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The Western Australian Herbarium specimen database

BCS Plant Science and Herbarium

Project Core Team

X X **Supervising Scientist** Julia Percy-Bower
Data Custodian John Huisman

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The Western Australian Herbarium specimen database

J Percy-Bower, S James, S Sinha, E Wood-Ward, S Coffey, R Gugiatti

Context

The Western Australian Herbarium collection management system (WAHerb) allows staff at the Herbarium to manage and maintain the Herbarium's botanical specimens and assets. It provides core data on the distribution, ecology and morphology of taxa for the department and the community, through *Florabase* and other biodiversity data aggregators. Data from the collections database is provided to researchers, consultants and community members on request, and to the Australasian Virtual Herbarium (AVH), Atlas of Living Australia (ALA), Global Biodiversity Information Facility (GBIF), and Dandjoo (Biodiversity Information Office) on a regular basis.

Aims

- Capture, maintain and validate taxonomic, spatial, phenological, population and habitat data for the Herbarium botanical collections, enabling curation of the collection and providing core data for biodoversity data providers and departmental decision support systems and research.

Progress

- The Western Australian Herbarium added 11,317 specimen records in 2021-22.
- More than 86,000 specimen records were edited ensuring the hebarium collection data is scientifically valid, up-to-date and aligned with the department's conservation codes.
- Customised specimen data reports (species lists and label data) were provided to departmental officers, researchers and the public regularly upon request.
- An instance of the Integrated Publishing Toolkit was established in 2022, enabling streamlined delivery of a Darwin Core Archive of the Herbarium data to biodiversity data aggregators on a regular basis.
- Through the Australasian Virtual Herbarium and Atlas of Living Australia, almost 33 million herbarium data records were downloaded in 17,000 download events. The Western Australian Herbarium dataset is also available via the Global Biodiversity Information Facility (GBIF - 875 million records in 19,650 download events) and through Dandjoo.
- Data cleaning and migration are underway to transfer records to a new collection management system. This includes the disambiguation of agents (collectors, determiners) and linkage to unique identifiers (ORCID, Wikidata). More than 1.7 million agent entries in WAHerb were linked to 13,923 unique agents.

Management implications

- WAHerb enables the management of the State's botanical collections assets; the migration to Specify will further increase productivity and provide management tools not previously available.
- WAHerb represents the most comprehensive vouchered specimen database for Western Australian plants available and provides a source of information that consultants, land managers, and policy makers can use for updates on biodiversity or conservation status, plant identification, clarification of plants in an area and identification of knowledge gaps. This ensures that all research and management activities are informed by up to date and valid botanical species names.

Future directions

- Continue timely addition, editing and validation of specimen records to maintain currency and connectivity between the Herbarium collection, the Western Australian Plant Census and departmental and external biodiversity data providers, including Florabase, Dandjoo, AVH, ALA, and GBIF.
- Complete the migration of the collection management system to Specify.