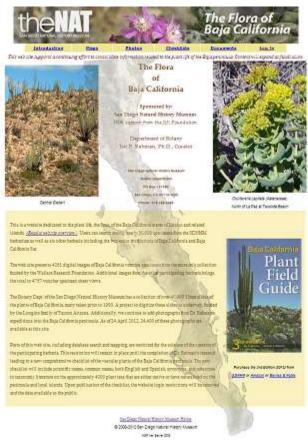
#### Baja Flora — San Diego Natural History Museum

BajaFlora.org January 2014

BajaFlora is a project of the Botany Department of the San Diego Natural History Museum with the goal of consolidating the available floristic data on the plants of the Baja peninsula, Mexico. The data is presented in narrative, photographic, and geographic (mapping) forms.



Dr. Jon Rebman, Curator of Botany, has undertaken work on major efforts to document the plants of the two states of Baja California. He has rewritten the 1989 book by Norman Roberts, *Baja California Plant Field Guide*, updating and greatly expanding its contents. In a parallel effort, he is preparing a new *Checklist of the Vascular Flora of Baja California*, which will include the literature, synonymy, endemism, and both English and Spanish common names of the Baja flora. Every included plant will be vouchered, and the voucher specimen sheet will be available on the web site.

The BajaFlora web site, which makes available the collection and voucher data from multiple herbaria, including the two major collections from Baja California, will serve as the central repository of the data collected as part of these efforts.

Currently the web site presents a publically

available set of pages and an area available only by login. The login areas will be opened to the public upon publication of the documents noted above.

#### **Plant Photos**

The web site currently includes over 24,000 photographs of plants and habitats of Baja, and more are being added as the scanning and uploading project continues. Web site users can search the collection by plant name and get a number of pages of thumbnails and brief data for each photo.

Clicking any thumbnail brings up the full-size photo with complete data. Unlike many online plant photo sources, the plants in these photos have been correctly identified by a qualified botanist.



#### **Moran Field Notes**

In addition to the collection data, photographs and map, the web will bring together other information relative to the subject of Baja vegetation, wherever it is found. For example, here is presented a searchable version of the field notes of Dr. Reid Moran. Moran, a former curator at SDNHM, was a prolific collector of Baja plants. The SDNHM herbarium holds approximately 26,000 of his specimens.

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Web site users can search his 17 field books, written from 1936 through 1993, for specimen numbers, dates, or names of persons and places.

Scanning and indexing these books is an ongoing volunteer effort.

#### **Historic Place Names**

Reading label information on old specimens can be difficult without a reference for the old place names. The web site provides some help for that problem with an interactive mapping application, using Google<sup>™</sup> Maps. A user can enter a name or part of a name into the text box and the map will produce icons at each location that name appears in the historical record. Clicking an icon brings up the data for that location, and a table on the page lists all the names found. Alternatively, a user can click



anywhere on the map, and the map will zoom to that location and display icons at all locations within a few miles that are in the historical names list.

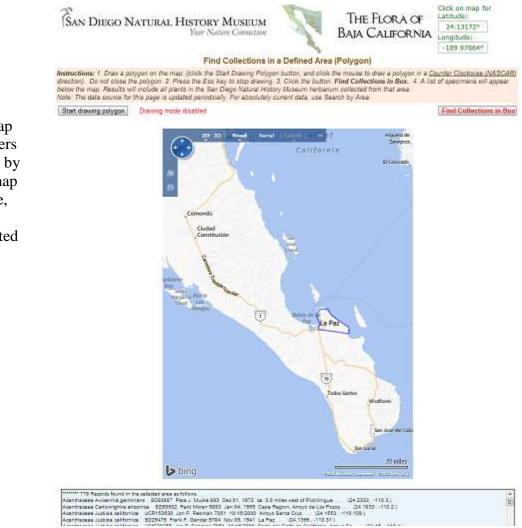
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SDNHM, in a joint effort with other herbaria holding collections of Baja plants, has assumed the role of consolidating the collections data to form a consortium of Baia collections. Web site users are able to search the combined collections of SDNHM, San Diego State University, Rancho Santa Ana,

Pomona College, Centro del Investigaciones Biologicas del Noroeste, La Paz (HCIB), and Universidad Autonoma de Baja California, Ensenada (BCMEX).

Users can search all or any one of the collections by plant name, collector name, year or year span of collection, or locality.

#### Search by Map Polygon



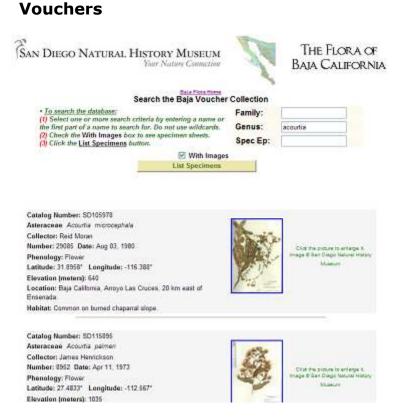
An interactive map feature allows users to define an area, by drawing on the map using their mouse, and find a list of specimens collected within that area.

## **Mapping Species**



The web site offers a number of mapping options. A Google<sup>TM</sup> Maps application maps any number of species with a table of specimen data, and provides all the functionality of the Google Maps.

Another mapping tool, a quick map, maps up to two plants on a fixed map. This option also allows the user to map using the Berkeley Mapper, a mapping application offered by UC Berkeley.



Web site users can search for views of the voucher specimens. Search results will display a set of thumbnails that match the search criteria; clicking a thumbnail brings up a full size display of the scanned image.

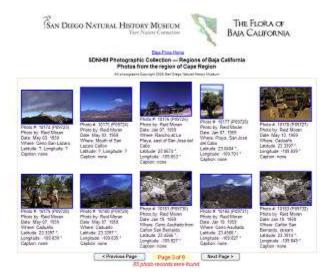
# **Regional Photographs**

In conjunction with the plant photos described earlier, the photographic collection also includes



thousands of photos of regional areas of the Baja peninsula. Users can select a region on the map and find a set of photographs that depict that region. Each icon painted on the map, when clicked, will reveal a photo taken from that locality, along with the pertinent data related to the photo. clicking the thumbnail on the map will bring

up the full size photo. For each region, a number of selected photos will appear as icons on the map. the larger collection of photos from that region can be accessed by clicking the large icon placed on the location.



Clicking the large icon produces an array of multiple pages of photographs from the selected region. And like the images on the map, clicking these thumbnails will bring up the full size photo.

**Geographic Spatial Searching** The web site provides a tool for searching for specimens within a defined area, within a specified distance from an area, within a specified distance from a line or polyline, and within a specified distance from a latitude/longitude point. Some areas, such as the Ecological Regions of the Baja peninsula, are predefined. However, a tool is provided to allow users to draw and save their own polygons, lines, or routes.

## Draw and save your own lines and polygons



The page shown here is used to review existing shapes (polygons, lines, routes) made available or drawn and saved by the user. User-generated shapes are available only to the user who created them. In the example to the left, the screen is showing the ecological region, Chaparral, and a route created by the user that follows the road from Rosarito to Santa Rosalia.

# Spatial Search (searching relative to a shape)

Users can run searches for specimens located geographically relative to any of the preprogrammed shapes or the shapes they drew and saved themselves using the page shown above. These searches can be displayed on the page or downloaded to an Excel spreadsheet.

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## **Photograph Uploads**

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