

Distribution Update

Updating Distributions: Standards for Contributors

The PLANTS database covers vascular plants, mosses, liverworts, hornworts, and lichens of the U.S. and its territories. We welcome thorough, verifiable plant distribution information from the public. Such distribution information must be relatively detailed about locality, documenter, and source of documentation. **Incomplete or unverifiable information cannot be accepted.** Please follow the guidelines below for providing distribution information, and then send us an [email](#) with your distribution updates.

1. Locality & other information (required):

- Provide county, parish, or equivalent municipality. These are the units that PLANTS maps. Furthermore, *localities provided should give the town or city, or even more precise geographic information, such as within 100 m in latitude/longitude or Universal Transverse Mercator (UTM) coordinates.
- *Date of documentation, including the day, month, and year.
- *Name of the collector or documenter.

*If you are reporting distributions to us from a printed flora, you do not need such precise locality information.

2. Plant documentation, which requires information for *at least one* of the four categories of sources below. If you provide photos or herbarium specimens (A or B below), please tell us how you made the identification (e.g. literature source, experts consulted, etc.).

A. Photographs

- These must be representative of the morphology of the plant, adequate for identification. Such morphological characteristics would be those used in a taxonomic key to distinguish the species, subspecies, or varieties of interest from other similar plants. Photos sent without identification will be thrown away.
- Photos must have the plants in clear focus and appropriately lighted.
- Submitted photos will be used only for identification, not posted on the website nor made available to the public.

B. Herbarium specimens: pressed, dried plant material

- As with photographs, such specimens must contain the necessary representative morphology of the plant, adequate for species identification. They also must not be moldy rotted, damaged by insects or other organisms, or contain any other damage that will obscure positive identification.

- You may refer us to specimens deposited in an internationally recognized herbarium (see [Index Herbariorum](#)), or mail us a collection of your own. Any specimens you provide us must contain ample material. If you plan to supply us with specimens of your own, before doing so please review some guidelines for making herbarium specimens (1)(2). After we examine these specimens we will send them to a proper herbarium. As with photos, specimens sent without identification will be thrown away. If you plan to collect specimens to provide us with distribution updates, please be sure they are legally collected by respecting private and public landowner rights and by following any local, regional, national, or international plant protection and quarantine laws.

C. Published literature

- Publicly available, preferably peer-reviewed. This can include floras, scientific journals, reports from heritage programs or similar organizations, as well as doctoral dissertations and masters theses. Please tell us about the literature source you are using (title, authors, publication date, publisher).
- Records from databases directly associated with herbaria are also acceptable, such as the [NCU](#) Flora of the Southeastern United States, the Consortium of California Herbaria ([CCH](#)), the Southwest Environmental Information Network ([SEINet](#)), the Plants of Washington ([WTU](#)), amongst many others. Furthermore, state Natural Heritage database records are also acceptable.

D. Botanical specialists

- Verbal reports from well-known, well-published botanists specializing in certain plant groups, such as families or genera, or floras of geographic regions.

Please [email your updates to the PLANTS National Plant Data Team](#)