

CITIZEN-SCIENTIST GUIDE TO THE CPP (*DRAFT*)

This guide will help you get started as a citizen-scientist with the California Phenology Project – Golden Gate NRA. Note that this is written based on the CPP monitoring Model 1, the process by which monitoring sites were established in GOGA and other National Parks. We encourage you to explore other monitoring models introduced by the CPP. Use this guide as a reference for getting started but should you need assistance or have questions, please feel free to contact rkwanppsintern@gmail.com

Model 1: Visit and monitor labeled and mapped plants: each plant is visited frequently when it is phenologically active

Model 2: Visit and monitor labeled (unmapped) plants whenever it's convenient (e.g., plants in a schoolyard)

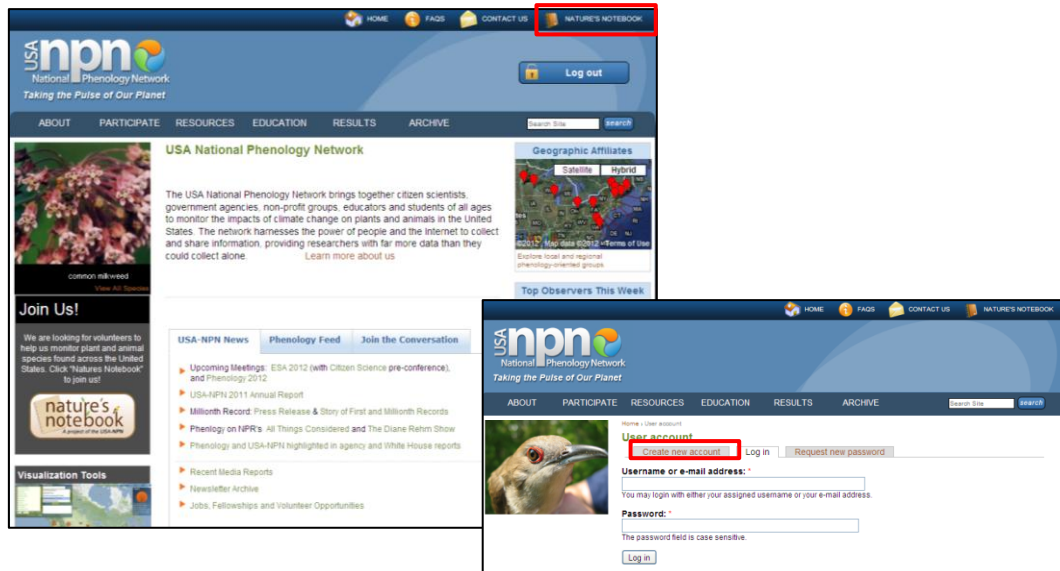
Model 3: Visit and monitor unlabeled plants whose location you're familiar with (e.g., the tree at the corner)

Model 4: Visit and monitor unlabeled plants one time, or opportunistically (e.g., plants encountered while on a hike)



CREATING A NATURE'S NOTEBOOK ACCOUNT

To create a *Nature's Notebook* account for first-time observers, simply click on the *Nature's Notebook* icon on the upper right hand corner of the screen. Then, choose the *Create a New Account* option.



Fill out the information that is requested. Select the **California Phenology Project** as your *Partner Organization*. Then, select **GOGA** as the location. You do not have to select GOGA as the location but by doing so you will be able to see and enter data for the plants observed at this park. You can always update your account information and select GOGA as the location (or CPP as the Partner Organization) under the “Edit” tab in “My Account.”

Note: You may belong to more than one Partner Organization/Group.

When you are transported to your new *Nature's Notebook* account interface, under *My Sites*, you will see GOGA and then the sites and plants associated with CPP-GOGA. If you are **observing GOGA trails and plants**, please continue reading below. Otherwise, please skip to “Establish Monitoring Sites and Plants.”

HOW TO SIGN-UP FOR MONITORING DATES USING GOOGLE CALENDAR

The instructions below will show you how to use Google Calendar successfully to coordinate monitoring days and communicate with fellow volunteers.

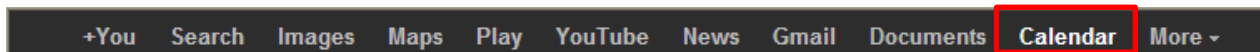
WHY CALENDARS?

The calendars will be a central location for you to keep track of your monitoring activity and those of other volunteers at your specific trail, allow you to see monitoring activities throughout the park, and communicate with other volunteers. The calendars will help us establish a volunteer monitoring network and is a way for us to keep track of monitoring efforts in the park.

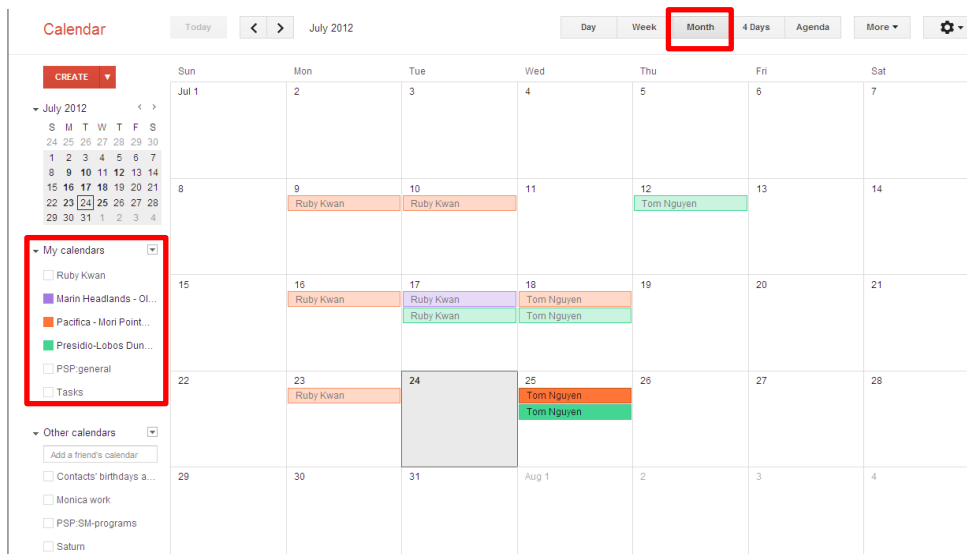
If you do not have a Gmail account, it is recommended that you create one in order to access the Google Calendars.

