Field Station Collection Digitization Workflow

0. Where to start?

https://www.idigbio.org/content/workflow-modules-and-task-lists

1. Flat Sheets and Packets
2. Pinned Specimens in Trays and Drawers
3. Things in Spirits in Jars
4. 3D objects in Trays and Boxes

Avoid "reinventing the wheel", but everything needs to be personalized to the needs of your collection.

Things to consider:

- Tradeoff of volume vs. completeness?
- Institutional/collection policies, needs, goals?
- Constraints of personnel, expertise, funds, physical layout?
- Type of collection?

1. Assess current collections

Main Collection Types

1. Plant ("flat sheets and packets")
2. Vertebrate ("things in spirits in jars" and "3d objects in trays and boxes")
3. Entomological ("pinned specimens in trays and drawers" and "things in spirits and jars"

Things to consider:

- Damage?
- Access?
- Level of identification?
- Who is using?
- Organization?
- Size?

2. Data decisions

Spectrum of Options

1. Donating collection to local research collection
2. Accessioning to local research collection (and permanently "on loan")
3. Independent, but digital data housed within a local research collection (a specific collection within the museum)
4. Independent, but linked into a broader network (ARCTOS, North American network for small herbaria, etc)

5. Completely independent

Things to consider:

- Future maintenance of collection?
- Who will have access? And how difficult?
- IT support?
- Legacy data?
- Size of collection?
- What needs to be digitized?
- What will data be used for?
- Might be different for all collection types

3. Digitize

Imaging

- Can do done by anyone with minimal training (volunteers, undergraduates, etc)
- Most important is to capture specimen, label data, and specimen ID in photograph
- Can be a series of photos (photo file names should be renamed to link them together)
- Should have a scale bar, and be as consistent between photos as possible.

Databasing/Data Capture

- Requires slightly more training than imaging, but still easy to do.
- Needs to be Darwin Core Compliant

Data Manipulation

- Error checking
- Requires the most amount of training
- Aggregate data in online cache
- Temporal-spatial analyses

4. Maintain Collections

Collections of all types were enhanced through:

- Clean, organize, and get necessary equipment
- Work on identifications
- Update species lists
- Build off and continue to update
- Maintain linkages with partner institutions
- Develop protocols for people doing research at field station to help enhance and contribute to collection
- Involve local community (imaging, databasing, bioblitz, teaching, and using the collections)

Checklist of Useful Items

Collection Assessment/Maintenance

- ✓ New cabinet
- ✓ Drawers
- ✓ Unit trays
- ✓ Jars/Vials
- ✓ Dust Masks
- ✓ Cleaning Supplies
- ✓ Forceps
- ✓ Ethanol
- ✓ Latex gloves
- ✓ Identification keys

I**maging**

- ✓ Dino-lites
- ✓ Extra light sources
- ✓ Laptops
- ✓ Specimen Labels
- ✓ Blank Label Paper
- ✓ Scissors
- ✓ Ruler (for photo scale)
- ✓ Imaging boxes
- ✓ Big photo stand
- ✓ Camera (and charger)
- ✓ Forceps
- ✓ USB/external hard drive
- ✓ Microscope
- ✓ Click counter
- ✓ Identification keys
- ✓ Micron pens
- ✓ Post-its
- ✓ Elmer's glue

Transportation

- ✓ Shipping tape
- ✓ Shipping boxes
- ✓ Cardboard
- ✓ Ribbon
- ✓ Truck
- ✓ Tarp & bungee cords