**SUPPLEMENTARY DATA I**

**Appendix 1. List of Literature**

Sixty-three contributions on Triassic to earliest Cretaceous dinoflagellate cysts issued after the publication of Riding (2012, 2013, 2014, 2019a, 2020), and older papers discovered after these compilations were made, are listed in alphabetical/chronological order below. The reference format used is much the same as in Riding (2013), which was slightly modified from Riding (2012). Digital Object Identifier (doi) numbers are included where these are available. The nine papers which are deemed to be of major significance are asterisked. The language in which a paper was written in is indicated if it is not in English. A synthesis of the scope of each item is given as a string of keywords in parentheses after each citation. These keywords attempt to comprehensively summarise the principal subject matter, age range, major geographical region(s) and country/countries. A distinction is made between publications which present new data (‘primary data’), and those which compile, review or summarise existing data (‘compilation’ etc.). Two abstracts are listed here, and these are denoted by the word ‘summary’ in the keyword string. If the author(s) have included photographs, occurrence charts and a zonal breakdown, these are indicated respectively in the keywords. For the purpose of this work, the world is subdivided into 23 major geographical regions. These are East Africa, North Africa, Southern Africa, Central America, northern South America, southern South America, Greater Antarctica, the Antarctic Peninsula, East Arctic, West Arctic, Southeast Asia, Australasia, sub-Arctic East Canada, sub-Arctic West Canada, China and Japan, East Europe, sub-Arctic West Europe, the Indian subcontinent, the Middle East, sub-Arctic Russia east of the Ural Mountains, sub-Arctic Russia west of the Ural Mountains, U.S.A. east of the Rocky Mountains and U.S.A. west of the Rocky Mountains (Table 1).

**A**

ADLOFF, M.-C., and DOUBINGER, J. 1982. Étude palynologique du Rhétien et de l’Hettangien de cinq sondages situés dans les environs de Mersch (Luxembourg). *Bulletin d'information des géologues du bassin de Paris*, 19(2): 9–20 (in French with an English abstract).

(acritarchs; biostratigraphy; biozonation; boreholes; *Dapcodinium priscum*; diversity; pollen and spores; prasinophytes; *Rhaetogonyaulax rhaetica*; primary data; quantitative occurrence charts; photographs; latest Triassic–earliest Jurassic [Rhaetian–Hettangian]; sub-Arctic West Europe [Mersch, central Luxembourg])

**B**

BADIHAGH, M.T., SAJJADI, F., FARMANI, T., and UHL, D. 2019. Middle Jurassic palaeoenvironment and palaeobiogeography of the Tabas Block, Central Iran: palynological and palaeobotanical investigations. *Palaeobiodiversity and Palaeoenvironments*, 99: 379–399 (doi: 10.1007/s12549-018-0361-0).

(biostratigraphy; biozonation; correlation; floral affinities; kerogen; *Klukisporites variegatus* acme zone; lithostratigraphy [Hojedk Formation]; Mid Asian part of the Indo-European floral province; palaeobiogeography; palaeobotany; palaeoclimate; palaeoecology; palynofacies; plant macrofossils; pollen and spores; primary data; occurrence charts; photographs; Middle Jurassic [?Bajocian–Bathonian]; Middle East [Well 233, South Kuchak-Ali area, South Khorasan Province, southwest of Tabas city, Tabas Block, central Iran])

BAILEY, D.A. 2020. BioStrat Limited Early Jurassic Zonation. Available online at: http://www.biostrat.org.uk/EJ%202011%20postcon.pdf (accessed 30 January 2020).

(ammonite zones; bioevents; biostratigraphy; biozonation; chronostratigraphy; informal taxa; pollen and spores; prasinophytes; compilation; Early Jurassic [Hettangian–Toarcian]; sub-Arctic West Europe [no specific geographical focus])

BAILEY, D.A. 2020. BioStrat Limited Mid Jurassic Zonation. Available online at: http://www.biostrat.org.uk/MJ%202011%20eventspostcon.pdf (accessed 30 January 2020).

(ammonite zones; bioevents; biostratigraphy; biozonation; *Botryococcus*; chronostratigraphy; informal taxa; pollen and spores; compilation; Middle Jurassic [Aalenian–Callovian]; sub-Arctic West Europe [no specific geographical focus])

BAILEY, D.A. 2020. BioStrat Limited Late Jurassic Zonation. Available online at: http://www.biostrat.org.uk/LJ%202011%20events%20postcon.pdf (accessed 30 January 2020).

(acritarchs; ammonite zones; bioevents; biostratigraphy; biozonation; chronostratigraphy; informal taxa; compilation; Late Jurassic–earliest Cretaceous [Oxfordian–Berriasian]; sub-Arctic West Europe [no specific geographical focus])

BAILEY, D.A. 2020. BioStrat Limited Early Cretaceous Zonation. Available online at: http://www.biostrat.org.uk/EK%20Zones%202011postcon.pdf (accessed 30 January 2020).

(bioevents; biostratigraphy; biozonation; chronostratigraphy; informal taxa; compilation; Early Cretaceous [Berriasian–Albian]; sub-Arctic West Europe [no specific geographical focus])

BIRKENMAJER, K., and GEDL, P. 2019. The Jurassic to Palaeogene strata in the northern boundary fault zone in deep borehole PD-9 at Szczawnica, Pieniny Klippen Belt, West Carpathians, Poland: biostratigraphy and tectonic implications. *Annales Societatis Geologorum Poloniae,* 89(3): 233–257 (doi: 10.14241/asgp.2019.18).

(biostratigraphy; geological background; Grajcarek Unit; lithostratigraphy [the Bryjarka Member and the Hałuszowa, Jarmuta, Malinowa Shale, Szczawnica and Szlachtowa formations]; Magura Nappe; Pieniny Klippen Belt; structural geology; tectonic thrust sheet; tectonics; West Carpathian Mountains; primary data; quantitative occurrence chart; photographs; Early–Middle Jurassic to Eocene [Toarcian–Aalenian to Ypresian]; East Europe [Szczawnica, central southern Poland])

BOOROVÁ, D., SKUPIEN, P., VAŠÍČEK, Z., and LOBITZER, H. 2015. Biostratigraphy of the Lower Cretaceous Schrambach Formation on the classical locality of Schrambachgraben (Northern Calcareous Alps, Salzburg Area). *Bulletin of* *Geosciences,* 90(1), 89–131 (doi: 10.3140/bull.geosci).

(ammonites; aptychi, biostratigraphy; calpionellids; calcareous dinoflagellate cysts; geological background; palynofacies; lithostratigraphy [Oberalm, Schrambach and Rossfeld formations], reworking; taxonomy; tectonic slices; primary data; non-quantitative occurrence charts; photographs; Early Cretaceous [Berriasian–Valanginian]; sub-Arctic West Europe [Schrambachgraben, Salzachtal, near Hallein and Kuchl, south of Salzburg, central Austria])

**D**

DOWNIE, C., and SARJEANT, W.A.S. 1965. Bibliography and index of fossil dinoflagellates and acritarchs. *Geological Society of America, Memoir*, No. 94, 180 p.

(acritarchs; bibliography; index; compilation; no geographical or stratigraphical focus)

**E**

EL ATFY, H., MOSTAFA, A., MAHER, A., MAHFOUZ, K., and HOSNY, A. 2019. Early Cretaceous biostratigraphy and palaeoenvironment of the northern Western Desert, Egypt: an integrated palynological and micropalaeontological approach. *Palaeontographica Abteilung B: Palaeobotany – Palaeophytology*, 299 (1–6): 103–132 (doi: 10.1127/palb/2019/0064).

