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The Mesozoic Corals.
Bibliography 1758-1993.

Supplement 21 (-2015)

Compiled by Hannes Löser[1]

Summary

This supplement to the bibliography (published in the Coral Research Bulletin 1, 1994) contains 27 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 27 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 27 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 27 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

ABDELHADY, A.A. & FÜRSICH, F.T.

2014. Macroinvertebrate palaeo-communities from the Jurassic succession of Gebel Maghara (Sinai, Egypt). – *Journal of African Earth Sciences*, 97: 173-193; Amsterdam. D • j • ET

Macrobenthic palaeo-communities of the Middle and Upper Jurassic strata of G. Maghara, Egypt, were investigated to identify relationships with environmental parameters and to trace the temporal changes of the ecosystem associated with sea-level fluctuations. The quantitative analysis of a data matrix comprising 198 macrobenthic taxa in 138 samples collected from four sections identified nine associations and three assemblages, interpreted to be representative of their original environment. Non-Metric Multidimensional Scaling (NMDS) delineated the same degree of habitat partitioning as hierarchical clusters with very little overlap. Detrended Correspondence Analysis (DCA) identified water depth as the primary environmental gradient controlling the distribution of the fauna, while Axis 2 reflects substrate consistency. Community structure is related to the various ramp environments. Based on diversities, the associations and assemblages have been divided into two major groups, low-stress polyspecific associations and high-stress paucispecific associations. The low-stress polyspecific associations were interpreted to represent two different habitats, a high-energy, firm substrate habitat, in which epifaunal bivalves and brachiopods in addition to solitary corals dominated during advanced stages of transgression, and a low-energy, soft substrate habitat dominated by infaunal bivalves during the maximum flooding. The high-stress paucispecific associations are dominated by one or few taxa and occurred (1) in an oligotrophic setting that developed during episodes of sediment starvation in restricted inner ramp environments or during early transgression, (2) in a setting characterized by high sedimentation rates which developed during advanced regression, (3) in a distal prodelta setting with soft substrate and dysoxia during sea-level lowstand, and (4) in a high-energy shoal environment during peak regression. A combined stress involving a shortage in food supply, episodic dysoxia, in addition to a soupy substrate may have developed during maximum flooding episodes. Hydrodynamic conditions were most likely the main factor controlling the benthic communities. Hydrodynamic conditions influenced the substrate type, redistributed nutrients and were responsible for stratified water masses and hypoxia. Animal-sediment relationships in addition to replacement between bivalves and brachiopods are also discussed. Middle ramp settings were found to provide the best conditions for macrobenthos. [original abstract]

BOVER ARNAL, T., PASCUAL-CEBRIAN, E., SKELTON, P.W., GILI, E. & SALAS, R.

2015. Patterns in the distribution of Aptian rudists and corals within a sequence-stratigraphic framework (Maestrat Basin, E Spain). – *Sedimentary Geology*, 321: 86-104; Amsterdam. C • k • E

The ecological zonation of, and environmental controls on rudist and coral assemblages on carbonate platforms of the Old World have received more attention for Late Cretaceous examples than for their Early Cretaceous counterparts. This study accordingly investigates the vertical and lateral distribution of Aptian rudist bivalves and scleractinian corals on a carbonate platform succession from the western Maestrat Basin (E Iberian Peninsula). Here, colonial corals grew profusely on an isolated platform top environment during an earliest highstand stage of a long-term trend of relative sea level, as well as on marly slope settings during higher-frequency transgressive pulses. During the later highstand stage within a longer-term relative sea-level cycle, a facies belt dominated by autochthonous rudist bivalves overlaid the coral meadow that had developed on the isolated platform top . The internal part of this carbonate platform with rudists is dominated by slender elevator caprinids such as Caprina parvula, whereas requieniids and polyconitids predominate in the external zone. The abundance of caprinids in the internal platform is remarkable given that caprinid lithosomes of late Early Aptian age are usually rare in the northern margin of the Tethys. The proliferation of caprinids in this case was probably favoured by the apparently more isolated nature of the carbonate platform. On the slopes, the coral communities that flourished during higher-frequency transgressive pulses are overlain by carbonates with rudists, mainly requieniids, shed from the platform top during normal and forced regressive higher-frequency changes of relative sea level. Accordingly, the vertical change from coral-dominated to rudist-dominated facies in both platform top and slope settings records progradation. To decipher the long-term relative sea-level changes that controlled the deposition of this carbonate succession, a sequence stratigraphic analysis was performed. Two depositional sequences including a late Early Aptian (intra Dufrenoyia furcata Zone) forced regressive stage of relative sea level, which subaerially exposed and incised the Early Aptian succession to a depth of 21 m, were recognised. The incisions were back-filled with peritidal deposits during the subsequent marine onlap. The rudist- and coral-bearing carbonates were deposited a long platform top to slope profiles lacking a barrier margin, and hence, lagoon environments. [original abstract]