NAVIGATION

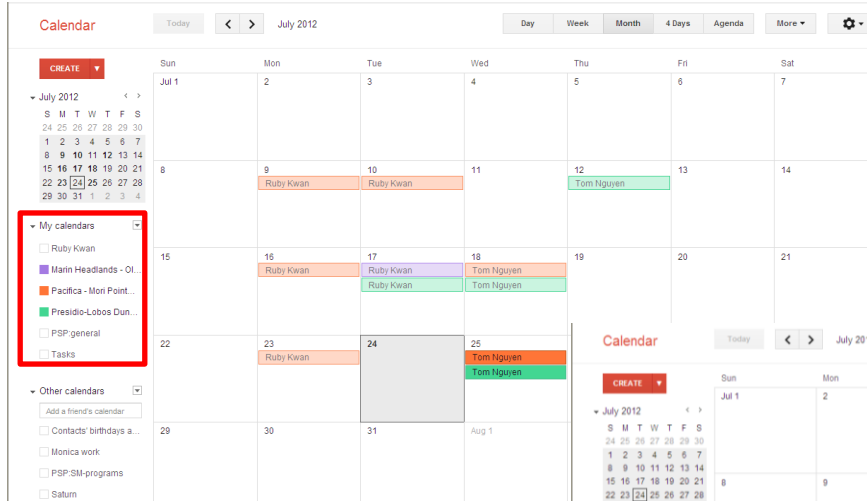
1. Once in your Gmail account, click on the “Calendar” option located in the banner.



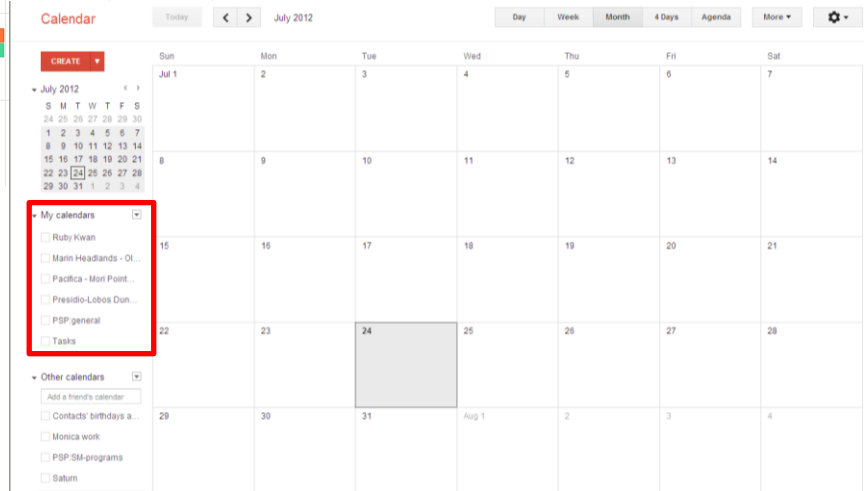
2. In the Calendar interface, choose the “Month” option to display the calendar by month.
3. Under “My calendars” on the left side of the screen, you will see a cache of calendars that you have created or have been shared with you. You should have the three calendars, Marin Headlands, Pacifica, and Presidio calendars. If you do not have three calendars, please email rkwanppsintern@gmail.com and ask for confirmation that the calendar(s) were shared with you.



- To display each calendar, simply click on the calendar. If the calendar is active, the box in front of each calendar title should be filled with the color associated with that calendar. To turn-off a calendar, simply click on the calendar again and the box will be unfilled, meaning the calendar is inactive.



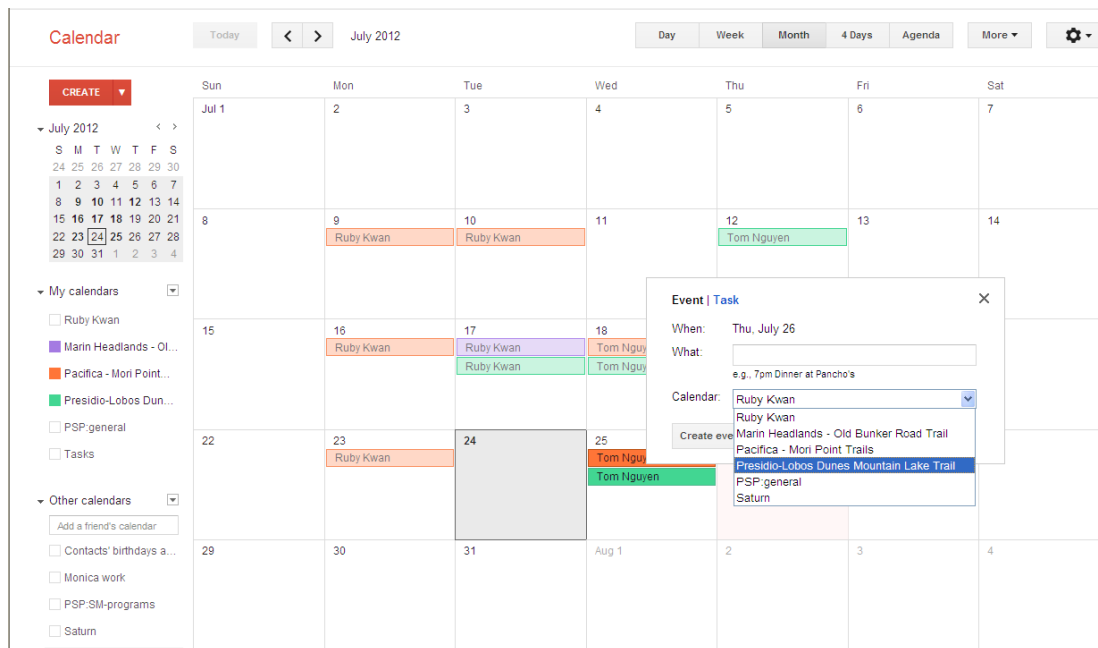
Above: The calendars are active because the color boxes in front of each calendar title are filled and the calendars are displayed on the screen.



