The literature on Triassic, Jurassic and earliest Cretaceous dinoflagellate cysts: supplement 1

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Since the publication of a major literature compilation issued in mid 2012, 94 further contributions on Triassic, Jurassic and earliest Cretaceous (Berriasian) dinoflagellate cysts have been discovered, or were issued recently (i.e. during late 2012 and early 2013). These studies are mostly on the Late Jurassic and Early Cretaceous of Europe, and are listed herein with a description of each item as a string of keywords.

Keywords: dinoflagellate cysts; Triassic; Jurassic; earliest Cretaceous; literature compilation

1. Introduction

The literature on Triassic, Jurassic and earliest Cretaceous (Berriasian) dinoflagellate cysts was comprehensively compiled and reviewed by Riding (2012a). In this major work, which was published in June 2012, Riding (2012a) listed 1347 publications on this topic known to him as of March 2012, with strings of keywords that detail the scope of each contribution. During the 12 months since the publication of Riding (2012a), i.e. as of March 2013, the author has compiled 73 items which were previously inadvertently overlooked, together with 21 recently published papers (i.e. late 2012 or early 2013).

These 94 publications are largely on the Late Jurassic and earliest Cretaceous of Europe (Table 1), and are listed in Appendix 1 below. Papers on West Europe are most numerous, and comprise 36.2% of the overall total (Table 1); this Euro-centric trend was also noted by Riding (2012a, table 1). The total of 16 contributions (17.0%) on Australasia is significantly biased by the inclusion of nine technical reports on the Mesozoic palynology of
Australia and Papua New Guinea from microfiches in Jell (1987). Significant numbers of contributions are included from Antarctica (5 = 5.3%), the Arctic (7 = 7.4%), East Europe (6 = 6.4%) and Russia (9 = 9.6%). There were also 6 papers (6.4%) based on two or more geographical regions. The numbers of publications from Africa, North America, South America, the Indian subcontinent and the Middle East were less than five each. No contributions from Central America and China have been issued since March 2012 (Table 1).

Papers specifically on other palynomorph groups such as Srivastava (2011), which is on pollen and spores, are not included here. Two typographical errors have been noted in Riding (2012a, p. 26, 92); the first word of the title of Cookson and Eisenack (1974) is “Mikroplankton” and not “Mikrofossilien”, and the year of publication of Riley and Fenton (1984) was incorrectly stated to be 1980.

2. Major recent papers

Ten of the 21 publications issued since Riding (2012a) are deemed to be especially scientifically significant. Arkadiev et al. (2012) is a major multidisciplinary biostratigraphical study of the Jurassic-Cretaceous transition of the Crimea, Ukraine. In this monograph, Tithonian-Berriasian marine and terrestrially-derived palynomorphs were studied by Olga V. Shurekova, who wrote a detailed and well-illustrated section (Arkadiev et al., 2012, p. 294-307, pl. 49-54). An account of the Middle Jurassic Szlachtowa Formation (“black flysch”) of southern Poland was provided by Barski et al. (2012). This unit is of Bajocian age, and contains evidence of Late Triassic to earliest Middle Jurassic reworking. Mantle and Riding (2012) formally defined the Bajocian-Bathonian *Wanaea verrucosa* dinoflagellate cyst zone, and described and comprehensively illustrated the relatively low diversity assemblages in this interval from three wells drilled in offshore Western Australia. These Middle Jurassic floras are substantially similar to coeval assemblages from the northern hemisphere. A comprehensive revision of the lithostratigraphy of the Middle Jurassic to earliest Cretaceous (Callovian-Berriasian) strata of the Dutch sector of the North Sea was given by Munsterman et al. (2012). This major paper included many relevant data on dinoflagellate cyst biostratigraphy. The dinoflagellate cyst *Gonyaulacysta dentata* (Raynaud 1978) Lentin & Vozzhennikova 1990 was emended by Riding (2012b). This large and distinctive species is indicative of the latest Middle to earliest Late Jurassic (Late Callovian-earliest Oxfordian) interval of Europe and the Arctic, and is unequivocally a cold water form. A further
contribution on *Gonyaulacysta dentata* was given by Riding and Michoux (2013). Schnyder et al. (2012) gave an account of Late Jurassic (Kimmeridgian-Tithonian) dinoflagellate cysts from western France; most of the samples studied by these authors were calibrated to magnetostratigraphy. A major sequence stratigraphical synthesis of the Late Triassic (Norian-Rhaetian) to Quaternary successions of offshore eastern Canada was published by Weston et al. (2012).