(biostratigraphy; biozonation; correlation; floral dynamics; foraminifera; foraminiferal test linings; freshwater algae; fungal remains; geological background; lithostratigraphy [Alam El Bueib and Alamein members of the Burg El Arab Formation]; palaeoclimate; palaeoecology; palynofacies; pollen and spores; prasinophytes; primary data; photographs; non-quantitative and quantitative occurrence charts; Early Cretacous [Berriasian–Aptian]; North Africa [Obaiyed Oilfield, northwest Matruh Basin, northern Western Desert, northwest Egypt])

**F**

FENSOME, R.A., WILLIAMS, G.L., and MACRAE, R.A. 2019. The Lentin and Williams index of fossil dinoflagellates 2019 edition. *American Association of Stratigraphic Palynologists Contributions Series*, No. 50, 1173 p.

(acritarchs; age of type material; alphabetical index; calcareous dinoflagellate cysts; coccolithophorids; cyanobacteria; dictyophycea; desmids; foraminifera; freshwater algae; fungi; glossary; *incertae* *sedis*; mineral grains; pollen; prasinophytes; radiolaria; rules of nomenclature; schizosporous algae; silicoflagellates; sponges; spores; taxonomy; compilation; no geographical or stratigraphical focus)

FENSOME, R.A., WILLIAMS, G.L., WOOD, S.E.L., and RIDING, J.B. 2019. A review of the areoligeracean and ceratiacean dinoflagellate cyst *Cyclonephelium* and morphologically similar genera. *Palynology,* 43, Supplement No. 1, 71 p. (doi: 10.1080/01916122.2019.1596391).

(areoligeracean dinoflagellate cysts; ceratiacean dinoflagellate cysts; *Cyclonephelium* group (11 genera); evolution; generic definitions; history; morphology (acavate/cavate; horn and ornamentation distribution; intergradation; sulcus offset to the left); palaeoecology; palaeogeography; stratigraphical occurrences; tabulation; taxonomy; type material; taxonomic review; photographs; Late Jurassic–Cretaceous–Paleogene/Neogene [Kimmeridgian–Holocene]; no geographical focus)

Note that the online Supplemental data to this paper comprises primary data on the Early Cretaceous (?Barremian) and younger successions of Arctic Canada and offshore eastern Canada (https://doi.org/110.1080/01916122.2019.1596391).

**H**

HABIB, D. 1979. Sedimentary origin of North Atlantic Cretaceous palynomorphs. *In*: Talwani, M., Hay, W., and Ryan, W.B.F. (editors). *Deep drilling results in the Atlantic Ocean: continental margins and paleoenvironment*, 3: 420–437 (doi: 10.1029/ME003p0420) American Geophysical Union, Maurice Ewing Series.

(biostratigraphy; biozonation; Deep Sea Drilling Project [DSDP]; deltaic deposition; palaeoecology; palaeogeography; palynofacies; pollen and spores; sedimentology; primary data; quantitative occurrence charts; photographs; earliest–Late Cretaceous [Berriasian–Cenomanian]; multi-region: sub-Arctic West Europe [Spain]; U.S.A. east of the Rocky Mountains [offshore East U.S.A., western North Atlantic Ocean])

HESSELBO, S.P., and PIEŃKOWSKI, G. 2011. Stepwise atmospheric carbon-isotope excursion during the Toarcian Oceanic Anoxic Event (Early Jurassic, Polish Basin). *Earth and Planetary Science Letters*, 301(1–2): 365–372 (doi: 10.1016/j.epsl.2010.11.021).

(ammonites; carbon cycle; chemostratigraphy; clay minerals; correlation; eccentricity forcing; eustacy; flooding surfaces; gas hydrate (methane) release; glacioeustacy; lithostratigraphy [Komorowo, Drzewica and Ciechocinek formations]; *Luehndea spinosa*; megaspores; palaeoclimate; Polish Basin; sedimentology; sediment supply; sequence stratigraphy; stepwise carbon isotope excursions; terrestrial organic matter; Toarcian Oceanic Anoxic Event [T-OAE]; weathering; primary data; Early Jurassic [Pliensbachian–Toarcian]; East Europe [Brody-Lubienia, Gorzów Wielkopolski, Kozłowice, Mechowo, Parkoszowice and Suliszowice, central Poland])

\*HESSELBO, S.P., HUDSON, A.J.L., HUGGETT, J.M., LENG, M.J., RIDING, J.B., and ULLMANN, C.V. 2020. Palynological, geochemical, and mineralogical characteristics of the Early Jurassic Liasidium Event in the Cleveland Basin, Yorkshire, UK. *Newsletters on Stratigraphy,* 53(2): 191–211 (doi: 10.1127/nos/2019/0536).

(acritarchs; *Asteroceras obtusum* and *Oxynoticeras oxynotum* ammonite zones; authigenic processes; biostratigraphy; *Botryococcus braunii*; carbonate minerals; Carboniferous reworking; chemostratigraphy; *Classopollis classoides*; clay mineralogy; Cleveland Basin; diagenesis; geochemistry [carbon isotope analysis; carbon:nitrogen ratios, elemental analyses; total nitrogen; total organic carbon]; hand-held X-ray fluorescence analyses; hyperthermal event; kerogen; Liasidium Event; *Liasidium* *variabile*; lithostratigraphy [Silicious Shale Member of the Redcar Mudstone Formation]; organic matter; palaeoclimatology; palaeoecology; paragenesis; petrography; pollen and spores; prasinophytes; scanning electron microscopy; sea level changes and sequence stratigraphy [lithological cycles/parasequences, maximum flooding, regressive-transgressive facies trends; short eccentricity cycles]; X-ray diffraction; primary data; quantitative occurrence chart; photographs; Early Jurassic [Sinemurian]; sub-Arctic West Europe [Boggle Hole, Robin Hood’s Bay, North Yorkshire, northern England])

HILLEBRANDT, A.V., KRYSTYN, L., KÜRSCHNER, W.M., BONIS, N.R., RUHL, M., RICHOZ, S., SCHOBBEN, M.A.N., URLICHS, M., BOWN, P.R., KMENT, K., McROBERTS, C.A., SIMMS, M., and TOMÃSOVÝCH, A. 2013. The Global Stratotype Sections and Point (GSSP) for the base of the Jurassic System at Kuhjoch (Karwendel Mountains, Northern Calcareous Alps, Tyrol, Austria). *Episodes*, 36(3): 162–198.

(acritarchs; ammonites; biostratigraphy; bivalves; brachiopods; calcareous nannofossils; carbon isotope data; correlation; cyclo- and isotope stratigraphy; diagenesis; conodonts; crinoids; crustaceans; *Dapcodinium priscum*; echinoids; foraminifera; gastropods; geochemistry; geological setting; Global Stratotype Section and Point (GSSP); kerogen analysis; lithostratigraphy (the Eiberg Member of the Kössen Formation and the Tiefengraben Member of the Kendlbach Formation); ostracods; palaeobiogeography; palaeomagnetism; pollen and spores; radiometric geochronology; *Rhaetogonyaulax rhaetica*; Triassic-Jurassic (T-J) boundary; scaphopods; primary data; latest Triassic and earliest Jurassic [Rhaetian–Hettangian]; sub-Arctic West Europe [the Kuhjoch Pass, Karwendel Mountains, Northern Calcareous Alps, Tyrol, western Austria])

HOLM‐ALWMARK, S., ALWMARK, C., FERRIÈRE, L., LINDSTRÖM, S., MEIER, M.M.M., SCHERSTÉN, A., HERRMANN, M., MASAITIS, V.L., MASHCHAK, M.S., NAUMOV, M.V., and JOURDAN, F. 2019. An Early Jurassic age for the Puchezh‐Katunki impact structure (Russia) based on 40Ar/39Ar data and palynology. *Meteoritics and Planetary Science*, 54(8): 1764–1780 (doi: 10.1111/maps.13309).