Above: The calendars are inactive.

CREATING AN EVENT (SIGNING-UP)

- To sign-up for a day you want to monitor, simply click on a date and an “Event” screen should pop-up. **Under “What,” please type in your name and contact information (e.g. email address and/or phone number).** The contact information is shared only with the people who have access to the calendars. The information will be important to us should we need to contact you, and to other volunteers if someone is interested in joining you to monitor on a particular day. **Under “Calendar,” click on the calendar you want to create this event for based on the trail you want to monitor.** For instance, if you wanted to monitor the Lobos Dunes trail on Thursday July 26th, you would create an event for this date on the **Presidio-Lobos Dunes Mountain Lake Trail calendar**. Remember to click **“Create event”** or your changes will not be saved.



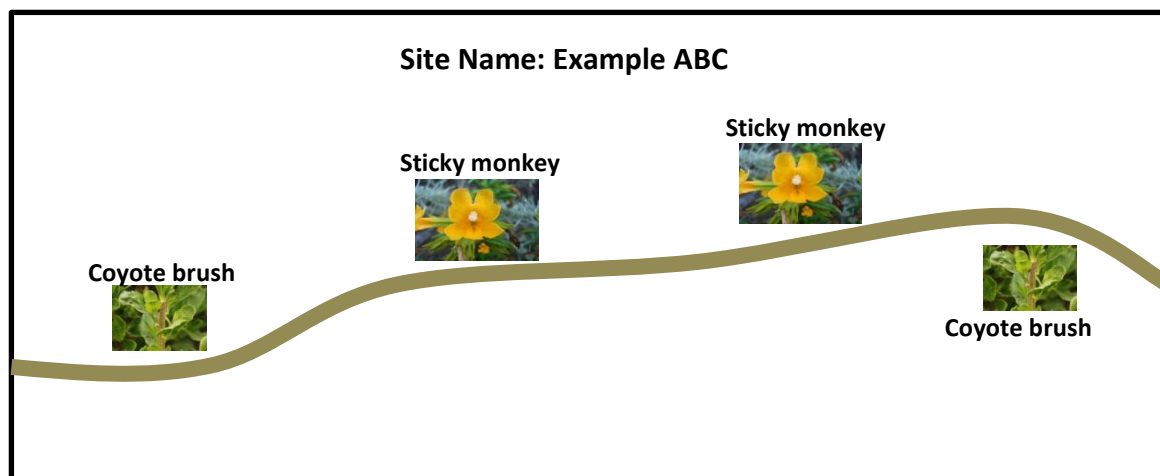
6. The event you created should appear on the calendar. To **Edit** the event, simply click on the event and a pop-up screen should have an **“Edit Event”** option.
7. If you wish to see the contact information of someone who you want to monitor with, simply click on the person’s name.
8. Remember, you do not have to display all three calendars. You can choose to display only the calendar you are interested in, this of course based on which monitoring location/trail you are interested in monitoring. Feel free to turn calendars on or off based on your preferences. By turning on all three calendars, you can see monitoring activities happening throughout the park.
9. You are all set! Remember your monitoring day and have fun! Monitoring is very flexible, so if you sign up for a particular day but cannot head out, simply remove the event notice from the calendar.
10. Questions, need help, ideas on how to improve this process, contact rkwanppsintern@gmail.com

ESTABLISH MONITORING SITES

The following instructions will show you how to establish your own monitoring site based on the CPP monitoring protocol, Model 1: *Visit and monitor labeled and mapped plants: each plant is visited frequently when it is phenologically active* (Note: plants do not have to be mapped using GIS/GPS technology).

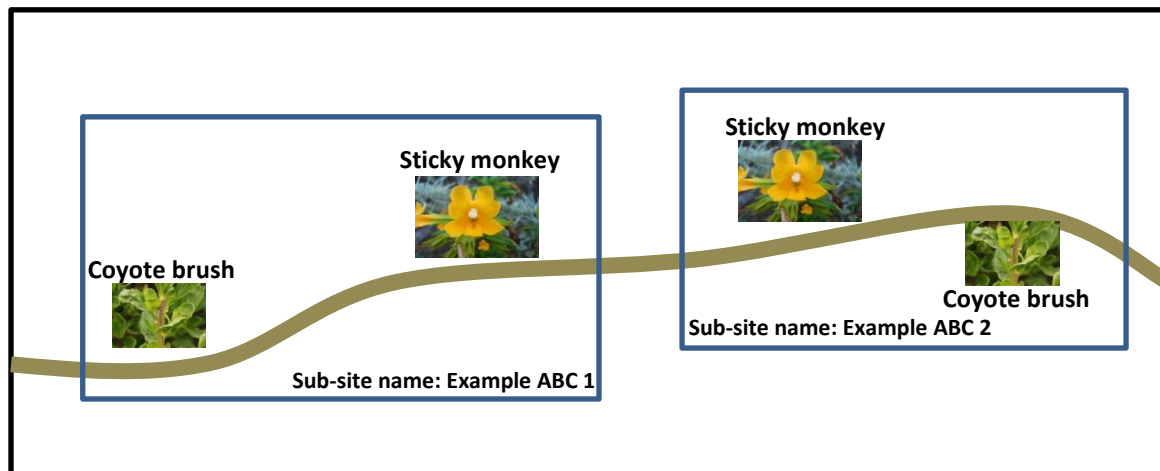
First, decide what type of site you want to establish.

Do you want to create a whole site (one site) with multiple plant individuals? This option is ideal for small areas such as backyards, school campus/nursery.



