

Progress Report CF 2011-105

Herbarium collections management

Plant Science and Herbarium

Project Core Team

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Project Team	granted
Program Leader	granted
Directorate	granted

Herbarium collections management

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Context

The Western Australian Herbarium's Collection provides the core resource for knowledge of the State's plants, algae and fungi. The Collection is growing constantly, through addition of new specimens representing new taxa and new records of existing taxa. The collection is maintained to a high standard, and provides Parks and Wildlife and the community with the fundamental resource providing knowledge of the diversity, distribution and abundance of plants throughout Western Australia.

Aims

- Fully document and audit the diversity of Western Australia's plants, algae and fungi.
- Maintain in perpetuity a comprehensive, adequate and representative research and archive collection of specimens of all taxa in these groups occurring in Western Australia.
- Contribute to, support and service the research, conservation and decision-making activities of Parks and Wildlife.
- Contribute to, support and service taxonomic research by the world's scientific community.

Progress

- 9,596 specimens were added to the collection, which now stands at 769,256, a 1.26% increase in holdings during this period.
- Loans and exchange: loans outward—17 loans consisting of 881 specimens; loans inward—21 loans consisting of 1,277 specimens; loans returned to the Herbarium—49 loans consisting of 2,060 specimens; loans returned to their home institution—42 loans consisting of 1145 specimens; exchange inward—294 specimens; exchange outward—1303 specimens including 7 requests for destructive sampling.
- Tasks managed by Collections staff with the assistance of volunteers were as follows: mounting and labelling 8,100 specimens; validating the name and occurrence of 2,139 incoming specimens for lodgement; databasing specimens; rearranging fungi collection from a systematic to alphabetic sequence; curating the backlog of algae and slimemoulds; developing a microscope slide collection; curated the *Lepidosperma* collection; assigning Karratha Regional Herbarium specimens to eastern Australian herbaria.
- Volunteer participation was significant, totalling 10,761 hours which is equivalent to 6 full time employees.
- Recruited 28 volunteers through three recruitment drives.
- Maintained the Reference Herbarium facility, which has 14,899 specimens representing 11,764 taxa and also added or replaced 139 specimens. 1,272 visitors used this resource to identify plant specimens during this period.
- Research Collection was accessed by 676 visitors to study taxa or help with identification.
- Provided 282 high resolution scans of herbarium specimens to Parks and Wildlife staff and industry consultants to aid in the identification and location of known and new populations of priority and threatened taxa, and to scientists for research.
- Significant lodgements were processed, including industry surveys, regional Parks and Wildlife surveys, Jurien Wetland Coastal survey, Pilbara Biological Survey, M & R Barrett, T Start (Loranthaceae), and Bushblitz.
- The Herbarium Identification Program provided identifications to a range of clients and specialises in taxa and specimens that clients find challenging. Our most significant clients included Parks and Wildlife, other government agencies, environmental consultancies, regional herbaria and the public. Significant projects this year included Bushblitz, Pilbara DNA barcoding, AusPlots and Karratha Regional Herbarium.
- Educational role continued with staff providing tours of the Herbarium for tertiary institutions, Parks and Wildlife staff, environmental consultancies, community groups and the media.

- Scanned 233 types for the Global Plants Initiative where Western Australian Herbarium type specimens are now accessible to the world's scientific community for study.

Management implications

- Maintenance and curation of the Herbarium collections provides an authoritative inventory of the plant biodiversity of Western Australia.
- The collections are drawn upon constantly by Parks and Wildlife staff, consultants and others for validating specimen records from biological surveys and for assessing the conservation status of native taxa.
- Many taxa in Western Australia are yet undiscovered, but many of these are already represented by specimens in the Herbarium, awaiting recognition by taxonomic staff.

Future directions

- Continue to maintain the collection to an authoritative standard for all users.
- Continue to review and document collections management policy and procedures to effect efficiencies and reflect modern herbarium practices, and where applicable make available on the Herbarium webpage.
- Recruit a sustainable number (approx 20 per year) of volunteers to assist in key Herbarium functions.
- Merge the incoming Manjimup fungi collection with the research collection.
- Work through Parks and Wildlife specimen mounting backlog.
- Physically expand the research collection to improve access, care and maintenance and increase efficiencies in management of the collection.
- Re-house the spirit collection to improve ongoing maintenance and access, and conform with Occupational Health and Safety standards.