COLLETÉ, C., FRICOT, C., MATRION, B. & MIQUELIS, F.

2013. Le Crétace inférieur du département de l'Aube. – *Bulletin d'information des géologues du Bassin de Paris*, 50, 1: 4-15; Paris. C • k • F

EL-SOROGY, A.S., AL-KAHTANI, K.M. & EL-ASMAR, H.M.

2014. Marine benthic invertebrates of the upper Jurassic Tuwaiq Mountain Limestone, Khashm Al-Qaddiyah, central Saudi Arabia. – *Journal of African Earth Sciences*, 97: 161-172; Amsterdam (Elsevier Sciencific Publishing Company). D • j • SA

26 species belong to 24 genera and 16 families have been described and illustrated from the Callovian Tuwaiq Mountain Limestone, Khashm Al-Qaddiyah, central Saudi Arabia. 10 of the identified species belong to scleractinian corals, 7 to brachiopods, 4 to bivalves, 4 to gastropods and one to cephalopods. Actinastraea pseudominima, Thamnasteria nicoleti, Enallocoenia crassoramosa, Collignonastraea cf. grossouvrei, Burmirhynchia jirbaensis, Pholadomya (Bucardiomya) somaliensis, Pseudomelania (Rhabdoconcha) raabi and Nautilus giganteus are believed to be recorded for the first time from the Jurassic rocks of central Arabia. The identified species have close affinity to Tethyan faunas known from parts in Asia, Africa and Europe. They indicated shoaling of the sea floor persisted throughout the deposition of the Tuwaiq Mountain Limestone, in water depth ranging from 20 to 30 m. The low diversity of invertebrates in the studied section may attribute to paleoenvironmental conditions prevailed during the Callovian age as high rate of sedimentation. [original abstract]

ELIÁŠOVÁ, H.

2015. Genres nouveaux et peu connus de coraux Scléractiniaires des calcaires de Štramberk (Jurassique supérieur de République tchèque). – *Revue de Paléobiologie*, 34, 1: 59-76; Genève. N • j • CZ

New or imperfectly known genera and species of Scleractinia from Štramberk Limestone (Early Tithonian-Early Berriasian, Flysch zone of the Outer Western Carpathians, the Czech Republic) are described : Halucinophyllia subridens n. gen. n. sp., Munusculum martinaseki n. gen., n. sp., Tegocoenia n. gen., Sylviella n. gen. [S. columnaris (Ogilvie), S. exquisita n. sp. S. multisepta n. sp., S. noveni n. sp., S. benjamin n. sp.], Sylviellopsis erici n. gen., n. sp. Emended diagnoses are proposed for two imperfectly known genera (Acrosmilia d'Orbigny, and Crateroseris Tomes). A new family, Sylviellidae n. fam. is proposed. The studied corals are extraordinarily well-preserved showing delicate morphological details of their external skeleton, which allows detailed descriptions. [original abstract]

FILKORN, H.F. & PANTOJA-ALOR, J.

2015. Mexican Cretaceous coral species (Cnidaria, Anthozoa, Scleractinia) described as new by Filkorn & Pantoja-Alor (2009), but deemed 'unpublished' under the International Code of Zoological Nomenclature: republication of data

necessary for nomenclature – *Bulletin of Zoological Nomenclature*, 72, 1: 93-101. N • k • MEX

GILL, G.A. & RUSSO, A.

1973. Présence d'une structure septale de type <Montlivaltide> chez Trochosmilia, Madréporaire Éocène. – *Annales de Paléontologie, (Invertébrés)*, 59, 1: 1-61, pl.1-9; Paris. D • ke • F/I

GRETZ, M., LATHUILIÈRE, B. & MARTINI, R.

