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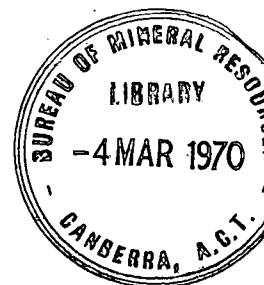
COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Record No. 1969 / 134 054058

Palaeontology in Australia
(including the place of Micropalaeontology)



by

D.J. Belford and J.M. Dickins

*Paper Presented at Fourth ECAFE Symposium on the
Development of Petroleum Resources of Asia and the
Far East, Canberra, October - November 1969*

The information contained in this report has been obtained by the Department of National Development as part of the policy of the Commonwealth Government to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus or statement without the permission in writing of the Director, Bureau of Mineral Resources, Geology & Geophysics.



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PALAEONTOLOGY IN AUSTRALIA
(including the place of Micropalaeontology)

by

D.J. Belford and J.M. Dickins

Bureau of Mineral Resources, Geology and Geophysics

SUMMARY

About 150 scientists are engaged in palaeontological work in Australia, most being on the staff of Universities, Museums and the Federal and State Surveys, with relatively few full-time individual consultants and consulting groups. A palaeontological group is being formed within the Geological Society of Australia to improve communication between palaeontologists.

Most palaeontological work is connected with geological mapping and drilling, with major undertakings being the description of faunas and floras and the establishment of their stratigraphic sequence; current research projects are tabulated. Most fossil groups are covered and efforts have been made to avoid duplication of work. Close co-operation between palaeontological and field activities has been found very useful. Micropalaeontology has developed greatly in the last decade, particularly in palynological and conodont studies. Palaeontological work is providing basic information necessary for the understanding of many problems of earth history and structure and development of its resources.

undertaking. This is a pre-requisite for resolution of both geological and biological problems and there is no clear distinction between work carried out in Universities, Museums and Surveys (including the Federal Organization - B.M.R.). In the Surveys, however, orientation tends to be towards the programmes of the organizations, and to direct application to geological problems and in the Museums towards public education.

Most fossil groups, zoological and botanical, are covered and an effort has been made to avoid duplication of work especially on the part of B.M.R. and the Surveys. These organizations have tended to concentrate on fields where no workers have been available elsewhere in Australia or where work is required by the special needs of the organization. Close co-operation between organizations and individuals has been reflected in the contribution towards solution of geological problems.

In the B.M.R., which has 14 palaeontologists, close co-operation between palaeontological and field activities has been shown to be especially fruitful. The practice of palaeontologists collecting in the field has been encouraged; this results in collection of more useful material of higher quality. Where possible, in fossiliferous areas, palaeontologists are assigned to work as members of the field team. This allows sounder appreciation of the problems to be solved and immediate decisions can be made on the programme to be followed in order to allow practical solution. Effort may also be avoided where solutions are not amenable to palaeontological methods. Great advantage comes from on the spot solutions, resulting in progress which otherwise would require further visits in later field seasons, and also avoiding failure to appreciate the problems present.

PALAEONTOLOGY IN AUSTRALIA

(including the place of Micropalaeontology)

by D.J. Belford and J.M. Dickins*

About 150 scientists are engaged in palaeontological work in Australia. Most are found in the Universities, Museums and the Federal (Bureau of Mineral Resources, Geology and Geophysics) or State Surveys. Relatively few are employed in private exploration companies or as full-time consultants for private industry, particularly the petroleum industry. The research projects being undertaken are tabulated in the accompanying list reproduced from Strusz (1968), and amended to bring it up to date.

Palaeontologists have not formed scientific societies separate from other workers in the geological sciences but have been associated with the Geological Society of Australia and the Royal Societies of the States. A palaeontological group, however, is being formed within the Geological Society of Australia to provide forums for discussion of palaeontological problems, to improve communications between palaeontologists in Australia, to maintain liaison with workers and organizations outside Australia, and to foster conservation of fossil material and preservation of type specimens. The Queensland Palaeontographical Society has been formed and is publishing volumes of Index Fossils of Queensland.

Most palaeontological work is closely connected with the active mapping, surveying and drilling being undertaken and plays an integral part in this effort. Description of the faunas and floras from the vast area of Australia and elucidation of the faunal and floral sequences is a major

*Bureau of Mineral Resources, Geology and Geophysics,
Canberra, A.C.T. Australia

Exploration for oil and gas is carried out by private organizations and fossil material obtained from surface survey and drilling is examined mainly by Universities, B.M.R. and Surveys. A few companies have palaeontologists but in nearly all cases their work is supplemented from outside organizations. A few full-time individual consultants and consulting groups carry out examinations and much of the work done in Universities is on a consulting basis.

Concurrently with the development of geological and palaeontological work in the last two decades, the use of micropalaeontology has developed, especially in the last decade. To the well established work on Foraminifera and Ostracoda, has been added microfloral work (palynology) and more recently work on conodonts. Palynological work is now being undertaken in most States and a great advance has taken place in understanding the non-marine deposits. Non-marine sequences are particularly widespread in the Mesozoic rocks of Australia (see Banks, in press; Jersey & Williams, in press) and major advances have been made in the Palaeozoic (Dickins, in press, Evans, in press). The microfloras have also been found particularly useful in relating marine and non-marine deposits. Conodonts have emerged as a major study in the last few years and are particularly useful in intercontinental correlation and for determining the ages of rocks in which other fossils are poor or absent. Palynological and conodont studies, as with studies of other groups of organisms, are found most useful when in a stratigraphical and palaeontological framework resulting from studies of many groups of organisms. Micropalaeontology is, of course, particularly useful where only small samples are available as is particularly the case with material from drilling.

In palaeontology, interesting advances have occurred in the study of Tertiary vertebrates (Stirton, Tedford & Woodburne, 1968) where patient research has contributed to knowledge of the period in ways which would not have been thought possible a few years ago. Important discoveries have been made of Triassic marine invertebrate faunas in Australia and New Guinea (Fleming, 1966; Skwarko, 1967). A new understanding is available of the stratigraphical development and history of the Cambrian, Carboniferous and Permian Systems in Australia and the remarkable Precambrian fossils (see Glaessner, 1966) have aroused worldwide interest.

