

## Notice of Annual General Meeting and Annual Address

The 170<sup>th</sup> Annual General Meeting will be held in the Flett Lecture Theatre of the Natural History Museum, London SW7 5BD, on Wednesday, 19<sup>th</sup> April, 2017, at 4.00 pm. The Annual Report of Council will be presented, along with Income and Expenditure Accounts for the year ended 31<sup>st</sup> December, 2016, and Council Members and Officers will be elected for the ensuing year. Tea and coffee will be available from 3.30 pm. This meeting is open to all members of the Society.

The AGM will be followed by the Society's Eleventh Annual Lecture, to be given by Professor Jenny Clack (University of Cambridge). The event will be held in the Flett Lecture Theatre of the Natural History Museum, Cromwell Road, London, SW7 5BD, at 4.15 pm. This event is open to members of the Society and other interested parties.

---

### NEWSLETTER 33

**1 Publications:** Volume 170 was published in November 2016.

**Vol. 170, 2016 (£280.00)**

646. British Jurassic regular echinoids, Part 2, Carinacea, by A.B. Smith (pp. 69-176, plates 42-82, final part. £130.00).
647. Ichthyosaurs of the British Middle and Upper Jurassic, Part 1, *Ophthalmosaurus*, by B.J. Moon & A.M. Kirton (pp. 1-84, plates 1-30. £150.00).

The Editors welcome suggestions for new titles and would also be grateful for manuscripts that represent concluding or additional parts of ongoing, unfinished monographs.

**2 Subscriptions for 2017** were considered due on 1st January, 2017, and will entitle subscribers to Volume 171. Individual subscriptions are £35.00. Institutional subscriptions are £135.00, though if paid through an agency are £280.00. The Student rate remains at half the individual rate, £17.50. There is a surcharge of £1.50 when subscriptions are paid through PayPal.

Subscriptions can be sent to Dr. T. McCormick, The Treasurer, c/o British Geological Survey, Environmental Science Centre, Nicker Hill, Keyworth, Nottingham, NG12 5GG, United Kingdom (cheques, drawn on a UK bank, should be made payable to 'The Palaeontographical Society'). A subscription renewal form for 2017 (Volume 171) was enclosed with the mailing of Volume 170. If a replacement is required please download one from the Society website or contact the Treasurer.

The Society also accepts credit card payments for subscriptions and renewals via PayPal. If you wish to pay via this method please follow the instructions on the 2017 subscriptions form or visit the Society's website ([www.palaeosoc.org](http://www.palaeosoc.org)).

The Treasurer maintains the membership list and prepares the distribution list for each volume of monographs. Any enquiries concerning subscriptions or methods of payment should be directed to the Treasurer. His e-mail address is [tmcm@bgs.ac.uk](mailto:tmcm@bgs.ac.uk).

**3 The Society's Web Site ([www.palaeosoc.org](http://www.palaeosoc.org)) and Online Shop** continue to be an effective tool for posting new information on the Society (including progress reports for Palaeontographical Society Research Grants and other announcements), and for selling Society publications and enabling credit card payments for membership renewals. To obtain the member's discount from the online shop, a password is required. If you have not already registered your e-mail address with us and have yet to be issued with your personal password, please contact Web manager, Dr. A. Butcher ([anthony.butcher@port.ac.uk](mailto:anthony.butcher@port.ac.uk)), who will be pleased to issue you with one.

**4 Research funds:** The Palaeontographical Society Research Fund scheme was renamed the Richard Owen Research Fund in 2012. It aims to provide awards in the region of £500 for research on the UK fossil flora and fauna. Please see the website or contact the Secretary ([Steve.Donovan@naturalis.nl](mailto:Steve.Donovan@naturalis.nl)) for further information. The next closing date for applications is 28<sup>th</sup> February, 2017, and the successful applicant(s) will be announced at the AGM. Two grants were awarded in 2016:

Stephen K. Donovan (Naturalis Biodiversity Center, Leiden). Systematics of British Devonian crinoids in the collections of the British Geological Survey, Keyworth

Elisa Panciroli (University of Edinburgh). Middle Jurassic mammals from Skye.

Reports on these projects appear below.

**5 The Edward Forbes Prize:** The Society invites applications for the Edward Forbes Prize, which aims to recognize outstanding contributions by early career researchers in the field of taxonomic and systematic palaeontology (encompassing invertebrates, vertebrates, palaeobotany and microfossils). The Prize, which is to be awarded for publication excellence, comprises £250 and a one-year membership of the Society. The Prize will be awarded at the Society's Annual General Meeting each year. Full criteria for eligibility are posted on the Society's website.

