

THE DIGITAL PLANT PRESS – PLANT IDENTIFICATION IN THE CYBER AGE

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As a deer hunter or wildlife manager you have complete familiarity with these words: Boone and Crocket, drop tine, and buck:doe ratio. But how familiar are you with words such as Skunkbush sumac, Bumelia and Engelmann daisy? The biggest influence during the life of any deer is the quality of the native habitat in which that deer lives and secures nourishment. It is accepted that in order to grow large healthy deer they need three things: nutrition, age and genetics. The next frontier for deer aficionados is learning how to recognize and identify plants that deer consume for nutrition.

Short of enrolling in a botany class or joining the local garden club what can be done to learn plant identification (ID)? Carrying a stack of plant ID books on the pickup seat or handing the unknown to a local plant expert used to be the common methods for identification. While these methods still produce positive results, you can take advantage of modern methods such as the digital camera, flat bed scanner, and use of e-mail and internet resources to self learn plant identification. Today, with a digital camera that fits in your shirt pocket you can take a high quality photo of a plant, download it to your computer and e-mail it to your plant expert and he or she will see the plant exactly as you did. As a bonus, most digital cameras come with a macro setting which can take extreme close-up photos for capturing small details in flowers or leaves. You also have an image of the plant that can easily be reproduced months or years later to share with others.

The use of color scanners to produce a life-like plant image has been in use for just a few years; however, you will be amazed at the three dimensional effect of the plant picture. To get the best print quality use medium or higher priced matte or glossy photo paper. These scanned images can be saved as a jpg and e-mailed the same as a digital photo. With a scan or high resolution digital photo you can zoom in on the image on your monitor with little loss of detail or image quality.

When scanning plants for collection, remember that it can be difficult to obtain a quality image of plants with white or very small flowers. Additionally, plants with very large or bulky parts can cause problems with letting too much light into your scan. Taking pictures of these types of plants might be the better option when putting together a quality collection of plant images.

When scanning plant images, there are two options you can utilize that will allow you to add the image to your plant collection. The first option allows you to scan only the plant in order to create an image that can be inserted into a document. Another option requires that you attach the plant to a printed document before scanning, so that the finished product

already has the plant data you wish to include with your collection. Trim large plants or fold the longer stems to fit on the scanner, set the resolution to 300 dpi, close the lid to reduce stray light, and scan. The two options are outlined below.

Scanning Plant Images for Use in Other Documents:

1. Place the plant you want to scan directly onto the glass of the scanner.
2. Open the HP Director software and click on the Scan Document button.
3. When the Scan Document dialog box opens, select Text & Image as Graphic so that your scan will be in color and then click the Scan button.
4. If you are happy with the scanned image, click the Accept button. The Save As dialog box will open and you will need to navigate to the location in which you would like to save your plant images. Your C: drive is the best option. Use the Save as type: drop down arrow and select Jpeg Image. Click the Save button.

You now have a .jpg file that can be inserted into other documents.

5. At this point, you will need to open the document in which you want to insert the plant image and complete the pertinent plant data you wish to include in your plant collection.
6. To insert the scanned plant image, choose Insert, Picture, From File and navigate to the .jpg file of the plant image and select it. Click on the Insert button. Move and adjust the image to fit the document you are using. You can utilize the Picture Toolbar for more options in changing the look of the image.
7. When you are satisfied with the document you have created for your plant collection, save the file.

Scanning a Document for Plant Collections

1. Open the document you are using to record pertinent plant data for the plants in your collection and complete the data for the plant you have on hand. Print the document. *Note: If you wish to simply write in the plant data, you can keep blank forms printed and ready for use.*
2. Affix the plant to the printed document so that the pertinent data is still visible.
3. Place the document and the plant directly on the scanner glass.
4. Open the HP Director software and click on the Scan Document button.
5. When the Scan Document dialog box opens, select Text & Image as Graphic so that your scan will be in color and then click the Scan button.
6. If you are happy with the scanned image, click the Accept button. The Save As dialog box will open and you will need to navigate to the location in which you would like to save your plant collection. Your C: drive is the best option. Use the Save as type: drop down arrow and select PDF (*.pdf). Click the Save button.

Online plant identification resources were unknown just over ten years ago. Today there are numerous web sites that show photos of identified grasses, forbs and woodies with several photos of each species. They highlight the entire plant, which includes close up of the leaves, flowers, stems, fruit and even the bark of trees.

The following web sites are highly recommended for plant identification:

<http://plants.usda.gov/>,

<http://www.bio.utexas.edu/courses/bio406d/>,

<http://uvalde.tamu.edu/herbarium/index.htm>,

<http://www.noble.org/WebApps/PlantImageGallery/Index.aspx>,

and <http://texnat.tamu.edu/plant.htm>.

There are even a couple of books on important native plants used as deer food that are available online or free by mail: *White-tailed Deer their foods and management in the cross timbers* by Ken Gee and Mike Porter of the Noble Foundation,

<http://www.noble.org/Ag/Research/Wildlife.htm> and *White-tailed deer food habits and preferences in the cross timbers and prairie region of Texas* by Jim Dillard et al of the

Texas Parks and Wildlife Department,

http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd_rp_w7000_1017.pdf , both of which are valuable references.

Ask your local NRCS, Extension or TPWD personnel for a list of their favorite plant ID web sites. Another new technique if you know the name of a plant is to go into either search engines Google or Yahoo, click on the Images button, then type in the common or scientific name and you will see a variety of images of that plant. Good plant identification books are still the bread and butter ID resources for most experienced plant folks, but digital and cyber methods are here to stay. Knowledge of plants and their value as food must be learned by all land managers.