A lineage of latest Jurassic to Early Cretaceous (Tithonian-Hauterivian) chorate dinoflagellate cysts from Madagascar was documented by Chen (2013); this plexus largely comprises the new genus *Palaecysta*, which is closely related to *Systematophora*. The typically Early Jurassic (Late Sinemurian) dinoflagellate cyst *Liasidium variabile* Drugg 1978 was interpreted as being indicative of warm marine waters and palaeotemperatures by Riding et al. (2013), due to evidence from isotope geochemistry, multivariate statistics and thermophytic pollen. It is a marker for a distinctive negative carbon isotope excursion (CIE), which was termed the S-CIE by Riding et al. (2013). Van de Schootbrugge et al. (2013) undertook a detailed review of the palaeobiology of latest Triassic and Early Jurassic (Rhaetian-Toarcian) acritarchs, dinoflagellate cysts and prasinophytes, with emphasis on the end-Triassic mass extinction and the Toarcian oceanic anoxic event.

### Acknowledgements

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### Author biography
JAMES B. RIDING is a palynologist with the British Geological Survey based in Nottingham, United Kingdom. Jim is a specialist on Mesozoic-Cenozoic palynology, and works on a wide variety of domestic and international projects. One of his principal tasks is a RCUK Individual Merit research programme entitled *Jurassic dinoflagellate cyst palaeobiology and its applications*. This work aims to use the Jurassic dinoflagellate cyst record to effect long-scale correlations, to assess floral provincialism and to use dinoflagellate cysts to solve palaeobiological questions. Jim became Secretary-Treasurer of the International Federation of Palynological Societies (IFPS) in 2012.

References


Riding JB. 2012a. A compilation and review of the literature on Triassic, Jurassic, and earliest Cretaceous dinoflagellate cysts. American Association of Stratigraphic Palynologists Contributions Series No. 46, 119 p. plus CD ROM.


Caption for Table 1:
Table 1. A breakdown of the 94 publications on Triassic to earliest Cretaceous dinoflagellate cysts compiled herein based on geographical region and the initial letter of the first author.

Appendix 1. List of Literature
The literature on Middle Triassic to earliest Cretaceous (Berriasian) dinoflagellate cysts issued after the publication of Riding (2012a), and those papers encountered after this compilation was made, is listed in alphabetical/chronological order below. The reference format used in Riding (2012a) is retained. Papers of major significance are asterisked. The language in which a paper was written in is indicated if it is not in English. A summary of the scope of each item is given as a string of keywords in parentheses after each citation. This summary comprises the principal subject matter, age range, geographical region(s) and country/countries. A distinction is made between publications which document new data (‘primary data’), and those which compile, review or summarise existing data (‘compilation’). For the purposes of this work, the world is subdivided into 13 geographical regions. These are Africa, Central America, North America, South America, Antarctica, the Arctic, Australasia, China, East Europe, West Europe, the Indian subcontinent, the Middle East and Russia (Table 1).
ARKADIEV, V.V., BOGDANOVA, T.N., GUZHIKOV, A.Y., LOBACHEVA, S.V.,
MYSHKINA, N.V., PLATONOV, E.S., SAVELYEVA, Y.N., SHUREKOVA, O.V., and
YANIN, B.T. 2012 Berriasian Stage of the mountainous Crimea. Lema Publishers, Saint
(biostratigraphy; lithostratigraphy; macropalaeontology; magnetostratigraphy; ostracods;
palaeogeography; tintinnids; primary data; Late Jurassic-Early Cretaceous [Tithonian-
Berriasian]; East Europe [Crimea, Ukraine])

BACHMANN, G.H., GELUK, M.C., WARRINGTON, G., BECKER-ROMAN, A.,
BEUTLER, G., HAGDORN, H., HOUNSLOW, M.W., NITSCH, E., RÖHLING, H.-G.,
(biostratigraphy; lithostratigraphy; compilation; Late Triassic [Rhaetian]; West Europe
[Southern North Sea])

*BARSKI, M., MATYJA, B.A., SEGIT, T., and WIERZBOWSKI, A. 2012 Early to Late Bajocian age of the “black flysch” (Szlachtowa Fm.) deposits:
implications for the history and geological structure of the Pieniny Klippen Belt, Carpathians.
(biostratigraphy; reworking; regional geology; primary data; Middle Jurassic [Bajocian]; East
Europe [Poland])


BEIZEL, A.L., LEBEDEVA, N.K., and SHENFIL, O.V.