2015. A new coral with simplified morphology from the oldest known Hettangian (Early Jurassic) reef in southern France. – *Acta Palaeontologica Polonica*, 60, 2: 277-286; Warszawa. N • j • F

The family Zardinophyllidae (Pachythecaliina) represents one of the most enigmatic coral groups known from the beginning of Mesozoic record of stony corals. They share some features with Paleozoic rugosans (overall architecture of the corallite) but also modern-day scleractinians (aragonite mineralogy). Fossil record of zardinophyllids was up to now restricted to the Triassic. Here we describe a new coral genus Cryptosepta collected in the oldest known Jurassic (Hettangian) reef in the Ardèche department in southern France. Cryptosepta gen. nov. has poorly developed (cryptic) septa, which is a peculiarity that extends the boundaries used to distinguish post-Palaeozoic corals and an oversimplification that could support reinitialisation of the evolutionary clock during extinction events or that support an adaptation to specific environmental conditions. Occurrence of Cryptosepta gen. nov. in Jurassic suggests zardinophyllid survival through the Triassic–Jurassic boundary, and may represent (possibly with Sinemurian genus Pachysmilia) a missing link to Amphiastreidae. [original abstract]

KOŁODZIEJ, B.

2015. Corals of the Štramberg-type limestone from Poland: Taxonomic and palaeoecological aspects. – *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, 276, 2: 181-199; Stuttgart. D • jk • PL

The paper provides new data and the summary of the previous studies on the taxonomy and palaeoecology of corals from the Štramberk-type limestones, occurring as pebbles to boulders (so-called exotics) in the flysch sucessions of the Polish Outer Carpathians. At least 80 species (53 genera) are known from these limestones. Less abundant and less diversified than corals of the Štramberk Limestone from Moravia, but they still represent one of the most species-rich assemblage of the latest Jurassic–earliest Cretaceous age (mostly Tithonian). Uniqueness of these coral faunas, especially in Czech Republic, is an unusual proliferation of the suborder Pachythecaliina (order Hexanthiniaria). 22 species and 14 genera, occur in the Štramberk-type limestones in Poland. Corals, many with phaceloid growth form, are commonly associated with microbialites and microencrusters, which are important reef framework contributors. Macrobiota and microencrusters (some typical for the Tethyan realm) suggest oligotrophic or mildly mesotrophic environments. Four scleractinian species, representing poorly known genera Bilateracoenia, Thecomeandra and Misistella are described. [original abstract]

LÖSER, H.

2015a. Les coraux. [In:] MOREL, N. [Ed.]: Stratotype Cénomanien. – p. 280-282; Paris (Muséum national d'Histoire naturelle). D • k • F

LÖSER, H.

2015b. Revision of the genus Pseudocunnolites (Scleractinia; Late Cretaceous). – *Batalleria*, 22: 5-7; Barcelona. D • k • E

One of the richest collections of Mesozoic and Cenozoic corals worldwide, that at the Geological-Palaeontological Institute of the Leipzig University collected by the scientist and university teacher Johannes Felix (1859-1941), has now been catalogued and recorded in a computer database. Figured specimens and types have been checked. This paper gives an overview of Felix's life and work, of the genesis and troubled history of the collection and a condensed catalogue in the appendix. [abstract]

LÖSER, H.

2015c. Die Gattung Moltkia (Gorgonacea, Cnidaria) in der Sächsischen Oberkreide (Deutschland). – *Geologica Saxonica*, 60, 3: 427-434. D • k • D

The calcified internodes of the gorgonid genera Moltkia are typical faunal elements in the Cenomanian sediments of Saxony (Germany). Depending on their position in the living animal, the internodes measure between five to 15mm in length and one to three millimetres in width. They are ornamented with fine striae or - in younger stages - with slightly depressed calicular pits. Moltkia is known from the Cenomanian to the Early Eocene and reached its highest morphological differentiation during the Danian. In the present publication, the authorship of the type species of the genus, Moltkia isis, is discussed and assigned to Steinmann & Döderlein (1890). Synonyms of the genus and known species are stated. The material from the Saxon Upper Cretaceous is presented. [original abstract]

LÖSER, H.

