

The Fruits of Autumn

Nancy Rose

Autumn is prime time for observing a great array of maturing fruits on woody plants. Fleshy types like pomes, drupes, and berries are often brightly colored and highly noticeable at this time of the year. Fall-fruiting trees and shrubs—viburnums (*Viburnum* spp.), crabapples (*Malus* spp.), mountain ash (*Sorbus* spp.), beautyberries (*Callicarpa* spp.), and hollies (*Ilex* spp.), to name a few—provide a showy display, especially as deciduous leaves begin to fall. In addition to adding color to the landscape, fall-fruiting plants also serve as an important food source for birds.

Other fruiting structures seen in autumn are less showy but still interesting. Pods, samaras, and inflated capsules are some of the diverse forms to be seen. As anyone who has ever tried to learn woody plants knows, fruits often provide the key for correct identification.

Here are some examples of fruits to look for this fall:



Grape honeysuckle, (*Lonicera reticulata*)



Common persimmon (*Diospyros virginiana*)

The word “berry” is often used to describe just about any rounded, juicy-looking fruit, but botanically speaking a **berry** is a fleshy, indehiscent (not splitting open at maturity) fruit that develops from a single pistil and contains one or multiple seeds. A number of woody plants bear berries including vines like *Vitis* (grape), *Actinidia* (kiwi), and *Parthenocissus* (Virginia creeper, Boston ivy). Both vine and shrub species of *Lonicera* (honeysuckle) have berries, often attractive bright red ones. Common persimmon (*Diospyros virginiana*) is one of few large trees that produces true berries; look for the golden orange, globe-shaped fruits persisting on branches through late autumn.

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Clockwise from upper left:
Donald Wyman crabapple (*Malus* 'Donald Wyman')
Korean mountain ash (*Sorbus alnifolia*)
Chinese sand pear (*Pyrus pyrifolia*)
Black chokeberry (*Aronia melanocarpa*)

A **pome** is a fleshy, indehiscent fruit that develops from a compound ovary set within a fleshy floral cup or tube. Multiple seeds are found in the core of the fruit. Pomes are the fruits of a number of well-known genera in the rose family (Rosaceae), including *Malus* (apple, crabapple), *Sorbus* (mountain ash), *Pyrus* (pear), *Crataegus* (hawthorn), *Aronia* (chokeberry), *Cotoneaster*, and *Pyracantha* (firethorn).



Clockwise from upper left:
Sapphireberry (*Symplocos paniculata*)
American cranberrybush (*Viburnum trilobum*)
Purple beautyberry (*Callicarpa dichotoma*)
Winter Red winterberry (*Ilex verticillata* 'Winter Red')

Another common berrylike fruit found on woody plants is the **drupe**. A drupe is a fleshy, indehiscent fruit containing a single seed which is surrounded by a stony endocarp. Many of the showiest fall-fruiting shrubs and small trees bear drupes, including viburnums (*Viburnum* spp.), beautyberries (*Callicarpa* spp.), dogwoods (*Cornus* spp.), and hollies (*Ilex* spp.). Many delicious drupes are found in the genus *Prunus* including cherries, plums, and peaches.



A **hip** is a pomelike structure formed by a fleshy hypanthium (a cup-shaped structure formed from fused floral parts at the flower's base) which surrounds multiple achenes (small, dry fruits containing single seeds). The term hip is used specifically for roses (*Rosa* spp.). The large, scarlet hips of *Rosa rugosa* (left) give it one of its common names: beach tomato.

Aggregate fruits are composed of numerous small fruits that develop from multiple pistils in a single flower. Raspberry fruits, for example, are aggregates of drupelets. Magnolias produce conelike aggregates of follicles; at maturity, each follicle opens to reveal a seed covered by a brightly colored aril (fleshy seed coat) and attached by a stretchy thread. The fruit of a hybrid sweetbay magnolia (*Magnolia virginiana*) is seen here (right).



Multiple fruits develop when the fruits derived from numerous individual flowers in an inflorescence fuse together to form what appears to be a single fruit. Pineapple (*Ananas* spp.) and mulberry (*Morus* spp.) are examples of multiple fruits. The unique, baseball-sized green fruits of osage orange (*Maclura pomifera*), shown at left, are also multiple fruits.



Built to be carried by the wind, **samaras** are winged achenes. The papery wing part of the structure takes variable forms; for example, in elms (*Ulmus* spp.) the wing encircles the achene, in ash (*Fraxinus* spp.) the wing extends like a paddle from a single achene, and maples (*Acer* spp.) bear paired (two-winged) samaras that usually split apart when they mature and fall. The size and wing angle of maple samaras provide a good identification key among species.



Three-flowered maple (*Acer triflorum*) bears triplets of two-winged samaras. Another samara variation—a single achene dotted in the middle of the wing—is seen in this red-fruited form of the notoriously seedy tree-of-heaven (*Ailanthus altissima* f. *erythrocarpa*).

Exclusive to oaks (*Quercus* spp.), **acorns** are hard-shelled seeds (nuts) nested in cup-shaped involucre. Acorn size and degree of involucre extension on the nut provide a good clue when trying to identify oak species. Noted for their extensively fringed involucre, the acorns of bur oak (*Quercus macrocarpa*) are seen in this image.





Many plants bear seed-holding **capsules** but the forms of these dry, dehiscent (splitting open at maturity) fruits vary widely. The inflated, paper-lantern-like capsules found on golden rain tree (*Koelreuteria paniculata*, left) turn from green to tan—sometimes with a blush of pink—and often persist well into the winter. Also shown (right) are the small, rounded capsules of summersweet (*Clethra alnifolia*), filled with numerous tiny seeds.



Pods are dry, dehiscent or indehiscent fruits that contain seeds. The legume family (Fabaceae) is well-known for producing pods as its fruiting structure. Woody plants in this family include honey locust (*Gleditsia* spp.; pods of *G. triacanthos* pictured), Kentucky coffee tree (*Gymnocladus dioica*), wisteria (*Wisteria* spp.), and silk-tree (*Albizia julibrissin*).