conditions, e.g. in the case that Cretaceous species were assigned to a genus which turns out to be a junior synonym of a Jurassic or Cenozoic genus, or in the case a genus is poorly defined and a so-called junior synonym is better documented but does not occur in the Cretaceous. No difference is made between synonymous or non-synonymous genera. Invalid (nom. nud.) genera are not included. The total number of included genera is 714 (131 Jurassic, 461 Cretaceous, 55 Cenozoic, 61 Extant, remaining with unknown age).

The volume is subdivided into seven chapters and an appendix. The short Introduction encompasses an introduction to the book and the acknowledgements. The relatively abridged Historical Aspects gives an account on the research history of the group. The chapter Morphology presents a detailed introduction to the morphology of the Scleractinian corals. In Methods, the preparation of the fossil coral material, its description, the preparation of images, and the process of determination are described. The species concept is discussed here. In Classification, the new classification system is introduced, giving a detailed account of each family. Discussion reports data on the diversity, evolution, abundance pattern, endemism, palaeoecology, and palaeobiogeographical distribution of corals. The largest portion of the catalogue is Systematic part that presents an alphabetic list of all genera with descriptions, remarks and illustrations. The Appendices explain abbreviations, give an explanation of the applied stratigraphic framework and include the reference list.

The chapter Systematic part is the far largest in the revision and contains an alphabetical list of all Cretaceous genera (according to the limitations given above). The list is alphabetically arranged because the classification system proposed here is somehow preliminary and will surely be modified in the future. It seems therefore easier to separate the classification from the genera. The access to the genera will remain the same, even if the classification system may change. For each genus data on synonyms (senior and junior, objective and subjective), the type species, the types of the type species, a description based on the type material and/or topotypical material, remarks on the morphology, relationships, synonymy, the taxonomic position, the abundance, the stratigraphic and geographic distribution, and a species list is provided. Most genera are illustrated. The illustrations are preferably taken from the type material, or if not available, from topotypical material. We attempted to obtain images from thin sections, peels, or polished surfaces. In some cases, pictures of complete specimens were used. If a type specimen had no thin sections, and no polished sections, and if it was possible to collect or loan topotypical material, and identify this material positively with the type species in question, this topotypical material was used to obtain thin sections for illustrations. If all attempts failed, the type was refigured from the literature. If available, transversal and longitudinal sections are provided, and where necessary a close-up of one corallite or important features. [original abstract]

LÖSER, H. & FŐZY, I.

2016. Asteroseris from the Bersek Marl (Gerecse Mountains, Hungary; Early Cretaceous; Anthozoa). – *Fragmenta Palaeontologica Hungarica*, 32: 3-10. D • k • H

The small cupolate solitary coral Asteroseris is reported from Late Valanginian to Hauterivian marls from the Bersek Hill (Gerecse Mountains, Northern Hungary). The material is poorly preserved and the taxonomic assignation difficult. The findings mark the first occurrence of the family Asteroseriidae. [original abstract]

LÖSER, H. & SKLENÁŘ, J.

2016. The Scleractinian coral genus Glenarea (Bohemian Cretaceous Basin). – *Acta Musei Nationalis Pragae (B) Historia Naturalis*, 71, 3/4: 365-376; Praha. N • ke • CZ/F/BH

The enigmatic Cretaceous coral genus Glenarea is revised on the basis of the type specimen of its type species Glenarea cretacea Pocta, 1887. The provenance of the large silicified specimen is discussed. Glenarea has an unusual morphology and resembles the Eocene coral genera Triphyllocoenia and Ewaldocoenia. Both the latter genera are revised here as well, resulting in synonymisation of Ewaldocoenia with Triphyllocoenia. Glenarea shows fewer than 10 thick, unconnected septa that lack any symmetry in their arrangement. Skeletal elements such as columella, pali and endotheca are absent. The genus is only known from the type specimen. For the coral material that was assigned to Glenarea after 1991, the genus Sakalavastraea Alloiteau, 1958 with the type species S. collignoni from the Callovian of Madagascar is applied. Another three species are assigned to the genus, one of which is new. The range of Sakalavastraea is considerably extended from Callovian to Cenomanian; the genus is distributed worldwide. [original abstract]

LÖSER, H. & ZELL, P.

