CONTENTS

PREFACE

Mammal assemblages in Boonanarring Nature Reserve, Dandaragan Plateau, Western Australia from 1986 and 2012
T L Moore, A H Burbridge, T Sonneman & B A Wilson  

Environmental characteristics of ephemeral rock pools explain local abundances of the clam shrimp Paralimnadia badia (Brachiopoda Spinicaudata: Limnadiidae)
A Calabrese, C McCullough, B Knott (deceased) & S C Weeks 

Chronostratigraphic context for artefact-bearing palaeosols in late Pleistocene Tamala Limestone, Rottnest Island, Western Australia
I Ward, T J Pietsch, E J Rhodes, G H Miller, J Hellstrom & C E Dortch 

Male sterility in Corymbia calophylla (marri)
J McComb
The Royal Society of Western Australia

To promote and foster science in Western Australia

Patron
Her Majesty the Queen

Vice-Patrons
Her Excellency the Honourable Kerry Sanderson AO
Governor of Western Australia
Professor Lyn Beazley AO FTSE MA PhD

COUNCIL 2015–2017

President Kate Triajstic
Immediate Past President Hugo Bekle
Vice-President Bill Loneragan
Vice-President Chris Florides
Hon Treasurer Greg Benjamin
Hon Secretary Kelly Freeman
Hon Editor Patrick Armstrong

Councillors
Elizabeth Re
Charlotte Oskam
David Haig
Brian Devine

EDITORIAL BOARD 2015–2016

Editor-in-chief
Patrick Armstrong, University of Western Australia

Editorial Assistant
Desireé Moon

Board Members
Hugo Bekle, Enviro Systems
Alex Bevan, Western Australian Museum

Rob Davis, Edith Cowan University
Chris Florides, Murdoch University
David Haig, University of Western Australia
Philip Ladd, Murdoch University
Kate Trinajstic, Curtin University
Mike Van Keulen, Murdoch University

The Royal Society of Western Australia was founded in 1914. The Society promotes exchange among scientists from all fields in Western Australia through the publication of a journal, monthly meetings where interesting talks are presented by local or visiting scientists, and occasional symposia or excursions on topics of current importance. Members and guests are encouraged to attend meetings on the third Monday of every month (March–November) at 7 pm, Kings Park Board offices, Kings Park, West Perth, WA 6005, or as advertised, in the RSWA Proceedings, Diary of Events, or online.

Individual membership subscriptions for the 2016-2017 financial year are $95 for ordinary Members, $45 for Student Members and $45 for Associate Members. For Library, company and institution subscriptions see the Society’s website http://www.rswa.org.au. Prices include GST. For membership forms, contact the Membership Secretary, PO Box 7026, Karawara, Western Australia 6152, or visit the website http://www.rswa.org.au.

The Journal of the Royal Society of Western Australia was first published in 1914 and circulates widely within Australia and throughout the world. The journal has a large number of personal subscribers, many of whom are scientists working in Western Australia.

Cover design: The images symbolise the diversity of sciences embraced by the Royal Society of Western Australia. Counter-clockwise from the top they are: Wolfe Creek Meteorite Crater; the world-famous stromatolites at Shark Bay; the numbat (Myrmecobius fasciatus), Mangles' kangaroo paw (Anigozanthos manglesii) and Gogo fish (Mcnamaraspis kaprios), which are the faunal, floral and fossil emblems of Western Australia, respectively; a zircon grain (Western Australian rocks have yielded the oldest zircon dates in the world, up to 4.37 Ga); and the black swan (Cygnus atratus) that appears on the logos of the Royal Society and the coat of arms of the Government of Western Australia.
Instructions to Authors

The Journal of the Royal Society of Western Australia publishes peer-reviewed articles dealing with research in all aspects of the natural and physical sciences of relevance to Western Australia. Research papers reporting original research should not normally exceed 5000 words; review papers should not exceed 10 000 words. Short papers/Research notes not exceeding 2000 words will be given priority in publication. Discussions and Replies of recently published papers in the journal should not exceed 1000 words. Since June 2016 the journal has been published entirely online.

Authors are encouraged to submit a list of potential reviewers in Australia or overseas, but choice of reviewers is at the discretion of the Editor. Submission of a paper is taken to mean that the results have not been published or are not being considered for publication elsewhere. Authors are solely responsible for the accuracy of all information in their papers, and for any opinions they express. Papers accepted for publication become copyright of the Royal Society of Western Australia, unless Crown Copyright in claimed, and the corresponding author will be required to assent to the transfer of copyright, signing of behalf of all co-authors in the case of multi-authored papers. A pdf of the published paper is provided free to corresponding authors and their coauthors.

Manuscripts should be submitted as pdfs or Word (doc or docx) files to the Editor in the following format: Title page; Abstract; Key words; Text; References; Figure captions; Tables; Appendices (if any); and Figures.

Headings: Authors may use up to four levels of headings, all of which are left justified: first-order headings are bold capitals; second-order headings are bold upper and lower case; third-order headings are capitals; and fourth- order headings are upper and lower case. All pages should be numbered consecutively, including those carrying tables and captions to figures.

Illustrations: All illustrations, both line drawings and photographs, are to be numbered as figures (not plates) in sequence, and each must be referred to in the text in consecutive order. In composite figures made up of several photographs or diagrams, each part should be designated by a lower-case letter (e.g. Figure 2b).

Authors are advised to use the most recent issues of the Journal as a guide to the general format and bibliographic style of the manuscript, and to conform as closely as possible to the style in preparing the manuscript. The metric system (SI units) must be used. Taxonomic papers must follow the appropriate International Code of Nomenclature, and geological papers must adhere to the International Stratigraphic Guide. Spelling should follow the Concise Oxford Dictionary. Following the review process, authors should revise their papers must follow the appropriate International Code of Nomenclature, and geological papers must adhere to the International Stratigraphic Guide. Spelling should follow the Concise Oxford Dictionary. Following the review process, authors should revise their papers.