1997 New geological data and zoning of the Neocomian key section on the Yatriya River (Polar Transuralia) according to belemnites, dinocysts, and palynomorphs. Russian Geology and Geophysics, 38(6): 1092-1099. (biostratigraphy; primary data; Early Cretaceous [Berriasian-Hauterivian]; Arctic [Northwest Siberia, Northeast Russia])

BENTON, M.J., COOK, E., and TURNER, P.


BLOOS, G.

1999 Aspekte der Wende Trias/Jura. In: Hauschke, N., and Wilde, V. (editors). Trias: eine ganz andere Welt: Mitteleuropa im frühen Erdmittelalter. Verlag Dr. Friedrich Pfeil, München, 43-68. (biostratigraphy; primary data; Late Triassic [Rhaetian]; West Europe [Wales])

BONIS, N.R., VAN KONIJNENBURG-VAN CITTERT, J.H.A., and KÜRSCHNER, W.M.

2010 Changing CO₂ conditions during the end-Triassic inferred from stomatal frequency analysis on Lepidopteris ottonis (Goeppert) Schimper and Ginkgoites taeniatus (Braun) Harris. Palaeogeography, Palaeoclimatology, Palaeoecology, 295(1-2): 146-161.
(biostratigraphy; CO₂ levels; palaeobotany [stomata]; palaeoclimatology; primary data; Late Triassic-Early Jurassic [Rhaetian-Hettangian]; West Europe [Germany])

C


(biostratigraphy; lithostratigraphy; compilation; Late Triassic [Rhaetian]; West Europe [Isle of Man, England])

*CHEN, Y.-Y.


(biostratigraphy; morphology; phylogeny; taxonomy; primary data; latest Jurassic-Early Cretaceous [Tithonian-Hauterivian]; East Africa [Madagascar])

CIRILLI, S.


(biostratigraphy; correlation; palaeobiology; palaeoclimatology; pollen/spores; compilation; Late Triassic-Early Jurassic [Hettangian-Rhaetian]; worldwide)

COLOMBIÉ, C., SCHNYDER, J., and CARCEL, D.

2012 Shallow-water marl-limestone alternations in the Late Jurassic of western France: Cycles, storm event deposits or both? Sedimentary Geology, 271-272: 28-43.


ERCEGOVAC, M., GRUBIĆ, A., and MILIVOJEVIĆ, J.

2002 Biostratigraphical study of Lower Cretaceous Kašajina River Beds and its importance for geology of NE Serbia. Annales Géologiques de la Péninsule Balkanique, 64: 63-82. (biostratigraphy; primary data; Early Cretaceous [?Berriasian-Valanginian to Hauterivian]; East Europe [Serbia])

FEDOROVA, V.A., BYSTROVA, V.V., KOLPENSKAYA, N.N., and SOCHEVANOVA, O.A.

1993 Detailed microbiostratigraphy of the basal sections of boreal Berriasian in Russia (Rvs Igma, Jatriya, Boyarka). In: Chirva, S.A., and Zinchenko, V.N. (editors). Phanerozoic stratigraphy of the petrol- and gas-bearing regions of Russia. VNIGRI, St.-Petersburg, 172-188 (in Russian). (biostratigraphy; compilation; Late Jurassic-Early Cretaceous [Volgian-Valanginian]; Arctic [North Siberia, North Russia])

FORTWENGLER, D., MARCHAND, D., BONNOT, A., JARDAT, R., and RAYNAUD, D.

