



Wild Harvesting American Plum and Chickasaw Plum in Georgia

J. Holly Campbell, *UGA Warnell School of Forestry and Natural Resources*

Heather N. Kolich, *UGA Cooperative Extension Service*

INTRODUCTION

American plum (*Prunus americana* Marsh.) and Chickasaw plum (*Prunus angustifolia* Marsh.) are two native plum species with a small fleshy fruit that is flavorful, nutritious, and great for wild harvesting (Fig. 1). The Chickasaw plum, in particular, has a long history of wild harvesting and cultivation. Native Americans of the Great Plains cultivated Chickasaw plums, potentially causing their wider geographic spread (Little, 1979). Nineteenth century frontier explorers Lewis and Clark and George Catlin documented these plum groves in their travels. In the late nineteenth century, midwestern horticulturalists grew hundreds of named cultivars of American and Chickasaw plums (Damery, 2018). Although most of these cultivars are no longer commercially available, both species still play an important role in people's lives. They are harvested from the wild (wild harvested), planted in home orchards, and used in soil and native plant conservation efforts. For the remainder of the publication, "wild plums" will be used to refer to both American and Chickasaw plums.

Wild plum species play an important ecological role. They naturally form thickets, providing year-round cover for songbirds and small mammals. The fragrant flowers are an early spring nectar and pollen source for birds and insects. Wild plums also serve as caterpillar host plants for several butterfly species, including coral hairstreak (*Satyrrium titus*) and eastern tiger swallowtail (*Papilio glaucus*). The Natural Resources Conservation Service (NRCS) estimates that Chickasaw plums contribute 5-10% of some bird and mammal diets, such as providing food for northern bobwhite quail (*Colinus virginianus*), wild turkey (*Meleagris gallopavo*), racoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*) (Row & Geyer, 2010).

Wild plums are a nutritious food source for humans and other animals. One hundred grams (g) of wild plums contain approximately 90 calories, 10 g of sugars, 5 g of dietary fiber, < 1 g of protein and fat, 364 milligrams of potassium, and smaller quantities of several minerals and vitamins including calcium, magnesium, phosphorous, Vitamin C, and more (USDA ARS, 2019).



Figure 1: *American plum in flower.*
Credit: Susan McDougall

Wild Harvesting American Plum and Chickasaw Plum in Georgia

IDENTIFICATION AND HABITAT

Safely harvesting food from the wild requires accurate plant identification. This includes knowing a plant's preferred habitat (e.g., wet or dry site, full sun or shade) and its morphological characteristics, such as the shape of leaves and appearance of flowers, fruit, and bark. Identifying characteristics of American and Chickasaw plums are detailed below.

Plums are in the very diverse Rosaceae family, which includes roses, blackberries, hawthorn, crabapple, and more. Their genus, *Prunus*, is shared by apricot, cherry, peach, almond, and more. Each of these species, excluding roses (due to extensive breeding), share similar flower characteristics. Native plums flower early in the spring and may be the only native plant in bloom at that point of the season, so this is an important identification characteristic.

American Plum (*Prunus americana*)

American plums have a wide distribution across the United States and Canada (Fig. 2). Typical habitats include open prairies, pastures, and forest edges, where ample sunlight is available. American plums are a deciduous, multi-stemmed large shrub or single-stemmed small tree 10 - 30 feet (ft) or 3 - 9.1 meters (m) tall. They are often found in dense thickets, and the plant may send up sprouts, or suckers, from the roots.

From March to May, showy, white flowers with 5 petals appear in clusters at the ends of branchlets (Fig. 3). Flowers are 1 inch (in) or 2.54 centimeters (cm) across, with long stamens that give them a hair-like appearance. Simple, oval to elliptical leaves are 3 - 4 in (7.6 - 10 cm) long, the edges of the leaves are shaped like a saw's teeth (serrated), have a pointed tip, and are green on the leaf surface and paler green below (Stevens & Kaiser, 2000). Leaves emerge off the branch in an alternate arrangement. The round plum fruits (drupe) are about 1-inch in diameter with yellow to reddish-purple flesh that contains one seed (pit). Plums ripen throughout the summer. When the plant is young, the bark is smooth and reddish gray with numerous horizontal lenticels, which appear as light-colored slits in the bark that vary from 1/8 in to 1/2 in long. As the plant matures, the bark develops irregular ridges and exfoliating strips that curl. The reddish-brown twigs are slender and have raised leaf scars and reddish-grey, sharp-pointed buds. Branches may develop thorn-like short branches.