2016. Late Aptian corals from the South Iberian Sub-Basin (Cretaceous; Eastern Spain). – *Revista de la Sociedad Geológica de España*, 29, 1: 3-20. D • k • E

A small coral fauna from the Aptian Calizas con Rudistas del Caroch Formation 18 km NNE of Requena (Valencia) is described. A total of 21 species in 11 genera of the suborders Archeocaeniina, Caryophylliina, Faviina, Meandrinina, Rhipidogyrina, Microsolenina, and Stylinina are reported. For the genus Angelismilia the range of its stratigraphic distribution is extended. For the formerly monospecific genus Nudacolumastrea another two species are described. The studied fauna is typical for the Early Cretaceous; almost all species were indicated in the early Aptian, but less in the Albian or Cenomanian. Only one genus has a range beyond the Cenomanian. The fauna is dominated by plocoid colonies (genera Cryptocoenia, Holocystis and Nudacolumastrea; 13 species) whereas cerioid, flabelloid, meandrinoid, phaceloid, and solitary forms are subordinated. Palaeobiogeographic relationship exists with the lower Albian of Montmell Formation in East Iberia and various Mexican faunas of Aptian to Albian age. [original abstract]

MORO, A., HORVAT, A., TOMIĆ, V., **SREMAC, J. & BERMANEC, V.**

2016. Facies development and paleoecology of rudists and corals: an example of Campanian transgressive sediments from northern Croatia, northeastern Slovenia, and northwestern Bosnia. – *Facies*, 62, 19: 1-25; Erlangen. D • k • BIH/SLO

At six localities in northern Croatia (Donje Orešje, Gornje Orešje), Slovenia (Stranice, Slovenj Gradec), and Bosnia (Bešpelj and Kober), successions of shallow-water Campanian deposits transgressively covered a tectonically uplifted and eroded paleorelief. They constitute different lateral parts of a transgressive subtidal environment, where rudists and corals are typical macrofossils. At the investigated localities, two types of succession were distinguished: (a) clastic and (b) carbonate. Most localities are within the extended chronostratigraphic range of Calveziconus cf. lecalvezae (80.5–79.03 Ma), which comprises the upper part of the Vaccinites alpinus interval zone (for Stranice and Slovenj Gradec localities) and beginning of the Pironaea polystyla interval zone (for Bešpelj and Kober localities). In clastic successions, corals are the most abundant macrofossils, whereas rudists predominate within carbonate sections. The depositional setting of the investigated localities results from rapid relative sea-level rise with a tectonic overprint, which covered different types of paleo-relief. In cases when the paleorelief is gentle, a transgressive succession starts with clastic coral-rich sediments or carbonates with radiolitids. In areas of steeper paleorelief carbonate sediments were deposited with a mixed radiolitid-

hippuritid community, and the rudists, as the major macrofossils, indicate higher sedimentation rates in comparison with the clastic situations. [original abstract]

MORYCOWA, E. & RONIEWICZ, E.

2016. Microstructural evidence of the stylophyllid affinity of the genus Cyathophora (Scleractinia, Mesozoic). – *Annales Societatis Geologorum Poloniae*, 86, 1: 1-16; Kraków. D • tj • A/CH/F/E/GB/PL

The genus Cyathophora Michelin, 1843 (Cyathophoridae) is removed from the suborder Stylinina Alloiteau, 1952 and transferred to the Stylophyllina Beauvais, 1980. Morphologically, it differs from stylinine corals in that rudimentary septa are developed in the form of ridges or spines on the wall and may continue onto the endothecal elements as amplexoid septa. Relics of primary aragonite microstructure, preserved in silicified colonies of Cyathophora steinmanni Fritzsche, 1924 (Barremian–early Aptian) and in a calcified colony of C. richardi Michelin, 1843 (middle Oxfordian), indicate a non-trabecular structure of their skeletons. The sclerenchyme of radial elements is differentiated into fascicles of fibres, and in the form of fascicles or a non-differentiated layer of fibres, it continues as the upper part of endothecal elements and as the incremental layers of the wall. A micro-lamellation of the skeleton corresponds to the accretionary mode of skeleton growth found in Recent corals. A similarity between the septal microstructure of Cyathophora and that of the stylophyllid genera, the Triassic Anthostylis Roniewicz, 1989 and the Triassic–Early Jurassic Stylophyllopsis Frech, 1890, is interpreted as a result of their being phylogenetically related. The microstructure of the Jurassic Stylina gaulardi Michelin, 1843 has been considered for purposes of comparison. The systematics of the genus Cyathophora is formally revised with C. richardi Michelin reinstated as the type species. [original abstract]

SHA, J. & CESTARI, R.