B.M.R., in collaboration with other organizations, has embarked on publication of catalogues of type specimens of Australian fossils. Catalogues are now available for types housed in Tasmania, Western Australia and the Australian Capital Territory and catalogues for New South Wales are nearing completion.

Palaeontology, in conjunction with other avenues of study, is providing the basis for a clearer and more exact understanding of time relationships of value to oil exploration as well as to exploration for other mineral resources. This work is also providing information basic to developing a more precise and reliable world time-scale, a prerequisite for understanding many problems connected with the development of the earth as a whole, its history, structure and resources.

REFERENCES

- BANKS, M.R., (in press) - Correlation table for the Triassic System in Australia (with accompanying notes and bibliography). Proceedings of 1st International Symposium on Gondwana Palaeontology and Stratigraphy, Mar del Plata, Argentina, 1967.
- DICKINS, J.M., (in press) - Correlation chart for the Permian System in Australia (with accompanying notes and bibliography). Ibid.
- EVANS, P.R., (in press) - Upper Carboniferous and Permian palynological stages and their distribution in Eastern Australia. Ibid.
- FLEMING, P.J.G., 1966 - Eotriassic marine bivalves from the Maryborough Basin, South-east Queensland. Qld. geol. Surv. Publ., 333, 17-29.
- GLAESSNER, M.F., 1966 - Precambrian palaeontology. Earth Sci. Rev., 1(1), 29-50.
- JERSEY, N.J. de and WILLIAMS, A.J., (in press) - Correlation Table for the Jurassic System in Australia (with accompanying notes and bibliography). Proceedings of 1st International Symposium on Gondwana Palaeontology and Stratigraphy, Mar del Plata, Argentina, 1967.
- SKWARKO, S.K., 1967 - First Upper Triassic? Lower Jurassic marine mollusca from New Guinea. Bur. Miner. Resour. Aust. Bull. 75, 38-71.
- STIRTON, R.A., TEDFORD, R.H., and WOODBURN, M.O., 1968 - Australian Tertiary deposits containing fossil mammals. Univ. California Pubns. Geol. Sciences, 77.
- STRUSZ, D.L., 1968 - List of Australian Palaeontological Research Projects, Revised Edition, September 1968. Bur. Miner. Resour. Aust., Rec., 1968/118 (unpubl.).

LIST OF AUSTRALIAN PALAEOONTOLOGICAL RESEARCH PROJECTS

Compiled in the Geological Branch, Bureau of Mineral Resources,
Geology and Geophysics, from information supplied by
Australian institutions and individuals
Revised edition, September 1968

Compiled by D.L. Strusz
and amended July 1969

Projects are listed alphabetically by fossil groups and then by workers. Projects dealing with diverse or undifferentiated faunas are listed under "General", and those dealing with palaeoecology or palaeo-environments under "Palaeoecology"; both headings follow the taxonomic list.

Workers located outside Australia, but studying Australian fossils, are indicated by an asterisk.

ALGAE

BYRNES, J.G.,
Dept of Geology & Geophysics,
University of Sydney

Palaeoecology and taxonomy of
Ordovician to Devonian algae of
the Baker's Swamp-Stuart Town area,
central-west N.S.W.

PREISS, W.V.,
Dept of Geology & Mineralogy,
University of Adelaide

Precambrian stromatolites in
Australia (with M.R. Walter)

VEEVERS, J.J.,
School of Earth Sciences,
Macquarie University

Upper Devonian and Lower Carbon-
iferous calcareous algae from the
Bonaparte Gulf Basin, W. Aust.

WALTER, M.R., see PREISS, W.V.,

WEBBY, B.D.,
Dept of Geology & Geophysics,
University of Sydney

Larger calcareous algae of the
Ordovician of central-west N.S.W.

ANNELIDA

GLAESSNER, M.F.,
Dept of Geology & Mineralogy,
University of Adelaide

Cambrian annelids

ARCHAEOCYATHA

*DEBRENNE, Mme F.,
Institute de Paléontologie,
Centre National de la Recherche
Scientifique, Paris 5^e.

A revision of the Bedford Collection of South Australian archaeocyathids in the South Australian Museum

BIVALVIA (PELECYPODA)

DICKINS, J.M.,
Bureau of Mineral Resources

Taxonomy, palaeoecology and stratigraphic applications of Permian pelecypods

RUNNEGAR, B.,
Dept of Geology,
New England University

Permian Bivalvia of eastern Australia

BRACHIOPODA

ARMSTRONG, J.D.,
Dept of Geology & Mineralogy,
University of Queensland

Upper Palaeozoic Spiriferida, with particular reference to Queensland faunas.

BANKS, M.R.,
Dept of Geology,
University of Tasmania

Silurian and Devonian brachiopods

BROWNE, Ida A.,
Dept of Geology & Geophysics,
University of Sydney

Permian spiriferids of south-east Australia

CAMPBELL, K.S.W.,
Dept of Geology,
School of General Studies,
Australian National University

- 1) Carboniferous brachiopod faunas of N.S.W.
- 2) Siluro-Devonian brachiopod fauna from Yass and Taemas, N.S.W.

CHATTERTON, B.D.E.,
Dept of Geology,
School of General Studies,
Australian National University

The taxonomy and palaeoecology of the brachiopod fauna of the Receptaculites Limestone (Taemas Formation) at Taemas, N.S.W.

- CLARKE, M.J.,
Tasmanian Dept of Mines
- DEAR, J.F.,
Queensland Geological Survey
- ENGEL, B.A.,
Dept of Geology,
Newcastle University
- FLOOD, P.,
Bureau of Mineral Resources
- FOLDVARY, G.Z.,
Dept of Geology & Geophysics,
University of Sydney
- GARRATT, M.J.,
Dept of Geology,
University of Melbourne
- *GATEHOUSE, C.G.,
Dept of Earth & Space Sciences,
State University of New York at
Stony Brook, N.Y., U.S.A.
- GILL, E.D.,
National Museum of Victoria.
- HAWKINS, I.E.,
Dept of Geology,
University of Melbourne
- HERBERT, C.,
Dept of Geology & Geophysics,
University of Sydney
- McKELLAR, R.G.,
West Australian Petroleum Pty.Ltd.
Perth, W.A.
- 1) Permian strophalosiids and
spiriferids
2) Silurian and Devonian brachiopods
- Permian brachiopods and biostratigraphy of the Bowen Basin and Yarrol Basin, Qld
- Carboniferous brachiopods of the Myall-Manning-Hunter River Province, N.S.W.
- Lower Devonian brachiopods of the Lob's Hole and Taemas areas, N.S.W.
- Devonian spiriferids of western N.S.W. (with G.H. Packham & B.D. Webby)
- Upper Devonian Spiriferida from the Fitzroy Basin, W. Aust.
- Cambrian inarticulate brachiopods of N. Aust.
- Siluro-Devonian brachiopods.
- Siluro-Devonian Orthida and Rhynchonellida from Victoria
- Siluro-Devonian brachiopods of southern N.S.W.
- Devonian and Carboniferous brachiopods of the Yarrol and Star Basins, Qld