We invite submissions for the 2017 award on the basis of any eligible article that was published in 2016. Applications should be addressed to the Secretary (Steve.Donovan@naturalis.nl) and must be received by the closing date of 28<sup>th</sup> February, 2016. The decision of the Prize Committee will be announced at the Society's AGM. The successful applicant will be informed in advance, so that they may attend the meeting if they wish.

**6 The Palaeontographical Society Medal:** Council has instigated a biannual award, the Palaeontographical Society Medal, which is intended to recognize a sustained and important series of contributions to taxonomic and systematic palaeontology. In particular, the Society seeks to honour those who have made an exceptional contribution to the micropalaeontology, palaeobotany, or invertebrate or vertebrate palaeontology of the British Isles, including those who have applied these data to solve problems of palaeogeography, palaeoecology and phylogeny. Recipients will not be limited to palaeontologists based in the British Isles, although it is anticipated that this region will form an important element of their research programme. The second award was made at the Annual General Meeting in April 2016 to Dr. Adrian W.A. Rushton (Natural History Museum, London).

It is anticipated that the third Palaeontographical Society Medal will be awarded in April 2018. The Council of the Society welcomes nominations and suggestions for future recipients of the Medal. Please contact the Secretary (Steve.Donovan@naturalis.nl).

**7 Discount rate on backstock for Members and Authors:** Individual Members are reminded that they are entitled to a discount of at least 50% on the purchase of one copy of any backstock and reprinted editions where available. This discount is available via the website when using your member login details. Authors are entitled to receive a 75% discount on backparts of monographs they contributed to. If authors wish to purchase backstock they should contact the Treasurer (tmcm@bgs.ac.uk).

Student members are now eligible for a 75% discount off the cover price of monographs published by the Society (see advertisement herein). The discount is not applied automatically in the online store, however, so please contact the Marketing Manager, Emma Bernard at E.Bernard@nhm.ac.uk, if you are interested in making any purchases.

**8 Society Archives:** Members of the Society wishing to view the archives of the Palaeontographical Society should write to the Secretary (Steve.Donovan@naturalis.nl).

**9 Annual Address:** The Eleventh Annual Address will be presented by Professor Jenny Clack of the University of Cambridge.

**10 Meetings:** The Lyell Meeting, supported through the Joint Committee for Palaeontology of which the Palaeontographical Society is a member, will be held in the Meeting Room of the Geological Society (Burlington House) on Tuesday, 7<sup>th</sup> March, 2016. This year's Lyell Meeting is being convened by Mike Rogerson and Daniel Parsons (University of Hull), Concha Arenas Abad (University of Zaragoza, Spain), Gernot Arp (University of Göttingen, Germany) and Jaco Baas (University of Bangor), and is entitled: "Sticking Together - Microbes and their role in forming Sediments". Note that entrance to the Lyell Meeting is no longer free to members of the Palaeontographical Society.

**11 Nominations for Council:** The Palaeontographical Society is open for nominations to council for 2017–2020. The council meets twice a year and is responsible for overseeing the running of the Society and for providing guidance on how it can best serve its membership's needs. Any member of the Society can nominate a candidate and names will be considered at the AGM. Members should nominate a candidate by sending an e-mail to the Secretary (Steve.Donovan@naturalis.nl) together with a statement from the candidate that he/she is willing to be considered.

**12 New members:** We extend a warm welcome to the following recent new members of the Society: John W Adron; Luc Georges Bulot; Philip C Donoghue; Jane Francis; Dean Lomax; Judy A Massare; Lucy McCobb; Benjamin Moon; Robert Sansom; and Brent Wilson.

S. K. Donovan  
Secretary  
January 2017

c/o Taxonomy and Systematic Group,  
Naturalis Biodiversity Center,  
Postbus 9517,  
2300 RA Leiden, THE NETHERLANDS.