2016. Late Aptian–Albian Yasin-type rudist assemblage in the Himalayas: palaeobiogeographic implications. – *Cretaceous Research*, 65: 34-57; London. C • k • RCH

Shallow water rudist bivalves are a very suitable tool for palaeoenvironmental and palaeobiogeographic reconstructions of the Cretaceous Tethys. For this reason, we have reviewed fossil localities bearing polyconitid rudists of the late Aptian and Albian in the Himalayan area and in other Tethyan sites. The well preserved Rossi Ronchetti rudist collection of Yasin (Kohistan Himalayas) has been reinspected as a reference for the regionally distinctive Horiopleura haydeni biofacies. Two morphotypes of the genus related to different sedimentary settings were distinguished on the basis of biometric measurements. Assemblages characterized by benthic organisms of Mesogean affinity dominated by polyconitid and radiolitid rudists, together with nerineid gastropods, corals and orbitolinid forams have a distinct provincial significance. Today, various polyconitid bearing biofacies can be recognized in many sedimentary successions of the Himalayas, westwards to the Iberia region and even eastwards to the Pacific area. Their distribution allows recognition of a palaeobiogeographic pattern influenced by a thermal barrier. It also helps to understand how the accretion of the Lhasa terrane and the Kohistan-Dras intra-oceanic volcanic arc could represent a spreading centre for the "Yasin-type" Horiopleura haydeni biofacies (marked by the absence of Polyconites) in the South West Asian Province. [original abstract]

TÁVORA, V.A., DIAS, J.J. & SEQUEIRA FERNANDES, A.C.

2016. New records and redescriptions of brazilian Scleractinia corals (Itamaracá, Maria Farinha and Pirabas Formations). – *Paleontología mexicana*, 5, 1: 71-86; Mexico City. D • kc • BR

This work deals with the systematic study of the corals from Itamaracá, Maria Farinha and Pirabas formations (Lower Maastrichtian, Paleocene-Eocene and Lower Miocene, respectively) at Pernambuco and Pará states. Herein are presented the first records of the species Actinastrea dickersoni (Wells, 1941), A. jukesbrownei (Wells, 1945), Caulastraea dendroidea (Coryell and Ohlsen, 1929), C. portoricensis (Coryell and Ohlsen, 1929), Ceratotrochus (C.) sp., Enallhelia aff. E. occidentalis Wells, 1944, Hydnophora latefundata Gregory, 1895, Stephanocoenia marylandica (Conrad, 1841), Trochocyathus (T.) collignoni (Alloiteau, 1958) and T. (Platycyathus) sp. as well as redescriptions of Cladocora sp., Stephanocoenia pernambucensis Fernandes, 1978, Stylophora silicensis Weisbord, 1973 and Paracyathus rugosus Vaughan, 1900. [original abstract]

ZORN, I.

2016. Upper Cretaceous corals stored in the palaeontological collections of the Geological Survey of Austria. – *Jahrbuch der Geologischen Bundesanstalt*, 155: 147-197; Wien. D • k • A

The collections of the Geological Survey of Austria in Vienna include Upper Cretaceous corals from Austria which were treated in Reuss (1854), Felix (1899, 1901, 1903), Beauvais (1982), Beauvais & Beauvais (1975), Baron-Szabo (1999, 2002, 2003a–c, 2014a, b), Szente et al. (2010) and Löser (2009, 2014a). The present paper provides a summary of the total stock, the processing status of holo-, lecto- and neotypes in detail as well as a list of all existing specimens with the most important master data and republications. Several type specimens, such as the holotype of Phyllosmilia felixi Beauvais, 1982 and the lectotypes of Placosmilia fenestrata (Felix, 1903) and Strotogyra sinuosa (Felix, 1903) are figured as well as some newly discovered syntypes of Reuss (1854). In addition, the inventory of unpublished corals from the Upper Cretaceous of Austria is discussed. [original abstract]