

# BIOSTRATIGRAPHY AND PALEONTOLOGY IN GSWA

## 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

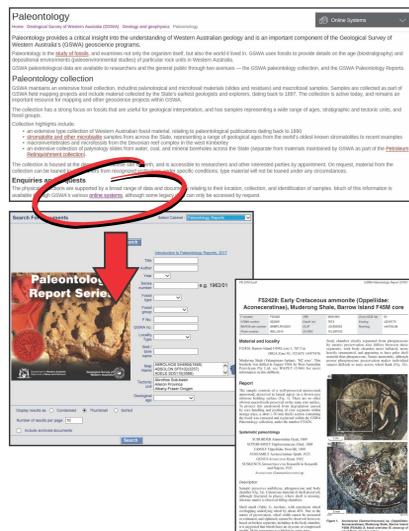
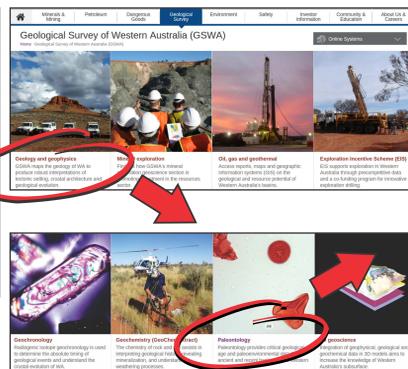
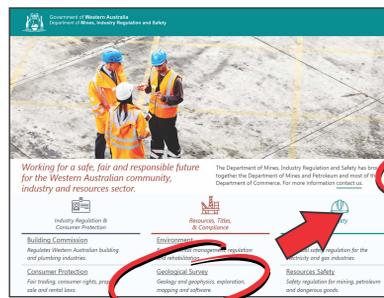
The reports are a great resource for regional studies across Western Australia.

### 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.

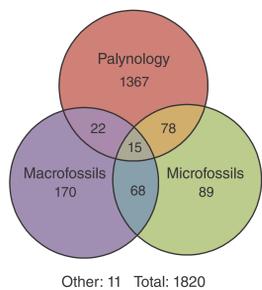
Fossil materials described in many reports are held within the GSWA Paleontology or Petroleum Relinquishment collections, allowing for further studies.

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

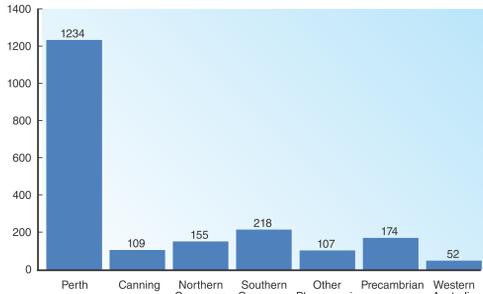


Both legacy and new series Paleontology Reports are available free at:  
[www.dmp.wa.gov.au/Paleontology](http://www.dmp.wa.gov.au/Paleontology)

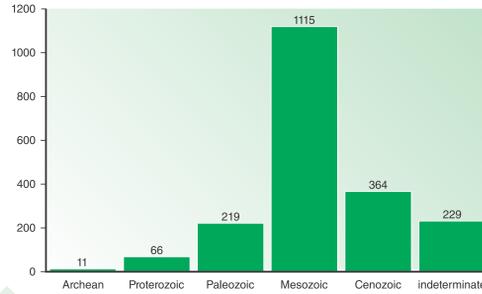
## BY FOSSIL TYPE



## BY BASIN



## BY AGE



Reports cover a wide range of:

- map sheets
- basins
- fossil groups
- geological ages

## 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.

Current projects include:

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

Brachiopod (left) and *Dimotopyge* sp. (right), Bulgadoo Shale (1 cm scale)

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

*Didymograptus* and *Tetragraptus*, Early Ordovician, Canning Basin (1 cm scale)

*Cruziana rugosa*, in association with fish macrofossils, Cobbs Embayment, Canning Basin (2 cm scale)

**Tumblagooda Sandstone**  
reassessments of biostratigraphy, ichnology and regional correlation. External publication due end 2017.

Left: *Diplichnites gouldi* trackway, Nature's window. Right: *Daedalus* burrows, Kalbarri

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

Spincrudatan, Lower Triassic Kockatea Shale (1 cm scale)

**Southern Perth Basin**  
reassessment of historic palynological data. GSWA Report on the data between Mandurah and Bunbury will be published late 2017. Data from Bunbury south to follow in 2018.

*Dinogodinium cerviculum*, F12421/1, HS41, southern Perth Basin

**Amadeus, Officer and Murraba Basins**  
Neoproterozoic biostratigraphy. GSWA Record on the Aralka Formation (in conjunction with NTGS) due early 2018; GSWA Report documenting a biostratigraphic scheme for the latest Neoproterozoic – early Cambrian of the western Centralian Superbasin (including the Amadeus, Officer and Murraba Basins) due 2019.

*Linella avis*, Amadeus Basin

*Arumberia* sp., Murraba Basin (5 cm scale)



**Precambrian paleontology**  
field reassessment of potentially biogenic features

corral pseudofossils, Moora Group (2 cm scale)

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

## 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 macro- and microfossils, extending back to the 1890s.

### CONTACT:

Perth Core Library  
37 Harris St Carlisle  
(08) 9470 0302  
paleontology@dmirs.wa.gov.au

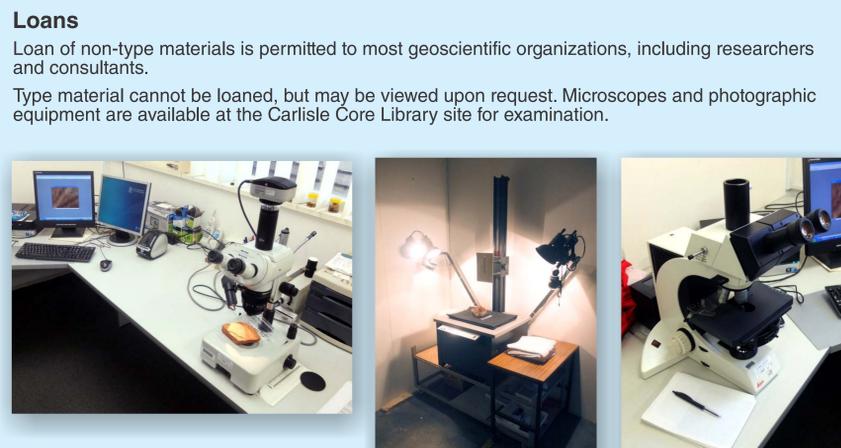
**Sarah Martin**  
(08) 9222 3324  
Sarah.Martin@dmirs.wa.gov.au

Collections access, Perth Basin, Carnarvon Basin, Canning Basin Ordovician



**Heidi Allen**  
(08) 9222 3671  
Heidi.Allen@dmirs.wa.gov.au

Stromatolite biostratigraphy, Precambrian paleontology, Tumblagooda Sandstone, Carnarvon Basin, Canning Basin and embayments



### Loans

Loan of non-type materials is permitted to most geoscientific organizations, 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 examination.