

BIOSTRATIGRAPHY AND PALEONTOLOGY

REPORTS

GSWA paleontology reports consist of two types:

Legacy (1962–2000)

- recently rescanned and keyworded
- kept as original, i.e. no corrections made
- originally prepared as informal internal reports
- contain much of the basic biostratigraphic and taxonomic data used in past GSWA mapping projects

The reports are a great resource for regional studies across Western Australia.

New series (2016 onwards)

- fully edited in line with other GSWA publications
- rapid communication of new discoveries, basic data, and brief reports unrelated to larger projects
- will be written on an ad hoc basis

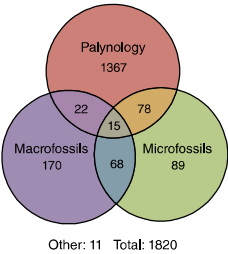
Fossil materials described in many reports are held within the GSWA Paleontology or Petroleum Relinquishment collections, allowing for further studies.

Spatial searchability will be available via **GeoVIEW.WA** in the near future.

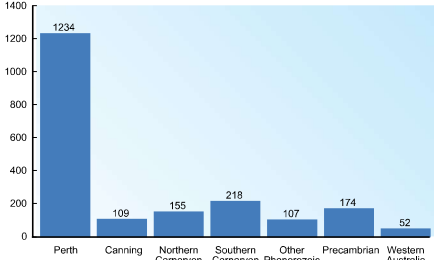
The image shows several screenshots of GSWA Paleontology reports and the online portal. The top left shows a report cover with a photo of workers. The top right shows the GSWA Paleontology portal with a search bar and filters. The bottom left shows a report titled 'Paleontology Report Series'. The bottom right shows a report titled 'Paleontology Report Series' with a photo of a fossil. Red arrows point from the portal to the reports.

Both legacy and new series paleontology reports are available free at:
www.dmp.wa.gov.au/Paleontology

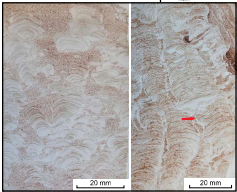
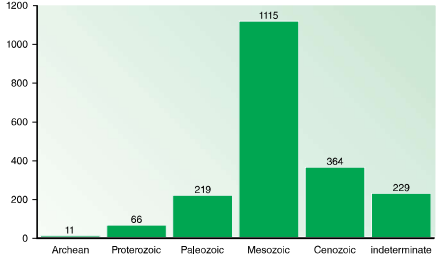
BY FOSSIL TYPE



BY BASIN



BY AGE



- Reports cover a wide range of:
- map sheets
 - basins
 - fossil groups
 - geological ages.

CURRENT RESEARCH PROJECTS

Paleontology forms an active part of GSWA's mapping and basin studies, providing biostratigraphic and paleoenvironmental data for sedimentary units across the state.

Carnarvon Basin
Early Permian macrofossils and paleoenvironments (in conjunction with UWA)

Two images of fossilized brachiopods. The left image is labeled 'Brachiood (left) and Dimotopyge sp. (right), Salsgadoo Shale'. The right image is labeled '1 cm'.

Canning Basin and embayments
Paleozoic macro- and micropaleontology and ichnology.

Two images of fossilized arthropods. The left image is labeled 'Barapromognathus extensus, St. element, 4, Symple 1, Lower Ordovician, Nambear Formation, Canning Basin'. The right image is labeled 'Cruziana rugosa, in association with fish macrofossils, Cobb Embayment, Canning Basin'. Scale bars are 100 µm and 2 cm.

Amadeus, Officer and Murrumbidgee Basins
Neoproterozoic biostratigraphy. GSWA Record on the Aralka Formation (in conjunction with NTGS) released 2018; GSWA Report documenting a biostratigraphic scheme for the latest Neoproterozoic – early Cambrian of the western Centralian Superbasin (including the Amadeus, Officer and Murrumbidgee Basins) due 2020.

Two images of fossilized brachiopods. The left image is labeled 'Linella aris, Amadeus Basin'. The right image is labeled 'Arumbona sp., Murrumbidgee Basin'. Scale bars are 5 cm and 5 cm.