PACKHAM, G.H.,
Dept of Geology & Geophysics,
University of Sydney

Devonian spiriferids of W. N.S.W.
(with G.Z. Foldvary & B.D. Webby)

QUILTY, P.G.,
Dept of Geology,
University of Tasmania

Jurassic brachiopods of Ells-
worthland

*ROBERTS, J.,
Bureau of Mineral Resources,

Carboniferous brachiopods from
the Bonaparte Gulf Basin, W.Aust.

*SAVAGE, N.M.,
Dept of Geology,
University of Natal,
Durban, Natal. South Africa

Palaeozoic brachiopods, with
particular reference to the Lower
Devonian faunas of the Manildra
area, central-west N.S.W.

STRUSZ, D.L.,
Bureau of Mineral Resources

- 1) A revision of "Spirifer"
yassensis from the Lower
Devonian at Taemas, N.S.W. (with
B. Chatterton & P. Flood)
- 2) Lower Devonian brachiopods from
the Garra Formation, central-
west N.S.W.

*TALENT, J.A.,
School of Earth Sciences,
Macquarie University, Sydney

- 1) Siluro-Devonian brachiopod
faunas of Victoria
- 2) Devonian brachiopods from
Ukalunda and Clermont, Qld

THOMAS, G.A.,
Dept of Geology,
University of Melbourne

- 1) Permian Spiriferida of north-
west Australia
- 2) Devonian Spiriferida of the
Fitzroy Basin, W. Aust.
- 3) Permian Davidsoniacea and
Orthotetacea of Tasmania

WEBBY, B.D.,
Dept of Geology & Geophysics,
University of Sydney

Devonian spiriferids from western
N.S.W. (with G.Z. Foldvary &
G.H. Packham)

*WRIGHT, A.J.T.,
Dept of Geology,
Victoria Univ., Wellington, N Z.

Devonian brachiopods from Mudgee,
N.S.W.

BRYOZOA

BANKS, M.R.,
Dept of Geology,
University of Tasmania

Permian polyzoa of Tasmania

BROWN, D.A.,
Dept of Geology,
School of General Studies,
Australian National University

Polyzoa from the bores on Midway
Island, northern Pacific

COCKBAIN, A.E.,
Western Australian Geological
Survey

Tertiary bryozoa from the Eucla
Basin, and the southwest region
of W. Aust.

ENGEL, B.A.,
Dept of Geology,
Newcastle University

Carboniferous bryozoa of the
Myall-Manning-Hunter River
province, N.S.W.

WASS, R.E.,
Dept of Geology & Geophysics,
University of Sydney

- 1) Ecology of Tertiary to Recent
bryozoa of southern Australia
- 2) Permian bryozoa of the Perth,
Canning and Carnarvon Basins,
W.Aust.
- 3) Ordovician bryozoa from
Cliefden Caves, N.S.W.

CEPHALOPODA

***GLENISTER, B.F.,**
Dept of Geology,
State University of Iowa, U.S.A.

Devonian ammonoids from the
Lennard Shelf in the Canning
Basin, W. Aust.

JENKINS, T.B.H.,
Dept of Geology & Geophysics,
University of Sydney

Upper Devonian and Carboniferous
cephalopods of N.S.W.

QUILTY, P.G.,
Dept of Geology,
University of Tasmania

Jurassic ammonites and belemnites
of Ellsworthland

RUNNEGAR, B.,
Dept of Geology,
New England University

- 1) Lower Triassic ammonoids of
southeast Queensland
- 2) Lower Carboniferous goniatites
of Queensland and N.S.W.

COELENTERATA

- | | |
|---|--|
| BANKS, M.R.,
Dept of Geology,
University of Tasmania | Tasmanian Ordovician corals |
| BYRNES, J.G.,
Dept of Geology & Geophysics,
University of Sydney | Palaeoecology and taxonomy of
Ordovician to Devonian tabulate
corals of the Baker's Swamp-Stuart
Town area, central-west N.S.W. |
| HILL, Dorothy
Dept of Geology & Mineralogy,
University of Queensland | Palaeozoic rugose and tabulate
corals, especially Australian
Silurian and Devonian faunas
(with J.S. Jell) |
| JELL, J.S., see HILL, Dorothy | |
| *JULL, R.K.,
Dept of Geology,
University of Windsor,
Ontario, Canada | 1) Taxonomy and biostratigraphy
of Queensland Visean rugose
corals
2) Silurian rugose corals from
the Broken River gorge, N.
Qld (with D. Hill) |
| MALLETT, C.W.,
Dept of Geology,
Newcastle University | Devonian stromatoporoids from the
Broken River area (N. Qld) and
Tamworth (N.S.W.). |
| PICKETT, J.W.,
Geological Survey of New South
Wales (Mining & Geological
Museum) | 1) Lower Devonian corals from the
Yass Basin, N.S.W.
2) Carboniferous corals from
north-east N.S.W. |
| *ST JEAN, J.,
Dept of Geology,
University of North Carolina,
U.S.A. | Devonian stromatoporoids from the
Lennard Shelf, Canning Basin,
W. Aust. |
| SHERWIN, L.,
Geological Survey of New South
Wales | Silurian conulariids from Cheeseman
Creek, south of Molong, N.S.W. |

STRUSZ, D.L.,
Bureau of Mineral Resources

- 1) Lower Devonian rugose corals from the Garra Formation, central-west N.S.W.
- 2) Givetian rugose corals from N. Qld, with particular reference to the Reid Gap area

THOMAS, G.A.,
Dept of Geology,
University of Melbourne

Permian conulariids of Australia

WEBBY, B.D.,
Dept of Geology & Geophysics,
University of Sydney

Taxonomy and palaeoecology of stromatoporoids, rugose and tabulate corals from the Ordovician of central-west N.S.W.