(acritarchs; biostratigraphy; biozonation; *Botryococcus braunii*; geochronology (40Ar/39Ar dating); geological setting; history of study; impactites; lithostratigraphy (Kovernino Formation); *Mendicodinium* spp.; Permian reworking; petrography; pollen and spores; post-impact crater lake sediments; prasinophytes; radiometric dating; thin sections; Early Jurassic [Pliensbachian–Toarcian]; sub-Arctic Russia west of the Ural Mountains [Puchezh‐Katunki impact structure, Privolzhsky Fereral District, east of Moscow])

**I**

INGRAMS, S. 2019. High latitude palynology of the Jurassic–Cretaceous boundary, Sverdrup Basin, Arctic Canada, preliminary results. *The Micropalaeontological Society Annual Conference, Keyworth, Nottingham, 13th and 14th November 2019, Abstracts Volume*, p. 40.

(biostratigraphy; biozonation; chorate and proximochorate dinoflagellate cysts; dropstones; eustacy; glaciations; glendonites; morphology; palaeoclimate; palaeoecology; summary; Late Jurassic–Early Cretaceous [Oxfordian–Valanginian]; West Arctic [Rollrock section, northern Ellesmere Island, Sverdrup Basin, Arctic Canada])

\*ISSAUTIER, B., LE NINDRE, Y.-M., HOOKER, N., REID, C., MEMESH, A., and DINI, S. 2019. Chapter 5. Depositional environments, age, and sequence stratigraphy of the Minjur Formation in outcrop and near subsurface–Central Saudi Arabia. *In*: Al Anzi, H.R., Rahmani, R.A., Steel, R.J., and Soliman, O.M. (editors). Siliciclastic Reservoirs of the Arabian Plate. *AAPG Memoir*, No. 116: 141–183 (doi: 10.1306/13642172M1183803).

(acritarchs; biostratigraphy; biozonation; caving; conodonts; correlation; depositional environments; facies analysis; foraminiferal test linings; freshwater algae; geological background; isopach map; lithostratigraphy [Minjur Formation]; palaeoclimate; palaeoecology; palaeogeography; pollen and spores; prasinophytes; reworking; sedimentology; sequence stratigraphy; primary data; semi-quantitative occurrence charts; Late Triassic–Early Jurassic [Carnian–Pliensbachian]; Middle East [central Saudi Arabia])

**J**

JAIN, S. 2020. Dinoflagellates. In: *Fundamentals of Invertebrate Palaeontology*. Springer Geology. Springer, New Delhi, 67–92 (doi: 10.1007/978-81-322-3962-8\_4).

(archaeopyle; biostratigraphy; geological record; living dinoflagellates; morphology; phytoplankton; tabulation; zooplankton; review article; bioevent charts; line drawings; Late Triassic–Quaternary [Rhaetian–Holocene]; no geographical focus)

**K**

KEMP, D.B., BARANYI, V., IZUMI, K., and BURGESS, R.D. 2019. Organic matter variations and links to climate across the early Toarcian oceanic anoxic event (T-OAE) in Toyora area, southwest Japan. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 530: 90–102 (doi: 10.1016/j.palaeo.2019.05.040).

(acritarchs; ammonite zones; carbon and nitrogen isotopes; carbon cycle; climate change/global warming; fluvial flood events; global carbon release; hydrological cycling; lithostratigraphy [Nishinakayama Formation, Toyora Group]; *Luehndea spinosa*; palaeoecology; palynofacies; pollen and spores; Tabe Basin; thermal maturity; thin sections; Toarcian Oceanic Anoxic Event (T-OAE); primary data; semi-quantitative occurrence chart; photographs; Early Jurassic [Toarcian]; China and Japan [Sakuraguchi-dani stream section, Toyota Town area, Yamaguchi Prefecture, southwest Japan])

\*KOEVOETS, M.J., HAMMER, O., OLAUSSEN, S., SENGER, K., and SMELROR, M. 2018. Integrating subsurface and outcrop data of the Middle Jurassic to Lower Cretaceous Agardhfjellet Formation in central Spitsbergen. *Norwegian Journal of Geology,* 98(4): 1–34 (doi: 10.17850/njg98-4-01).

(ammonites; biostratigraphy; *Botryococcus*; brachiopods; carbon isotopes; chemostratigraphy; correlation; downhole logging; facies analysis; fish teeth; frost weathering; geological setting; lithostratigraphy [Agardhfjellet Formation]; Longyearbyen carbon dioxide storage project; palaeoecology; marine reptiles; molluscs; reworking; sea floor oxygenation levels; sedimentology; sequence stratigraphy; structural geology; this sections; total organic carbon [TOC]; trace fossils; X-ray flourescence geochemistry; primary data; semi-quantitative occurrence chart; Middle Jurassic–earliest Cretaceous [Bathonian–Berriasian (Ryazanian)]; East Arctic [central Spitsbergen, Svalbard Archipelago, Arctic Ocean])

KOWAL‑KASPRZYK, J., KRAJEWSKI, M., and GEDL, P. 2020. The oldest stage of the Outer Carpathian evolution in the light of Oxfordian–Kimmeridgian exotic clast studies (southern Poland). *Facies*, 66, 11, doi: 10.1007/s10347-020-0595-y.

(biostratigraphy; calcareous dinoflagellate cysts; exotic clasts; facies analysis; foraminifera; foraminiferal test linings; geological background; limestones; lithostratigraphy; microfacies; palaeobathymmetry; palaeoecology; palaeogeography; provenance analysis; reworking; primary data; occurrence chart; photographs; Late Jurassic [Oxfordian–Kimmeridgian]; East Europe [Outer Carpathians, south of Kraków, southern Poland])

KRENCKER, F.-N., LINDSTRÖM, S., and BODIN, S. 2019. A major sea-level drop briefly precedes the Toarcian oceanic anoxic event: implication for Early Jurassic climate and carbon cycle. *Nature Scientific Reports*, 9: 12518, 12 p. (doi: 10.1038/s41598-019-48956-x).

(biozonation; carbon cycle; correlation; eustacy; geochemistry; glaciation; global warming; lithostratigraphy; macrofossils; palaeoclimate; polar ice sheet; pollen and spores; reworking; sedimentology; sequence stratigraphy; Toarcian Oceanic Anoxic Event [T-OAE]; trace fossils; primary data; Early–Middle Jurassic [Pliensbachian–Aalenian]; multi-region: North Africa [Central High Atlas Basin, Morocco]; West Arctic (Jameson Land Basin, East Greenland)

**L**

\*LEBEDEVA, N.K., NIKITENKO, B.L., and COLPAERT, C. 2019. Dinoflagellate cysts and foraminifera of the Upper Jurassic Lopsiya River sections, Nether-Polar Urals, NW Western Siberia (Russia). *Revue de Micropaléontologie*, 64: 100361 (doi: 10.1016/j.revmic.2019.07.001).

(acritarchs; ammonite zones; biostratigraphy; biozonation; correlation; foraminifera; freshwater algae; geological setting; molluscs; pollen and spores; prasinophytes; *Sentusidinium-Batiacasphaera-Kallosphaeridium* group; primary data; photographs; Late Jurassic [Oxfordian–Tithonian (Volgian)]; East Arctic [Lopsiya River, sub-Polar Ural Mountains, northwest Siberia, northern Russia])

LIN, M., and LI, J. 2019. Late Jurassic–Early Cretaceous palynofloras in the Lhasa Block, central Xizang, China and their bearing on palaeoenvironments. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 515: 95–106 (doi: 10.1016/j.palaeo.2018.05.038).

(biostratigraphy; lithostratigraphy [Duoni, Duodigou, Linbuzong and Chumulong formations]; palaeoclimates; palaeoecology; palaeogeography; palaeovegetation; pollen and spores; primary data; photographs; Late Jurassic–Early Cretaceous [undifferentiated–Barremian]; China and Japan [Doilongdegqin County, Lhasa Block, central Qinghai-Xizang Plateau, western central China]

**M**

MUDIE, P.J., FENSOME, R.A., ROCHON, A., and BAKRAČ, K. 2020. The dinoflagellate cysts *Thalassiphora subreticulata* n.sp. and *Thalassiphora balcanica*: their taxonomy, ontogenetic variation and evolution. *Palynology*, 44(2), 237–269 (doi: 10.1080/01916122.2019.1567614).