2015d. The Cretaceous corals from the Bisbee Group (Sonora; Late Barremian-Early Albian): Solenocoeniidae. – *Paleontología mexicana*, 4, 2: 13-24; Mexico City. D • k • MEX

The current work constitutes the third part of the systematic revision of the corals from the Bisbee Group (Late Barremian to Early Albian) and deals with the Solenocoeniidae. This family taxon is applied instead of the poorly defined Cyathophoridae. The family has three genera in the Cretaceous of Sonora: Confusaforma, Cryptocoenia, and Cyathophoropsis. To distinguish samples within the Sonoran fauna and species of this genus, systematic measurements of the corals were taken and statistically analysed. From the Bisbee Group, two Confusaforma, six Cryptocoenia, and one Cyathophoropsis species are here described and illustrated. Most are common Early Cretaceous species with a wide geographic and stratigraphic distribution. [original abstract]

LÖSER, H., ARIAS, C. & VILAS, L.

2015. Aptian-Albian coral faunas from the Sierra del Carche (Prebetic, Murcia, Southern Spain). – *Spanish Journal of Palaeontology*, 30, 1: 43-63. N • k • E

Three small coral faunas from the Early Aptian, Latest Aptian and Late Albian from a sedimentary section in the Sierra del Carche are described. A total of 17 species in 15 genera of the suborders Amphiastraeina, Archeocaeniina, Faviina, Fungiina, Heteroceniina, Microsolenina, and Stylinina are reported. One species in the genus Heteropistophyllum is described as new. The Early Aptian fauna encompasses six species, the Late Aptian fauna three species and the Late Albian fauna ten species. The three faunas do almost not share species. There are only colonial corals. [original abstract]

LÖSER, H. & ZELL, P.

2015. Revision of the family Columastraeidae (Scleractinia; Cretaceous). – *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, 277, 2: 153-166; Stuttgart. N • k • A/E/F/RO

The coral family Columastraeidae (suborder Faviina) is revised on the basis of its type genus and respective type species. The family encompasses colonial plocoid forms with compact radial elements that are arranged in a regular hexameral symmetry. The radial elements are composed of medium-sized trabeculae. Together with the name-giving genus Columastrea Orbigny, 1849, the genera Brachyphyllia Reuss, 1854, Placocolumastrea Reig Oriol, 1989, and Proplesiastraea Oppenheim, 1930 are assigned to the family. Two genera – Eocolumastrea and Nudacolumastrea – are established as new. Eocolumastrea is established for mainly Early Cretaceous species that were formerly assigned to Columnocoenia and afterwards preliminarily to Placocolumastrea. Nudacolumastrea is the only genus in the family that lacks a columella, but presents paliform lobes at the first septal cycle. All genera are revised on the basis of the types of their respective type species, except for Proplesiastraea. Possible species of all genera are listed. Ranges and evolution of the genera are discussed. The family occurs wolrdwide from the Valanginian to Maastrichtian. In particular, the genera Columastrea and Eocolumastrea are very abundant faunal elements. [original abstract]

MALLADA, L.

1884. Sinopsis de las especies fósiles que se han encontrado en España. Terreno Mesozóico – *Boletín de la Comisión del Mapa geológico de España*, 11: 209-358; Madrid. C • j • E

MARTINDALE, R.C., CORSETTI, F.A., JAMES, N. & BOTTJER, D.J.

2015. Paleogeographic trends in Late Triassic reef ecology from northeastern Panthalassa. – *Earth-Science Reviews*, 142: 18-37; Amsterdam. D • t • CDN/USA