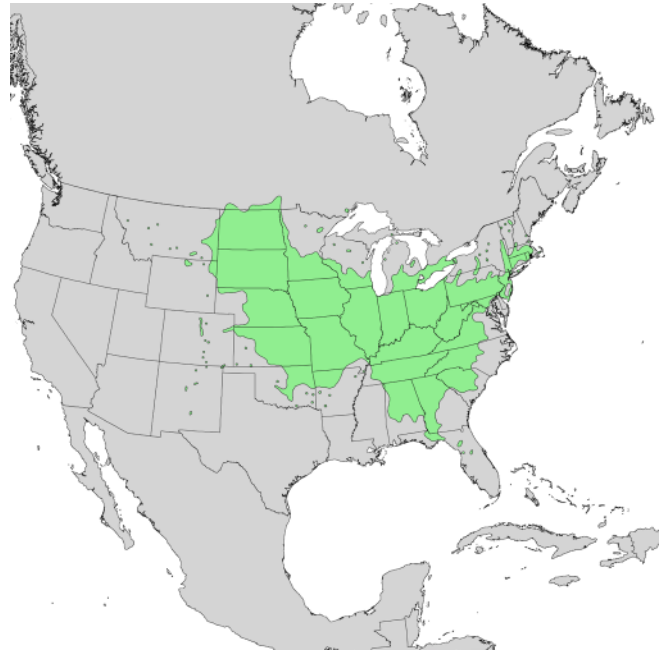


Fig. 2: *American plum native range map. Data: Little (1971).*
Map: United States Geological Survey (USGS)



Fig. 3: *American plum flowers (top left), ripe fruit (bottom left), and leaves (right).* Images by Susan McDougall.

Wild Harvesting American Plum and Chickasaw Plum in Georgia

Chickasaw Plum (*Prunus angustifolia*)

Chickasaw plum has a more southern range than American plum (Fig. 4). Habitats include open areas such as grasslands, sandy prairies, roadsides, woodland margins, old homesites, and fence rows. Chickasaw plums are a deciduous, shrubby tree growing up to 20 ft (6 m) tall. Like American plum, they may form thickets due to root suckers.

From February to April, Chickasaw plums produce abundant, fragrant flowers (Fig. 5). The small, white, 5-petaled flowers are a 1/3 in (0.8 cm) across and have orange anthers. They occur in clusters on side twigs and tips of branches. Chickasaw plum leaves are shorter and narrower than American plum leaves. The narrow, pointed leaves are 1.5 - 3 in (3.8 - 7.6 cm) long and .25 - 4/5 in (0.16 - 0.3 cm) wide with a finely serrated leaf edge. The leaves are alternately arranged; have a shiny, dark green leaf surface that is lighter below; and angle upward along the midrib creating an elongated trough (Row & Geyer, 2010). The fruit is a round, 1/3 - 1/2 in (0.83 - 1.3 cm) yellow to red fleshy plum, ripening from June to August and containing one pit. Ripe plums have a whitish appearance (bloom) on the skin. Bark on younger trees is similar to American plum; however, in comparison, bark on mature Chickasaw plums is scaly and contains cracks and shallow furrows. Twigs are slender, zig-zag in appearance, and reddish brown with raised leaf scars, thorny branches, and small red buds.



Fig. 4: *Chickasaw plum native range map. Data: Little (1971). Map: USGS*



Fig. 5: *Chickasaw plum (clockwise from top left) bark on trunk, unripe and ripe fruit, leaves, and bark on branches. Images by Heather Kolich.*

Wild Harvesting American Plum and Chickasaw Plum in Georgia

WILD HARVESTING AMERICAN AND CHICKASAW PLUMS

In Georgia, wild plums are harvested in the summer, where fruit ripens over several weeks anywhere from June to August. Ripe plums may be yellow, orange, red, or reddish-purple. Yield varies by year. Prior to wild harvesting, review the steps for sustainable and ethical harvesting at right.

Ripe, undamaged fruit can be harvested by hand into a clean container. Be careful to avoid short thorny branches while harvesting. It is better to harvest early in the day, when the fruit is cool, and to transfer fruit into a refrigerator or cooler soon after collecting. Harvest sustainably, only taking what you can use while leaving fruit for wildlife and other wild harvesters. If harvesting for seeds (for growing plum trees), use a separate container to glean fruit from the ground after harvesting for edible fruit.