## PALAEONTOGRAPHICAL SOCIETY RESEARCH FUND REPORTS

### Morphological assessment of exceptionally preserved three-dimensional scombroid (tunas and kin) fossils from the London Clay of Britain

Hermione T. BECKETT

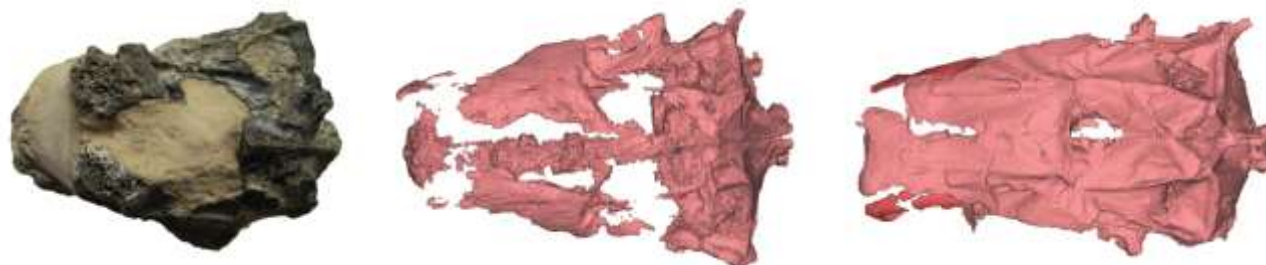
Department of Earth Sciences, University of Oxford, South Parks Road, Oxford OX1 3AN

E-mail: hermione.beckett@earth.ox.ac.uk

Scombroidei (tunas and their kin) is an ecologically and economically significant group of fishes characterized by exceptional anatomical innovations for efficient, high-speed swimming. Recent molecular work (Betancur-R. *et al.*, 2013; Miya *et al.*, 2013; Near *et al.*, 2013) has revealed that tunas are nested within a disparate assortment of marine fish groups not considered close relatives based on modern anatomical evidence. Collectively named Pelagia, these species show a range of bodyplans and lifestyles, but all inhabit the open ocean. Fossils (Patterson, 1993) and some molecular clock studies (Miya *et al.*, 2013) indicate the group originated during the early Paleogene, when pelagic environments were recovering from the Cretaceous-Paleogene (K-Pg) extinction (Friedman, 2010). This pattern of seemingly rapid divergence within a single clade shows many of the classic features associated with adaptive radiations, of which ecological replacement is a postulated driver (Schluter, 2000). Pelagia provides an opportunity to test this hypothesis by investigating: 1) the timing of evolutionary divergences within the group; and 2) the timing in shifts in constraints or rates of phenotypic evolution in the group's history.

The focus of my research thus far has been early Paleocene scombrids. Scombridae are the most well represented family of Pelagia in the fossil record. As they represent early examples of modern lineages, these fossils might provide important information about relationships among extant species, as well as potentially representing significant calibration points for the fish Tree of Life. However, existing work on extinct scombrids has had limited impact due to the nature of available fossils. Most fossil tunas and mackerels are preserved as flattened fossils that preserve overall body form, but few specific details (e.g., Monsch, 2006). My research exploits remarkable three-dimensional material of early scombrids from the London Clay of southern England. These specimens do not preserve overall body form, but provide exceptional preservation of the skull and its many complex and character-rich components. Three-dimensional material is also an excellent candidate for micro-CT scanning, which reveals hidden details internal anatomy. This is particularly relevant, because internal features like gill arches and neurocrania make up around 25% of the characters in cladistic character matrices for modern scombrids and their kin (e.g., Gago, 1998). Despite their excellent preservation and external study by Woodward (1901), Casier (1966) and Monsch (2005), no published phylogenetic analysis includes London Clay scombrids or other fossil representatives of the group.

This grant has allowed me to study fossils from smaller collections in addition to those from the Natural History Museum (NHM), London. The Lapworth Museum (University of Birmingham) has some 3D material of Scombridae, it is largely fragmentary, but has some good examples of the braincases of *Eocoelopoma*, a genus which I am currently reassessing, with reference to *Microrhynchus* and *Landanichthys* (Fig. 1).



**Figure 1** – (left) *Eocoelopoma curvatum* BIRUG 72138, (middle) *Eocoelopoma curvatum* NHMUK PV P9455, (right) *Microrhynchus hopwoodi* NHMUK PV OR 36136.

The comparison of 3D fossils that are found in collections like at the Lapworth Museum to the holotypes and other material, often CT scanned, allows additional detail to be obtained. It is clear from micro-CT scanning and investigation of collections that there is a wide diversity of form in Scombridae. Of particular interest in the smaller collections are possible representatives of the lesser-known scombrids, like *Spyraenodus* or *Scombramphadon*, where we know of fragmentary examples or examples missing important elements like braincases.

