# Free (or low cost) and open source database options for collections digitization

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## Choices.....

Excel (or other spreadsheet)



Microsoft Access



Specify



Symbiota







- Familiar
- Easy to use
- Generally available
- Good as an intermediate step for analysis, cleaning, data prep
- Easily modified

#### **Disadvantages**

- Not normalized
- Not relational
- Lacks field constraints
- Difficulties converting to other formats
- Doesn't use key fields, indexes
- Not dependable for managing globally unique identifiers





- Supports data normalization
- Relational (multiple related tables)
- Supports keys, indices, and GUIDs
- Generally available
- Datasheet view resembles Excel
- Searchable via Structure Query Language (SQL) syntax
- Advanced export features
- Easy way to process data before exporting to more sophisticated, online systems

#### **Disadvantages**

- Requires echnical expertise to utilize fully
- Potentially steep learning curve
- Can require significant development time and interface design
- Not accessible online (single-use database)





- Built on MySQL (relational)
- Long history
- Help desk (Theresa Miller)
- Free
- Powerful tools
- Customizable interface and schema
- Allows multiple users
- Has a web interface for serving data

#### **Disadvantages**

- Learning curve can be steep
- Requires a server for multiple users
- Not web based for data management
- Can be difficult to install





- Built on MySQL (relational)
- Long history
- Open source
- No installation
- Web based: managing and serving data
- Supports images
- Free
- Powerful data management tools
- Direct data mobilization to iDigBio and GBIF
- Easy to use
- Intuitive
- Built in OCR and georeferencing
- Allows multiple users from remote locations





North American Network of Small Herbaria