2012 Proposal for the Thuoux section as a candidate for the GSSP of the base of the Oxfordian stage. Carnets de Géologie [Notebooks on Geology], Article 2012/06 (CG2012_A06): 117-136. (biostratigraphy; Global Boundary Stratotype Section and Point [GSSP]; compilation; Late Jurassic [Oxfordian]; West Europe [France])
GEDL, P., KAIM, A., BOCZAROWSKI, A., KĘDZIERSKI, M., SMOLEŃ, J.,
SZCZEPANIK, P., WITKOWSKA, M., and ZIAJA, J.

2003 Rekonstrukcja paleośrodowiska sedymetacji środkowojurajskich ilów
rudonośnych Gnaszyna (Częstochowa – wyniki wstępne). Volumina Jurassica/Tomy

(biostratigraphy; primary data; Middle Jurassic [Bathonian]; East Europe [Poland])

GORYACHEVA, A.A.

2009 Palynostratigraphy of lower and middle Jurassic deposits in section of the
Well Vostok-4 (south-east of West Siberia). In: Zakharov, V.A. (editor). Jurasssic System of
Russia: Problems of Stratigraphy and Paleogeography. Third all-Russian meeting.
September 23-27, 2009, Saratov State University, Saratov: 43-45 (extended abstract in
Russian).

(biostratigraphy; summary; Early-Middle Jurassic [Pliensbachian-Bajocian]; Russia [Siberia,
East Russia])

HELBY, R.J.

1974a A palynological study of the Petrel Formation. Unpublished palynology
report, 47 p. (this was reproduced as fiche 1, p. 1-47, fiche 2, figs. 1-5 and fiche 3, figs. 6-12

(biostratigraphy; pollen/spores; primary data; Middle Jurassic-Early Cretaceous [Callovian-
Albian]; Australasias [Western Australia])

HELBY, R.J.

1974b A palynological study of the Cambridge Gulf Group (Triassic-Early
Jurassic) Formation. Unpublished palynology report, 34 p. (this was reproduced as fiche 1, p.
HELBY, R.J., and PARTRIDGE, A.D.


(biostratigraphy; pollen/spores; primary data; Triassic-Early Jurassic [Ladinian-Sinemurian]; Australasia [Western Australia])

HELBY, R.J., and PARTRIDGE, A.D.


(biostratigraphy; pollen/spores; thermal maturation; primary data; Middle Jurassic-Early Cretaceous [Bathonian-Albian]; Australasia [Papua New Guinea])

HELBY, R.J., and PARTRIDGE, A.D.


(biostratigraphy; pollen/spores; thermal maturation; primary data; Middle Jurassic-Early Cretaceous [Callovian-Albian]; Australasia [Papua New Guinea])

HELBY, R.J., and PARTRIDGE, A.D.

1977a Palynological analysis of the Mesozoic sequence in Iamara-1, Papuan Basin. *Esso Australia Limited, Palaeontological Report, 1977/3*, 11 p. (this was reproduced as fiche

(biostratigraphy; pollen/spores; thermal maturation; primary data; Middle Jurassic-Early Cretaceous [Bathonian-Aptian]; Australasia [Papua New Guinea])


(biostratigraphy; pollen/spores; thermal maturation; primary data; Late Jurassic-Early Cretaceous [Oxfordian-Albian]; Australasia [Papua New Guinea])


(biostratigraphy; pollen/spores; thermal maturation; primary data; Middle Jurassic-Early Cretaceous [Bathonian-Aptian]; Australasia [Queensland, Australia])


(catalogue; 35mm transparencies; compilation; Middle Jurassic-Late Cretaceous [Callovian-Maastrichtian]; Australasia [Australia, Papua New Guinea])

HELBY, R.J., and POWIS, G.D.

(biostratigraphy; palynofacies; pollen/spores; primary data; Late Triassic-Late Cretaceous [Rhaetian-Campanian]; Australasia [Western Australia])


(correlation; geochemistry; palaeobotany; palaeoclimatology; palaeoecology; palynofacies; primary data; Middle Jurassic [Bajocian]; West Europe [England])


(biostratigraphy; ammonoids; conodonts; magnetostratigraphy; compilation; Late Triassic-Early Jurassic [Rhaetian-Hettangian]; West Europe [England])


(biostratigraphy; palaeoecology; palaeogeography; summary; Early Jurassic [Toarcian]; Russia [Siberia, East Russia])

INGRAM, B.S.
1967  Palynology of the Otorowiri Siltstone Member, Yarragadee Formation.