(evolution; global compilation; morphology; ontogenetic variation; oxygen gradients; palaeosalinity; Paratethyan basins; size variation; tabulation; taxonomy; *Thalassiphora robusta*; *Thalassiphora* species complex; primary data and review article; occurrence chart; photographs; Late Jurassic–Late Miocene [Tithonian (Volgian)–undifferentiated]; multi-region: sub-Arctic East Canada [Shubenacadie H-100 well, Scotian margin, offshore Nova Scotia]; East Europe [Medvednica, Slavonija, Zagorje and Žumberak, Croatia and unknown locations in southwestern Romania])

**N**

\*NØHR-HANSEN, H., PIASECKI, S., and ALSEN, P. 2019. A Cretaceous dinoflagellate cyst zonation for NE Greenland. *Geological Magazine*, doi: 10.1017/ S0016756819001043.

(ammonite zones; bioevents; biostratigraphy; biozonation; correlation; lithostratigraphy; pollen; compilation/primary data; photographs; bioevent charts; latest Jurassic–Late Cretaceous [Tithonian–Maastrichtian]; West Arctic [Traill Ø to Store Koldeway, northeast Greenland])

**O**

OLAUSSEN, S., LARSSEN, G.B., HELLAND-HANSEN, W., JOHANNESSEN, E.P., NOTTVEDT, A., RIIS, F., RISMYHR, B., SMELROR, M., and WORSLEY, D. 2018. Mesozoic strata of Kong Karls Land, Svalbard, Norway; a link to the northern Barents Sea basins and platforms. *Norwegian Journal of Geology*, 98(4): 1–69 (doi: 10.17850/njg98-4-06).

(basin and tectonic history; biostratigraphy; *Botryococcus*; correlation; facies analysis; geological setting; lithostratigraphy [Kapp Toscana and Adventdalen groups]; macrofossils; *Mancodinium semitabulatum*; palaeogeography; plant fossils; sedimentology; seismic interpretation; sequence stratigraphy; structural geology; trace fossils; volcanism; primary data and compilation; Late Triassic–Early Cretaceous [Norian–Aptian]; East Arctic [Kong Karls Land, eastern Svalbard Archipelago, Arctic Ocean])

OMRAN, A.M., SOLIMAN, H.A., and MAHMOUD, M.S. 1990. Early Cretaceous palynology of three boreholes from northern Western Desert (Egypt). *Review of Palaeobotany and Palynology*, 66(3/4): 293–312 (doi: 10.1016/0034-6667(90)90044-J).

(biostratigraphy; biozonation; boreholes; correlation; ditch cuttings; geological setting; palaeoecology; pollen and spores; primary data; non-quantitative occurrence charts; photographs; Middle Jurassic to Early Cretaceous [?Bajocian–Tithonian to Albian]; North Africa (northern Western Desert, northern Egypt)

**P**

PATERSON, N.W., and MANGERUD, G. 2019. A revised palynozonation for the Middle–Upper Triassic (Anisian–Rhaetian) Series of the Norwegian Arctic. *Geological Magazine*, doi: 10.1017/S0016756819000906.

(acritarchs; ammonoids; biostratigraphy; biozonation; foraminiferal test linings; geological background; lithostratigraphy; palaeoclimate; palaeoecology; pollen and spores; prasinophytes; *Rhaetogonyaulax arctica*; *Rhaetogonyaulax rhaetica*; sequence stratigraphy; taxonomy; primary data/compilation; bioevent charts; photographs; Middle–Late Triassic [Anisian–Rhaetian]; East Arctic [Arctic Norway, Barents Sea, Svalbard Archipelago])

PATERSON, N.W., MORRIS, P.H., and MANGERUD, G. 2019. Lycopsid megaspores from the Upper Triassic of Svalbard and their relationship to the floras and palaeoenvironments of northern Pangaea. *Papers in Palaeontology*, 5(4): 577–599 (doi: 10.1002/spp2.1251).

(agglutinated foraminifera; biostratigraphy; biozonation; eustacy; foraminiferal test linings; freshwater algae; geological setting; kerogen; lithostratigraphy [Kapp Toscana Group]; megaspores from heterosporous lycopsids; micro-biofacies; ostracods; palaeoecology; preservation potential; pollen and spores; radiolaria; *Rhaetogonyaulax rhaetica*; sedimentology; primary data; Late Triassic [Carnian–Rhaetian]; East Arctic [Hopen Island, southeast Svalbard archipelago, Arctic Ocean])

POCOCK, S.A.J. 1962. Jurassic palynology in the Western Canada Basin. *Oil in Canada*, February 8th, 1962: 36–40.

(acritarchs; biostratigraphy; correlation [with Europe]; foraminiferal test linings; *Gonyaulacysta jurassica*; Jurassic–Cretaceous transition; lithostratigraphy [Fernie Shale and Manneville groups]; palaeoecology; pollen and spores; West Canada Basin; review article; histograms; photographs; Late Jurassic–Early Cretaceous [Kimmeridgian–Hauterivian]; sub-Arctic West Canada [British Columbia, Alberta and Saskatchewan])

**R**

REOLID, M., DUARTE, L.V., and RITA, P. 2019. Changes in foraminiferal assemblages and environmental conditions during the T-OAE (Early Jurassic) in the northern Lusitanian Basin, Portugal. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 520: 30–43 (doi: 10.1016/j.palaeo.2019.01.022).

(ammonite zones; biotic crisis and recovery; brachiopods; calcareous nannofossils; diversity; echinoderms; foraminifera; geological setting; Iberian palaeomargin; lithostratigraphy [Sao Giao Formation]; mass extinction; opportunistic taxa; organic geochemistry; ostracods; oxygen depletion; palaeoecology; palaeoproductivity; phosphorus; redox-sensitive elements; tempestite-turbidite facies; Toarcian Oceanic Anoxic Event [T-OAE]; trace fossils; data compilation; Early Jurassic [Toarcian]; sub-Arctic West Europe [Maria Pares section, Rabaçal, northern Lusitanian Basin, western Portugal])

RIDING, J.B., LEBEDEVA, N.K., and GORYACHEVA, A.A. 2019. Obituary. Vera Ivanovna Ilyina (1930–2018). *Palynology*, 43(3): 349–354 (doi: 10.1080/01916122.2019.1586090).

(acritarchs; biography; biostratigraphy; biozonation; history; Institute of Geology and Geophysics, Academgorodok, Novosibirsk, Siberia; International Association for the Promotion of Co-operation with Scientists from the New Independent States of the former Soviet Union [INTAS]; obituary, pollen and spores; prasinophytes; Third International Conference on Palynology [1971]; Vera I. Ilyina; review article; Early Jurassic–Early Cretaceous [Hettangian–Valanginian]; multi-region: East Arctic [northern Russia]; sub-Arctic Russia east of the Ural Mountains [undifferentiated], sub-Arctic Russia west of the Ural Mountains [undifferentiated] including Kazakhstan])

RODRIGUES, B., SILVA, R.L., FILHO, J.G.M., SADKI, D., MENDONÇA, J.O., and DUARTE, L.V. 2020. Late Pliensbachian–Early Toarcian palaeoenvironmental dynamics and the Pliensbachian–Toarcian Event in the Middle Atlas Basin (Morocco). *International Journal* *of Coal Geology*, 217, 103339 (doi: 10.1016/j.coal.2019.103339).