The Late Triassic was a pivotal period in reef evolution, but the majority of information about reef ecology during this time comes from buildups in the Alps (e. g., the Tethys Ocean). Recent studies of reefs in western North America have recognized unique ecologies along the eastern margin of the Panthalassa Ocean. Although there are numerous (twenty-five) localities with putative reef builders, only four buildups had syndepositional relief and a rigid framework (i.e. true reefs) . The most paleo-northern true reefs were microbial patch reefs with only a few large skeletal bioconstructors; hypercalcified sponges and spongiomorphs built the mid- latitude reefs, with secondary microbial encrustation and branching, phaceloid Retiophyllia corals. Corals are the primary bioconstructors in Panthalassa's most paleo-equatorial reefs and calcareous microbes are sparse. When all reefal deposits are analyzed, the N–S gradient is also present, with microbial and bivalve deposits in the north, spongecoral deposits in the mid latitudes, and coral deposits near the equator. This ecological gradient is not apparent in the Tethys Ocean. Tethyan reefs thrived in oligotrophic, tropical waters without strong latitudinal gradients; by contrast, paleoceanographic considerations suggest that cool, nutrient-rich waters swept south along the western North American borderlands in the Late Triassic. The eastern boundary current is interpreted to have created a strong north–south differentiation of environments in northeastern (NE) Panthalassa that was manifested in both the biotic and abiotic characteristics of eastern Panthalassic reefs. Reefs from equatorial Panthalassa are similar to Tethyan reefs (warm-water, photozoan, coral reef structures), whereas higher paleo-latitude reefs from Panthalassa are interpreted as cool-water (heterozoan) buildups, with abundant calcareous microbes, diminutive biocalcifiers, and few large, framework-building corals. [original abstract]

MORYCOWA, E.

2013. Cretaceous Scleractinian coral Preverastraeopsis gen. n. from central Greece. – *Rivista italiana di paleontologia*, 119, 2: 199-203; Milano. N • k • GR

The aulastraeoporid coral Preverastraeopsis gen. n. represented by one species Phyllocoenia major Hackemesser, 1936 from the Cenomanian (?Aptian-Cenomanian) of Central Greece is described. The new genus, characterized by astreoid colony structure is not known to date in the family Aulastraeoidea Alloiteau. The genus is related to Preverastraea Beauvais, which differs from Preverastraeopsis by cerioid colony with corallite wall in structural continuation with the septa. In the latter the radial elements are of costo-septal type, free in their external ends. [original abstract]

NIELSEN, K.B.

1918. Slaegten >Moltkia< og andre Octocoraller i Sveriges Kridttidsaflejringer. – *Geologiska Föreningens i Stockholm förhandlingar*, 40, 4; Stockholm. N • kp • DK

PEYBERNES, C., CHABLAIS, J. & MARTINI, R.

2015. Upper Triassic (Ladinian?-Carnian) reef biota from the Sambosan Accretionary Complex, Shikoku, Japan. – *Facies*, 61: 27 pp.; Erlangen. D • t • J

The Middle and Late Triassic was a time of important reef development. This evolution, which is primarily documented in the Tethys realm, comprised several phases from the Anisian to the Rhaetian. To help elucidate the less constrained reef evolution in the Panthalassa domain, samples of reef limestone were collected from several localities along the Sambosan Accretionary Complex in Shikoku Island, southwest Japan. In this paper, we report a well-preserved and comprehensive reef biota, including several taxonomic groups, such as scleractinian corals, calciied sponges, calcareous algae, foraminifers, and microproblematica. Seventeen species are described for the irst time in Japan among the 33 that are identiied in this study. The assemblage-based biostratigraphy and index taxa indicate a Ladinian?-Carnian age. This new inding corresponds to an older reef limestone than has been previously identiied in the Sambosan Accretionary Complex and may represent the initiation of shallow-water carbonate deposition on western Panthalassa seamounts. This work also provides valuable insights on reef ecosystem biodiversity in the Panthalassa domain during the Middle? to Late Triassic. [original abstract]

STANLEY, G.D. & ONOUE, T.

2015. Upper Triassic reef corals from the Sambosan Accretionary Complex, Kyushu, Japan. – *Facies*, 61, 1: 27 pp.; Erlangen. N • t • J