Morphological assessment of London Clay scombrids is ongoing, but revealing new information about the taxonomy of these fossils. The study and morphological assessment of fossils is providing a basis for new characters for a wider morphological assessment of Pelagia. As part of this assessment I aim to complete and publish some descriptive morphological work on particularly important scombrid fossils. The wider morphological and molecular assessment of both extinct and extant taxa, and their evolutionary history is the aim of my wider Ph.D. I thank the Palaeontographical Society for providing financial support to allow me to visit collections to facilitate a reassessment of fossils as part of this project. I also thank my supervisors Matt Friedman and Zerina Johanson for their ongoing support. [2015 Owen Award]

#### REFERENCES

BETANCUR-R, R., BROUGHTON, R.E., WILEY, E. O., CARPENTER, K., LÓPEZ, J. A., LI, C. & ORTÍ, G. 2013. *PLoS currents*, 5.

- CASIER, E. 1966. *Faune ichthyologique du London Clay: Atlas*. Vol. 2. British Museum (Natural History), London.
- FRIEDMAN, M. 2010. *Proceedings of the Royal Society*, **B277**: 1675-1683.
- GAGO, F.J. 1998. *Contributions in Science, Natural History Museum of Los Angeles County*, **476**: 1-79.
- MIYA, M., FRIEDMAN, M., SATOH, T.P., TAKESHIMA, H., SADO, T. *et al.* 2013. *PLoS ONE*, **8** (9): e73535.
- MONSCH, K.A. 2005. *Transactions of the Royal Society of Edinburgh: Earth Sciences*, **95**: 445-489.
- MONSCH, K.A. 2006. *Palaeontology*, **49**: 873-888.
- NEAR, T.J., DORNBERG, A., EYTAN, R.I., KECK, B.P., SMITH, W.L., KUHN, K.L. & WAINWRIGHT, P.C. 2013. *Proceedings of the National Academy of Sciences*, **110**: 12738-12743.
- PATTERSON, C. 1993. In BENTON, M.J. (ed.), *The Fossil Record*, second edition, 621-656. Chapman & Hall, London.
- SCHLUTER, D. 2000. *The Ecology of Adaptive Radiation*. Oxford University Press, Oxford.
- WOODWARD, A.S. 1901. *Catalogue of the Fossil Fishes in the British Museum (Natural History)*. British Museum (Natural History), London.

## Systematics of British Devonian crinoids in the collections of the British Geological Survey, Keyworth

Stephen K. DONOVAN

Naturalis Biodiversity Center, Postbus 9517, 2300 RA Leiden, The Netherlands

E-mail: Steve.Donovan@naturalis.nl

The Reverend George Ferris Whidborne published the only comprehensive monograph of the marine fauna of the Devonian of south-west England (Whidborne, 1889-1907). Whidborne's descriptions were based on a number of sources, including the collections of the Museum of Comparative Geology, London, and the Torquay Museum; important private collections such as those of Arthur M. Champenowne (1839-1887), Robert Harris Valpy (1819-1904) and William Vicary (1811-1903); and his own specimens (now in the Sedgwick Museum).

After almost 120 years, the British Devonian crinoids are being revised. The first part of the revision is published (Donovan & Fearnhead, 2014). Part 2 of the monograph will rely on research visits to the collections of the Natural History Museum, London (BMNH); British Geological Survey, Geological Survey Museum, Keyworth (BGS GSM); Sedgwick Museum, Cambridge; Lapworth Museum of Geology, Birmingham; and about six small museums in south-west England. This will be supplemented by new fieldwork (in hand Dr. F.E. Fearnhead).

In 2016, my museum research has been concentrated at the BMNH and BGS GSM; this report concerns only the latter. This important collection contains many of Whidborne's type and figured specimens. This collection has already proved its relevance to this project and, on an earlier visit, led to the first paper on the British Lower Devonian crinoids (Donovan, 2012).

The principal purpose of researching the BGS GSM collections was to describe and photograph those specimens of cladid and disparid crinoids that had been documented by Whidborne, plus to classify as accurately as possible specimens that had previously been deemed unidentifiable. This work had a number of significant aspects. Most pertinently, few of Whidborne's specimens had ever been photographed despite been first illustrated in the 1890s, and the results of this research will supplement the many images in Donovan & Fearnhead (2014).

A number of the 'unidentifiable' specimens have now been assigned to at least genus or morphogenus. Part of the problem with these specimens is their poor preservation compared with, for example, the crinoids of the Wenlock at Dudley or many British Mississippian crinoid associations. Specimens allocated to morphogenera were columnals and pluricolumnals, originally collected because of their distinct morphology, but then ignored by systematists.

A Lower Devonian specimen, labelled *Platycrinus* and collected by Charles W. Peach (1800-1886) before 1850, was reidentified as the hexacrinitid monobathrid camerate *Oehlerticrinus* sp. nov. (Donovan & Fearnhead, revised and resubmitted). This is both the oldest and most complete hexacrinitid from the Devonian of the British Isles. Although it has been described as a new nominal species, its typically poor preservation leaves the detailed features of the cup sculpture and the pattern of arm branching uncertain.