(acritarchs; ammonite zones; *Botryococcus*; carbon cycle; continental weathering; eustacy; foraminiferal test linings; fungal spores; geological background; *Luehndea spinosa*; *Nannoceratopsis gracilis*; organic geochemistry; palaeoclimate; palaeoecology; palaeoenvironments; palynofacies; Pliensbachian–Toarcian event; pollen and spores; prasinophytes; sedimentology; sequence stratigraphy; tectonics; thermal maturity; total organic carbon [TOC]; vitrinite reflectance; zygospores; primary data; photographs; Early Jurassic [Pliensbachian–Toarcian]; North Africa [Ait Moussa and Issouka sections, northeast of Boulemane, Fès-Meknès region, Middle Atlas Basin, northeast Morocco])

ROGALSKA, M. 1962. Analiza sporowo-pyłkowa osadów jurajskich północnej części Pasma Krakowsko-Wieluńskiego. [Spore and pollen grain analysis of Jurassic sediments in the northern part of the Cracow – Wieluń Cuesta] *Instytut Geologi Czny Odbitka z Prac*, 30(3): 495–524 (in Polish with English and Russian summaries).

(biostratigraphy; correlation; lithostratigraphy; *Pareodinia*; pollen and spores; prasinophytes; taxonomy; primary data; quantitative occurrence chart and non-quantitative occurrence chart; photographs; Triassic–Middle Jurassic [Rhaetian–?Bathonian]; East Europe [northern Kraków–Wieluń Cuesta/Scarp, southern Poland])

**S**

SARJEANT, W.A.S., and DOWNIE, C. 1966. The classification of dinoflagellate cysts above generic level. *Grana Palynologica*, 6(3): 503–527 (doi: 10.1080/00173136609430038).

(history of study; morphological basis of dinoflagellate ctst classification; problems of the previous classification; suprageneric classification; taxonomy; compilation/review; no geographical or stratigraphical focus)

SARJEANT, W.A.S., and DOWNIE, C. 1974. The classification of dinoflagellate cysts above generic level: a discussion and revisions. *Symposium on Stratigraphical Palynology*. *Birbal Sahni Instiutute of Palaeobotany Special Publication*, No. 3: 9–32.

(familial groupings; living dinoflagellates and their cysts; principles of classification; suprageneric classification; taxonomy; compilation/review; no geographical or stratigraphical focus)

SCHOBBEN, M., GRAVENDYCK, J., MANGELS, F., STRUCK, U., BUSSERT, R., KÜRSCHNER, W.M., KORN, D., SANDER, P.M., and ABERHAN, M. 2019. A comparative study of total organic carbon-δ13C signatures in the Triassic–Jurassic transitional beds of the Central European Basin and western Tethys shelf seas. *Newsletters on Stratigraphy*, 52(4): 461–486 (doi: 10.1127/nos/2019/0499).

(ammonites; biostratigraphy; biozonation; bivalves; carbon cycle; carbon isotope analysis; chemostratigraphy; clay mineralogy; conchostracans; correlation; *Dapcodinium priscum*; end-Triassic mass extinction; geological setting; Global Stratotype Section and Point [GSSP]; lithostratigraphy [Postera Beds to the Psilonotenton Formation]; palaeoclimate; pollen and spores; *Rhaetogonyaulax rhaetica*; *Suessia swabiana*; total nitrogen (TN); total organic carbon (TOC); weathering; primary data; semiquantitative occurrence chart; latest Triassic–earliest Jurassic [Rhaetian–Hettangian]; sub-Arctic West Europe [clay quarry northwest of Bonenburg village, near Warburg, North Rhine-Westphalia, west central Germany; Kuhjoch, near Hinteriss, central Austria])

SCHÖLLHORN, I., ADATTE, T., VAN DE SCHOOTBRUGGE, B., HOUBEN, A., CHARBONNIER, G., JANSSEN, N., and FÖLLMI, K.B. 2020. Climate and environmental response to the break-up of Pangea during the Early Jurassic (Hettangian–Pliensbachian); the Dorset coast (UK) revisited. *Global and Planetary Change*, 185, 103096 (doi: 10.1016/j.gloplacha.2019.103096).

(anoxia; bioproductivity; carbon and oxygen isotopes; chemical index of alteration; clay mineralogy; continenrtal breakup; correlation; eustacy; geochemistry; mineralogy; palaeoclimatology; palaeogeography; palaeoceanography; Pangea; sediment deposition rates; compilation; Early Jurassic (Hettangian–Pliensbachian); sub-Arctic West Europe [Pinhay Bay to Eype Mouth, Dorset, and St Audries Bay, Somerset, southern England])

SHEVCHUK, O.A. 2018. *Microfossils and biostratigraphy of the Middle Jurassic–Cretaceous of Ukraine*. Thesis for the degree of Doctor of Geological Sciences by specialty 04.00.09 “Paleontology and Stratigraphy (103 – Earth Sciences). Institute of Geological Sciences of the National Academy of Sciences of Ukraine, Kiev, 42 p. (in Ukrainian with an English summary).

(acritarchs; *Botryococcus*; biostratigraphy; biozonation; correlation; foraminiferal test linings; fungal spores; megaspores; palynofacies; *Pediastrum*; pollen and spores; prasinophytes; thesis summary; quantitative range charts; Middle Jurassic–Cretaceous [Aalenian–Maastrichtian]; East Europe [Teteic and Boreal-Atlantic belt, Ukraine])

SHEVCHUK, O., SLATER, S.M., and VAJDA, V. 2018. Palynology of Jurassic (Bathonian) sediments from Donbas, northeast Ukraine. *Palaeobiodiversity and Palaeoenvironments*, 98(1): 153–164 (doi: 10.1007/s12549-017-0310-3).

(biostratigraphy; *Botryococcus*; Dnieper–Donets Basin; Donbas fold belt; insect remains; lithostratigraphy [Kamyanska suite]; parent plants; petroleum geology; pollen and spores; provincialism; regional geology; sedimentology; thermal alteration index [TAI]; vegetation dynamics; primary data; quantitative occurrence charts; photographs; Middle Jurassic [Bathonian]; East Europe [Kamyanka village, Kharkiv region, northeast Ukraine])

\*SKUPIEN, P., and DOUPOVCOVÁ, P. 2019. Dinoflagellates and calpionellids of the Jurassic–Cretaceous boundary, Outer Western Carpathians (Czech Republic). *Cretaceous Research*, 99: 209–228 (doi: 10.1016/j.cretres.2019.02.017).

(biostratigraphy; calcareous dinoflagellate cysts; calpionellids; Jurassic–Cretaceous boundary; lithostratigraphy [Vendryně Formation and Těšín Limestone]; *Nannoceratopsis*; reworking; primary data; non-quantitative occurrence chart; photographs; latest Jurassic–earliest Cretaceous [Tithonian–Berriasian]; East Europe [Bruzovice River locality, Bruzovice, Outer Western Carpathians, eastern Czech Republic])

SLATER, S.M., McKIE, T., VIEIRA, M., WELLMAN, C.H., and VAJDA, V. 2017. Episodic river flooding events revealed by palynological assemblages in Jurassic deposits of the Brent Group, North Sea. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 485: 389–400 (doi: 10.1016/j.palaeo.2017.06.028).

(acritarchs; *Botryococcus*; correlation; facies analysis; foraminiferal test linings; geological setting; hyperpycnites; lithostratigraphy [Rannoch Formation of the Brent Group]; megaspores; non-metric multidimensional scaling; palaeoecology; palaeogeography; palynofacies; pollen and spores; prasinophytes; sedimentology; vegetational dynamics; primary data; photographs; Middle Jurassic [Aalenian–Bajocian]; sub-Arctic West Europe [Don North East and Penguins Cluster oilfields, Viking Graben, northern North Sea, UK sector])

SLATER, S.M., TWITCHETT, R.J., DANISE, S., and VAJDA, V. 2019. Substantial vegetation response to Early Jurassic global warming with impacts on oceanic anoxia. *Nature Geoscience*, 12: 462–467 (doi: 10.1038/s41561-019-0349-z).

