

BRAHMS

Management of natural history

BRAHMS v7 users will quickly recognise many of the tools and functions in v8 as well as the broad layout of the menus, thus minimising the task of upgrading. However, there are many fundamental differences between v7 and v8. Some of the key differences are listed here.

Topic	Comments
Project management	The BRAHMS project now has additional management support from Oxford University Innovation (OUI) who license BRAHMS v8, ensuring users get the correct package and support. https://innovation.ox.ac.uk/licence-details/brahms/
Data storage	Data are no longer stored in DBF FPT files but rather in a choice of stores that are fully up to date with respect to technology and have no meaningful limit to table size. Current options are SQLite, MSSQL Server and PostgreSQL. V8 databases can store millions of records. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#performancevideo
International	BRAHMS v8 is international with respect to the interface and the storage of data. Data storage is Unicode with no restriction on the character data stored across languages. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#language
Temp files folders	There are no longer any temp file work folders. Instead, personal files such as RDE file, saved files and column views are, by default, saved in your BRAHMS folder in Documents.
Primary and foreign keys	All table key fields use GUIDs (32 hexadecimal digits). They cannot be duplicated and thus 100% remove the danger of duplicating primary keys. Database integrity is assured both by the BRAHMS software and by the DBMS.
File and field names	Table and fields names have been updated to be more meaningful. V8 is no longer restricted to 10-character field names.
Modular system	BRAHMS v8 has a flexible, 3-tiered and modular architecture opening up options for shared development. The user interface (UI) is independent of the services and data store access and therefore could relatively easily be substituted by other technologies such as a web-browser UI. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#modular
Interface	The new system uses ribbon toolbar technology (context sensitive menus and toolbars) similar to that used in MS Office applications – making it highly intuitive. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#v8menus
Help	Improved help is built into v8, backed up by online support and training video clips e.g. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#mappingvideo
NULL values	It is now possible to store NULL values in all tables.
Museum management	V8 is no longer restricted to botanical data. The concept of herbarium specimen is replaced by preserved specimen (<i>i.e.</i> museum specimen). https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#nathistory

Species table and field names	The fields SP1, RANK1, SP2, RANK2 and SP3 have been dropped. V8 has separate fields for species, subspecies, variety, forma and cultivar. Formatted taxa names include the appropriate ranks. The size limit on these fields has been increased. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#taxonnames
Higher level classification table	A new table is added for taxon ranks above family. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#taxonnames
Extract files	V8 does not have the equivalent of extract files. Instead, your selections are seen in the main tables after applying a query.
Queries and filters	Query and filter functions are one and the same thing. Both now use standard SQL commands and have exactly the same result. There is no longer a fixed menu of query commands. You can design and save your own commands. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#explore
Tree Views	Tree Views are now available in all tables. You can also design and save your own multi-level Tree Views. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#treeviews
Link file fields	Link fields in v7 are now referred to as custom fields. These fields can be added to all tables and rather than being treated as add-ons, they become a more integrated part of your database. For example, they are added to the main data grids rather than optionally appearing below the grid. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#custom
Tagging	Tags (adding a symbol to the TAG field) in v7 were added to the main data files. Thus, on networks, one person's tags could interfere with those of another. In v8, while, as before, tags appear in the main tables, they are held in a user specific tag table. Thus, all tags and tag functions are now specific to each user. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#tagging
Excel	V8 has much improved connectivity with Excel. You can open Excel xlsx files more easily and transfer the data into BRAHMS. You can also save data more easily to xlsx files. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#importing https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#exporting
Memo fields	The concept of memo does not exist and you will not see 'memo' in the data grids. However, the text fields that replace them are effectively the same in that they store any length text strings.
Opening and docking multiple tables	Unlike v7, you are able to open as many tables as you need at the same time. These tables can be docked in different ways to optimise viewing. You can use multiple monitors to display tables, forms, images, maps and other windows. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#multiple
Dynamic web links	You can now open multiple external website links at the same time and these will auto update as you scroll through your data grid. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#weblinks
Mapping	In addition to the v7 mapping options, v8 includes has in-built ArcGIS API mapping to display your data. Map points and grid records are connected allowing you to locate the current record or map point, very handy for finding map errors. https://herbaria.plants.ox.ac.uk/bol/brahms/software/v8#mapping
RDE	The concept of Rapid Data Entry (RDE) remains. RDE files continue as portable and flexible flat files for data transfers and capture. RDE file structures are now identical to the tables they represent; you can hide and reorganise fields but not remove them; each record has a GUID providing 100% connectivity after import to the main database; RDE data can be edited and used to update data that have already been imported.
BRAHMS online	Website design and data uploading are more fully integrated in v8. For example, you can see your web page updates online as you edit the HTML.