Or

Do you want to create sub-sites that have multiple plant individuals? This option is ideal for large areas/trails.



1. After you have conducted a reconnaissance survey of the site(s) you want to establish and plant(s) you want to tag/observe, have the following materials in handy:
 - Plant spreadsheet (*see Appendix 1*) – to maintain a plant log
 - Schematic Site map (*see Appendix 2*) – for site sketches
 - Tags – for identification of plants (contact Ruby for tags)
 - GPS – for spatial information (or a smartphone)
 - Camera – to take photographs
 - Pin flags or flagging tape (optional) – to locate plants easier

2. Start with the first plant in the site. Tag the plant with a unique identifier code. The tags are usually placed at the base of the plant. If you are establishing the site at a public location, you would want to place the tag somewhere on the plant where you or another observer can find but not too visible such that it will tempt people to remove. You can also place a pin flag or some flagging tape to make the plant easier to locate in the future.



Unique Identifier Code →

3. With reference to the plant spreadsheet in Appendix 1, the information that you want to fill in include:
 - The trail (location) description and code
 - Site # - if you only have one whole site, you do not need a Site #, although you can label the entire site as Site **1**. If you have sub-sites, the Site # would be 1, 2, etc.
 - Species 4 letter code (GESP) – the first two letters of the genus and species of the plant
 - Individual number – example: BAPI 1 would indicate that this is the first BAPI (*Baccharis pilularis*) in the site.
 - Unique identifier Code
 - Spatial information – northing and easting (*WGS 1984 Zone 10N*)
 - Notes regarding plant position/site notes
 - Name – example: MORI1 – BAPI1 (#405) indicates that we are in MORI Site 1 and the coyote brush is the first individual in the site with the unique identifier code of #405.

4. Repeat the process above until you have completed the site(s) (i.e. you have tagged all the plants in each site). If you have sub-sites, keep track of the Site # on the spreadsheet as you move forward.
5. Sketch a map of the site. If you have sub-sites, draw a map for each individual sub-site (example in Appendix 2).
6. Take a photo of the site(s) and plants. If you place pin flags (or flagging tape) near the location of the plants, it will be easier to see the relative location of the plants in the site photo.
7. Save the information you have collected (i.e. spreadsheet, site photos, and schematic) so that other observers at your site will be able to locate the site(s) and plants.

EXAMPLE: Photo of Site 1 in the Lobos Dunes Mountain Lake trail. Notice the red pin flags.

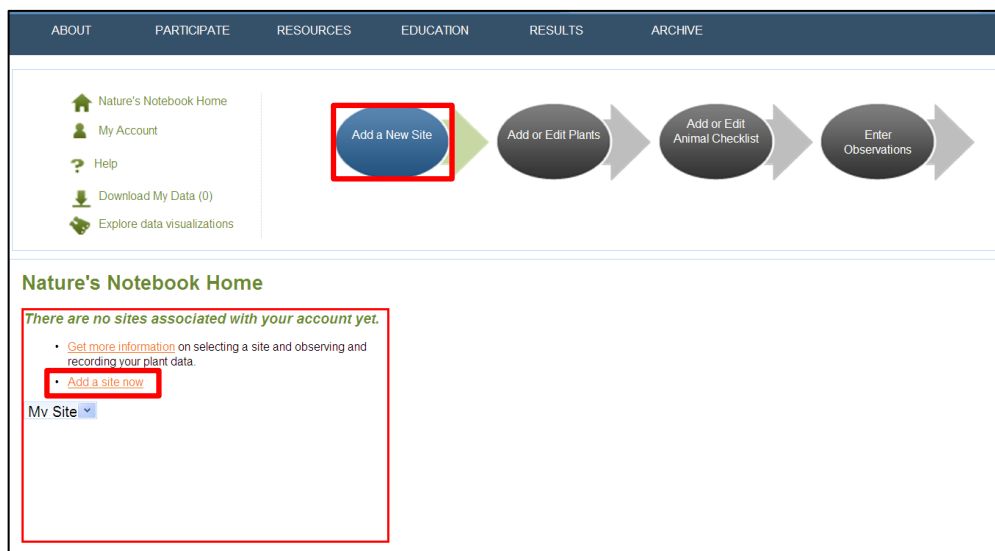


Once you have established your site(s), follow the instructions below to enter them into Nature's Notebook.

ADD NEW SITES AND PLANTS INTO NATURE'S NTBK

These instructions will show you how to add new sites and plants to your Nature's Notebook Account.

1. Log in to your Nature's Notebook account. At Nature's Notebook Home, you have two options by which to add a new site; choose "Add Site Now" or "Add a New Site."



2. You will be re-directed to a new screen where you can add a new site(s). Enter the name of your new site. For instance, if you are establishing a site at the Crissy Field Marsh Overlook, the site name can be "Marsh Overlook," "Crissy Marsh Overlook," or a simple acronym "MAOV" (if your overall site has sub-sites, read **NOTE**). Choose a site name that is most convenient and fun for you! You are welcome to fill out the remaining pieces of information, just remember that they are optional.

Add a New Site

Enter the following information about your site. The map will adjust as you enter more information. Latitude, longitude and elevation will be calculated from the address, and appear in the boxes below the map. If your site does not have a street address, enter a nearby zip code and use the map below to pinpoint your site.

[Add Public Site](#)

* Site Name: (e.g.: home, office, my front yard, etc.)