## REFERENCES

- DONOVAN, S.K. 2012. *Proceedings of the Yorkshire Geological Society*, **59**: 115-120.
- DONOVAN, S.K. & FEARNHEAD, F.E. 2014. *Monograph of the Palaeontographical Society*, London **168** (643): 1-55+i-viii.
- DONOVAN, S.K. & FEARNHEAD, F.E. (revised and resubmitted). *PalZ*.
- WHIDBORNE, G.F. 1889-1907. *Monograph of the Palaeontographical Society*, London, **Volume 1**, part 1, **42** (202) [1889 for 1888], i-ii+1-46; part 2, **43** (207) [1890 for 1889], 47-154; part 3, **44** (211) [1891 for 1890], 155-250; part 4, **45** (215) [1892 for 1891], 251-344: **Volume 2**, part 1, **45** (216) [1892 for 1891], 1-56; part 2, **46** (221) [1892], 57-88; part 3, **47** (225) [1893], 89-160; part 4, **49** (233) [1895], 161-212; part 5, **61** (298) [1907], 213-222: **Volume 3**, part 1, **50** (238) [1896], 1-112; part 2, **51** (242) [1897], 113-178; part 3, **52** (247) [1898], 179-236; part 4, **61** (298) [1907], 237-247.

# The fossil mammal fauna of the Bathonian Kilmaluag Formation (Isle of Skye, Scotland): comparisons with other UK Bathonian mammal assemblages

Elsa PANCIROLI

National Museum of Scotland, Chambers Street, Edinburgh, EH1 1JF, and University of Edinburgh, Grant Institute, Edinburgh, EH9 3FE, Scotland

E-mail: elsa.panciroli@ed.ac.uk

The first Mesozoic mammals were identified from English Jurassic sedimentary rocks in the 1800s, since which time multiple English specimens have been uncovered (Owen, 1871; Evans & Milner, 1994; Keilan-Jaworowska *et al.*, 2004). Field work in the 1970s/80s on the Isle of Skye, Scotland, recovered the first Scottish Mesozoic mammal in the Bathonian rocks of the Kilmaluag Formation (Waldman & Savage, 1972). Identified as docodont and named *Borealestes serendipitus*, the holotype comprises one partial lower left mandible with four erupted molars, one unerupted molar and three premolars. A tritylodontid, *Stereognathus hebridicus*, was also described for the first time from a single tooth.

Two blocks of limestone known as 'Block A' and 'Block B' were cut from the Bathonian outcrops of the Kilmaluag Formation (Andrews, 1985) on Skye in the 1970s/1980s, each containing the remains of a Mesozoic mammal. The blocks were transported to the University of Bristol, but no publication was made. In the 1990s some of Bristol's fossil collection was bequeathed to the National Museum of Scotland (Edinburgh), including these two specimens. These Scottish specimens are among the best preserved Middle Jurassic mammal material outside China, the latter having only more recently yielded contemporaneous fossils. The three taxa already known from the Kilmaluag – *Borealestes serendipitus* (Waldman & Savage, 1972), *Stereognathus hebridicus* (Waldman & Savage, 1972), and *Palaeoxonodon ooliticus* (Close *et al.*, 2016) – comprise only teeth and jaws. This makes the completeness of Blocks A and B especially important, providing crucial information to inform our understanding of Mesozoic mammal locomotion and ecology.

Recent field work carried out in conjunction with colleagues from the University of Oxford and the National Museum of Scotland has recovered multiple new mammal specimens from the Kilmaluag, adding substantially to the faunal list at this site. Alongside the mammal fossils are more specimens of *Stereognathus hebridicus*, a tritylodontid cynodont. These close cousins of the true mammals lived alongside them throughout the Jurassic. The Kilmaluag Formation has yielded possibly the best preserved post-canines of this taxon in the UK.

The main goal of my Ph.D. is to describe the fossils in Blocks A and B. To this aim, I must collect osteological character data for phylogenetic analysis. I have also been compiling a detailed description of *Stereognathus*, using material from Skye as well as from multiple Bathonian sites in England. Collecting these data has required first hand examination of material held at various institutions, but principally the Natural History Museum (London) and the Oxford University Museum of Natural History. The Richard Owen Fund enabled me to make three trips from Edinburgh to both of these institutions to examine their Mesozoic mammal collections, spending several days familiarising myself with fossils from localities such as Kirtlington Cement Quarry and Watton Cliff.

