

Progress Report CF 2011-105

Herbarium collections management

Plant Science and Herbarium

Project Core Team

Supervising Scientist	Karina Knight
Data Custodian	Karina Knight
Site Custodian	Karina Knight

Project status as of July 3, 2019, 12:57 p.m.

Update requested

Document endorsements and approvals as of July 3, 2019, 12:57 p.m.

Project Team	granted
Program Leader	granted
Directorate	granted

Herbarium collections management

K Knight, C Parker, J Huisman, J Percy-Bower, R Rees, S Coffey, M Falconer, E Wood-Ward, M Hislop, R Davis

Context

The Western Australian Herbarium 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 the department and the community with the fundamental resource that provides 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 the department.
- Contribute to, support and service taxonomic research by the world's scientific community.

Progress

- Addition of 11,486 specimens (including 811 Priority Flora and 147 Threatened Flora specimens) to the collection, which now stands at 791,006, a 1.47% increase in holdings.
- Loans and exchanges: loans outward--17 loans consisting of 104 specimens; loans inward--12 loans consisting of 668 specimens; loans returned to the Herbarium--42 loans consisting of 574 specimens; loans returned to their home institutions--54 loans consisting of 2,310 specimens; exchanges inwards--139 specimens; exchanges outwards--5,446 specimens including 28 requests for destructive sampling.
- Tasks managed by collections staff with the assistance of volunteers were as follows: mounting and labelling 8,039 specimens; validating the name and occurrence of 913 incoming specimens for lodgement; repackaging ca. 1,500 fungi specimens; processing backlog of A. Start's vascular parasite/host collection in preparation for databasing; entering data for 464 specimens into Max database format; added printed collection information to 7,939 pre-accessioned and accessioned specimen backlogs.
- The most significant projects accomplished were the distribution of the specimens from the closed Pilbara Regional Herbarium through the duplicate program, rehousing the fungi specimens collection from the Manjimup Herbarium and a focus on preparing the cryptogamic backlog for databasing.
- Volunteer participation was significant, totaling 10,843 hours, which is equivalent to ca. 6.2 full time employees. Twenty volunteers were recruited bringing the total working at the Herbarium to 65.
- Maintained the Reference Herbarium facility, which has 15,102 specimens representing 11,841 taxa as well as adding or replacing 282 specimens. This resource was used by 1,190 visitors to identify plant specimens during this period.
- Research collection was accessed by 878 visitors to study taxa or help with flora identification.
- Provided 124 high resolution scans of Herbarium specimens to departmental 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 purposes.
- Scanned 178 Types for the Global Plants Initiative, where Western Australian Herbarium Type specimens are now accessible to the world's scientific community for study.
- Significant collections lodged included industry surveys, regional staff surveys, Pilbara Biological Survey, Fortescue Valley Survey and collections from M Barrett and G Byrne.
- 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 departmental staff, other government agencies, environmental consultancies, regional herbaria and the public.

- Educational role continued with staff providing tours of the Herbarium for departmental staff, tertiary institutions, environmental consultancies, community groups and the media.

Management implications

- Maintenance and curation of the Herbarium collections provides an authoritative inventory of the plant biodiversity of Western Australia underpinning flora conservation and research programs. The collections are drawn upon constantly by department staff, consultants and others for validating specimen records from biological surveys and for assessing the conservation status of native taxa.

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 these 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 Herbarium research collection.
- Curate the lichen collection, focusing on rehousing the collection based on best practice principles.