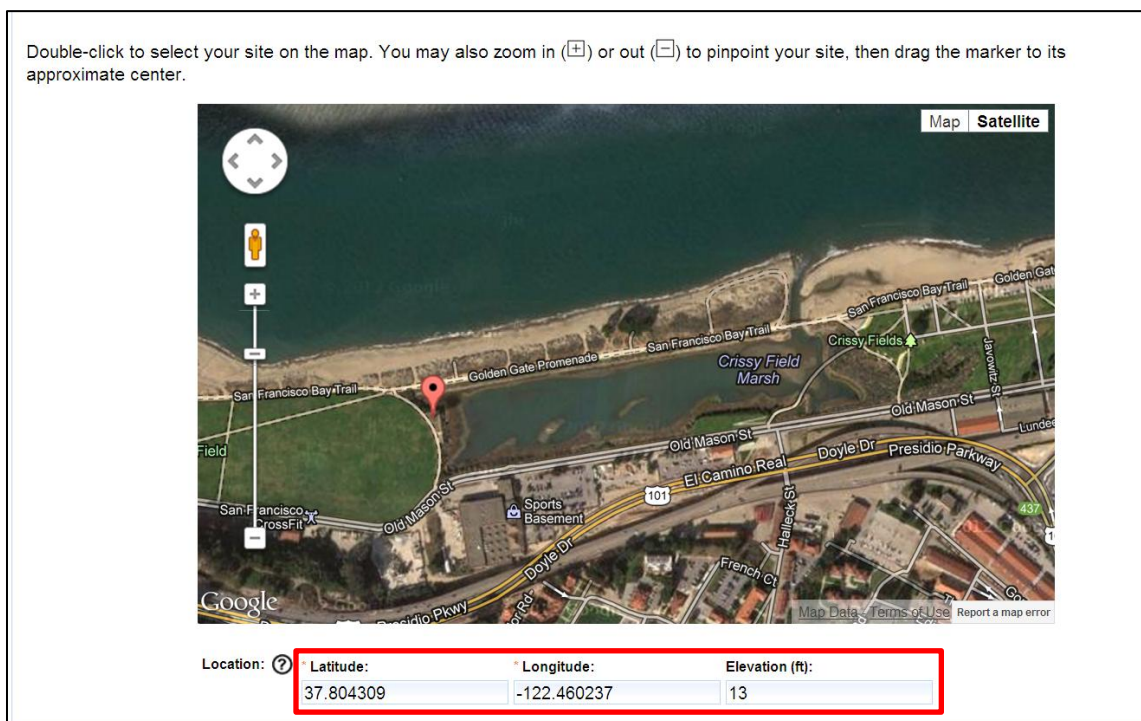
Address:

City: State: Zip Code:

NOTE: If your overall site is divided into sub-sites (i.e. LDML 1, LDML 2,...LDML 9) you will have to create a new site (i.e. repeat this process) for each sub-site that you have. For instance, if

MAOV is only one whole site not divided into sub-sites, you will only have to create this site once. However, if MAOV is divided into sub-sites, let's say 3, you will need to repeat this process 3 times in order to create three separate sites: MAVO 1, MAOV 2, and MAOV 3.

3. You will then pinpoint the location of your site using Google Earth. Let us continue with the Crissy Field Marsh Overlook example. Once you are close enough to see the site, but still far enough to see the spatial extent of the surrounding area, double click on the site and a red marker(the color may vary) should appear. Move the marker to pinpoint the site on the map. The latitude, longitude, and elevation information should be filled in for you.



Alternatively, if you already have the Latitude and Longitude of your site, you can simply type in the values and the map will automatically zoom in on your site. There are smartphone apps that can give you lat/long readings or you can use a GPS unit.

4. Answer the optional information questions to your liking. Remember to click “Create site” when you are all finished.

Optional Additional Information

Please answer as many of the following questions as you can. Hover over the ⓘ symbol for further explanation of the choices. If you do not know how to best answer a question for your site, please leave it blank.

Overall | Plants | Animals

The degree of development surrounding the site can best be described as: ⓘ
 --Please select one

This site is best described as: ⓘ
 --Please select one

How close is the nearest paved or maintained dirt road to the site? ⓘ
 --Units

How close is the nearest permanent body of water to the site? ⓘ
 --Units

What is the area of the site? ⓘ
 --Units

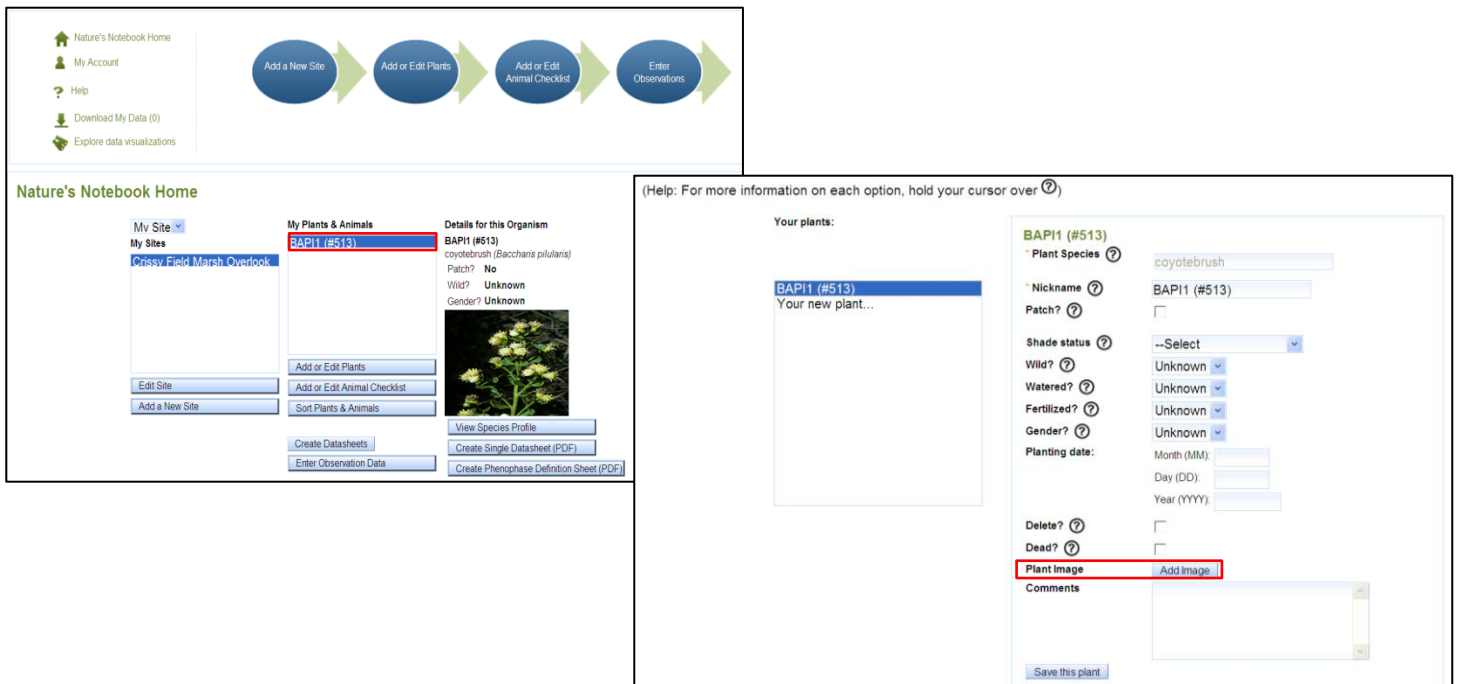
Comments:

Create site

- You should see the site(s) you have created in a new screen. In the example below, “Crissy Field Marsh Overlook” is **one** site. **Step 10** will show you what the screen would look like if the overall site were divided into sub-sites. But let us continue with this example. To add new plants, simply click “Add or Edit Plants.” Then, at the new screen, select the correct site where your plant(s) are located. Type in the plant species name (common or scientific) and select the correct species. The plant nickname can be tailored to your liking but the CPP protocol is to have the nickname follow this format: GESP# - ID. “GESP” is the first two letters of the genus and species of the plant, # is the individual number, and ID is the plants unique identifier code. Using a coyote brush (*Baccharis pilularis*) as an example, a nickname for this would be BAPI1-#513 where 1 indicates that it is the first individual in the site and #513 is the unique identifier code.

The image consists of two screenshots from the Nature's Notebook website. The left screenshot shows the 'Nature's Notebook Home' page. At the top, there is a navigation menu with links for 'Nature's Notebook Home', 'My Account', 'Help', 'Download My Data (0)', and 'Explore data visualizations'. Below the menu, there is a flow diagram with four steps: 'Add a New Site', 'Add or Edit Plants', 'Add or Edit Animal Checklist', and 'Enter Observations'. The main content area shows a message 'Site was successfully created!' and a list of 'My Sites' with 'Crissy Field Marsh Overlook' selected. Below the list, there are buttons for 'Edit Site', 'Add a New Site', 'Add or Edit Plants', and 'Add or Edit Animal Checklist'. The right screenshot shows the 'Add or Edit Plants' screen. At the top, there is a message 'Select the site where your plant is located. Site: Crissy Field Marsh Overlook' with a dropdown menu and a link 'Need to add a new site? Click here.' Below this, there is a text input field for 'Plant Species' and a list of possible matches. There are also links for 'View available plants' and 'View calibration species'. Below the list, there is a 'Help' message: 'For more information on each option, hold your cursor over ⓘ'. The main content area shows a 'New plant...' form with fields for 'Plant Species', 'Nickname', 'Patch?', 'Shade status', 'Wild?', 'Watered?', 'Fertilized?', 'Gender?', and 'Planting date' (Month, Day, Year). There is also a 'Comments' field and a 'Save this plant' button.

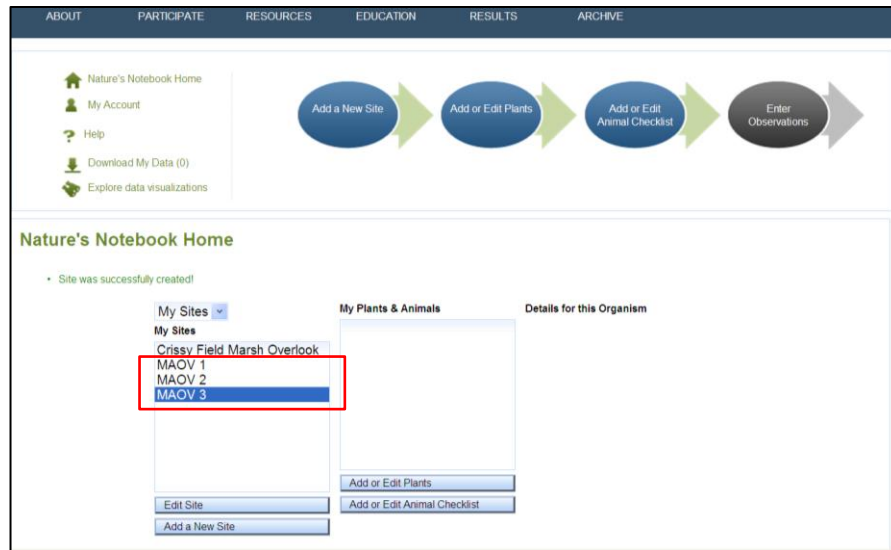
- Fill in the remaining information and remember choosing “Unknown” is perfectly ok. The comment box (*above*) is where you would type in information about the location of the plant such as notes regarding its location and site description. This is also the place to enter spatial information about the plant (i.e. coordinates). *Note: CPP protocol requires that UTM coordinates be recorded under WGS 1984 Zone 10N.*
- Remember to hit “Save this plant.” You can always edit information about the plant by selecting the “Add or Edit Plants” option so don’t feel like you have to answer every piece of information.
- If you go back to your Nature’s Notebook home, you will now see the new plant(s) that you have added. Notice that if you click on a plant and choose “Add or Edit,” you now have the option to add an image of your plant. *This can only be done after you have added the plant.* Repeat the process of adding new plants until you have added all the plants that are at your site.



- Once you have added all your plants, you are finished! Now you are ready to create datasheets, observe, and enter observation data.