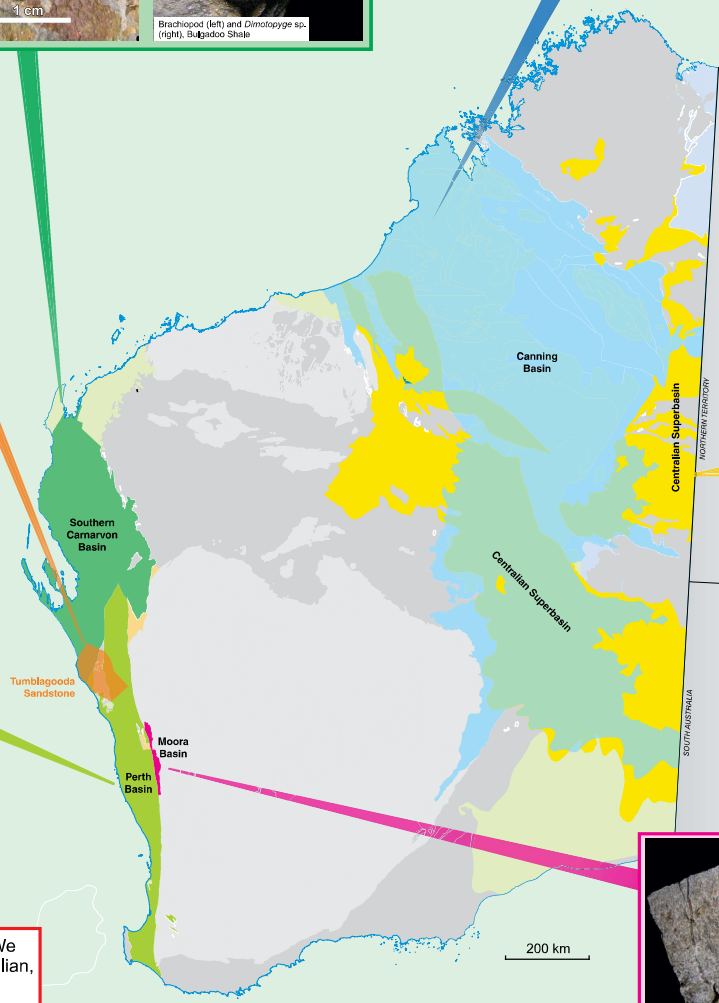
Tumblagooda Sandstone
Reassessments of biostratigraphy, ichnology and regional correlation. External publication due end 2019.

Two images of fossilized tracks. The left image is labeled 'Diplichnites gouldi trackway, Natures Window'. The right image is labeled 'Daedalus burrows, Kalbarri'. Scale bars are 1 cm and 1 cm.

Perth Basin
Macro- and micropaleontology studies. Includes ongoing research into unusual depositional environments of the Kockatea Shale (in conjunction with UWA)

Two images of fossilized brachiopods. The left image is labeled 'Spirinodonta, Lower Triassic, Kockatea Shale'. The right image is labeled 'Durgodinium ceratulum, F12421/1, H541, southern Perth Basin'. Scale bars are 1 cm and 1 cm.

Contact us for fossil identification and expert advice. We can also provide a point of contact for Western Australian, Australian, or worldwide paleontological specialists.



Precambrian paleontology
Field reassessment of potentially biogenic features

An image of a rock sample showing coral pseudofossils. The label is 'coral pseudofossils, Moora Group'. Scale bar is 2 cm.

COLLECTIONS

GSWA maintains a range of historical and modern paleontological materials, stored in two separate collections:

- GSWA Paleontology Collection
- Petroleum Relinquishment (including the Core Library)

Palynology and microfossils

- Outcrop samples, and non petroleum (mineral, water, engineering) boreholes (Paleontology Collection); petroleum well samples (Relinquishment and Core Library collections, searchable through WAPIMS)
- Slides and residues
- Non petroleum material has an emphasis on biostratigraphy of the Perth Basin Mesozoic and the Canning Basin Devonian

Macrofossils and stromatolites

- Trace and body fossils
- Hand samples, SEM stubs, section slides, acetate peels
- Emphasis on Proterozoic biostratigraphy, Devonian of the Canning Basin, Permian of the Carnarvon Basin

The Paleontology Collection also contains type and figured specimens of both macrofossils and microfossils, extending back to the 1890s.

Loans

Loan of non type materials is permitted to most geoscientific organisations, including researchers and consultants.

Type material cannot be loaned, but may be viewed upon request. Microscopes and photographic equipment are available at the Carlisle Core Library site for use in examination.



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