

New information on phytodebris in palynological and palynofacies samples from the Triassic to Early Cretaceous of the North Sea includes evidence of abundant bryophytes.

References

Atta-Peters, D., Agama, C.I., Asiedu, D.K. and Apesegah, E., 2013. Palynology, palynofacies and palaeoenvironments of sedimentary organic matter from Bonyere-1 Well, Tano basin, western Ghana. *International Letters of Natural Sciences*, 5.

Batten, D.J., 1982. Palynofacies, palaeoenvironments and petroleum. *Journal of Micropalaeontology*, 1(1), pp.107-114.

Batten, D.J., 1983. Identification of amorphous sedimentary organic matter by transmitted light microscopy. *Geological Society, London, Special Publications*, 12(1), pp.275-287.

Borovichev, E. and Vilnet, A., 2015. Recently resurrected for European liverwort flora—*Frullania calcarifera* Steph., new addition for the Crimean Peninsula. *Folia Cryptogamica Estonica*, 52, pp.1-6.

de Brito Valente, E. and Pôrto, K.C., 2006. Novas ocorrências de hepáticas (Marchantiophyta) para o Estado da Bahia, Brasil. *Acta Botanica Brasilica*, 20, pp.195-201

Castrejón-Varela, A., Pérez-García, B., Mendoza-Ruiz, A. and Espinosa-Matías, S., 2018. Gametophyte morphology of *Acrostichum aureum* and *A. danaeifolium* (Pteridaceae). *Revista de Biología Tropical*, 66(1), pp.178-188.

Chirila, G. and Tabara, D., 2010. PALYNOFACIES AND TOTAL ORGANIC CARBON CONTENT FROM THE BAIA BOREHOLE (MOLDAVIAN PLATFORM). *Analele Stiintifice de Universitatii AI Cuza din Iasi. Sect. 2, Geologie*, 56(2), p.83.

Gadens-Marcon, G.T., Mendonca-Filho, J.G., Guerra-Sommer, M., Carvalho, M.A., Pires, E.F. and Hartmann, L.A., 2014. Relation between the sedimentary organic record and the climatic oscillations in the Holocene attested by palynofacies and organic geochemical analyses from a pond of altitude in southern Brazil. *Anais da Academia Brasileira de Ciências*, 86(3), pp.1077-1099.

Gadens-Marcon, G.T., Guerra-Sommer, M. and Mendonça-Filho, J.G., 2014b. Palynofacies and organic geochemistry studies of organic matter from a wetland system of southern Brazil influenced by different hydrological regimes in the Quaternary. *Journal of South American Earth Sciences*, 56, pp.41-53.

Garel, S., Behar, F., Schnyder, J. and Baudin, F., 2017. Palaeoenvironmental control on primary fluids characteristics of lacustrine source rocks in the Autun Permian Basin (France) Contrôle paléoenvironnemental des caractéristiques des fluides primaires de roches mères lacustres dans le Bassin permien d'Autun (France). *Bulletin de la Société géologique de France*, 188(5).

Gedl, P. and Ziaja, J., 2012. Palynofacies from Bathonian (Middle Jurassic) ore-bearing clays at Gnaszyn, Kraków-Silesia Homocline, Poland, with

special emphasis on sporomorph eco-groups. *Acta Geologica Polonica*, 62(3), pp.325-349.

Glime, J.M. 2014. Adaptive strategies: Vegetative Propagules, Chapter 4-10. *In: Glime, J.M. Bryophyte Ecology. Volume 1. Physiological Ecology. Ebook* last updated September 2014 and available at www.bryoecol.mtu.edu

Gonçalves, P.A., Freitas da Silca, T., Filho, J.G.M., Flores, D. 2015. Palynofacies and source rock potential of Jurassic sequences on the Arruda sub-basin (Lusitanian Basin, Portugal). *Marine and Petroleum Geology* 59: 575-592.

Gradstein, R. and Uribe-M. 2011. A synopsis of the Frullaniaceae (Marchantiophyta) from Colombia. *Caldasia* **33(2)**: 367-396.

Ibrahim, MIA [ميهاربا ليعامسا دمحم], Ela, N.M.A. and Kholeif, S.E., 1997. Paleocology, palynofacies, thermal maturation and hydrocarbon source-rock potential of the Jurassic-Lower Cretaceous sequence in the subsurface of the north Eastern Desert, Egypt.

Ibrahim, M.I.A., Al-Saad, H. and Kholeif, S.E., 2002. Chronostratigraphy, palynofacies, source-rock potential, and organic thermal maturity of Jurassic rocks from Qatar. *GEOARABIA-MANAMA*-, 7, pp.675-696.

Jianguo, L. and Zhenyu, G., 2007. A Primary Observation on Palynofacies of the Chuangde Section (Late Jurassic-Cretaceous), Gyangzê, Southern Tibet. *Acta Geologica Sinica (English Edition)*, 81(6), pp.1019-1025.

Koch, G., Prtoljan, B., Husinec, A. and Hajek-Tadesse, V., 2017. Palynofacies and paleoenvironment of the Upper Jurassic mud-supported carbonates, southern Croatia: Preliminary evaluation of the hydrocarbon source

rock potential. *Marine and Petroleum Geology*, 80, pp.243-253.

de León, M.E.M.D., Pérez-García, B., Márquez-Guzmán, J. and Mendoza-Ruiz, A., 2008. Developmental gametophyte morphology of seven species of *Thelypteris* subg. *Cyclosorus* (Thelypteridaceae). *Micron*, 39(8), pp.1351-1362.

