**Documentation of Nature’s Notebook v1.0**

(3/21/2011 to 2/27/2012)

*Updated 8/25/2014 by Ellen Denny*

The documentation files in this packet are organized as follows:

**Monitoring guidelines** folder includes screen captures of webpages, printable materials, and training slideshows that were available to observers during this period. Also included are instructional materials for those setting up “shared sites” where multiple registered observers can report for the same individual plants and animal species at a site.

**Species** folder includes screen captures of the species search page, a few example species profile pages, and a list of all species available for monitoring. For specifics on phenophases and definitions for each species during this period, check the database output that accompanies download of Nature’s Notebook data.

**Registration forms** folder includes screen captures of the registration and data entry forms accessed from an example personal user account.

**Datasheets** folder includes printable datasheets for each of the different species groups.

Details of what was new in Spring 2011 were outlined on the Frequently Asked Questions page and are included below. Note that hyperlinks are no longer connected to the intended pages.

**What's new in Spring 2011?**

This spring we updated the phenology monitoring protocols in Nature’s Notebook, based on feedback from observers and from scientists who use the data. Please check the profile pages for your plant and animal species to see updated phenophase definitions and new phenophases.

If you have already starting observing this spring with the old phenophases, your observations are still valid, but we recommend you print out new datasheets and start using them right away. When you enter data in your Nature’s Notebook [Enter Observations](http://mynpn.usanpn.org/npnapps) form for observation dates on and after March 21, 2011, you will be asked to report on the new phenophases. The following FAQs summarize all the major changes and explain what to do if you had already started observing before the update.

* [What’s new with phenophase status in Spring 2011?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#new_pheno_status_2011)
* [What’s new with abundance and intensity in Spring 2011?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#new_intensity_2011)
* [What’s new with animal phenophases in Spring 2011?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#new_animal_2011)
* [What's new with plant phenophases in Spring 2011?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#new_plant_2011)
* [What is happening when I try to enter data from before Spring 2011?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#historic-protocol)

**What's new with phenophase status in Spring 2011?**

Up to now, you have been reporting ‘y’ if you saw that a phenophase ***was*** occurring, ‘n’ if you saw that a phenophase ***was not*** occurring, and ‘?’ if you were **uncertain** whether the phenophase was occurring or if you ***did not check*** for the phenophase. We have made a slight change for the last condition. If you checked for a phenophase and were not sure whether is was occurring or not, report ‘?’. If you did not even look or listen to check whether the phenophase was occurring, ***do not select any of the choices and leave them all uncircled***.

**What's new with abundance and intensity in Spring 2011?**

See [Why should I report on the intensity or abundance of my plant and animal phenophases?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#intensity) for information about why we have added the ability for you to estimate measures of intensity or abundance. Since this is a new feature, we would especially like your feedback on how easy or difficult these questions are to answer, and in the case of intensity categories, how well the choices seem to represent what is happening for your species over the course of the phenophase duration.  Reporting on the abundance or intensity of a phenophase is optional, so if you are unsure of what number to report or what category to choose, or if you simply find it to be too much trouble, it is ok to leave the box blank.

**What's new with animal phenophases in Spring 2011?**

Animal phenophases have not changed very much at all, but you may see a new phenophase or two for your species. If you started observing before March 21, 2011, you would not have looked for these new phenophases, so when asked for them on the [Enter Observations](http://mynpn.usanpn.org/npnapps) form, do not select any of the choices and leave them all uncircled. For the phenophases you did check for, you should leave the abundance box empty unless you remember how many individuals you saw in that phenophase on that observation date.

**What's new with plant phenophases in Spring 2011?**

For plants, some phenophase titles and definitions have changed slightly.  However, these changes were generally made to clarify the original phenophase definition and not to change the meaning.  There were also several new phenophases added for most plant species.  What follows is summary of the changes for each of the phenophases for your plant species, and how to report on each one if you were still using the old definitions for observations made on or after March 21, 2011.