*WRIGHT, A.J.T.,
Dept of Geology,
Victoria University, Wellington,
N. Z.

Devonian rugose corals from Mudgee, N.S.W.

CONODONTS

CHATTERTON, B.D.E.,
Dept of Geology,
School of General Studies,
Australian National University

Conodonts from the Receptaculites Limestone (Taemas Formation) at Taemas, N.S.W.

DRUCE, E.C.,
Bureau of Mineral Resources

- 1) Ordovician conodonts of the Horn Valley Formation, Amadeus Basin, N.T.
- 2) Lower Devonian conodonts from the Garra Formation, central-west N.S.W.
- 3) Devonian and Carboniferous conodonts from reef complexes in the Bugle Gap area, W. Aust.
- 4) Upper Cambrian and Tremadocian conodonts from central Australia.
- 5) Reworked faunas in Palaeozoic formations of the Bonaparte Gulf Basin, W. Aust.
- 6) Silurian conodonts of the A.C.T.

*GLENISTER, B.F.,
Dept of Geology,
State University of Iowa, U.S.A.

Lower Palaeozoic conodont
faunas of W. Aust.

JACKSON, J.J.,
Dept of Geology,
New England University

Devonian conodonts and biostratigraphy of the Timor anticline, northeast N.S.W.

JENKINS, T.B.H.,
Dept of Geology & Geophysics,
University of Sydney

Upper Devonian and Carboniferous
conodonts of N.S.W.

JONES, P.J.,
Bureau of Mineral Resources

- 1) Cambro-Ordovician conodonts from Queensland (with E.C. Druce)
- 2) Lower Ordovician conodonts from the Bonaparte Gulf and Daly River Basins, W. Aust.

KENNEDY, D.J.,
Dept of Geology,
University of Tasmania

Tasmanian Ordovician conodonts

LINK, A.G.,
Dept of Geology,
School of General Studies,
Australian National University

Palaeoecology and biostratigraphy of the Yass Basin faunas, Silurian, N.S.W.

NIEPER, C.,
Dept of Geology & Mineralogy,
University of Queensland

Ordovician conodonts of Qld and central Australia

PACKHAM, G.H.,
Dept of Geology & Geophysics,
University of Sydney

Ordovician conodonts of central N.S.W.

PALMIERI, V.,
Queensland Geological Survey

Queensland Carboniferous conodonts

PHILIP, G.M.,
Dept of Geology,
New England University

Conodont faunas of eastern Australia

*SAVAGE, N.M.,
Dept of Geology,
University of Natal,
Durban, Natal, South Africa

Palaeozoic conodonts, with particular reference to the Lower Devonian faunas of the Manildra area, central-west N.S.W.

SEDDON, G.,
Dept of Philosophy,
University of Western Australia

Middle Devonian conodonts from
the Canning Basin, W.A.

TELFORD, P.,
Dept of Geology & Mineralogy,
University of Queensland

Lower and Middle Devonian conodonts, mainly from the Broken River area, north Qld

WARRIS, B.J.,
Dept of Geology & Geophysics,
University of Sydney

Ordovician conodonts from
northwest N.S.W.

CRUSTACEA

GLAESSNER, M.F.,
Dept of Geology & Mineralogy,
University of Adelaide

Australian and New Zealand fossil
decapod crustaceans (with
R.F. Jenkins)

JENKINS, R.F., - see M.F. Glaessner

JONES, P.J.,
Bureau of Mineral Resources

- 1) Upper Devonian Ostracoda and Eridostraca from the Bonaparte Gulf Basin, W. Aust.
- 2) Lower Triassic palaeocope and podocope ostracods from the Perth Basin, W. Aust.
- 3) Lower Carboniferous ostracods from the Bonaparte Gulf and Canning Basins, W. Aust.
- 4) Upper Devonian ostracods from the Canning Basin, W. Aust.

"
OPIK, A.A.,
Bureau of Mineral Resources

Ordian (Cambrian) bradoriid
crustaceans of Australia

QUILTY, P.G.,
Dept of Geology,
University of Tasmania

Jurassic Crustacea of Ellsworthland

*ROLFE, W.D.I.,
Hunterian Museum,
Glasgow, Scotland

Devonian phyllocarids from W. Aust.

WILLEY, E.C.,
Dept of Geology,
New England University

Devonian ostracod faunas of
eastern Australia

ECHINODERMATA

McKELLAR, R.G.,
West Australian Petroleum Pty.Ltd. of Queensland
Perth, W.A.

Upper Palaeozoic echinoderms

*MACURDA, D.B. Jnr,
Museum of Paleontology,
University of Michigan,
Ann Arbor, Michigan, U.S.A.

Permian blastoids from Tasmania
and W.Aust.

PHILIP, G.M.,
Dept of Geology,
New England University

1) Australian fossil crinoids
2) Australian Cainozoic echinoids

WEBBY, B.D.,
Dept of Geology & Geophysics,
University of Sydney

Ordovician Echinodermata from
central-west N.S.W.

FORAMINIFERA

ABELE, C.,
Victorian Dept of Mines

Tertiary Foraminifera of Victoria,
with particular reference to the
Oligocene and Miocene of the
Torquay-Anglesea region

*ADAMS, C.G.,
British Museum (Natural History)

Stratigraphic distribution and
taxonomy of some larger
Foraminifera from Christmas
Island (Indian Ocean) (with
D.J. Belford)

BELFORD, D.J.,
Bureau of Mineral Resources

1) Planktonic and benthonic
smaller Foraminifera from the
Upper Cretaceous and Tertiary
of the Ashmore and Legendre
wells, W. Aust.
2) Christmas Island larger
Foraminifera (with C.G. Adams,
which see)

BINNEKAMP, J.G.,
Bureau of Mineral Resources

The biostratigraphic application
of planktonic Foraminifera, and
the environmental application of
benthonic Foraminifera, to the
Tertiary of New Guinea and the Upper
Cretaceous to Tertiary of W.Aust.

