

Notice of Annual General Meeting and Annual Address

The 171th Annual General Meeting will be held in the Flett Lecture Theatre of the Natural History Museum, London, SW7 5BD, on Wednesday, 18th April, 2018, at 4.00 pm. The Annual Report of Council will be presented, along with Income and Expenditure Accounts for the year ended 31st December, 2017, 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 Twelfth Annual Lecture, to be given by Professor Paul M. Barrett (The Natural History Museum, London). 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 34

1. Publications: Volume 171 was published in November 2017.

Vol. 171, 2017 (£280.00)

648. The Ammonoidea of the Lower Chalk, Part 7, by C.W. Wright & J. Kennedy (pp. 461-561, with Title-page, Contents and Index, Part 7 - final part. £175.00).
649. The Early Jurassic Bivalvia from the Hettangian and Lower Sinemurian of south-west Britain, Part 2, by P. Hodges (pp. 65-111, plates 7-10. £105.00).

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 2018 were considered due on 1st January, 2018, and will entitle subscribers to Volume 172. Individual subscriptions are £35.00. The Student rate remains at half the individual rate, £17.50. There is a surcharge of £1.50 when subscriptions are paid through PayPal.

The Palaeontological Society no longer offer Institutional or Agency rates. Institutions will now subscribe through Taylor & Francis at <https://www.taylorandfrancis-renewals.informa.com/info.html>.

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 2018 (Volume 172) was enclosed with the mailing of Volume 171. 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 2018 subscriptions form or visit the Society's website (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 (Dr Tim McCormick). His e-mail address is tmcm@bgs.ac.uk.

3. The Society's Web Site (www.palaeosoc.org) continues to be an effective tool for posting new information on the Society (including Members of Council, progress reports for Palaeontographical Society Research Grants and other announcements). The Society is also now on Facebook, and can be found through the Palaeontological Society website.

The Palaeontological Society's online shop has now been closed. There will, however, be a new Taylor & Francis online shop and details of this, and how to obtain member discounts (see also Point 7), will be circulated in the near future.

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 (Dr Nigel R. Ainsworth at nigelainsworth@btinternet.com) for further information. The next closing date for applications is 28th February, 2018, and the successful applicant(s) will be announced at the AGM. Two grants were awarded in 2017:

Fiona E. Fearnhead (The Natural History Museum, London). Devonian crinoids of the Plymouth area.

Claire Dobson (University of Oxford). Computer tomography of stem teleosts.

A report on Claire Dobson's project appears 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. The Edward Forbes Prize was not awarded in 2017.

We invite submissions for the 2018 award on the basis of any eligible article that was published in 2017. Applications should be addressed to the Secretary (nigelainsworth@btinternet.com) and must be received by the closing date of 28th February, 2018. 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, 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 third award will be made at the Annual General Meeting in April 2018 to Dr Robert M. Owens (National Museum of Wales, Cardiff).

The Council of the Society welcomes nominations and suggestions for future recipients of the Medal. Please contact the Secretary (nigelainsworth@btinternet.com).

7. Discount rate on books: There is a 30% discount on books for all Palaeontological Society Members for all Routledge, CRC Press, and Taylor & Francis books.

To gain the discount, visit either www.crcpress.com or www.routledge.com, select the titles you would like to purchase, and then enter SOC18 into the promotional code box provided during checkout. This Voucher will expire on the 31st December 2018.

8 Society Archives: Members of the Society wishing to view the archives of the Palaeontographical Society should write to the Secretary (nigelainsworth@btinternet.com).

9 Annual Address: The subject of the Twelfth Annual Address is "The Humble Origins of Terrible Lizards". This year's speaker is the outgoing President, Professor Paul M. Barrett of The Natural History Museum, London.

Dinosaurs were the preeminent terrestrial vertebrates for tens of millions of years. Even now 11,000 dinosaur species – the avian dinosaurs – live in environments spanning the globe, from ice caps to deserts, in vast numbers. Although Mesozoic dinosaurs have been studied extensively, and their abundant fossil material has been subjected to extensive scrutiny, many aspects of their evolutionary history and biology remain mysterious. In particular, both the origin of dinosaurs and the factors underpinning their rise to ecological dominance have been obscure, due to a dearth of early dinosaur specimens, uncertainties in dating and uneven geographical sampling. However, recent finds are starting to untangle their early evolutionary history. Dinosaurs arose from a group of rare, small and seemingly insignificant reptiles that lived in southwestern Pangaea during the Middle Triassic. New specimens, found in the field and in museum cabinets, and the application of new anatomical and geochronological datasets are now allowing us to unravel part of this story. These new species help to show how the unique body plan of dinosaurs was assembled and new analyses have started to question long-held assumptions about fundamental splits within their family tree.