Reef-building and dwelling scleractinian corals attained worldwide distribution in the Late Triassic and are best known from the former Tethys but some taxa also occur in the collage of displaced terranes now comprising the circum-Pacific rim. Among these are Upper Triassic corals from Japan, which have received little systematic study during the past 40 years but hold keys for resolving crucial questions about the depositional history and paleogeography of this region. Ten Upper Triassic coral taxa are here described from limestone rocks of the Sambosan Accretionary Complex, of Japan - a tectonically mobile belt extending from the Okinawa Islands to south of Tokyo on the island of Honshu. This belt contains the remains of reefs and carbonate sediment deposited on volcanic atolls formed at unknown tropical paleogeographic positions. The paleogeographic relationship of the Sambosan Accretionary Complex (SAC) relative to the Tethys and terranes of the circum-Pacific is not well constrained. The Upper Triassic corals of Japan occur within isolated carbonate blocks and extensive breccia deposits of the SAC. Corals and other organisms contain mixed Carnian and Norian taxa, many of which are known to build reefs and appear to have been derived from reef facies. Here we describe and discuss solitary and colonial, potentially reef-building corals from the SAC that come from the island of Kyushu and from Nara and Kochi Prefectures. Three new species described for the first time are: Retiophyllia tosaensis n. sp., Margarosmilia mizukamia n. sp., and Guembelastraea kanmerae n. sp. Other corals are taxonomically reevaluated from previous work: Craspedophyllia japonica n. sp., Thamnasteriamorpha okudai n. sp., Khytrastrea ominensis (Okuda and Yamagiwa), Craspedophyllia ramosa Roniewicz, Protoheterastraea konosensis (Kanmera), and Seriastraea furukawai (Kanmera). Two additional taxa, Retiophyllia cf. R. frechi Roniewicz and Volzeia cf. V. badiotica (Volz) show relationships with Carnian to Norian corals of the for-mer Tethys. Results, when compared with previous taxa, increase knowledge of the composition of Upper Triassic corals of Japan. It shows a high degree of endemism among the Triassic corals of the SAC with some paleogeographic connection to the western Tethys and Pamir Mountains and Timor. The presence of many reef-building coral taxa and reef-type carbonate microfacies along with their paleogeo-graphic distribution suggests a location in the southwestern Panthalassa. [original abstract]

SØRENSEN, A.M. & SURLYK, F.

2015. Rocky shore taphonomy—A comparative study of modern and Late Cretaceous analogues. – *Palaeogeography, Palaeoclimatology, Palaeoecology*, 423: 44-52; Amsterdam. D • k • S

Rocky shores are rare in the fossil record due to erosion under both sea-level rise and fall. In contrast, modern rocky shores are well-studied, but little is known about the evolution of their ecosystems due to the rarity of ancient counterparts. Reconstruction of these ancient ecosystems is thus essential to get an insight into their evoluti on . A high-diversity Late Cretaceous (Campanian) rocky shore fauna is found in southern Sweden. The original composition of the shelly fauna cannot be interpreted by direct examination of the preserved fauna due to the effects of taphonomic processes. Life and death assemblages from a modern rocky shore fauna from Thailand have previously been analysed and a hypothetical fossil assemblage was reconstructed in order to attempt an interpretation of the Campanian life assemblage. This study shows a low taxonomic agreement between the origin al Campanian life assemblage and the fossil assemblage, due to taphonomic processes, and high environmental fidelity with only a few out-of-habit at species represented. The modern life assemblage showed in an earlier study, a high loss of species before onset of fossilisation. This suggests that the faunal composition of the Campanian life assemblage cannot be easily reconstructed, and time averaging by generations of death assemblages makes this even more difficult. The Campanian aragonitic fauna is poorly represented and the rarity of moulds after aragonitic species is interpreted as due to taphonomic processes and not to lower richness of aragonitic species in the Cretaceous. This is supported by comparison with the high richness of aragonitic species found on a Late Cretaceous rocky shore in Germany. An originally high-diversity gastropod fauna is thus interpreted to have dominated the intertidal zone in the Campanian example, and the rare moulds of each of the aragonitic species indicate a high taphonomic loss in spite of rapid burial. Calcitic species-richness is higher in the Campanian fauna than in the modern life, death, and constructed hypothetical fossil assemblages. This is interpreted as reflecting time averaging of

generations of calcitic species and low loss of calcitic species by taphonomic processes in the Campanian fauna. It is thus assumed that the original Campanian fauna experienced a change in faunal composition from a gastropod-dominated life assemblage to a bivalve-dominated fossil assemblage due to dissolution of aragonite and excellent preservation of calcite. Reconstruction of ancient rocky shore shelly faunas can thus be considerably improved by comparison with analogous modern rocky shore faunas. [original abstract]

TAVERA, J.