COLEMAN, P.J.,
Dept of Geology,
University of Western Australia

- 1) Tertiary larger Foraminifera from the New Hebrides, and from the Suva Formation of Fiji
- 2) The foraminiferal succession in the Ashmore Reef test well, off-shore W. Aust.

COLLINS, A.C.,
National Museum of Victoria

Foraminifera, with particular reference to the Recent Foraminifera of Port Philip Bay.

*CONKIN, J. & B.,
University of Kentucky, U.S.A.

Tasmanian Permian Foraminifera

GLAESSNER, M.F.,
Dept of Geology & Mineralogy,
University of Adelaide

Foraminifera (general)

KESTON, S.,
Continental Oil Co. of Aust. Ltd

Tertiary planktonic Foraminifera of northern New Guinea

LINDSAY, J.M.,
South Australian Dept of
Mines

Tertiary planktonic foraminiferal zonation of S. Aust.

LLOYD, A.J.,
A.R. Lloyd Pty Ltd,
French's Forest, N.S.W.

- 1) Stratigraphy and palaeoecology of Papuan Tertiary Foraminifera
- 2) Foraminifera from subsurface Quaternary of the Capricorn Channel, Qld
- 3) Foraminiferal biostratigraphy in subsurface Carboniferous and Permian of the Bonaparte Gulf Basin, W. Aust.
- 4) Tertiary Foraminifera in the Wreck and Heron Islands bores, Qld

McGOWRAN, B.,
South Australian Dept of Mines

Foraminiferal morphology and taxonomy

NICHOLLS, D.R.,
Dept of Geology,
University of Melbourne

Middle Miocene to Recent Foraminifera of the Gippsland Basin and the Port Philip Sunkland

PALMIERI, V.,
Queensland Geological Survey

- 1) Permian Foraminifera of the Bowen Basin, Qld
- 2) Tertiary Foraminifera of Queensland, New Guinea, and adjacent shelf areas

PARTRIDGE, A.D.,
Geological Survey of New South Wales

Lower Cretaceous Foraminifera from the Great Artesian Basin in New South Wales

QUILTY, P.G.,
Dept of Geology,
University of Tasmania

- 1) Western Australian Eocene Foraminifera
- 2) Tasmanian Tertiary Foraminifera

TAYLOR, D.J.,
Dept of Geology & Geophysics,
University of Sydney

Mesozoic and Tertiary Foraminifera of the Bass Strait Basins

TERPSTRA, G.R.J.,
Bureau of Mineral Resources

- 1) Larger Foraminifera from the Tertiary of Papua and New Guinea
- 2) Foraminifera from the Permian and Lower Cretaceous

WADE, Mary J.,
Dept of Geology & Mineralogy,
University of Adelaide

Foraminifera (with M.F. Glaessner)

GASTROPODA

DARRAGH, T.A.,
National Museum of Victoria

A revision of the Tertiary Voluta

DICKINS, J.M.,
Bureau of Mineral Resources

The taxonomy, palaeoecology and stratigraphic application of Permian gastropods

QUILTY, P.G.,
Dept of Geology,
University of Tasmania

- 1) Tasmanian Tertiary gastropods
- 2) Jurassic gastropods of Ellsworthland

SPRY, Miss E.M.,
Dept of Geology,
University of Melbourne

Victorian Tertiary gastropods

GRAPTOLOIDEA

BANKS, M.R.,
Dept of Geology,
University of Tasmania

Graptolites from the Ordovician
Mathinna Beds

*JAEGER, H.,
Institut und Museum für
Paläontologie der Humboldt-
Universität, Berlin, E.Germany

Upper Silurian and Lower Devonian
graptolites from Victoria and
New South Wales

MOORS, H.T.,
Dept of Geology,
University of Melbourne

The ecology of Victorian Ordovician
graptolites in relation to the
turbidite environment

PACKHAM, G.H.,
Dept of Geology & Geophysics,
University of Sydney

Ordovician and Silurian graptolites of central N.S.W.

SKWARKO, S.K.,
Bureau of Mineral Resources

Ordovician graptolites from the
Canning Basin, W. Aust.

MICROPLANKTON

COOKSON, Isabel C.,
School of Botany,
University of Melbourne

Studies in Australian, particularly
Western Australian, Mesozoic
microplankton (fauna and flora).
(Some with A. Eisenack)

DOUGLAS, J.G.G.,
Victorian Dept of Mines

Mesozoic microplankton of
Victoria

*EISENACK, A. - see I.C. Cookson
University of Tübingen

GLAESSNER, M.F.,
Dept of Geology & Mineralogy,
University of Adelaide

Microfossils (with M.J. Wade)

KESTON, S.,
Continental Oil Co. of Aust. Ltd

Tertiary microfossils in northern
New Guinea.

RADE, J.,
Rade Stratigraphic Laboratories

Cretaceous microplankton from
the Normanton Fm., Carpentaria
Basin, North Queensland

WADE, Mary J.,
Dept of Geology & Mineralogy,
University of Adelaide

Microfossils (with M.F. Glaessner)

MOLLUSCA (see also Bivalvia,
Cephalopoda, Gastropoda)

DAY, R.W.,
Esso Standard Oil (Aust) Ltd
Sydney, N.S.W.

Cretaceous molluscan faunas from
the Great Artesian Basin.

ENGEL, B.A.,
Dept of Geology,
Newcastle University

Carboniferous molluscs of the
Myall-Manning-Hunter River
province of N.S.W.

KENDRICK, G.W.,
Dept of Palaeontology,
Western Australian Museum

Molluscan taxonomy and palaeo-
ecology

LUDBROOK, N.H.,
110 Watson Avenue,
Toorak Gardens, S.A.

