Progress Report CF 2011-104

Biodiversity informatics at the Western Australian Herbarium

BCS Plant Science and Herbarium

Project Core Team

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Project status as of July 4, 2023, 5:12 p.m.

X X Update requested

Document endorsements and approvals as of July 4, 2023, 5:12 p.m.

X X
Project Team granted
Program Leader granted
Directorate granted

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Context

Florabase, the web information system for the Western Australian flora, is the State's central warehouse for botanical taxonomic information. Florabase draws from three core databases for names (WACensus), specimens (WAHerb) and images (Imagebank). Actively managing the currency, authority, data quality, and linkages between these datasets is an important task, both for maintaining Florabase and contributing to national and global plant information resources such as the Atlas of Living Australia (ALA) and the Global Biodiversity Information Facility (GBIF). WAHerb is the Herbarium's specimen database and is the sole source of specimen data used by Florabase. Imagebank is the Herbarium's image collection.

Aims

- Deliver authoritative taxon, specimen and image information on all Western Australian vascular plants, algae, fungi, lichens, mosses and slime moulds to a wide audience, using efficient, effective and rigorous web-based technologies.
- Deliver the department's biodiversity data to the internet using standards-compliant web services and data structures.

Progress

- Contributed to the development and approval of BCS' IT Tactical Roadmap Investment Plan. (Aug–Oct 2022)
- Worked with Katrina Walton, Matt Cavana and Tanya Pinnell to correct a significant issue in Oracle WACensus. (Sept 2022)
- Provided support to BIO staff on the handling of WACensus' taxonomic names data. (Nov 2022, Mar 2023, Jun 2023)
- Developed a business case through IMBC and BCS, gained approval, and commenced my role as the Department's representative for creating Digital Object Identifiers (DOIs) for journal articles via CrossRef. (Aug 2022–Feb 2023)
- Developed a business case, gained approvals, and advertised for an Ecoinformatics position to fill Specify Migration role. (Jan–Mar 2023)
- Migrated *Nuytsia* Journal database out of the Texpress database environment. (Feb–Mar 2023)
- Created DOIs for *Nuytsia* articles and published a new version of Florabase to display and use these DOIs. (Mar 2023)
- Released a new maintenance version of Science Internet to support the migration of IT systems into Azure. (P403, Mar 2023)
- Released a new maintenance version of Science Website Workbench to support the migration of IT systems into Azure. (P403, Mar 2023)
- Released a new maintenance version of Imagebank to support the migration of IT systems into Azure. (P403, Mar 2023)
- Employed Jarid Prince as Ecoinformatics Developer to work on SPMS. (Apr 2023)
- Worked with BIO to transfer Tim Young as a Data Engineer into Ecoinformations to work on the Specify Migration. (Apr 2023)
- Provided data and system analysis, project planning, initial code implementation and other activities to migrate WAHerb into Specify. (Ongoing)
- Contributed to planning for the new Data Catalogue, including procurement approval through CUA. (Ongoing)
- Provided support, planning and approval for developing a new SPMS and support of the current version. (Ongoing)

- Released new maintenance versions of Florabase. (Ongoing)
- Released new maintenance versions of Pubsys. (Ongoing)
- Managed Ecoinformatics budget and purchasing. (Ongoing)
- Provided support, planning and approvals for end-of-life applications, including NatureMap and Max. (Ongoing)
- Contributed to ongoing Departmental IT planning through the Information Custodian Working Group (ICWG), IT Systems Health Check, and Retention and Disposal Mapping workshop. (Ongoing)

Management implications

- Ecoinformatics and BIO continue to work together to build a new platform in BCS for biodiversity data.
- Florabase is an essential data library that allows the community and department staff to retrieve the most recent information on the name, features, status and distribution of the 14,047 currently recognised native and naturalised Western Australian vascular plant taxa and 3145 alga, fungi, lichen, moss and slime mould taxa. Species conservation and land management efforts across the State are made more effective by access to this authoritative information.
- WAHerb is the authoritative source of data for any application relying on Western Australian plant specimen data.
- Imagebank is the authoritative source of data for Western Australian vascular plant images, with full support for images of other taxon groups such as mammals, insects and fungi. It is also the source of data for other applications such as Florabase and ALA.
- Involvement in national and international informatics collaborations enables Western Australia to participate fully in new developments in these areas, ensures that Western Australian data is made available to the broadest possible audience, and ensures that data from other sources can be integrated with local data for the more effective delivery of research outputs and outcomes.

Future directions

- Continue to work with BIO on migrating data into Nomos, Data Catalogue and Specify.
- Continue the development of up-to-date, integrated and accessible data catalogues and databases.
- Continue to ensure data is effectively captured, curated and accessible to support conservation management and decision-making.
- Rework Ecoinformatics applications (Florabase, Imagebank, Pubsys, Science Internet, Science Website Workbench, NatureMap, Max) following significant changes to WAHerb, WACensus, Data Catalogue and SPMS.