* **‘Breaking leaf/needle buds’** have virtually the same definitions as ‘Emerging leaves/needles’, but we updated the titles of the phenophases to clarify that you are actually looking only for the first leaf or needle emerging from a bud and not leaves or needles emerging from a growing shoot all season long. You can now also report an estimate of the number of breaking leaf or needle buds you see on the plant at the time of each observation.

*If you were using the old definitions, simply report your post-Mar 20 observations for ‘Emerging leaves/needles’ under the ‘Breaking leaf/needle buds’ phenophase. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* **‘Initial growth’** (forbs and grasses) has virtually the same definition as ‘Emerging growth’, but we updated the title of the phenophase to clarify that you are actually looking only for the initial stages of growth for each new shoot and not leaves emerging from a growing shoot all season long. Reporting of intensity for this phenophase is not currently available.

*If you were using the old definitions, simply report your post-Mar 20 observations for ‘Emerging growth’ under the ‘Initial growth’ phenophase.*

* **‘Leaves/Needles’** and **‘Young leaves/needles’** have virtually the same definitions as ‘Unfolded leaves/needles’ and ‘Young unfolded leaves/needles’ respectively.  For many species you can now also report an estimate of the number of young leaves/needles on the plant or the proportion of the plant canopy full with leaves or needles at the time of each observation. See [How do I judge what proportion of the canopy is full with leaves or needles?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#canopy_full) for more information.

*If you were using the old definitions, simply report your post-Mar 20 observations for ‘Young leaves/needles’ under the ‘Leaves/Needles’ phenophase. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* **‘Increasing leaf size’** is similar to ‘>75% of full leaf size’, however we now ask observers to report whether or not the majority of leaves are still growing larger, and if so, what proportion of full size they are at the time of observation. This allows reporting for leaf size at a full range of increments from 25% to 95% of full size. See [How can I judge the proportion of full leaf size while leaves are still increasing in size?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#full_leaf_size) and [Are you sure the phenophase 'Increasing leaf size' is appropriate for my plant?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#leaf_size_appropriate) for more information.

*If you were using the old definitions and had circled ‘y’ to ‘>75% of full leaf size’, then for your post-Mar 20 observations you should either be circling ‘y’ for ‘Increasing leaf size’ and choosing the ’75-94%’ or ‘95% or more’ intensity choice, or you should be circling ‘n’ if the leaves stopped getting larger and where at 100% of full size. If you do not remember the size of your plant’s leaves on the given observation dates, either do not select a choice for intensity or do not report on this phenophase at all.*

* **‘Colored leaves/needles’** collapses ‘>50% of leaves/needles colored’ and ‘All leaves/needles colored’ into a single phenophase, and allows reporting for colored leaves or needles at a full range of increments from 5% to 95%. See [For ‘Colored leaves/needles’ why am I asked to report an estimate of the proportion of the plant canopy still full with GREEN leaves?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#canopy_colored) for more information.

*If you were using the old definitions and had circled ‘y’ to ‘>50% of leaves/needles colored’ or ‘All leaves/needles colored’ but ‘n’ for ‘All leaves/needles fallen’, then for your post-Mar 20 observations it is likely that ‘y’ should be circled for ‘Colored leaves/needles’ on that date. Intensity choices for the new phenophases are different enough from the old phenophases that it is probably best not to select a choice for intensity.*

* **‘Falling leaves/needles’** is similar to ‘>50% of leaves/needles fallen’, however we now ask observers to report whether or not they see any leaves falling or recently fallen from the plant. No intensity estimates are included for this phenophase because the proportion of leaves that have fallen from the plant can be calculated from the proportion of leaves left on the plant as reported for ‘Leaves/Needles’.