Molluscan faunas of the Eucla
Basin

QUILTY, P.G.,
Dept of Geology,
University of Tasmania

Jurassic molluscs of Ellsworthland

SKWARKO, S.K.,
Bureau of Mineral Resources

Triassic marine molluscs from
New Guinea

*TALENT, J.A.,
School of Earth Sciences,
Macquarie University, Sydney

Devonian molluscs from Ukalunda
and Clermont, Queensland

PLANT MACROFOSSILS

CHAMBERS, T.C.,
School of Botany,
University of Melbourne

Morphology of some early
Australian land plants

DOUGLAS, J.G.G.,
Victorian Dept of Mines

Mesozoic plants of Victoria

GOULD, R.,
Dept of Geology & Mineralogy,
University of Queensland

Mesozoic flora of Queensland

LANGE, R.T.,
Dept of Botany,
University of Adelaide

Eocene floras at Maslin's Beach,
S. Aust., with particular
reference to the study of cuticles
of angiosperm leaves

MARTIN, A.R.H.,
School of Biological Sciences,
University of Sydney

Australian fossil plants in
relation to climate and geography

OFFLER, Christina E.,
Dept of Botany,
University of Adelaide

Lower Tertiary floras from Mt
Elba, Teal trig. stn, Woomera and
Clayton, S. Aust., with particular
reference to the vegetative off-
shoots of the Coniferales

TOWNROW, J.A.,
Dept of Geology,
University of Tasmania

- 1) Early Mesozoic conifers
- 2) Permian Isoetales

WHITE, Mary E.,
Balgowlah, N.S.W.

- 1) Devonian and Lower Carbonif-
erous floras
- 2) Species ranges of the Carbon-
iferous Lepidodendron and
Rhacopteris floras
- 3) The lower limits of the Glossopteris
flora
- 4) Glossopterid fructifications

PLANT MICROFOSSILS (Palynology)

BALME, B.E.,
Dept of Geology,
University of Western Australia

- 1) Permian palynology of the
Canning Basin, W. Aust.
- 2) Permian and Triassic palynology
of the Salt Range, W. Pakistan
- 3) Upper Permian and Lower Triassic
palynology of Greenland

BURGER, D.,
Bureau of Mineral Resources

Australian Cretaceous stratigraphic
palynology

COOKSON, Isabel C.,
School of Botany,
University of Melbourne

Mesozoic microfloras, particularly
from Western Australia

- | | |
|---|--|
| DETTMANN, M.,
Dept of Geology & Mineralogy,
University of Queensland | Cretaceous and Tertiary palynology
of eastern Australia |
| DOUGLAS, J.G.G.,
Victorian Dept of Mines | Mesozoic microfloras of Victoria |
| FILATOFF, J.,
Dept of Geology & Mineralogy,
University of Queensland | Upper Permian palynology of the
Theodore area, Queensland |
| GLIKSON, Mrs M.,
Dept of Geology,
University of Western Australia | Permian palynology of the Collie
and Wilga Basins, W. Aust. |
| HARRIS, W.K.,
South Australian Dept of Mines | 1) Tertiary taxonomic and strat-
igraphic palynology of south-
eastern Australia
2) Permian megaspores and their
geographic distribution
3) Permian palynological bio-
stratigraphy of the western Great
Artesian Basin |
| HASKELL, T.R.,
Dept of Geology & Mineralogy,
University of Queensland | Cretaceous palynology of the Great
Artesian Basin |
| HELBY, R.J.,
Geological Survey of New
South Wales | Upper Palaeozoic and Lower Meso-
zoic palynology, with particular
reference to:
1) Upper Carboniferous to Lower
Permian biostratigraphy
2) Upper Permian to Triassic
biostratigraphy
3) Lower Cretaceous biostrati-
graphy |
| HENNELLY, J.P.F.,
Dept of Geology & Geophysics,
University of Sydney | The relationship between spore
assemblages and coal measure
sedimentation in eastern Australia |
| INGRAM, B.S.,
Geological Survey of Western
Australia | Upper Mesozoic palynology of the
Perth Basin |

KEMP, Elizabeth M.,
West Australian Petroleum Pty.Ltd.
Perth, W.A.

- 1) Australian Mesozoic spores and pollen
- 2) Albian and Aptian spores and pollen from the United Kingdom

PLAYFORD, G.,
Dept of Geology & Mineralogy,
University of Queensland

Australian Carboniferous and
Mesozoic palynology

RADE, J.,
Rade Stratigraphic Laboratories

Middle Palaeozoic, Mesozoic and
Tertiary palynology, with particular
reference to:

- 1) The Greta coal measures at
Boggabri, N.S.W.
- 2) Correlation of coal measures
between Moura (Qld) and the
Narrabri-Curlewis area (N.S.W.)
- 3) Upper Devonian and Lower
Carboniferous spores of the
Bonaparte Gulf Basin, W. Aust.
- 4) Cretaceous sporomorphs and
microplankton of the Normanton
Formation, Carpentaria Basin,
N.Qld

SEGROVES, K.L.,
Dept of Geology,
University of Western Australia

Permian palynology of the northern
Perth Basin

TENTACULITIDS

*BOUCEK, B.,
Geological Survey of
Czechoslovakia

Devonian tentaculitids of
Victoria

TRACE FOSSILS

GLAESSNER, M.F.,
Dept of Geology & Mineralogy,
University of Adelaide

Cambrian trace fossils

WEBBY, B.D.,
Dept of Geology & Geophysics,
University of Sydney

Trace fossils from:

- 1) Silurian and Devonian grey-wackes, central-west N.S.W.
- 2) Upper Devonian sandstones, central-west N.S.W.
- 3) Triassic Narrabeen Group and Hawkesbury Sandstone, Sydney area

TRILOBITA

BANKS, M.R.,
Dept of Geology,
University of Tasmania

- 1) Ordovician trilobites of Tasmania
- 2) Permian trilobites of Tasmania

BUCKLEY, J.,
Dept of Geology,
University of Tasmania

Tasmanian nepeids

CAMPBELL, K.S.W.,
Dept of Geology,
School of General Studies,
Australian National University

Siluro-Devonian trilobite faunas
from Yass and Taemas, N.S.W.

CHATTERTON, B D.E.,
Dept of Geology,
School of General Studies,
Australian National University

The taxonomy, ontogeny and palaeo-ecology of trilobite faunas from the Receptaculites Limestone (Taemas Formation) of Taemas, N.S.W.