10. Change to the Publication of the Monographs: The Palaeontological Society has self-published the monograph series since its inception, but in order to broaden their distribution and to ensure the continued financial health of the Society, the Society has entered into a new partnership with Taylor & Francis, which begins in 2018. Taylor & Francis will print and distribute the monographs, but the Society will retain copyright and editorial control over content. The resulting product will look essentially the same, but will also be available in PDF format, as well as print. Members will receive a print copy by default and access to the monographs via Taylor & Francis' online platform. In addition, we will be increasing the numbers of issues from two to three each calendar year. An earlier agreement regarding the reprinting of out-of-print monographs, which was conducted in conjunction with Cambridge University Press, has been terminated.

Monographs of the Palaeontological Society are located on the Taylor & Francis website at <http://www.tandfonline.com/toc/tmps20/current>.

11. Meetings: The Lyell Meeting, which has been 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 Wednesday, 7th March, 2018. This year's Lyell Meeting is being convened by Professor Paul Wignall (University of Leeds) and Dr David Bond (University of Hull), and is entitled: "Mass extinctions – understanding the world's worst crises". Note that entrance to the Lyell Meeting is no longer free to members of the Palaeontographical Society, but a reduced rate applies.

12. Nominations for Council: The Palaeontographical Society is open for nominations to serve on Council for 2018–2021. 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 the needs of the membership. Any member of the Society can nominate a candidate and names will be considered at the AGM. Members can nominate a candidate by sending an e-mail to the Secretary (nigelainsworth@btinternet.com) together with a statement from the candidate that he/she is willing to be considered. A proposer and seconder are required, who must be current members of the Society.

13. New members: We extend a warm welcome to the following recent new members of the Society: Jennifer A Clack; Bjørn Funke; Judy A Massare; Robert B Stokes; Stephen Vidovic; David Ward and Brent Wilson.

N.R Ainsworth
Secretary
January 2018

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Hertfordshire,
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PALAEONTOGRAPHICAL SOCIETY RESEARCH FUND REPORT

Investigating the inter-relationships of stem-teleosts using Computed Tomography (CT) scanning

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Pachycormids are a clade of stem teleosts known from Mesozoic marine deposits, ranging in age from the Toarcian to the Maastrichtian (Arratia 2004; Liston 2006; Friedman *et al.* 2010; Wretman *et al.* 2016). They also have good fossil record, with well-preserved examples known from *Lagerstätten* including the Posidonia Shale (Lower Jurassic; Littke *et al.* 1991), Strawberry Bank (Lower Jurassic; Williams *et al.* 2015), the Oxford Clay (Upper Jurassic; Martill 1986), the Solnhofen Limestone (Upper Jurassic; Barthel *et al.* 1990), and the Smoky Hill Chalk (Upper Cretaceous; Hattin 1982). Despite an abundance of excellent material and their critical phylogenetic position, pachycormids have received limited detailed treatment, and the anatomy of most members remains poorly known.

My project investigates pachycormid anatomy using CT-scanning in order to better understand their evolution and ecology. In the last year, I have studied the morphology and ecology of *Martillichthys renwickae* (NHMUK PV P.61563), a large, toothless suspension-feeding pachycormid from the Callovian Oxford Clay. It is a close relative of *Leedsichthys* (Woodward 1895), the largest fish to have ever lived. Previous descriptions of giant suspension-feeding pachycormids have been made mostly on the basis of fragmented or disarticulated specimens (e.g. Liston 2006, 2008; Friedman *et al.* 2010). This specimen of *Martillichthys* represents the most complete example of an edentulous pachycormid skull, meaning that the structures present can be studied in their true anatomical context.

Following CT-scanning, I have made several trips to the Natural History Museum, London in order to examine external morphology of the specimen, and compare these observations to what can be viewed internally from the scan. The result has been a comprehensive, revised description of *Martillichthys*, an updated diagnosis, and new characters for use in phylogenetic analyses. Currently, the manuscript for this project is close to completion and will provide a model by which the fragmented remains of other edentulous pachycormids can be better understood. It is also hoped that this will contribute to elucidating the relationships of these taxa.