USING YOUR HARVEST

Wild plums have been utilized as food for centuries. Today, these species are eaten fresh or dried and are used in syrups, juice, jelly, jam, wine, fruit leather, meat recipes, and as part of various desserts. Substitute wild plums into a variety of recipes. Prior to use, closely examine your harvest. Discard damaged fruit and wipe dirt off as necessary. If using immediately, wash fruits and begin to process the plums according to your recipe. Note that you may need to remove the seeds and/or skin for some recipes. See Additional Resources for links to recipes.

STORING YOUR HARVEST

Plums continue to ripen after harvest. If storing prior to use, slow the ripening process by storing plums unwashed in the refrigerator for up to five days (McCurdy et al., 2009). Wild plums can be stored through drying, freezing, fermenting, and canning. The flavor of wild plums ranges from sweet to sour, making jams and jellies one of the more popular preservation methods.

PRECAUTIONS

Seeds, stems, and leaves (not the fruit) of *Prunus* species contain cyanogenic compounds. Although toxicity is low, eating any of these plant parts can result in cyanide or prussic acid poisoning. Those who have allergies to other members of the Rosaceae family (ex., apple, pear, cherry, etc.) should be cautious when considering consumption of plums.

OTHER WILD-HARVEST USES

Some Native American Nations used twigs and sprouts of wild plums for ceremonies and tools, such as brooms, and used bark and roots as an astringent or poultice for wounds and sores (Stevens & Kaiser, 2000).

CULTIVATING & PROPAGATING AMERICAN AND CHICKASAW PLUM

Though many people may prefer to wild-harvest plums, others may wish to grow one or both native plum species in their landscape. Additionally, urbanization and invasive plants have displaced wild plums in some areas (Indigenous Landscapes, 2018), so cultivating them can be a way to increase the abundance of both species. American and Chickasaw plum plants are often available through native plant nurseries, and bare-root seedlings can be ordered from the Georgia Forestry Commission. Both species can also be grown, or propagated, from

WILD HARVESTING BEST PRACTICES:

- Before wild harvesting, investigate whether you are allowed to harvest a particular plant. Some jurisdictions (state and federal lands) prohibit or require a permit to wild harvest.
- Ask permission to harvest on private land and avoid trespassing.
- When wild harvesting, wear protective clothing, gloves, sun protection, and insect repellent. Be aware that venomous snakes, biting insects, or poison-ivy may be present in heavy vegetation.
- Harvest with a buddy or let a friend or family member know where you are going.
- Take care not to damage the plant you are harvesting.
- Consider not broadly communicating your harvest location on social media to avoid overharvest.
- Avoid harvesting near roadways, along railroad tracks and other areas susceptible to pollution or pesticide application.
- If harvesting for seeds, leave sufficient dropped fruit on the ground for animal distribution and natural reseeded.
- Only harvest what you can reasonably use.
- Avoid harvesting threatened and endangered plants.

Wild Harvesting American Plum and Chickasaw Plum in Georgia

seed (see below), cuttings, or root sprouts. American and Chickasaw plums are cross-pollinated by insects and can hybridize with each other. This means that offspring grown from seed collected from a wild thicket with both species may exhibit characteristics of both species.

Starting new trees from seeds:

Both species can be grown from seed collected from fully ripe fruits in late summer. To prepare the seeds, remove them from the fruit and soak them in water to remove any residual pulp. Allow seeds to air dry for several days in a cool, dark, and dry location. The seeds will need a season of cold, or stratification, to break dormancy. This can be achieved through outdoor or indoor propagation. Please note that successful propagation from seed requires patience, as stratification can take months for seeds to break dormancy and sprout (Henry & Kaiser, 2000).

Outdoor propagation: Prepare a seed bed in your landscape and plant your prepared seeds outdoors early in the fall. As temperatures warm in the spring, water the bed weekly (until seedlings are transplanted to a container or permanent landscape location) to supplement rainfall (if rainfall is less than 1 in per week).

Indoor propagation: Place seeds in an open plastic bag in moist sand and store them in a refrigerator over the winter. Add water as needed to keep the sand moist but not drenched. Transplant seeds into a pot or planting bed when the seed cracks due to root emergence.