(biostratigraphy; reworking; primary data; Late Jurassic-Early Cretaceous [Oxfordian-Tithonian, undifferentiated]; Australasia [Western Australia])


(biostratigraphy; reworking; primary data; Late Jurassic and Early-Late Cretaceous [Oxfordian-Tithonian and Albian-Maastrichtian]; Antarctica [Antarctic Peninsula])


(biostratigraphy; reworking; primary data; Late Jurassic and Early-Late Cretaceous [Oxfordian-Tithonian and Albian-Maastrichtian]; Antarctica [Antarctic Peninsula])


(biostratigraphy; pollen-spores; primary data; Late Triassic [Norian-Rhaetian]; the Indian subcontinent [India])

KUMAR, P. 2000b  Palynomorphs from Denwa Formation (Late Triassic), Satpura Basin, India. *Geophytology*, 29(1, 2): 99-104.

(biostratigraphy; palaeoclimatology; palaeoecology; pollen-spores; primary data; Late Triassic [Carnian-Rhaetian]; the Indian subcontinent [India])

L
LARSSON, L.M. 2009 Palynostratigraphy of the Triassic-Jurassic transition in southern Sweden. *GFF (Journal of the Geological Society of Sweden)*, 131(1-2): 147-163. (biostratigraphy; primary data; Late Triassic-Early Jurassic [Rhaetian-Sinemurian]; West Europe [Sweden])


LINDSTRÖM, S. 2013 A review of the enigmatic microalga *Tetranguladinium* Yu et al. 1983 ex Chen et al. 1988; palaeoecology, stratigraphy and palaeogeographical distribution. *Palynology*, 37(1): 48-61. (biostratigraphy; microalgae; palaeoecology; compilation; Late Jurassic-Early Cretaceous [Tithonian-Valanginian]; West Europe [Denmark, Sweden])

LINDSTRÖM, S., VAN DE SCHOOTBRUGGE, B., DYBKJÆR, K., PEDERSEN, G.K., FIEBIG, J., NIELSEN, L.H., and RICHOZ, S. 2012 No causal link between terrestrial ecosystem change and methane release during the end-Triassic mass extinction. *Geology*, 40(6): 531-534. (biostratigraphy; carbon cycle; geochemistry; mass extinction; palaeobiology; palaeontology; volcanism; primary data; Late Triassic-Early Jurassic [Rhaetian-Hettangian]; West Europe [England; Denmark])

LONDEIX, L., POURTOY, D., and FENTON, J.P.G. 1996 The presence of *Dinogymnium* (Dinophyceae) in Lower Cretaceous sediments from the northwest Tethys (southeast France and western Switzerland) and Gulf of Mexico.

(biostratigraphy; palaeobiology; taxonomy; primary data; Early Cretaceous [Berriasian-Hauterivian]; North America [offshore Florida, southeast U.S.A.], West Europe [France, Switzerland])

M

*MANTLE, D.J., and RIDING, J.B.*


(biostratigraphy; provincialism; taxonomy; primary data; Middle Jurassic [Bajocian-Bathonian]; Australasia [offshore Western Australia])

*MEHROTRA, N.C., TEWARI, R., ARAI, M., GARCIA, M.J., and BERNADES-DE-OLIVEIRA, M.E.C.*


(biostratigraphy; compilation; Late Jurassic and Early-Late Cretaceous [Tithonian-Maastrichtian]; the Indian subcontinent [India], South America [Brazil])

*MICHALÍK, J., BIROŇ, A., LINTNEROVÁ, O., GÖTZ, A.E., and RUCKWIED, K.*

2010 Climate change at the Triassic/Jurassic boundary in the northwestern Tethyan realm, inferred from sections in the Tatra Mountains (Slovakia). *Acta Geologica Polonica*, 60(4): 535-548.