1956. Fauna del Cretáceo Inferior de Copiapó. – *Anales de la Facultad de Ciencias Físicas y Matemáticas*, 13 (Publicación No. 9): 205-216. C • k • RCH

TÁVORA, V.A., DIAS, J.J. & AGUILAR SANTOS, C. L. DE

2015. Scleractinia Corals of the Jandaíra Formation (Turonian-Campanian), Rio Grande do Norte state, Brazil. – *Paleontología mexicana*, 4, 2: 39-51; Mexico City. D • k • BR

This work deals with the systematic study of the corals collected in the Jandaíra Formation, Turonian-Campanian of the Rio Grande do Norte state, Brazil. The specimens were recognized as Actinastrea decaturensis (Vaughan, 1919), A. guadalupae (Roemer, 1849), Stephanocoenia guadalupae Wells, 1932, Madracis johnwellsi Frost and Langenheim, 1974, Isastrea whitneyi Wells, 1932, Paracycloseris effrenatus Filkorn and Pantoja-Alor, 2009 and Orbicella travisensis Wells, 1932, as well as Isastrea sp. and two doubtful species, Turbinolia (Turbinolia)? insignifica Vaughan, 1900 and Placotrochus? texanus (Vaughan, 1903). The majority of these species occurs in the Aptian-Albian of USA and Mexico, as well as the Lower Tertiary of Central America and north of South America. This fauna is the westernmost hermatypic assemblage of the Turonian scleractinian and has affinities with others shallow marine Cretaceous units within USA and Mexico. [original abstract]

ZIEGLER, B.

1987. Der Weiße Jura der Schwäbischen Alb. – *Stuttgarter Beiträge zur Naturkunde*, C, 23: 1-71, 11 pls.; Stuttgart. D • j • D

ŽÍTT, J., VODRÁŽKA, R., **HRADECKÁ, L., SVOBODOVÁ, M.** & ŠŤASTNÝ, M.

2015. Depositional and palaeoenvironmental variation of lower Turonian nearshore facies in the Bohemian Cretaceous Basin, Czech Republic. – *Cretaceous Research*, 56: 293-315; London. D • k • CZ

Dark grey strata belonging to the basal horizons of the Bílá Hora Formation (lower Turonian) were exposed during quarrying at the locality of Planany (Bohemian Cretaceous Basin) . Based mainly on quarry maps, the early Turonian rocky bottom was reconstructed in the area of about 14,800 m2. Two sedimentologic and palaeoecological settings were recognized in the area. Dark grey deposits form part of the first setting, representing a fill of large and deep depressions on the northern foot of the Planany elevation. The second setting with a phosphatic lag is located on the elevated part of the area. Dark grey sedimentation belongs to the UC6a and particularly to the UC6b nannoplankton zones. During the latter zone the dark sedimentation passed upwards into light siltstones. The enrichment of Corg and S, clay minerals with an important kaolinite peak, formation of framboidal pyrite and the enrichment of macrofauna and phosphatic particles are characteristic of the basal portions of the dark deposits. The sulphate reduction zone is suggested for this sedimentary environment. In the associations of phosphatic particles, shark coprolites, faecal pellets and sponge fragments prevail. No phosphatic lag is developed. On the other hand, the phosphatic lag directly overlying the Cenomanian relicsis most characteristic of the second setting. This lag is a product of sedimentary condensation, characterized by a long-lasting concentration of phosphatic particles and phosphogenesis, accompanied by encrustation of closely adjacent free rock surfaces by a faunal community with Terebella. Additional biostratigraphic data presently contributed to a proposed correlation of both settings. Micropalaeontological data (foraminifera, palynomorphs, nannoplankton) indicate that the phosphatic lag and basal dark grey deposits may be approximately coeval. The stagnant depositional conditions with only very slow sea-level rise are thought to have lasted for a relatively long period that includes a significant part of the Whiteinella archaeocretacea Zone (lowermost Turonian). In elevated parts, condensation could proceed under conditions of prevailingly weak currents and strong oxidation of organic matter, while decomposition of organic matter was probably very slow and in complete in depressions below the elevation. The sedimentary condensati on in both settings is highlighted by the remarkable formation of abundant glauconite in local deposits. [original abstract]