To date, I have amassed a detailed database of photographs and notes on the mammal fossils from UK Bathonian sites. Work on the mammals in Blocks A and B is ongoing, but the data I have collected is providing vital comparative material. Regarding the tritylodontid *Stereognathus*, the species *S. hebridicus* was erected based only on size (Waldman & Savage, 1972). My work re-examining all known UK *Stereognathus ooliticus* (Charlesworth, 1854) and *S. hebridicus* material suggests that size is not a diagnostic character for this genus. I am currently in the final stages of preparing a manuscript for publication identifying new morphology for *Stereognathus* based on more complete specimens from Skye.

The Kilmaluag Formation on the Isle of Skye contributes to our knowledge of Mesozoic mammals, as well as the story of early mammal evolution in Scotland. The tritylodontid specimens augment our understanding of cynodont distribution and morphology, and the faunal diversity of the Middle Jurassic. My work on Kilmaluag Formation material will contribute towards a full systematic revision of British Middle Jurassic mammals at the end of my Ph.D., and revised faunal lists for mammals and their close relatives in the UK Bathonian.

## REFERENCES

- ANDREWS, J.E. 1985. *Journal of the Geological Society, London*, **142**: 1119-1137.
- CHARLESWORTH, E. 1854. *Report of the British Association for the Advancement of Science*, 80 pp.
- CLOSE, R.A., DAVIS, B.M., WALSH, S., WOLNIEWICZ, A.S., FRIEDMAN, M. & BENSON, R.B. 2016. *Palaeontology*, **59**: 155-169.
- EVANS, S.E. & MILNER, A.R. 1994. In FRASER, N.C. & SUES, H.D. (eds), *In the shadows of the dinosaurs – Early Mesozoic tetrapods*, Cambridge University Press, Cambridge, 303-321.
- KIELAN-JAWOROWSKA, Z., CIFELLI, R. L. & LUO, Z. 2004. *Mammals from the age of dinosaurs: origins evolution and structure*. Columbia University Press, New York, 630 pp.
- OWEN, R. 1871. *Monograph of the Paleontographical Society*, London, **24** (110): 1-vi + 1-115.
- WALDMAN, M. & SAVAGE, R.J.G. 1972. *Journal of the Geological Society, London*, **128**: 119-125.

CATALOGUE OF MONOGRAPHS  
PUBLISHED OR COMPLETED SINCE 2009

Volume 170 (for 2016) published November 2016 (£280.00)

646. **Smith, A.B.** British Jurassic regular echinoids, Part 2, Carinacea. 69-176, pls. 42-82, final part. £130.00.  
647. **Moon, B.J. & Kirton, A.M.** Ichthyosaurs of the British Middle and Upper Jurassic, Part 1, Ophthalmosaurus. 1-84, pls. 1-30. £150.00.

Volume 169 (for 2015) published November 2015 (£260.00)

644. **Smith, A.B.** British Jurassic regular echinoids, Part 1, Cidaroida, Echinothuroida, Aspidodiadematoidea and Pedinoidea. 1-67, pls. 1-41. £160.00.  
645. **Wright, C.W. & Kennedy, W.J.** The Ammonoidea of the Lower Chalk, Part 6. 404-459, pls. 125-145. £100.00.

Volume 168 (for 2014) published October 2014 (£260):

642. **Smith, A.S. & Benson, R.B.J.** Osteology of *Rhomaleosaurus thorntoni* (Sauropterygia: Rhomaleosauridae) from the Lower Jurassic (Toarcian) of Northamptonshire, England (Complete). 40 pp., pls 1-35. £125.00.  
643. **Donovan, S.K. & Fearnhead, F.E.** The British Devonian Crinoidea. Part 1, introduction and Camerata. 1-55, pls 1-15. £135.00 .

Volume 167 (for 2013) published March 2014 (£240):

640. **Mohibullah Mohibullah, Williams, M. & Zalasiewicz, J.** Late Ordovician ostracods of the Girvan District, south-west Scotland (Complete). 40 pp., pls 1-6. £25.00.  
641. **Copestake, P. & Johnson, B.** Lower Jurassic Foraminifera from the Llanbedr (Mochras Farm) Borehole, North Wales, UK (Complete). 403 pp., pls 1-21. £215.00.