(acritarchs; global warming; lithostratigraphy [Cleveland Ironstone and Whitby Mudstone formations]; palynofacies; pollen and spores; prasinophytes; Toarcian Oceanic Anoxic Event; vegetation dynamics; primary data; photographs; Early Jurassic [Pliensbachian–Toarcian]; sub-Arctic West Europe [Kettleness, Port Mulgrave, Runswick Bay, Saltwick Bay and Staithes, North Yorkshire, northern England])

\*SMELROR, M., LARSSEN, G.B., OLAUSSEN, S., RØMULD, A., and WILLIAMS, R. 2018. Late Triassic to Early Cretaceous palynostratigraphy of Kong Karls Land, Svalbard, Arctic Norway, with correlations to Franz Josef Land, Arctic Russia. *Norwegian Journal of Geology,* 98(4):1–31 (doi: 10.17850/njg004).

(acritarchs; ammonites; biostratigraphy; biozonation; correlation; freshwater algae; hiatuses; lithostratigraphy [Kapp Toscana and Adventdalen groups]; pollen and spores; prasinophytes; reworking; sedimentology; sequence stratigraphy; primary data; non-quantitative occurrence charts; photographs; Late Triassic–Early Cretaceous [Norian–Aptian]; East Arctic [Kong Karls Land, eastern Svalbard Archipelago, Arctic Ocean])

SMITH, D.G. 1982. Stratigraphic significance of a palynoflora from ammonoid-bearing Early Norian strata in Svalbard. *Newsletters on Stratigraphy*, 11(3): 154–161 (doi: 10.1127/nos/11/1982/154).

(ammonoids; ammonoid zones; biostratigraphy; biozonation; chronostratigraphy; correlation; lithostratigraphy [Flatsalen Formation]; pollen and spores; *Rhaetipollis germanicus* assemblage; *Rhaetogonyaulax rhaetica*; primary data and review; Late Triassic [Norian]; East Arctic [Hopen Island, Svalbard archipelago])

STEEMAN, T., DE WEIRDT, J., SMITH, T., DE PUTTER, T., MEES, F., and LOUWYE, S. 2020. Dinoflagellate cyst biostratigraphy and palaeoecology of the early Paleogene Landana reference section, Cabinda Province, Angola. *Palynology*, 44(2), 280–309 (doi: 10.1080/01916122.2019.1575091).

(*Aldorfia aldorfensis*; biostratigraphy; biozonation; correlation; Darteville collection; foraminifera; organic geochemistry [total organic carbon - TOC]; palaeoecology; reworking; primary data; quantitative and semi-quantitative occurrence charts; photographs; Middle Jurassic reworking into Palaeocene–Eocene/Oligocene [Bathonian reworking into Danian/Selandian–?Priabonian/Rupelian]; Southern Africa [Landana coastal section, Cabinda Province, Congo Basin, Angola])

STORM, M.S., HESSELBO, S.P., JENKYNS, H.C., RUHL, M., ULLMANN, C.V., XU, W., LENG, M.J., RIDING, J.B., and GORBANENKO, O. 2020. Orbital pacing and secular evolution of the Early Jurassic carbon cycle. *PNAS (Proceedings of the National Academy of Sciences of the United States of America)*, 117(8): 3974–3982 ([doi: 10.1073/pnas.1912094117](https://doi.org/10.1073/pnas.1912094117)).

(ammonite zones and subzones; astrochronology; carbon isotopes [δ13CTOC] and their excursions; chemostratigraphy; chronostratigraphy; geochemistry; geological background; global carbon cycle; magmatic events; orbital forcing; organic geochemistry; palaeoenvironment; palaeogeography; palaeotemperature; sedimentary organic matter; Toarcian Oceanic Anoxic Event [T-OAE]; Triassic–Jurassic transition; compilation/data review; latest Triassic–Early Jurassic [Rhaetian–Toarcian]; sub-Arctic West Europe [Bristol Channel Basin, southwest England, UK; Mochras Borehole, Cardigan Bay Basin, West Wales, UK; Sancerre-Couy Borehole, Paris Basin, northern France])

STOVER, L.E., and EVITT, W.R. 1978. Analyses of pre-Pleistocene organic-walled dinoflagellates. *Stanford University Publications, Geological Sciences*, 15, 300 p.

(appendices; archaeopyle types and variability; catalogue/index; classification; *Gonyaulacysta* complex [e.g. *Gonyaulacysta, Impagidinium, Leptodinium* and *Rhynchodiniopsis*]; *Herendeenia-Omatia*; *Kiokansium unituberculatum*; *Lanternosphaeridium* complex; line drawings; lists of species; morphology; opercula; peridiniacean genera; *Spiniferites* complex; synopsis of genera; taxonomy; compilation; no specific geographical and stratigraphical focus)

SVOBODOVÁ, A., ŠVÁBENICKÁ, L., REHÁKOVÁ, D., SVOBODOVÁ, M., SKUPIEN, P., ELBRA, T., and SCHNABL, P. 2019. The Jurassic/Cretaceous boundary and high resolution biostratigraphy of the pelagic sequences of the Kurovice section (Outer Western Carpathians, the northern Tethyan margin). *Geologica Carpathica*, 70(2): 153–182 (doi: 10.2478/geoca-2019-0009).

(acritarchs; biostratigraphy; calcareous dinoflagellate cysts; calcareous nannofossils; calpionellids; foraminiferal test linings; geological setting; Jurassic–Cretaceous boundary; Kurovice Limestone; limestones; magnetostratigaphy; microfacies; palaeobathymetry; palaeoecology; pollen and spores; prasinophytes; radiolarians; reworking; sponge spicules; Tethys; primary data; non-quantitative occurrence chart; photographs; latest Jurassic–earliest Cretaceous [Tithonian–Berriasian]); East Europe [Kurovice Quarry, near Zlín, Outer Western Carpathians, southeast Czech Republic])

**T**

TAUGOURDEAU LANTZ, J., and DONZE, P. 1971. Un aperçu de l’environnement végétal pendant l’épisode régressif du Berriasien terminal dans le Jura méridional (France). *Revue de Micropaléontologie*, 14(5): 102–120 (in French).

(acritarchs; *Botryococcus*; eustacy; foraminiferal text linings; geological background; megaspores; palaeoecology; pollen and spores; prasinophytes; taxonomy; vegetational reconstructions; primary data; occurrence chart [percentages]; photographs; earliest Cretaceous [Berriasian]; sub-Arctic West Europe [France])

**V**

\*VAEZ-JAVADI, F. 2018. Dinoflagellate palynostratigraphy of Middle Jurassic of the Hojedk Formation, Tabas, central-east Iran and its correlation to the other palynomorph zones in Iran and elsewhere. *Quarterly Journal of Geosciences*, 127: 265–276 (in Persian).

(acritarchs; biostratigraphy; biozonation [*Nannoceratopsis gracilis* total range subzone and *Nannoceratopsis triceras-Pareodinia ceratophora* assemblage zone]; correlation; lithostratigraphy [Hojedk Formation]; palaeoclimate; pollen and spores; prasinophytes; Tabas Block; primary data; occurrence chart; photographs; Middle Jurassic [Aalenian–Bajocian]; Middle East [Tabas County, South Khorasan Province, northeast Iran])

VAEZ JAVADI, F. 2019. Middle Jurassic palynology of the southwest Tabas Block, Central-East Iran. *Palynology*, doi: 10.1080/01916122.2019.1637954.

(acritarchs; biostratigraphy; biozonation [*Nannoceratopsis* sp. cf. *N. gracilis* interval zone]; botanical affinity; Chahrekhneh borehole; correlation; Iran Plate; lithostratigraphy [Hojedk Formation]; palaeoclimate; palaeoecology; palaeogeography; pollen and spores; Tabas Block; Tethys Ocean; primary data; occurrence chart; photographs; Middle Jurassic [Aalenian–Bajocian]; Middle East [southwest of Tabas, Tabas County, South Khorasan Province, northeast Iran])

VAEZ-JAVADI, F., and ABBASSI, N. 2018. Middle Jurassic biostratigraphy of plant macro and microfossils in Soltanieh Mountains, south of Zanjan, NW Iran. *Geosciences*, 106: 91–102.