The Title should begin with a keyword.

The Abstract should not be an expanded title, but should include the main substance of the paper in a condensed form.

Six to ten Keywords should be provided.

The Text should be organised under the following headings: Introduction, which should contain the reasons for doing the work and essential background material, but not the results or conclusions; Methods (if applicable), which should provide sufficient details of techniques to allow them to be repeated; Results, which should not include material more appropriate to the discussion; Discussion, which should emphasise the significance of the results and place them in the context of related work; Conclusions, which summarise the main findings of the paper; Acknowledgements, which should acknowledge any appropriate assistance from colleagues and also the journal reviewers.

References must be set out as follows, with journal titles spelled out in full.

Paper:

Book:

Chapter in Book:

High-quality Illustrations are required, no larger than 300 mm x 400 mm, with sans serif lettering suitable for reduction to appropriate publication size (81, 115 or 170 mm wide). Scale must be indicated on illustrations. Photographs must be good quality prints, not exceeding 170 mm x 252 mm. Figures should also be provided as high-resolution (300 dpi) tif, jpg or eps files to ensure high-quality reproduction.

Extensive sets of data, such as large Tables or Appendices, may be classed as Supplementary Papers and not included with the paper but lodged with the Society’s Library (held in the Western Australian Museum, 49 Kew Street, Welshpool, WA 6106). They should be supplied in printed and digital form (preferably as pdfs). Copies of a Supplementary Paper may be obtained from Society’s Library upon payment of a fee.

Contributions should be sent to:
Editor-in-chief
Journal of the Royal Society of Western Australia
journal@rswa.org.au
Since June 2016 this journal has been published entirely online but a few copies of former special issues are available:

(Prices are ex GST; discount prices for members are in parentheses)

<table>
<thead>
<tr>
<th>Title</th>
<th>Price</th>
<th>Discount Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symposium on the Design of Reserves for Nature Conservation</td>
<td>$30</td>
<td>($20)</td>
</tr>
<tr>
<td>in South-western Australia (Volume 79, Part 4, 1996)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mini-symposium on Remote Sensing and its Applications in</td>
<td>$30</td>
<td>($20)</td>
</tr>
<tr>
<td>Western Australia (Volume 80, part 1, 1997)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granite Outcrops Symposium (Volume 80, Part 3, 1997)</td>
<td>$30</td>
<td>($20)</td>
</tr>
<tr>
<td>Centennial Issue 1897-1997 (Volume 81, Part 1, 1998)</td>
<td>$30</td>
<td>($20)</td>
</tr>
<tr>
<td>Management of Granite Outcrops (Volume 83, Part 3, 2000)</td>
<td>$30</td>
<td>($20)</td>
</tr>
<tr>
<td>Leschenault Inlet Estuary (Volume 83, Part 4, 2000)</td>
<td>$50</td>
<td>($35)</td>
</tr>
<tr>
<td>Fire and Wetlands on the Swan Coastal Plain (Volume 88, Part 3, 2005)</td>
<td>$20</td>
<td>($15)</td>
</tr>
<tr>
<td>Holocene sedimentation, stratigraphy, biostratigraphy, and history of</td>
<td>$25</td>
<td>($20)</td>
</tr>
<tr>
<td>the Canning Coast, north-western Australia (Supplement to Volume 91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part 1 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leeuwin Current Symposium 2007 (Volume 92 Part 2, 2009)</td>
<td>$65</td>
<td>($45)</td>
</tr>
<tr>
<td>The Habitats of the Western Australian soldier crab *Mictyris</td>
<td>$25</td>
<td>($20)</td>
</tr>
<tr>
<td><em>occidentalis</em> Unno 2008 (Brachyura: Mictyridae) across its biogeographical range (Supplement to Volume 92 Part 3, 2009)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symposium on Evolutionary Biology (Volume 92 Part 4, 2009)</td>
<td>$45</td>
<td>($35)</td>
</tr>
<tr>
<td>Symposium on Kimberley Marine and Coastal Science (Volume 94 Part 2</td>
<td>$65</td>
<td>($45)</td>
</tr>
<tr>
<td>2011)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centennial Issue (Volume 97 Part 1 2014)</td>
<td>$65</td>
<td>($45)</td>
</tr>
<tr>
<td>Inaugural Western Australian Freshwater Fish Symposium</td>
<td>$65</td>
<td>($45)</td>
</tr>
<tr>
<td>(Volume 97 Part 2 2014)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please add postage and handling at the following rates:

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular issue</td>
<td>$10</td>
<td>$20</td>
</tr>
<tr>
<td>Thematic Issues</td>
<td>$15</td>
<td>$20</td>
</tr>
</tbody>
</table>

Combined postage discounts apply, airmail POA

Please send your order, including payment (all prices in Australian dollars), to:
Honorary Treasurer, Royal Society of Western Australia, PO Box 7026, Karawara, Western Australia 6152.

Journal of the Royal Society of Western Australia© is published by:
Royal Society of Western Australia, PO Box 7026, Karawara, Western Australia 6152
rsrwa@museum.wa.gov.au

ISSN 0035-922X Print Post Approved PP642409/00008.

Address changes should be submitted to:
Membership Secretary, PO Box 7026 Karawara WA 6152.

© ROYAL SOCIETY OF WESTERN AUSTRALIA 2016

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without written permission from the Editor-in-chief of the Royal Society of Western Australia,
journal@rswa.org.au. A permissions line must be provided crediting author(s) and Journal of the Royal Society of Western Australia as the source.