Volume 166 (for 2012) published November 2012 (£240):

638. **Donovan, S.K., Widdison, R.E., Lewis, D.N. & Fearnhead, F.E.** The British Silurian Crinoidea, Part 3, addendum to Parts 1 and 2, Camerata and columnals. 135-259, pls 37-62, final part. £115.00.  
639. **Smith, A.B. & Wright, C.W.** British Cretaceous Echinoids, Part 9, Atelostomata, 2. Spatangoida (2). 635-754, pls 210-253, final part. £125.00.

Volume 165 (for 2011) published December 2011 (£230):

637. **Evans, D.H.** The Lower Ordovician cephalopod faunas of the Durness Group, north-west Scotland (Complete). 131 pp., pls 1-15. £140.00.  
636. **Lamsdell, J.C.** The eurypterid *Stoermeropterus conicus* from the Lower Silurian of the Pentland Hills, Scotland (Complete). 84 pp., pls 1-15. £90.00.

Volume 164 (for 2010) published December 2010. £230, complete.

635. **Donovan, S.K., Widdison, R.E., Lewis, D.N. & Fearnhead, F.E.** 2010. The British Silurian Crinoidea. Part 2, Addendum to Part 1 and Cladida. 47-133, pls 7-36. £105.00.  
634. **Hooker, J.J.** 2010. The mammal fauna of the early Eocene Blackheath Formation of Abbey Wood, London (Complete). 162 pp., pls 1-4. £125.00.

Volume 163 (for 2009) published December 2009. £210, complete:

633. **Edmunds, M.** 2009. A revision of the Lower Jurassic ammonite genus *Eoderoceras* Spath and its immediate descendants and other relatives (Complete). 89 pp., pls 1-40. £140.00.  
632. **Donovan, S. K., Lewis, D. N., Fearnhead, F. E. & Widdison, R. E.** 2009. The British Silurian Crinoidea. Part 1, Introduction and Disparida. 1-45, pls 1-6. £70.00.

PALAEONTOGRAPHICAL SOCIETY

Established 1847

Registered Charity No. 228372

ANNUAL REPORT FOR 2015-2016

Volume 169 for 2015 appeared in October.

The Palaeontographical Society exists for the purpose of figuring and describing British fossils. It publishes monographs to this end; these may be restricted geographically, stratigraphically or palaeontologically. Intending contributors may obtain a copy of the Society's 'Notes for Authors' from the Secretary, Editor or directly from the Society website ([www.palaeosoc.org](http://www.palaeosoc.org)).

An Annual Volume is published, consisting of a number of complete monographs or individual part monographs.

Each person subscribing £35.00, each *bona fide* student subscribing half that amount, and each Institution subscribing £135.00 (£280.00 via an agency), is considered a Member of the Society and is entitled to the volume issued for the year to which the subscription relates. Subscriptions are considered due on 1<sup>st</sup> January of each year. Applications for membership (and renewals) can be completed online ([www.palaeosoc.org](http://www.palaeosoc.org)) or via the Treasurer ([tmcm@bgs.ac.uk](mailto:tmcm@bgs.ac.uk)).

Many monographs are not now available in original print, but some out-of-print monographs have been reprinted, most recently by the Cambridge University Press. Full details of the reprinted publications may be obtained from the Society website. Many monographs are also available in micro-edition (5x3) as diazo or as silver halide microfiche from Microform Ltd., Main Street, East Ardsley, Wakefield, Yorkshire WF3 2JN.

Published volumes, monographs or individual parts may be obtained through the Society website ([www.palaeosoc.org](http://www.palaeosoc.org)). Members of the Society are entitled to a minimum 50% discount on all publications. Published prices do not include postage and packing.

Thanks to the generosity of the publishers, a set of volumes up to 1972 of the *Treatise of Invertebrate Paleontology*, editor R.C. Moore, is available for Members' reference in the D.M.S. Watson Library, University College, London.

**Secretary:** Dr. Stephen K. Donovan, Taxonomy & Systematics Group, Naturalis Biodiversity Center, Postbus 9517, 2300 RA Leiden, The Netherlands.

January 2017

# REPORT OF THE COUNCIL

for the year ended 31<sup>st</sup> December 2015

COUNCIL 2016–2017

---

Read and adopted at the 169<sup>th</sup> Annual General Meeting held in the Neil Chalmers Seminar Room of the Natural History Museum on the afternoon of 13<sup>th</sup> April 2016, Professor Paul M. Barrett, The President, in the Chair.

---

Volume 169 (for 2015) was published in November 2015.