(biostratigraphy; biozonation [*Pareodinia ceratophora*-*Nannoceratopsis triceras* assemblage zone]; correlation; lithostratigraphy [Dansirit Formation, Shemshak Group]; palaeoecology; palaeogeography; plant macrofossils; pollen and spores; Tethys Ocean; primary data; occurrence chart; photographs; Middle Jurassic [Aalenian–Bajocian]; Middle East [Soltanieh Mountains, south of Zanjan city, Zanjan Province, northwest Iran])

VAEZ-JAVADI, F., GHAVIDEL-SYOOKI, M., and GHASEMI-NEJAD, I. 2003. Biostratigraphy of Shemshak Formation in Ozon Mountain, Jajarm based on dinoflagellata. *Journal of Science, University of Tehran*, 29(1): 141–160 (in Persian with an English abstract).

(acritarchs; biostratigraphy; biozonation [*Nannoceratopsis spiculata* and *Valensiella ovulum* biozones]; lithostratigraphy [Shemshak Formation]; primary data; occurrence chart; photographs; Early–Middle Jurassic [Pliensbachian–Bajocian]; Middle East [Ozon Mountain, Jajarm County, North Khorasan Province, northeast Iran])

\*VAN DE SCHOOTBRUGGE, B., HOUBEN, A.J.P., ERCAN, F.E.Z., VERREUSSEL, R., KERSTHOLT, S., JANSSEN, N.M.M., NIKITENKO, B., and SUAN, G. 2019. Enhanced Arctic-Tethys connectivity ended the Toarcian Oceanic Anoxic Event in NW Europe. *Geological Magazine*, doi: 10.1017/S0016756819001262.

(ammonite zones; anoxia; bioproductivity; biostratigraphy; black shale; carbon cycle; carbon isotopes; chemostratigraphy; correlation; diversity; eustacy; geochemistry; geological background; global warming; heterochroneity; lithostratigraphy; marine stratification; migrations; ocean circulation; palaeoenvironmental recovery; palaeoceanography; palaeosalinity; Toarcian Oceanic Anoxic Event [T-OAE]; total organic carbon; primary data; occurrence charts; photographs; Early Jurassic [Pliensbachian–Toarcian]; multi-region: East Arctic [Kelimyar River, Siberia, northeast Russia]; sub-Arctic West Europe [coastal outcrops between Staithes and Ravenscar, North Yorkshire, northern England and well 34/10-35, Tjalve Terrace, Gulfaks South oilfield, Norwegian sector of the northern North Sea])

**W**

WARRINGTON, G. 1976. British Triassic palaeontology. *Proceedings of the Ussher Society*, 3(3): 341–353.

(acritarchs; biostratigraphy; correlation; lithostratigraphy; macrofossils; microfossils; pollen and spores; prasinophytes; scolecodonts; compilation/review paper; Triassic [Induan–Rhaetian]; sub-Arctic West Europe [pan-United Kingdom])

WARRINGTON, G. 1980. Palynological studies of Triassic rocks in central Somerset (Abstract). *Proceedings of the Ussher Society*, 5(1): 90.

(biostratigraphy; correlation; diversity; foraminiferal test linings; lithostratigraphy [Mercia Mudstone and Penarth groups]; pollen and spores; scolecodonts; summary; Late Triassic [Carnian and Rhaetian]; sub-Arctic West Europe [Burton Row and Puriton boreholes, near Bridgwater, central Somerset, southwest England])

WILLIAMS, G.L. 1965. Organic-walled microfossils aid oil search. *The Oil and Gas Journal*, November 22 1965: 108–112.

(acritarchs; biostratigraphy; correlation; *Gonyaulacysta jurassica*; history of study; hystrichospheres; life cycle; modern dinoflagellates; morphology; oil/gas exploration; palaeoecology; review article; photographs; no geographical or stratigraphical focus)

WILLIAMS, G.L. 1974. 57. Biostratigraphy and paleoecology of the Mesozoic and Cenozoic rocks of the Atlantic Shelf. Project 710062. *Geological Survey of Canada Paper* 74–1, Part B: 150–152.

(biostratigraphy; biozonation; correlation; lithostratigraphy [Western Bank, Nova Scotia and Gully groups]; offshore boreholes; oil/gas exploration; palaeoecology; pollen and spores; unconformity; review article; Middle Jurassic to Pliocene/Pleistocene [Bathonian/Callovian – undifferentiated]; sub-Arctic East Canada [Grand Banks and Scotian Shelf, offshore eastern Canada])

WILSON, G.J., and CLOWES, C.D. 1981. A concise catalogue of organic-walled fossil dinoflagellate genera. *New Zealand Geological Survey Report*, No. 92, 199 p.

(archaeopyle type; catalogue; descriptions of genera; line drawings; morphology; range charts; compilation; Late Triassic [undifferentiated] to Holocene; no geographical or stratigraphical focus)

**SUPPLEMENTARY DATA II**

**Appendix 2. List of palynomorph species, subspecies and varieties**

This Appendix alphabetically lists all valid palynomorph taxa below generic level which are mentioned in this contribution with full author citations. References to the author citations for the dinoflagellate cysts can be found in Williams et al. (2019 - *American Asssociation of Stratigraphic Palynologists Contribution Series* 50, available at: <https://palynology.org/contribution-series-number-50-the-new-lentin-and-williams-index-2019/>). The recommendations of Williams et al. (2019) are followed with the following two exceptions. The proposals of Correia et al. (2017 - *Review of Palaeobotany and Palynology* 237, p. 93) on the species *Nannoceratopsis senex* are followed herein. With regard to this species, Williams et al. (2019) adopted the taxonomic proposals of Ilyina et al. (1994 - *Russian Academy of Sciences, Siberian Branch, United Institute of Geology, Geophysics and Mineralogy, Transactions* 818), who proposed that *Nannoceratopsis senex* is a subspecies of *Nannoceratopsis deflandrei* Evitt 1961. Furthermore, the Linnaean binomial *Ctenidodinium sellwoodii* (Sarjeant 1975) Stover & Evitt 1978 is preferred herein to *Dichadogonyaulax sellwoodii* Sarjeant 1975. Most of the Jurassic tabulate gonyaulacoid species with epicystal archaeopyles are placed in *Ctenidodinium*. The species *sellwoodii* is clearly closely related to two contemporary species which are accommodated in *Ctenidodinium* according to Williams et al. (2019). These are *Ctenidodinium* *combazii* Dupin 1968 and *Ctenidodinium* *cornigerum* (Valensi 1953) Jan du Chêne et al. 1985. That said, there are substantial taxonomic issues with the two apparently very similar genera *Ctenidodinium* and *Dichadogonyaulax*. These genera require a thorough taxonomic review. It is eminently possible that *Dichadogonyaulax* is a junior synonym of *Ctenidodinium* as previously suggested by Lentin and Williams (1973 - *Geological Survey of Canada Paper* 73–42, p. 46).

