



## *Illinois Plants* ([www.inhs.illinois.edu/data/plantdb](http://www.inhs.illinois.edu/data/plantdb)) is here: A new online resource for botanists and plant enthusiasts in Illinois

*What's the quickest way to find out the following: which ferns grow in Kane County?...where am I likely to find American bellflower in central Illinois?...how many plant species are there in Illinois?*

Until now, finding these answers required searching diffuse sources, but now there is a single place to find these answers in seconds—with a few mouse clicks. The Illinois Plants website and database has just come online!

Both expert botanists and nature enthusiasts are constantly looking for information about plants. For centuries, this information was searched for in printed volumes, but in the age of instant electronic gratification, people want answers now! The new website, *Illinois Plants*, has just about everything you'd want to know about the wild and naturalized plants growing in the Prairie State—hot off the presses and in a single place.

*Illinois Plants* provides a great variety of information. It includes native plants, invasives, and the ornamentals that occasionally escape into the wild. The site includes detailed information about plant taxonomy, plant traits (such as flowers, leaf arrangement, and basic physiology), flowering dates, and distributions. We have great photos for many of the species and are constantly acquiring more; there is even a way for users to submit their own images to be incorporated



ABOVE maidenhair fern (*Adiantum pedatum*). © Connie Carroll-Cunningham.  
RIGHT American bellflower (*Campanula americana*). © Connie Carroll-Cunningham.





Key:		Click on map for detailed occurrence records
Non-shaded counties:		absent
Light gray counties:		qualitative observation
Mid gray counties:		non-vouchered record
Dark gray counties:		vouchered record

[About phenology diagram](#)

J	F	M	A	M	J	J	A	S	O	N	D
0	0	0	2	7	14	17	21	3	9	0	0

[About timeline diagram](#)

pre-1900	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
0	0	0	0	5	4	24	15	9	4	7	5	0

ABOVE A county level map of *Quercus falcata*, Southern red oak (map and legend), a table showing the phenology (J- January through D- December) of *Q. falcata*, and the collection history of *Q. falcata* for the decades spanning 1900 through present.

into the site. We strove to develop a site that is visually uncluttered and easy to navigate, with a home page that allows the user to search the common or Latin names of plants, and an advanced search page that might help you key in on a plant even if you do not know its name.

*Illinois Plants* is a multi-institutional effort. It was born at the Illinois Natural History Survey, and it has expanded to include researchers and scientists from a wide variety of institutions. Central to the site are photographs on the *Phytoimages* website curated by Dan Nickrent of Southern Illinois University. Our biggest partnerships come from contributions of plant distribution information. We currently have more than 100,000 plant localities from botanists of many differ-

ent types and institutions that record the distributions of thousands of plant species across the state. Simply put, there are few regions of the world whose flora is as well documented as that of Illinois. And, by integrating so many institutions' and organizations' data and plant locality records, this information is available for the first time in a single location. For example, records from the Illinois Department of Natural Resources databases were incorporated, as were records from the Illinois Department of Transportation wetlands program. We also included plant records from many herbaria throughout the state and nation. In the near future, we expect to reach **one million records** as more and more collaborators share their plant data. This will give us a picture of where our plants are growing with detail and resolution that was previously impossible.

The site offers a variety of resources that will be of particular interest to expert botanists and plant ecologists. For example, the site provides an easy format for downloading occurrence records of plants in Illinois—a tool that will be valuable for those researchers interested in understanding the geographic or climatic drivers of plant distributions. The site contains detailed lists of plant traits that could be relevant to research on evolution of plant morphology and the association of particular plant traits with certain habitats. Additionally, we have compiled a large bibliography of botanical and floristic references to point researchers toward further information.

The inner-workings of the site are relatively simple and flexible, using open-source programming languages. Information about plants is stored in a MySQL relational database, which is automatically queried to an HTML website based on user input using PHP code. This means that the design will allow us to easily incorporate information in the future – leaf toughness? butterfly associates? favorite recipes? extinction risks? range expansions/contractions?

During site development, innumerable decisions were made about taxonomic uncertainties (correct names and relationships between species), dubious

occurrence records, and lack of clarity with plant traits. Our approach was to be consistent in our decisions, and to document the rationale behind them. For example, we generally used global databases of accepted plant names to define plant taxonomy on the site, but we also included a number of taxa that are not widely recognized because they have legal status in Illinois (e.g., *Eleocharis olivacea*) or because they are included in prominent regional floras and are recognized by Illinois botanists. Likewise, we attempted to draw occurrence records from as many professional sources as possible with the recognition that those lacking tangible herbarium records cannot be fully vetted. We provided notations regarding the collector, the location of the voucher specimen (if available), and the age of the record, but it is ultimately up to the user to decide the validity of a record. Currently, the vast majority of plant trait data comes from a single, and mostly reliable source—the Illinois Plant Information Network (ILPIN) database, developed in the 1980's by researchers at INHS.

So, check out the *Illinois Plants* site ([www.inhs.illinois.edu/data/plantdb](http://www.inhs.illinois.edu/data/plantdb))! It is an ongoing effort, so let us know how we can make it even more useful for you.

Oh, and by the way... There are a surprising 27 ferns and fern-allies in Kane County. If you live near Champaign, you may consider going to the Vermillion River to see an American bellflower, although you could probably find some even closer to home. And there are a total of 3,249 plant taxa (including species, subspecies, varieties, and hybrids that we recognize) recorded in Illinois, although only about 2/3 of these occurred here before European colonization.

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