DAILY, B.,
Dept of Geology & Mineralogy,
University of Adelaide

Cambrian trilobites (with J.B. Jago)

GILBERT-TOMLINSON, Joyce
Bureau of Mineral Resources

The taxonomy and biostratigraphy of northern Australian Ordovician trilobites, with particular reference to the Dikelocephalinidae

JAGO, Mrs J.B. (see also B. Daily)

Tasmanian Cambrian trilobites

JELL, P.,
Dept of Geology & Mineralogy,
University of Queensland

Lower Middle Cambrian trilobites of Queensland

LINK, A.G.,
Dept of Geology,
School of General Studies,
Australian National University

The stratigraphic succession and
palaeoecology of the trilobite
faunas of the Yass Basin, N.S.W.

"
OPIK, A.A.,
Bureau of Mineral Resources

- 1) Dolichometopid trilobites of
Queensland, Northern Territory
- 2) Australian Metadoxididae of
the Cambrian Ordian Stage
- 3) Redlichia in northern Australia
and N.S.W.
- 4) Templetonian and Ordian xystridurid trilobites of Australia
- 5) Nepeid trilobites of the Middle
Cambrian of northern Australia
- 6) Ptychagnostids and diplagnostids of the Middle Cambrian,
their taxonomy, stratigraphy and
palaeogeography
- 7) Middle Cambrian polymerid trilobites of Asian affinity in
Australia

SHERGOLD, J.H.,
Bureau of Mineral Resources

- 1) Late Upper Cambrian trilobite
faunas of northern Australia,
with particular reference to
the Pseudagnostidae
- 2) Silurian and Lower Devonian
acastomorph trilobites
- 3) Encrinurus in Canberra and Yass
(with D.L. Strusz)

SHERWIN, L.,
Geological Survey of New South
Wales

- 1) The revision of N.S.W. Siluro-
Devonian trilobites
- 2) Silurian trilobites from Cheeseman
Creek, south of Molong, N.S.W.

*STEHLI, F.G.,
Dept of Geology,
Western Reserve University, U.S.A.

Permian trilobites

STRUSZ, D.L.,
Bureau of Mineral Resources

- 1) Encrinurus in the Silurian of Canberra and Yass (with J.H. Shergold)
- 2) Lower Devonian trilobites from the Garra Formation, central-west N.S.W.

WASS, R.E.,
Dept of Geology & Geophysics,
University of Sydney

Permian trilobites of N.S.W.

VERTEBRATA

ARCHER, M.,
Western Australian Museum

Taxonomy and palaeoecology of Quaternary marsupials

BARTHOLOMAI, A.,
Queensland Museum

- 1) Upper Cainozoic macropodid marsupials
- 2) Mesozoic Vertebrata

BAYNES, A.,
Western Australian Museum

Taxonomy and palaeoecology of murids

CAMPBELL, K.S.W.,
Dept of Geology,
School of General Studies,
Australian National University

The anatomy of the Devonian lungfish Dipnorhynchus (with K.S. Thompson)

*CLEMENS, W.A.,
Dept of Paleontology,
University of California,
Berkeley, California, U.S.A.

Thyacoleo from the Pleistocene at Naracoorte, S. Aust.

*COSGRIFF, J.W.,
Wayne State University

Tasmanian Triassic vertebrates

DAILY, B.,
Dept of Geology & Mineralogy,
University of Adelaide

Fossil koalas (with R. Wells)

FINCH, Mrs E.,
Dept of Zoology,
University of Western Australia

The anatomy of Thylacoleo (with W.D.L. Ride)

HILLS, E.S.,
Dept of Geology,
University of Melbourne

Devonian fish from New South Wales and the Northern Territory

- JONES, P.J.,
Bureau of Mineral Resources
Upper Silurian to Lower Devonian
coelolepid fish scales from the
Toko Range, western Queensland
- KEMP, N.R.,
Dept of Geology,
University of Melbourne
Tertiary elasmobranchs of Victoria
- *LUNDELIUS, F , Jnr,
Dept of Geology,
University of Texas,
Austin, Texas, U.S.A.
Pliocene-Pleistocene marsupials
from Hamilton, Coimadaí and
Geelong, Victoria
- MAHONEY, J.A.,
Dept of Geology & Geophysics,
University of Sydney
Quaternary mammals of Australia,
with particular reference to the
rodents
- MERRILEES D.,
Dept of Palaeontology,
Western Australian Museum
The taxonomy and palaeoecology of
Quaternary marsupials
- PLANE, M.,
Bureau of Mineral Resources
Studies on Tertiary vertebrates
from New Guinea, the Northern
Territory, and north Queensland
- *RICH, Mrs P.,
American Museum of Natural History,
Washington, D.C., U.S.A.
Fossil bird material from the
collections of the Queensland
Museum
- RIDE, W.D.L.,
Western Australian Museum
The taxonomy and palaeoecology of
Quaternary marsupials
- RITCHIE, A.,
Australian Museum, Sydney
1) Devonian fish from Cobar, N.S.W.
2) Palaeozoic fish from Britain,
Scandinavia and Spain
- *SCARLETT, R.,
Canterbury Museum,
New Zealand
A supposed Moa from Queensland -
based on material in the Queens-
land Museum
- STEPHENSON, N.G.,
School of Biological Sciences,
University of Sydney
The taxonomy and phylogeny of
fossil wombats

*TEDFORD, R.H.,
Dept of Paleontology,
University of California,
Berkeley, California, U.S.A.

Australian Tertiary mammals, with
particular reference to the
Pleistocene of Naracoorte, S. Aust.

*THOMPSON, K.S.,
Yale University, U.S.A.

The anatomy of the Devonian lung-
fish Dipnorhynchus (with K.S.W.
Campbell)

*TURNBULL, W.D.,
Field Museum of Natural History,
Chicago, Illinois, U.S.A.

Pliocene-Pleistocene marsupials
from Hamilton, Coimadaí and
Geelong, Victoria (with F.
Lundelius)

WALDMAN, M.,
Dept of Zoology and
Comparative Physiology,
Monash University, Victoria

- 1) Lower Cretaceous fish from
Koonwarra, Victoria (dipnoans,
archaeomaenids, paleoniscids,
leptolepids)
- 2) Carboniferous fish from
Mansfield, Victoria (crossop-
terygians, paleoniscids,
dipnoans, acanthodians)

WARREN, J.W.,
Dept of Zoology & Comparative
Physiology,
Monash University, Victoria

- 1) Lower Devonian crossoptery-
gian fish from eastern Victoria
- 2) Tertiary tortoises from
VTasmania

WELLS, R.,
South Australian Museum

Fossil koalas (with B. Daily)

WILKINSON, H.E.,
National Museum of Victoria

- 1) A revision of fossil wombats
- 2) A study of fossil Sarcophilus

GENERAL

BANKS, M.R.,
Dept of Geology,
University of Tasmania

Permian faunas and correlation
(with M.J. Clarke)

BROWNE, Ida A.,
Dept of Geology & Geophysics,
University of Sydney

Siluro-Devonian fossils of the Yass-
Taemas area, N.S.W.