**Acritarch:**

*Limbicysta bjaerkei* (Smelror, 1987) MacRae et al. 1996

**Dinoflagellate cysts:**

*Aldorfia aldorfensis* (Gocht 1970) Stover & Evitt 1978

*Ambonosphaera*? *staffinensis* (Gitmez 1970) Poulsen & Riding 1992

*Amphorulacysta*? *dodekovae* (Zotto et al. 1987) Williams & Fensome 2016

*Amphorulacysta metaelliptica* (Dodekova 1969) Williams & Fensome 2016

*Arkellea teichophera* (Sarjeant 1961) Below 1990

*Atopodinium haromense* Thomas & Cox 1988

*Chytroeisphaeridia cerastes* Davey 1979

*Chytroeisphaeridia hyalina* (Raynaud 1978) Lentin & Williams 1981

*Corculodinium inaffectum* (Drugg 1978) Courtinat 2000

*Coronifera oceanica* Cookson & Eisenack 1958

*Cribroperidinium*? *edwardsii* (Cookson & Eisenack 1958) Davey 1969

*Cribroperidinium globatum* (Gitmez & Sarjeant 1972) Helenes 1984

*Cribroperidinium*? *longicorne* (Downie 1957) Lentin & Williams 1985

*Ctenidodinium continuum* Gocht 1970

*Ctenidodinium elegantulum* Millioud 1969

*Ctenidodinium ornatum* (Eisenack 1935) Deflandre 1938

*Ctenidodinium sellwoodii* (Sarjeant 1975) Stover & Evitt 1978

*Dapcodinium priscum* Evitt 1961

*Diacanthum hollisteri* Habib 1972

*Dichadogonyaulax bensonii* Monteil 1992

*Dingodinium tuberosum* (Gitmez 1970) Fisher & Riley 1980

*Dissiliodinium giganteum* Feist-Burkhardt 1990

*Endoscrinium galeritum* (Deflandre 1938) Vozzhennikova 1967

*Endoscrinium luridum* (Deflandre 1938) Gocht 1970

*Evansia deflandrei* (Wolfard & Van Erve 1981) Below 1990

*Glossodinium dimorphum* Ioannides et al. 1977

*Gochteodinia villosa* (Vozzhennikova 1967) Norris 1978subsp*. villosa* autonym

*Gonyaulacysta* *centriconnata* Riding 1983

*Gonyaulacysta eisenackii* (Deflandre 1938) Górka 1965

*Gonyaulacysta jurassica* (Deflandre 1938) Norris & Sarjeant 1965

*Gonyaulacysta jurassica* (Deflandre 1938) Norris & Sarjeant 1965 subsp*. adecta* Sarjeant 1982

*Gonyaulacysta jurassica* (Deflandre 1938) Norris & Sarjeant 1965 subsp. *adecta* Sarjeant 1982 var. *longicornis* (Deflandre 1938) Downie & Sarjeant 1965

*Gonyaulacysta jurassica* (Deflandre 1938) Norris & Sarjeant 1965 subsp*. jurassica* autonym

*Heibergella asymmetrica* Bujak & Fisher 1976

*Isthmocystis distincta* Duxbury 1979

*Kalyptea diceras* Cookson & Eisenack 1960

*Kleithriasphaeridium corrugatum* Davey 1974

*Kleithriasphaeridium fasciatum* (Davey & Williams 1966) Davey 1974

*Lagenorhytis delicatula* (Duxbury 1977) Duxbury 1979

*Leptodinium subtile* Klement 1960

*Liasidium variabile* Drugg 1978

*Liesbergia liesbergensis* Berger 1986

*Luehndea spinosa* Morgenroth 1970

*Mancodinium semitabulatum* Morgenroth 1970

*Maturodinium inornatum* Morgenroth 1970

*Moesiodinium raileanui* Antonesçu 1974

*Muderongia longicorna* Monteil 1991

*Muderongia simplex* Alberti 1961

*Nannoceratopsis dictyambonis* Riding 1984

*Nannoceratopsis gracilis* Alberti 1961

*Nannoceratopsis pellucida* Deflandre 1938

*Nannoceratopsis plegas* Drugg 1978

*Nannoceratopsis raunsgaardii* Poulsen 1996

*Nannoceratopsis senex* van Helden 1977

*Nannoceratopsis spiculata* Stover 1966

*Nannoceratopsis symmetrica* Bucefalo Palliani & Riding 2000

*Nannoceratopsis triceras* Drugg 1978

*Noricysta fimbriata* Bujak & Fisher 1976

*Oligosphaeridium complex* (White 1842) Davey & Williams 1966

*Ovalicysta hiata* Bjaerke 1980

*Paragonyaulacysta*? *borealis* (Brideaux & Fisher 1976) Stover & Evitt 1978

*Pareodinia ceratophora* Deflandre 1947

*Pareodinia halosa* (Filatoff 1975) Prauss 1989

*Pareodinia prolongata* Sarjeant 1959

*Pareodinia*? *pseudochytroeides* (Below 1987) Lentin & Williams 1989

*Parvocysta bullula* Bjaerke 1980

*Parvocysta nasuta* Bjaerke 1980

*Phallocysta elongata* (Beju 1971) Riding 1994

*Phallocysta eumekes* Dörhöfer & Davies 1980

*Phoberocysta neocomica* (Gocht 1957) Millioud 1969

*Phoberocysta tabulata* Raynaud 1978

*Prolixosphaeridium anasillum* Erkmen & Sarjeant 1980

*Pseudoceratium pelliferum* Gocht 1957

*Rhaetogonyaulax arctica* (Wiggins 1973) Stover & Evitt 1978

*Rhaetogonyaulax dilatata* (Wiggins 1973) Stover & Evitt 1978

*Rhaetogonyaulax rhaetica* (Sarjeant 1963) Loeblich Jr. & Loeblich III 1968

*Rhaetogonyaulax wigginsii* (Stover & Helby 1987) Lentin & Williams 1989

*Rhynchodiniopsis cladophora* (Deflandre 1938) Below 1981

*Rotosphaeropsis thule* (Davey 1982) Riding & Davey 1989

*Sahulidinium ottii* Stover & Helby 1987

*Scriniocassis priscus* (Gocht 1979) Below 1990

*Scriniocassis weberi* Gocht 1964

*Scriniodinium campanula* Gocht 1959

*Scriniodinium crystallinum* (Deflandre 1938) Klement 1960

*Scriniodinium*? *dictyophorum* (Deflandre 1938 ex Sarjeant 1967) Brenner 1988

*Scriniodinium pharo* (Duxbury 1977) Davey 1982

*Senoniasphaera jurassica* (Gitmez & Sarjeant 1972) Lentin & Williams 1976

*Sentusidinium explanatum* (Bujak in Bujak et al. 1980) Wood et al. 2016

*Sirmiodinium grossii* Alberti 1961

*Spiculodinium* *neptuni* (Eisenack 1958) Duxbury 2018

*Spiniferites ramosus* (Ehrenberg 1837) Mantell 1854

*Stanfordella*? *cretacea* (Neale & Sarjeant 1962) Helenes & Lucas-Clark 1997

*Stephanelytron redcliffense* Sarjeant 1961

*Suessia swabiana* Morbey 1975

*Susadinium faustum* (Bjaerke 1980) Lentin & Williams 1985

*Susadinium scrofoides* Dörhöfer & Davies 1980

*Systematophora areolata* Klement 1960

*Systematophora penicillata* (Ehrenberg 1843 ex Ehrenberg 1854) Sarjeant 1980

*Tehamadinium evittii* (Dodekova 1969) Jan du Chêne et al. 1986

*Tenua anaphrissa* (Sarjeant 1966) Benedek 1972

*Trichodinium castanea* Deflandre 1935 ex Clarke & Verdier 1967

*Trichodinium scarburghense* (Sarjeant 1964) Williams et al. 1993

*Tubotuberella apatela* (Cookson & Eisenack 1960) Ioannides et al. 1977

*Valensiella ovulum* (Deflandre 1947) Eisenack 1963

*Valvaeodinium armatum* Morgenroth 1970

*Valvaeodinium koessenium* (Morbey 1975) Below 1987

*Valvaeodinium spinosum* (Fenton et al. 1980) Below 1987

*Wallodinium cylindricum* (Habib 1970) Duxbury 1983

*Wanaea fimbriata* Sarjeant 1961

*Wanaea thysanota* Woollam 1982

*Wanaea verrucosa* Riding & Helby 2001

**Pollen and Spores:**

*Classopollis classoides* Pflug 1953

*Klukisporites variegatus* Couper 1958