(biostratigraphy; clay mineralogy; geochemistry; palaeoclimate; sedimentology; primary data; Late Triassic-Early Jurassic [Rhaetian-Hettangian]; East Europe [Slovakia])

*MUNSTERMAN, D.K., VERREUSSEL, R.M.C.H., MIJNLIEFF, H.F., WITMANS, N., KERSTHOLT-BOEGEHOLD, S., and ABBINK, O.A.*

(biostratigraphy; lithostratigraphy; petroleum geology; sedimentology; compilation; Middle Jurassic-Early Cretaceous [Callovian-Berriasian]; West Europe [offshore The Netherlands])


(biostratigraphy; pollen-spores; summary; Late Triassic [Carnian-Rhaetian]; the Indian subcontinent [India])


(anoxia; carbon cycle; geochemistry; mass extinction; palaeobiology; palaeoecology; primary data; Early Jurassic [Hettangian]; West Europe [England])


(biostratigraphy; CAMP volcanism; global change; mass extinction event; palynofacies; wildfires; primary data; open access journal; Late Triassic-Early Jurassic [Rhaetian-Sinemurian]; West Europe [Denmark, Sweden])


(biodiversity; primary data; Middle-Late Jurassic [undifferentiated]; East Europe [Romania])


(biostratigraphy; in-situ study; palaeobotany; pollen; taxonomy; primary data; Middle-Late Jurassic [Callovian-Oxfordian]; Middle East [Israel])


(palaeoecology; palaeogeography; reworking; primary data; Jurassic, Paleogene [undifferentiated, Bartonian-Rupelian]; West Europe [France])


(biostratigraphy; geochemistry; mass extinction; palaeobiology; palaeoceanography; primary data; Late Triassic-Early Jurassic [Rhaetian-Sinemurian]; West Europe [Germany, Luxembourg])

*RIDING, J.B.
The Jurassic dinoflagellate cyst *Gonyaulacysta dentata* (Raynaud 1978) Lentin & Vozzhennikova 1990 emend. nov.: An index species for the Late Callovian to earliest Oxfordian of the northern hemisphere. *Review of Palaeobotany and Palynology*, 176-177: 68-81. (biostratigraphy; palaeoclimatology; taxonomy; primary data; Middle-Late Jurassic [Callovian-Oxfordian]; West Europe [Scotland])

RIDING, J.B., and CRAME, J.A. 2002 Aptian to Coniacian (Early-Late Cretaceous) palynostratigraphy of the Gustav Group, James Ross Basin, Antarctica. *Cretaceous Research*, 23: 739-760. (biostratigraphy; reworking; primary data; Late Jurassic and Early-Late Cretaceous [Oxfordian-Tithonian and Albian]; Antarctica [Antarctic Peninsula])

RIDING, J.B., and MICHOUX, D. 2013 Further observations on the Jurassic dinoflagellate cyst *Gonyaulacysta dentata* (Raynaud 1978) Lentin & Vozzhennikova 1990 emended Riding 2012. *Review of Palaeobotany and Palynology*, 196: 51-56. (biostratigraphy; lithostratigraphy; morphology; palaeobiology; palaeoclimatology; taxonomy; compilation; primary data; Middle-Late Jurassic [Callovian-Oxfordian]; Arctic [Greenland], West Europe [Scotland])


*RIDING, J.B., LENG, M.J., KENDER, S., HESSELBO, S.P., and FEIST-BURKHARDT, S.* 2013 Isotopic and palynological evidence for a new Early Jurassic environmental perturbation. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 374: 16-27. (biostratigraphy; environmental change; isotope geochemistry; palaeobiology; palynofacies; pollen; primary data; Early Jurassic [Sinemurian]; West Europe [England])


SELKOVA, L.A., LYUROV, S.V., BURDELNAYA, N.S., and BOUSHNEV, D.A.


(biostratigraphy; summary; Late Jurassic [Kimmeridgian-Tithonian]; Arctic [Pechora Basin, Northwest Russia])

SELKOVA, L.A., VETOSHKINA, O.S., and LYYUIROV, S.V.


(biostratigraphy; primary data; Middle-Late Jurassic [Callovian-Tithonian]; Arctic [Northwest Russia])

*SHULGINA, N.I., BURDYKINA, M.D., BASOV, V.A., and ÅRHUS, N.


(biostratigraphy; provincialism; primary data; Late Jurassic-Early Cretaceous [Tithonian-Hauterivian]; Arctic [North Siberia, Northeast Russia])

SHUREKOVA, O.V.