--- Continue reading the steps below only if you are adding a site with multiple sub-sites---

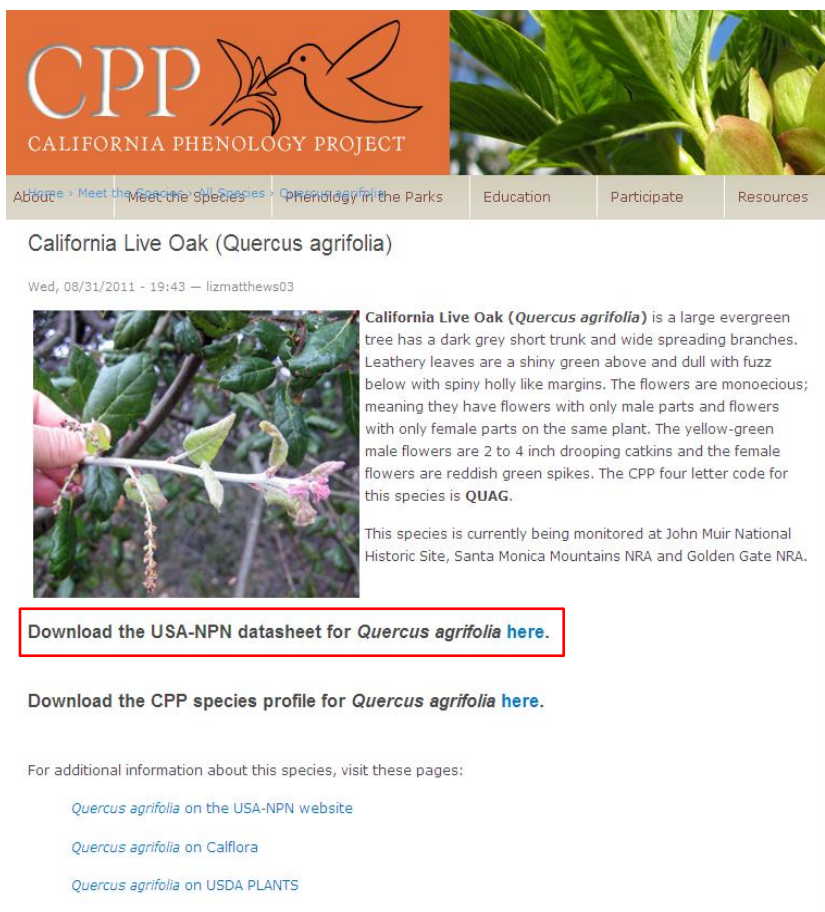
10. To create sub-sites, simply follow the instructions from Step 1-4 and repeat depending on how many sub-sites you have.
11. Using the Crissy Field Marsh Overlook as an example, which is shortened to MAOV, if the overall area is divided into 3 sub-sites for instance, below is what the screen would look like once you have created the sites.



12. Follow Steps 5 through 9 to add plant(s) into each sub-site.
13. Once you have added all your plants, you are finished! Now you are ready to create datasheets, observe, and enter observation data.

DATASHEETS

1. Datasheets for GOGA specific monitoring species can be downloaded from the species page on the CPP website, (<http://www.usanpn.org/cpp/taxonomy/term/3>). On the each species page, there will be a link to download the USA-NPN datasheet, similar to the link included on the *Quercus agrifolia* page shown below.




CPP
CALIFORNIA PHENOLOGY PROJECT

Home > Meet the Species > All Species > Phenology in the Parks > Education > Participate > Resources

California Live Oak (*Quercus agrifolia*)

Wed, 08/31/2011 - 19:43 — lizmatthews03



California Live Oak (*Quercus agrifolia*) is a large evergreen tree has a dark grey short trunk and wide spreading branches. Leathery leaves are a shiny green above and dull with fuzz below with spiny holly like margins. The flowers are monoecious; meaning they have flowers with only male parts and flowers with only female parts on the same plant. The yellow-green male flowers are 2 to 4 inch drooping catkins and the female flowers are reddish green spikes. The CPP four letter code for this species is **QUAG**.

This species is currently being monitored at John Muir National Historic Site, Santa Monica Mountains NRA and Golden Gate NRA.

Download the USA-NPN datasheet for *Quercus agrifolia* [here](#).

Download the CPP species profile for *Quercus agrifolia* [here](#).

For additional information about this species, visit these pages:

- [Quercus agrifolia on the USA-NPN website](#)
- [Quercus agrifolia on Calflora](#)
- [Quercus agrifolia on USDA PLANTS](#)

2. Datasheets can be downloaded from the USA-NPN species profile pages, which are best accessed via the species search interface (http://www.usanpn.org/species_search). After clicking on the species of interest, scroll down the profile page to the “Datasheet” tab; clicking on this tab will download a pdf of the appropriate datasheet.

USA npn National Phenology Network Taking the Pulse of Our Planet

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nature's notebook A project of the USA-NPN

Home » Quercus agrifolia

Quercus agrifolia

California live oak
coast live oak

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Plant & Animal List

How to Observe

Log in/Register

Submit Observations

FAQs




Photo Credit: © Donald Owen, California Department of Forestry and Fire Protection, Bugwood.org

Did you know?:

Quercus agrifolia is very fire resistant. Adaptations to fire include having evergreen leaves, thick bark, and the ability to sprout post-fire from the roots, trunk, and upper crown. Individuals can live up to 250 years. This oak species is susceptible to Sudden Oak Death disease.


What does this species look like?

This species is a large (up to 25 meters tall) evergreen tree with a dark grey short trunk and wide spreading branches. In older individuals, the trunk can be massive and gnarled. The leaves are alternate and simple. The leaf shape is elliptical to oblong with a thick and leathery texture. Leaves are 2 to 7 centimeters long and they are a shiny green above and dull with fuzz below. The edges turn down and have spiny holly like margins. The flowers are monoecious, having flowers with only male parts and flowers with only female parts on the same plant. The yellow-green male flowers are 2 to 4 inch drooping catkins and the female flowers are small reddish green spikes that form in the leaf axils. This species is wind-pollinated.