**Vol. 169, 2015 (£260.00)**

644. *British Jurassic regular echinoids, Part 1, Cidaroida, Echinothuroidea, Aspidodiadematoidea and Pedinoidea*, by A.B. Smith (pp. 1-67, plates 1-41. £160.00).
645. *The Ammonoidea of the Lower Chalk, Part 6*, by C.W. Wright & W.J. Kennedy (pp. 404-459, plates 125-145. £100.00).

Three Richard Owen Research Fund awards were made in 2014, to Fiona E. Fearnhead (Natural History Museum, London) to study the British Devonian Crinoidea, to Davide Foffa (University of Edinburgh) for his work on thalattosuchian crocodylomorphs from the Kimmeridge Clay Formation and Hermione Beckett (University of Oxford) for a morphological assessment of exceptionally preserved three-dimensional scombroid (tunas and kin) fossils from the London Clay of Britain. The Edward Forbes Prize was not awarded in 2015.

The Society provided support for the Lyell Meeting, entitled “Mud, glorious mud, and why it is important for the fossil record”, at Burlington House in March.

During the year, £5612.00 was received from the sales of back-stock held by the Society.

The balance shown in the Statement of Accounts stands at £76,596.75. The Income and Expenditure Account for 2015 is annexed.

At the Annual General Meeting, held on Wednesday, 15<sup>th</sup> April, 2015, Dr D. Loydell retired as Vice-President, Dr B.M. Cox retired as Senior Editor, and Drs T. Dunkley-Jones and M.J. Simms retired as Members of Council. Dr B.M. Cox was elected as new Vice-President. Dr P.R. Crowther was elected as new Editor. Drs N. Ainsworth and J.P. Botting were elected as new Members of Council. Dr Y. Candela was re-elected as an Editor. Dr T. McCormick was re-elected as Treasurer. Ms E. Bernard was re-elected as Marketing Manager. Professor S.K. Donovan was re-elected as Secretary.

Following the Annual General Meeting, held on Wednesday, 13<sup>th</sup> April 2016, Dr. M. Munt retired as Vice-President. Professor J. Francis was elected as a new Vice-President. Drs Y. Candela and P.R. Crowther were re-elected as Editors, Dr T. McCormick was re-elected as Treasurer and Dr. S.K. Donovan was re-elected as Secretary. Professor S.E. Evans and P. Kenrick retired from Council. Drs L. McCobb and R. Sansom were elected as new members of Council.

<b>President</b>	Professor P.M. Barrett
<b>Vice-Presidents</b>	Dr. B.M. Cox and Professor J. Francis
<b>Treasurer</b>	Dr T. McCormick
<b>Secretary</b>	Professor S.K. Donovan
<b>Editors</b>	Dr Y. Candela and Dr. P.R. Crowther
<b>Marketing Manager</b>	Ms E. Bernard
<b>Web manager</b>	Dr. A. Butcher
<b>Other Members</b>	Dr. N. Ainsworth, Dr. J.P. Botting, Dr. Fiona E. Fearnhead, Dr. L. McCobb, Dr. R. Sansom, Mr. D.J. Ward.

## **Independent Examiner's report to the Trustees of the Palaeontographical Society**

I report on the accounts of the Palaeontographical Society for the year ending 31 December 2015.

### **Respective responsibilities of trustees and examiner**

The charity's trustees are responsible for the preparation of the accounts. The charity's trustees consider that an audit is not required for this year under section 144 of the Charities Act 2011 (the Charities Act) and that an independent examination is needed.

It is my responsibility to:

- examine the accounts under section 145 of the Charities Act,
- to follow the procedures laid down in the general Directions given by the Charity Commission under section 145(5)(b) of the Charities Act; and
- to state whether particular matters have come to my attention.

### **Basis of independent examiner's statement**

My examination was carried out in accordance with general Directions given by the Charity Commission. An examination includes a review of the accounting records kept by the charity and a comparison of the accounts presented with those records. It also includes consideration of any unusual items or disclosures in the accounts, and seeking explanations from the trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit, and consequently, no opinion is given as to whether the accounts present a 'true and fair view' and the report is limited to those matters set out in the statement below.

### **Independent examiner's statement**

In connection with my examination, no matter has come to my attention

(1) which gives me reasonable cause to believe that, in any material respect, the requirements:

- to keep accounting records in accordance with section 130 of the Charities Act; and
- to prepare accounts which accord with the accounting records and comply with the accounting requirements of the Charities Act

have not been met; or

(2) to which, in my opinion, attention should be drawn in order to enable a proper understanding of the accounts to be reached.



**Name:** Dr Stewart G. Molyneux

**Address:** British Geological Survey, Keyworth, Nottingham NG12 5GG, U.K.

**Date:** 8 April 2016