(biostratigraphy; summary; Middle Jurassic [Bathonian-Callovian]; Russia [Siberia, East Russia])

SHURYGIN, B.N., NIKITENKO, B.L., ALIFIROV, A.S., IGOLNIKOV, A.E., LEBEDEVA, N.K., PESTCHEVITSKAYA, E.B., and POPOV, A.Y.

(biostratigraphy; summary; Late Jurassic-Early Cretaceous [Tithonian-Berriasian]; Russia [Siberia, East Russia])


(biostratigraphy; summary; Middle-Late Jurassic [Callovian-Tithonian]; Russia [Siberia, East Russia])


(biostratigraphy; palynofacies; summary; Late Jurassic-Early Cretaceous [Tithonian-Berriasian]; East Europe [Czech Republic, Slovakia], West Europe [Austria], Arctic [North Siberia, Northeast Russia])


(biostratigraphy; ammonites; primary data; Late Jurassic-Early Cretaceous [Tithonian-Berriasian]; Australasia [Australia])

SUAN, G., FÖLMMI, K.B., ADATTE, T., BOMOU, B., SPANGENBERG, J.E., and VAN DE SCHOOTBRUGGE, B.
Thomas, J.B., Marshall, J., Mann, A.L., Summons, R.E., and Maxwell, J.R. 1993. Dinosteranes (4,23,24-trimethylsteranes) and other biological markers in dinoflagellate-rich marine sediments of Rhaetian age. Organic Geochemistry, 20(1): 91-104. (geochemistry; palaeoecology; palynofacies; primary data; Late Triassic [Rhaetian]; West Europe [England])


Turner, S., Bean, L.B., Dettmann, M., McKellar, J.L., McLoughlin, S., and Thulborn, T.

(V)

VAJDA, V., and WIGFORSS-LANGE, J.


(biostratigraphy; Jurassic-Cretaceous boundary; palaeoecology; pollen and spores; sedimentology; primary data; Early Cretaceous [Berriasian]; West Europe [Sweden])

VAJDA, V., and WIGFORSS-LANGE, J.


(biostratigraphy; compilation; Middle Jurassic [Aalenian-Bajocian]; Arctic [Greenland]; West Europe [Denmark, Norway])

*VAN DE SCHOOTBRUGGE, B.*, BACHAN, A., SUAN, G., RICHOZ, S., and PAYNE, J.L.


(acritarchs; anoxic events; black shales; carbon cycle; geochemistry; mass extinctions; palaeobiology; palaeoceanography; prasinophytes; sedimentology; primary data; Late Triassic-Early Jurassic [Rhaetian-Toarcian]; West Europe [Germany])

Vijaya, and Murthy, S.

(biostratigraphy; palaeoclimatology; palaeoecology; insects; fungal remains; pollen-spores; primary data; Late Triassic [Carnian-Rhatian]; the Indian subcontinent [India])


(biostratigraphy; compilation; Early Jurassic-Early Cretaceous [Toarcian-Barremian]; South America [Argentina])


(biostratigraphy; lithostratigraphy; primary data; Late Triassic [Rhaetian]; West Europe [Wales])


(biostratigraphy; lithostratigraphy; primary data; Late Triassic [Rhaetian]; West Europe [England])

WARRINGTON, G.


WARRINGTON, G.


*WILSON, G.J., and HELBY, R.*

(biostratigraphy; reworking; primary data; Late Jurassic-Early Cretaceous [Oxfordian-Hauterivian]; Australasia [New Zealand])


(biostratigraphy; eustasy; compilation; Early Cretaceous [Berriasian-Aptian]; Australasia [Western Australia])

Z


(biostratigraphy; summary; Late Jurassic-Early Cretaceous [Tithonian-Berriasian]; Russia [Siberia, East Russia])


(taxonomy; primary data; Middle Jurassic-Early Cretaceous [Callovian-Berriasian]; Russia [West Siberia, East Russia])

(biostratigraphy; palaeoecology; palynofacies; petroleum geology; thermal maturation; primary data; Middle Jurassic-Late Cretaceous [Callovian-Kimmeridgian/Tithonian to Albian-Cenomanian]; North Africa [Egypt])