Quercus agrifolia is found in valleys, slopes, mixed-evergreen forest, and woodlands at elevations less than 1500 meters. In California it is found in the outer North Coast Ranges, Central Western California, and Southwestern California in addition to Baja California. This species often grows with Canyon Live Oak and the two species may be hard to distinguish. *Q. agrifolia* is known to hybridize with Interior Live Oak (*Q. wislizenii*), Nuttall's Scrub Oak (*Q. dumosa*) and Shreve Oak (*Q. parvula* var. *shreveii*).

Where is this species found?

U.S. States:
CA



click to enlarge

Which phenophases should I observe?

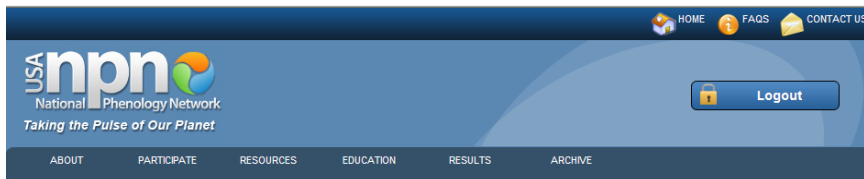
Datasheet

Leaves

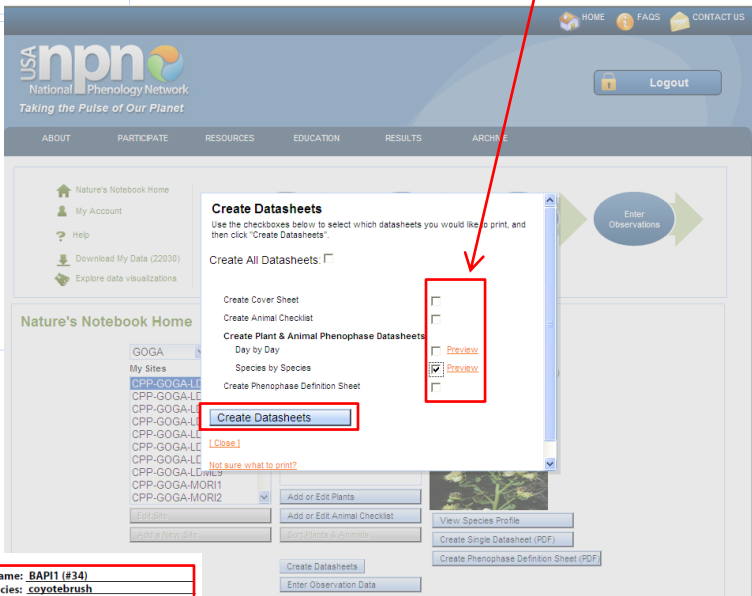
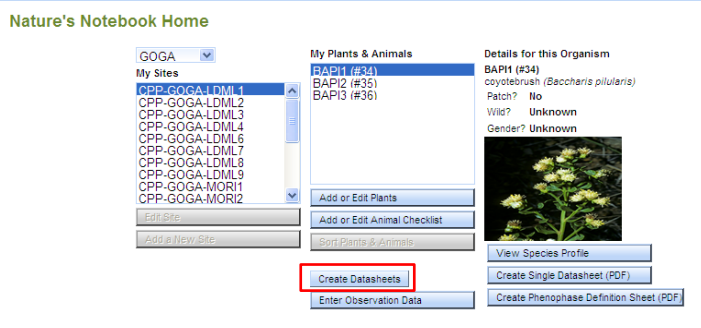
Do you see...?

Breaking leaf buds
One or more breaking leaf buds are visible on the plant. A leaf bud is considered "breaking" once a green leaf tip is visible at the end of the bud, but before the first leaf from the bud has unfolded to expose the leaf stalk (petiole) or leaf base.

3. Datasheets can also be downloaded from within *Nature's Notebook*. In your *Nature's Notebook* home, choose a site and click the "Create Datasheets" tab to download a pdf file that includes the appropriate datasheet for each species at the registered site.



You can customize your dataset anyway you like by checking/unchecking the options shown. The "Species by Species" option gives you only the datasheets.



Trees and Shrubs *Broadleaf evergreen (with pollen, no leaf buds)*

Directions: Fill in the date and time in the top rows and circle the appropriate letter in the column below.
 y (phenophase is occurring); n (phenophase is not occurring); ? (not certain if the phenophase is occurring).
 Do not circle anything if you did not check for the phenophase. In the adjacent blank, write in the appropriate measure of intensity or abundance for this phenophase.



Nickname: BAP11 (#34)
 Species: coyotebrush
 Site: CPP-GOGA-LDML1
 Year: 2012
 Observer: CPPGOGAUSER SF

If you download datasheets using this method, the information will be automatically filled in for you!

Do you see...	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:
	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:
Young leaves	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Flowers or flower buds	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Open flowers	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Pollen release	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Fruits	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Ripe fruits	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Recent fruit or seed drop	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Check when data entered online:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:								

Do you see...	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:
	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:
Young leaves	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Flowers or flower buds	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Open flowers	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Pollen release	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Fruits	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Ripe fruits	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Recent fruit or seed drop	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?	y n ?
Check when data entered online:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:								

DATA ENTRY INTO THE USA-NPN DATABASE

Phenological data collected as part of the CPP effort will be uploaded into the USA National Phenology Network database via the *Nature's Notebook* interface (<http://mynpn.usanpn.org/npnapps/>).

Once in your Nature's Notebook account, choose GOGA from the drop down menu. Then, a list of all GOGA sites will be visible. Choose the site that you want to enter observation data for and then click "Enter Observation Data."

Once you have entered observation data for all plants in one site, use the drop down menu to choose another site.

APPENDIX – 2

These are the schematic sketch maps produced for two sub-sites in Lobos Dunes Mountain Lake. Each sub-site has its own map. If you have one whole site (i.e. not subdivided), you will only need to draw one map.