Martínez, O.G., Prada, C., Tanco, M.E., Bonomo, M.C. 2013. Sexual Phase of Three Species of *Pteris* (Pteridaceae). *Tropical Plant Biology* 6:46-52. DOI 10.1007/s12042-012-9114-9

Mendoza-Ruez, A., Perez-Garcia, B. 2009. Morphogenesis of the gametophytes of eight Mexican species of *Blechnum* (Blechnaceae). *Acta Botanica Mexicana* 88:59-72.

Olaru L., 2005. Some problems of biostratigraphy and palynological correlation of upper formation (Tg. 4) from Tulgheş group, east Carpathians (Romania). *Acta Palaeontologica Romaniae* 5: 351-366.

Passos Bastos C. J. 2012. Taxonomia e distribuição de *Cheilolejeunea aneogyna* (Spruce) A. Evans (Lejeuneaceae, Marchantiophyta). *Acta Botanica Brasílica* 26(3):709-713.

Peñaloza-Bojacá, G.F., de Oliveira, B.A., Araújo, C.A.T., Fantecelle, L.B. and Maciel-Silva, A.S., 2018. Bryophyte reproduction on ironstone outcrops: delicate plants in harsh environments. *Flora*, 238, pp.155-161.

Perez-Garcia B., Riba, R., Mendoza, A., Reyes, I. 1998. Compared gametophytic development of three species of *Phebodium* (Polypodiaceae, s. str.). *Rev. biol. trop.* 46(4).

Perez-Garcia B., Mendoza-Ruiz, A., Espinosa-Matías, S., Gómez-

Pignataro, L.D., 2010. Gametophyte morphology of *Platycterium andinum* Baker and *Platycterium wandae* Racif. *Micron* 41; 806-813.

Pocock, S.A.J. 1970. Palynology of the Jurassic sediments of western Canada, Part I (Continued) Terrestrial Species. *Palaeontographica* Abt. B **130**: 73-136.

Rameil, N., Götz, A.E., Feist-Burkhardt, S. 2000. High-resolution sequence interpretation of epeiric shelf carbonates by means of palynofacies analysis: an example from the Germanic Triassic (Lower Muschelkalk, Anisian) of East Thuringia, Germany. *Facies*, 43(1), pp.123-143.

Schwab K.W., Bayliss G.S., Smith M.A., Yoder N.B. 2011. Dwarf Hepatic Floral Fragments (Possibly Liverworts) from the Upper Mississippian Barnett Shale in the Fort Worth Basin of North Central Texas. *Search and Discovery Article #70091 (2011)*

Schwab K.W., Bayliss G.S., Smith M.A., Yoder N.B. (2013) Mushroom and Broccoli-Head Shaped Algal Fragments from the Eagle Ford Shale of South Texas and Coahuila, Mexico. *Search and Discovery Article #70134 (2013)*

Shaw J., Renzaglia, K. (2004). Phylogeny and Diversification of Bryophytes. *American Journal of Botany* 91(10): 1557–1581.

Silva, Y.M.P., Meyer, K.E.B., Perônico, C. and Castro, P.D.T.A., 2010. Palinofácies de uma sequência sedimentar quaternária da lagoa Preta, Parque Estadual do Rio Doce, MG, Brasil. *Revista Brasileira de Paleontologia*, 13(1), pp.49-56.

Singh, Y.R., Singh, B.P. and Li, J., 2015. Hydrocarbon Potential of the

Paleogene Disang Group, Manipur Region, India-A Palynological Approach. In *Petroleum Geosciences: Indian Contexts* (pp. 191-204). Springer, Cham.

Wanas, H. A., E. Sallam, M. K. Zobaa, and X. Li. "Mid-Eocene alluvial-lacustrine succession at Gebel El-Goza El-Hamra (Shabrawet area, NE Eastern Desert, Egypt): facies analysis, sequence stratigraphy and paleoclimatic implications." *Sedimentary geology* 329 (2015): 115-129.

Zhu, X., Cai, J., Wang, X., Zhang, J. and Xu, J., 2014. Effects of organic components on the relationships between specific surface areas and organic matter in mudrocks. *International Journal of Coal Geology*, 133, pp.24-34.

Zobaa, M.K., Zavada, M.S., Whitelaw, M.J., Shunk, A.J. and Oboh-Ikuenobe, F.E., 2011. Palynology and palynofacies analyses of the Gray Fossil Site, eastern Tennessee: Their role in understanding the basin-fill history. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 308(3), pp.433-444.

Recognising the full range of morphological variation in microspores produced by a single fossil plant species in dispersed assemblages; new observations from the Sleipner Formation (Middle Jurassic) of the North Sea.

Diez, J.B, Sender, L.M, Villanueva-Amandoz, U., Ferrer, J. and Rubio, C. 2005. New data regarding *Weichselia reticulata*: Soral clusters and the spore developmental process. *Review of Palaeobotany and Palynology* **135**: 99-107.

Kvaček, J. and Dašková, J., 2010. *Konijnenburgia*, a new genus of the fern family Matoniaceae. *Review of Palaeobotany and Palynology* **158**: 308-318.

Na, Y., Manchester, S. Sun, C. and Zhang, S. 2014. The Middle Jurassic palynology of the Daohugou area, Inner Mongolia, China, and its implications for palaeobiology and palaeogeography. *Palynology* **39 (2)**: 270-287.

Pocock, S. A. J. and Sarjeant, W. A. S. 1972. Partitomorphae, a new sub- group of Triassic and Jurassic acritarchs, *Bull. geol. Soc. Denmark*, vol. 21 pp. 346-357.

Tahun, S.S. and Mohamed, O. 2014. *Leiosphaeridia* and
Pterospermella acritarch genera as shallowing phase indicators in the early
Jurassic, North Sinai, Egypt. *Arabian Journal of Geosciences*, DOI
10.1007/s12517-014-1500-1