*If you were using the old definitions and had circled ‘y’ for ‘>50% of leaves/needles fallen’ and ‘n’ for ‘All leaves fallen’, then it is likely for your post-Mar 20 observations you should be circling ‘y’ for ‘Falling leaves/needles’.*

* ‘All leaves/needles fallen’ and ‘All leaves withered’ are no longer separate phenophases. They were redundant since this stage on the plant was already being reported when ‘Unfolded leaves/needles’ was reported as no longer occurring. It was also confusing as to when to stop reporting ‘All leaves/needles fallen’ or ‘All leaves withered’.

*If you had circled ‘y’ to ‘All leaves/needles fallen’ or ‘All leaves withered’, then for your post-Mar 20 observations it is likely that ‘n’ should be circled for ‘Leaves/Needles’ on that date.*

* **‘Flowers’**, **‘Flower heads’** (grasses), and **‘Pollen cones’** (conifers) are new phenophases. See [How are the phenophases ‘Flowers’, ‘Flower heads’ (grasses), or ‘Pollen cones’ (conifers) different from ‘Open flowers’ or ‘Open pollen cones’?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#flowers) for more information.

*If you were using the old definitions, for your post-Mar 20 observations you may report ‘y’ to ‘Flowers’, ‘Flower heads’, or ‘Pollen cones’ if you reported ‘y’ to ‘Open flowers’ or ‘Pollen release’. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* ‘Flower buds’ is no longer a special phenophase for cacti, but the stage is included within the new definition for ‘Flowers’.

If *you had circled ‘y’ for ‘Flower buds’, then for your post-Mar 20 observations you should be circling ‘y’ for ‘Flowers’.*

* **‘Open flowers’** has virtually the same definition as before. You can now also report an estimate of the number of open flowers you see on the plant at the time of each observation.

I*f you were using the old definitions, simply report your post-Mar 21 observations for ‘Open flowers’ as usual. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* **‘Open pollen cones’** is a new phenophase for conifers.

*If you were using the old definitions, for your post-Mar 20 observations you may report ‘y’ to ‘Open pollen cones’ if you reported ‘y’ to ‘Pollen release’. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* ‘Full flowering’ is no longer a phenophase unto itself, but is included as an intensity choice (called ‘Peak flower’) for ‘Open flowers’. See [When should I choose ‘Peak flower’, ‘Peak opening’, or ‘Peak pollen’ to describe the intensity of 'Open flowers', 'Open pollen cones', or 'Pollen release'?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#peak_flower) for more information.

*If you had circled ‘y’ to ‘Full flowering’, then for your post-Mar 20 observations you should be circling ‘y’ for ‘Open flowers’ and choosing the ’Peak flower’ intensity choice.*

* **‘Pollen release’** should be checked carefully.  It is a new phenophase for some species, and for many of the species that previously had this phenophase (like birches, oaks and alders), the definition has changed somewhat.   ‘Pollen release’ should now be reported only if you can actually see pollen dust upon blowing or shaking the flower or pollen cone. Do not try to observe this phenophase if you can not get close enough to a flower or pollen cone to blow or shake it to see if pollen falls into your hand. You can now also report an estimate of the number of flowers or cones you see releasing pollen on the plant at the time of each observation.

*If you were using the old definitions and had circled ‘y’ to ‘Pollen release’, then for your post-Mar 20 observations you should either be circling ‘y’ for ‘Open flowers’ (birches, oaks, alders) or for ‘Open pollen cones’ (conifers). If you actually saw pollen in your hand, you can also report ‘y’ for the new ‘Pollen release’ phenophase. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* ‘Full pollen release’ is no longer a phenophase unto itself, but is included as an intensity choice (called ‘Peak pollen’) for ‘Pollen release’.

*If you had circled ‘y’ to ‘Full pollen release’, then for your post-Mar 20 observations you should be circling ‘y’ for ‘Open flowers’ (birches, oaks, alders) or for ‘Open pollen cones’ (conifers), and choosing the ’Peak flower’ or ‘Peak opening’ intensity choice. If you actually saw pollen in your hand, you can also report ‘y’ for the new ‘Pollen release’ phenophase and choose the ’Peak pollen’ intensity choice.*

* **‘Fruits’** is a new phenophase. See [How is the phenophase ‘Fruits’ different from ‘Ripe fruits’?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#fruits) for more information. Note that specific information for identifying fruits on each plant species will soon be added after the general definition on each species' profile page.

