

Rick Brune's Excellent Adventure with SEINet

The following are directions for accessing the CoNPS field trip lists and creating species lists from user defined areas. There are many other ways to access the database. A few of my experiences using the dynamic key are presented later.

First, for an understanding of the design and functions of the portal and more instructions, you may want to visit: symbiota.org

To access the CoNPS field trips and other Colorado lists, do the following:

Go to: swbiodiversity.org

Click on: "Flora Projects"

Scroll down and click on: "Colorado" (Note: The location of the Colorado data is subject to change. There are also other paths to get to it.)

At this point you should be presented with a list of field trips and other Colorado surveys.

Chose a field trip such as Narraguinne Canyon 2001. A list of species observed on the trip will appear either as images, alphabetical taxa, or common names depending on your choice in the "Filters" box on the right. I picked alphabetical taxa. Click "Rebuild List". This will recreate the list alphabetically by Latin name. Selecting "Notes and Vouchers" will show notes and voucher specimens if any.

To learn more about a species, click on the Latin name. This will take you to a page from Flora North America or other reference(s) for a taxonomic description. It would be helpful if a small snippet of the key the description comes from could be include in the future. There are usually photographs of the species.

Clicking "More Images" may show images of herbarium specimens that may help for identification.

Clicking on the very fine print "more" by the synonym(s) will create a list of synonyms for scientific and/or common names of the species. Synonymy doesn't get any simpler unfortunately. An interactive map is also presented that can be opened to see locations of collections and casual observations for the species in the list.

Clicking on the "key" symbol will create a dynamic key on the left side of the page designed specifically for the species list being viewed.

Another powerful tool is the ability to create species lists for user-selected areas. The areas can be counties, states, and other legal entities or they can be user defined using coordinates or areas around points. Below are basic instructions.

To access lists for user-defined areas start with the following:

Go to swbiodiversity.org

Hover your cursor over "Search" and click on "Search Collections"

Click on "Specimens and Observations"

Under latitude and longitude, select a radius around a point or enter latitudes and longitudes defining an area.

Click on the small symbol of a globe.

Locate your area of interest by clicking to place a point on the map if using radius.

Click "Submit Coordinates"

Click "Search"

Click "Species List"

Click "Key" if desired.

You can also click "map" and a map of all of the retrieved species will be created. Click on the dots on the map to view specimen information for that location.

I found the results from the keys to be problematic for the five species I tried in various lists: *Phragmites australis* reduced only to *Phragmites australis* and *Distichlis spicata*. Not a problem for the informed but someone not familiar with either would not know the correct species. *Sagittaria latifolia* in two lists and *Sagittaria cuneata* in another were eliminated when I added certain characteristics; and *Rhus aromatica* failed with leaves simple even though the reference refers to it having simple leaves at times. These problems arise because characteristics used for some species in the key are not marked for other species. This probably happens because these unmarked characteristics are not mentioned in floras. For example, one generated key had the characteristic choices succulent vs non-succulent; armed vs un-armed; and latex present vs absent. These were highly ranked characteristics for separating species in the list. Checking these key characters, either half of the couplet, while keying *Sagittaria latifolia* resulted in its elimination.

I also checked the listing for Bluff Lake which I surveyed in May and June 2004. I documented 245 species including 6 identified only to genus. The listing has 186 species. This may be a result of using only vouchered specimens but vouchered species from Bluff Lake such as *Ipomoea leptophylla* (Wingate 5527), *Panicum virgatum* (Wingate 8551), and *Eleocharis parvula* (Wingate 8533) are missing. Hopefully a way can be found to include vouchered and unvouchered records together to avoid loss of information. (If you go to Bluff Lake, look for the rare and beautiful white bush morningglories.) Regardless of the data entered, it must be extremely time consuming and tedious to enter field trip and other records from long time periods during which the synonymy changes. My sympathy and thanks to Melissa and the Denver Botanic Gardens herbarium staff for all of the effort they have put into this project.

This portal is a great source of information. Go explore it.