During the next 6 months, I plan to repeat these methods to study the carnivorous pachycormids and describe their cranial anatomy using CT-scanning. This project will focus on describing exceptionally well-preserved, three-dimensional specimen of *Pachycormus macropterus* from Strawberry Bank, Dorset. I will also analyse comparative material from museums and collections across the UK, including London, Peterborough, Bristol, Bath, Whitby and Edinburgh. Analysing many different specimens will help to build a detailed description of the anatomical characters of *Pachycormus*. Characters from this description can then be used to investigate the interrelationships of pachycormids. The description will also provide another model for analysing poorly preserved specimens of other taxa, and better understand the ecology and evolution of these enigmatic stem teleosts.

I thank the Palaeontographical Society for awarding me the Richard Owen Research Fund to help fund this project. I would also like to thank Emma Bernard (NHM Earth Sciences) for access to the fossil fish collection, and Farah Ahmed and Amin Garbout (NHM Image and Analysis Centre) for access to the CT-scanning facilities.

REFERENCES

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CATALOGUE OF MONOGRAPHS
PUBLISHED OR COMPLETED SINCE 2010

Volume 171 (for 2017) published November 2017 (£280.00):

648. **Wright, C.W. & Kennedy, J.** The Ammonoidea of the Lower Chalk, Part 7, final part. £175.00.
649. **Hodges, P.** The Early Jurassic Bivalvia from the Hettangian and Lower Sinemurian of south-west Britain, Part 2. 65-111, pls. 7-10. £105.00.

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, Echinothuroidea, 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 Dumess 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.

PALAEONTOGRAPHICAL SOCIETY
Established 1847
Registered Charity No. 228372

ANNUAL REPORT FOR 2016-2017

Volume 170 for 2016 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).

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, 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 1st January of each year. Applications for membership (and renewals) can be completed online (www.palaeosoc.org) or via the Treasurer (tmcm@bgs.ac.uk).

Many monographs are not now available in original print. Taylor & Francis will be creating a full digital archive of the Monographs in the near future. 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.

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 Nigel R. Ainsworth, 39 De Tany Court, St. Albans, Hertfordshire AL1 1TU, U.K.

January 2018

REPORT OF THE COUNCIL for the year ended 31st December 2016

Read and adopted at the 170th Annual General Meeting held in the Flett Lecture Theatre of the Natural History Museum, London, on the afternoon of 19th April 2017, Professor Paul M. Barrett, The President, in the Chair.

Volume 170 (for 2016) 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 second Palaeontographical Society Medal was awarded to Dr Adrian W.A. Rushton (formerly of the BGS, now a Scientific Associate of the Natural History Museum). Two Richard Owen Research Fund awards were made in 2016, to Stephen K. Donovan (Naturalis Biodiversity Center, Leiden) on the systematics of the British Devonian Crinoidea, and Elisa Panciroli (University of Edinburgh) on the Middle Jurassic mammals from Skye. The Edward Forbes Prize was not awarded in 2016.

The Society provided support for the Lyell Meeting, entitled “Palaeoinformatics: Synthesising data from the past to illuminate the future”, at Burlington House in March.

During the year, £5092.11 was received from the sales of back-stock held by the Society.

The balance shown in the Statement of Accounts stands at £70405.97. The Income and Expenditure Account for 2016 is annexed.

At the Annual General Meeting, held on Wednesday, 13th April, 2016, Dr M. Munt retired as Vice-President, and Professors S.E. Evans and P. Kenrick retired as Members of Council. Professor J. Francis was elected as a new Vice-President. Drs L. McCobb and R. Sansom were elected as new Members of Council. Drs Y. Candela and P. Crowther were re-elected as Editors. Dr T. McCormick was re-elected as Treasurer. Ms E. Bernard was re-elected as Marketing Manager, while Professor S.K. Donovan was re-elected as Secretary.

Following the Annual General Meeting, held on Wednesday, 19th April 2017, Dr B.M. Cox retired as Vice-President. Professor S.K. Donovan 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, Dr A. Butcher was re-elected as Web Manager, while Ms E. Bernard was re-elected as Marketing Manager. Professor S.K. Donovan retired as Secretary. Dr N.R. Ainsworth was elected as the new Secretary. Dr F.E. Fearnhead and Mr D.J. Ward retired from Council. Professor J. Clack, Dr B. Moon and Mr S. Wills were elected as new members of Council.

President
Vice-Presidents

Professor P.M. Barrett
Professor J. Francis and Professor S.K. Donovan

Treasurer

Dr T. McCormick

Secretary

Dr N.R. Ainsworth

Editors

Dr Y. Candela and Dr P.R. Crowther

Marketing Manager

Ms E. Bernard

Web manager

Dr A. Butcher

Other Members

Dr J.P. Botting, Professor J. Clack, Dr L. McCobb, Dr B. Moon, Dr R. Sansom, Mr S. Wills