*If you were using the old definitions, for your post-Mar 20 observations you may report ‘y’ to ‘Fruits’ if you reported ‘y’ to ‘Ripe fruits’. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* **‘Unripe seed cones’** is a new phenophase. See [Can I report seeing both ‘Unripe seed cones’ and ‘Ripe seed cones’ on the same plant at the same time?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#seed_cones) for more information.

*If you were using the old definitions, there was no equivalent to this phenophase, so for your post-Mar 21 observations do not report anything for ‘Unripe seed cones’.*

* **‘Ripe fruits’** has virtually the same definition as before.  As with ‘Fruits’, specific information for identifying ripe fruits on each plant species will soon be added after the general definition on each species' profile page.  You can now also report an estimate of the number of ripe fruits you see on the plant at the time of each observation.

*If you were using the old definitions, simply report your post-Mar 21 observations for ‘Ripe fruits’ as usual. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* **‘Ripe seed cones’** has virtually the same definition as before. You can now also report an estimate of the number of ripe seed cones you see on the plant at the time of each observation.

*If you were using the old definitions, simply report your post-Mar 21 observations for ‘Ripe seed cones’ as usual. Do not select a choice for intensity unless you happen to remember what it would have been at each observation date.*

* **‘Recent fruit drop’** and **‘Recent seed cone drop’** are new phenophases. See [Why should I look for ‘Recent fruit drop’ or ‘Recent seed cone drop’ (conifers), and how can I tell if mature fruits or seed cones have dropped from my plant since my last visit?](http://www.usanpn.org/sites/all/modules/fckeditor/fckeditor/editor/fckeditor.html?InstanceName=edit-body&Toolbar=DrupalFull#mature_fruit_drop) for more information.

*If you were using the old definitions, there were no equivalents to these phenophase, so for your post-Mar 21 observations do not report anything for ‘Recent fruit drop’ or ‘Recent seed cone drop’.*

**What is happening when I try to enter data from before Spring 2011?**

In updating Nature's Notebook this year, we have added new phenophases and revised existing phenophase titles and definitions for many species. For example, we have added fruit phenophases and renamed some phenophases (what was ‘emerging leaves’ is now called ‘breaking leaf buds’). We want you to be able to go back and accurately add or edit your observations no matter what set of phenophases were used when you collected your data in the past.

Let's say you are finally getting around to entering observation data for your "red maple-1" that was collected in 2010. On the plant phenophase datasheet in front of you, which you printed and filled out last year, the first phenophase is ‘Emerging leaves’.  However, when you go to the Enter Observations page now, the first phenophase listed for your "red maple-1" is ‘Breaking leaf buds’. Don’t worry! Once you enter the observation date (as long as it was before March 21, 2011), you will get a pop-up box which says:

*The following individual(s) are associated with a different set of phenophases for the date you selected: red maple-1. We'll have to reset the page to continue; you'll lose any data on this page that you have not yet saved. Press 'Yes' to proceed.*

This message lets you know that you are going to move back to a point in time when your red maple had a different set of phenophases (or at least different phenophase definitions) associated with it. If you do want to go back to this point in time, proceed by clicking yes and enter your "red maple-1" data with the appropriate set of phenophases. If you don’t see the complete message as above (this may happen if you have a lot of plants or animals registered), try resizing the pop up box.

Note that the same thing happens when you use the blue arrows to navigate back and forth in time through changing sets of phenophases. Instead of a pop-up box, you will see a pink message like this:

*The previous observation records were created using a different set of phenophases. To see these observations and their phenophases click the orange back arrow : red maple-1*

In order to proceed, click the orange arrow.