BYRNES, J.G.,
Dept of Geology & Geophysics,
University of Sydney

Palaeoecology and taxonomy of
Ordovician to Devonian faunas in
the Baker's Swamp-Stuart Town
area, central-west N.S.W.

CHATTERTON, B.D.E.,
Dept of Geology,
School of General Studies,
Australian National University

The palaeoecology of the
Receptaculites Limestone at Taemas,
and its faunas of trilobites,
brachiopods and conodonts

CLARKE, M.J.,
Tasmanian Dept of Mines

The stratigraphy and taxonomic
description of Tertiary and Palae-
ozoic macrofaunas, particularly
brachiopods (with M.R. Banks)

ENGEL, B.A.
Dept of Geology,
Newcastle University

- 1) Carboniferous faunas of the
Myall-Manning-Hunter River
province, N.S.W.
- 2) The general faunas of Rouchel
Brook

FLEMING, P.J.G.,
Queensland Geological Survey

- 1) The Cretaceous fauna of the
Maryborough Basin, Queensland
- 2) Middle Cambrian palaeoecology
and biostratigraphy of northwest
Queensland

FOLDVARY, G.Z.,
Dept of Geology & Geophysics,
University of Sydney

The stratigraphy and palaeontology
of the Bogan Gate-Trundle District,
western N.S.W.

GARRATT, M.J.,
Dept of Geology,
University of Melbourne

Siluro-Devonian biostratigraphy of
the Kingslake area, Victoria

GILL, E.D.,
National Museum of Victoria

Quaternary faunas

GLAESSNER, M.F.,
Dept of Geology & Mineralogy,
University of Adelaide

Precambrian fossils (with M.J.
Wade)

JENKINS, T.B.H.,
Dept of Geology & Geophysics,
University of Sydney

The palaeontology and stratigraphy
of Upper Devonian and Carboniferous
rocks in N.S.W.

LINDSAY, J.M.,
South Australian Dept of Mines

Biostratigraphy of the Tertiary of
the St. Vincent and Murray Basins

PEET, L.J.,
Dept of Geology,
University of Western Australia

The Lower Permian fauna of the
Mingenew Formation, northern
Perth Basin

RUNNEGAR, B.,
Dept of Geology,
New England University

The Permian faunas of New England,
N.S.W.

SHERGOLD, J.H.,
Bureau of Mineral Resources

Wenlock-Ludlow faunal stratigraphy
of southwest Britain

SHERWIN, L.,
Geological Survey of New
South Wales

Silurian stratigraphy and faunas
of central-west N.S.W., and the
Taralga-Bungonia area, near
Goulburn, N.S.W.

SKWARKO, S.K.,
Bureau of Mineral Resources

The revision of Middle Jurassic
fossils from the Newmarracarra
Formation, W. Aust.

STRUSZ, D.L.,
Bureau of Mineral Resources

The Upper Ordovician, Silurian,
and Lower Devonian faunas of the
Canberra 1:250,000 Sheet area

TALENT, J.A.,
School of Earth Sciences,
Macquarie University, Sydney

Siluro-Devonian faunas of
Victoria

WADE, Mary J.,
Dept of Geology & Mineralogy,
University of Adelaide

Precambrian fossils (with
M.F. Glaessner)

WARRIS, B.J.,
Dept of Geology & Geophysics,
University of Sydney

Lower Palaeozoic faunas of
northwest N.S.W.

WASS, R.E.,
Dept of Geology & Geophysics,
University of Sydney

Permian faunas of the western
margin of the Sydney Basin, and of
the Narrabri 1:250,000 Sheet area

PALAEOECOLOGY

ARCHER, M.,
Western Australian Museum

Quaternary marsupials

BINNEKAMP, J.G.,
Bureau of Mineral Resources

Determination of depth and environment from Upper Cretaceous and Tertiary benthonic Foraminifera

BYRNES, J.G.,
Dept of Geology & Geophysics,
University of Sydney

Ordovician to Devonian faunas of the Baker's Swamp-Stuart Town area, central-west N.S.W.

CHATTERTON, B.D.E.,
Dept of Geology,
School of General Studies
Australian National University

Palaeoecology of the Receptaculites Limestone at Taemas, N.S.W.

COCKBAIN, A.E.,
Geological Survey of Western
Australia

Devonian reef complexes of the Lennard Shelf, Canning Basin, W. Australia

FLEMING, P.J.G.,
Queensland Geological Survey

The Middle Cambrian of northwest Queensland

HENNELLY, J.P.F.,
Dept of Geology & Geophysics,
University of Sydney

Relationship between spore assemblages and coal measure sedimentation in eastern Australia

KENDRICK, G.W.,
Dept of Palaeontology,
Western Australian Museum

Molluscan palaeoecology

LINK, A.G.,
Dept of Geology,
School of General Studies,
Australian National University

Sedimentation and palaeoecology in the Yass Basin

LLOYD, A.R.,
A.R. Lloyd Pty Ltd,
French's Forest, N.S.W.

Tertiary foraminiferal palaeoecology in Papua

MARTIN, A.R.H.,
School of Biological Sciences,
University of Sydney

Australian fossil plants in relation to climate and geography

MERRILEES, D.,
Dept of Palaeontology,
Western Australian Museum

Quaternary marsupials

MOORS, H.T.,
Dept of Geology,
University of Melbourne

The ecology of Victorian Ordovician
graptolites in relation to the
turbidite environment

PACKHAM, G.H.,
Dept of Geology & Geophysics,
University of Sydney

Ordovician faunas of central N.S.W.

RIDE, W.D.L.,
Western Australian Museum

Quaternary marsupials

WASS, R.E.,
Dept of Geology & Geophysics,
University of Sydney

Tertiary to Recent bryozoa of
southern Australia, and its
application to older faunas.