Starting new trees from cuttings:

Wild plums spread through root suckers, making vegetative propagation possible. Select young suckers that have developed some roots of their own. Loosen the soil around the sucker to find the originating root from the parent plant. Cut this root close to the sucker. Gently remove the sucker and rebury the root of the parent plant. Wrap the roots of the sucker in wet paper towels to keep them moist during transport. Plant the sucker into well-moistened soil in a pot or a prepared garden bed as soon as possible. Keep the soil moist at root depth but allow the soil surface to dry between water applications. Reduce frequency of watering when the plant shows new growth.

CONCLUSION

American and Chickasaw plums have a long history of human use as a food source, cultural resource, traditional medicine, and for conservation. Wild-harvesting, and even cultivating, these species for their delicious and nutritious fruits can be a rewarding activity and an excellent addition to any pantry.

REFERENCES

- Damery, J. (2018, Feb.). Recalling plums from the wild. *Arnoldia*, 75(3), 24-34. Retrieved from <https://arboretum.harvard.edu/stories/arnoldia/75-3/>
- Henry, J. & Kaiser, J. (2000). Wild plum. USDA NRCS Planting Guide. Retrieved from https://www.blogs.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mopmcpgram.pdf.
- Indigenous Landscapes, LLC. (2018). Wild plum conservation project. Retrieved from <https://indigesapes.com/blog/2018/8/14/wild-plum-conservation-project>.
- Little, E. L., Jr. (1979). Checklist of United States Trees (Native and Naturalized). USDA Forest Service Agriculture Handbook No. 541, p. 211. Retrieved from <https://naldc.nal.usda.gov/catalog/CAT80450955>.
- McCurdy, S., Peutz, J., & Wittman, G. (2009). Storing food for safety and quality. University of Idaho Extension. Retrieved from <https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw612.pdf>
- Row, J. M., and Geyer, W. A. (2010). Plant guide for Chickasaw plum (*Prunus angustifolia*). USDA-Natural Resources Conservation Service, Manhattan Plant Materials Center, Manhattan, KS. Retrieved from <https://www.nrcs.usda.gov>.

Wild Harvesting American Plum and Chickasaw Plum in Georgia

Stevens, M., & Kaiser, J. (2000). Plant Guide for wild plum *Prunus americana* Marsh. USDA-Natural Resources Conservation Service, National Plant Data Center & Missouri State Office. Retrieved from <https://plants.usda.gov>.

USDA ARS (U.S. Department of Agriculture Agricultural Research Service). (2019). Plums, wild (Northern Plains Indians). Food Data Central. Retrieved from <https://fdc.nal.usda.gov/fdc-app.html#/food-details/169820/nutrients>. Accessed 08/05/2021.

ADDITIONAL RESOURCES

Identification

North Carolina State University Plants Database: <https://plants.ces.ncsu.edu/>

USDA NRCS Chickasaw Plant Guide: https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/kspmcp9876.pdf

USDA NRCS American Plant Guide: https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mopmcp6751.pdf

Virginia Tech Dendrology: <https://dendro.cnre.vt.edu/dendrology/factsheets.cfm>

Uses

Plum Jelly with powdered pectin. From National Center for Home Food Preservation. https://nchfp.uga.edu/how/can_07/plum_jelly_powdered.html

Plum Jelly without added pectin. From National Center for Home Food Preservation. https://nchfp.uga.edu/how/can_07/plum_jelly.html

Preserving Plums & Prunes. From Oregon State University Extension Service. <https://extension.oregonstate.edu/sites/default/files/documents/8836/sp50586preservingplumsandprunes.pdf>

Wild Plum Conservation Project, Ohio, Kentucky, and Indiana. <https://indigescapec.com/blog/2018/8/14/wild-plum-conservation-project>

Wild Plum Planting Guide. From USDA Natural Resources Conservation Service. https://www.blogs.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mopmcpgram.pdf

Winemaking at Home. From University of Georgia Extension, Circular 717. <https://extension.uga.edu/publications/detail.html?number=C717&title=Winemaking%20at%20Home>

The University of Georgia Warnell School of Forestry and Natural Resources offers educational programs, assistance, and materials to all people without regard to race, color, national origin, age, gender, or disability.

The University of Georgia is committed to principles of equal opportunity and affirmative action.