



Appalachia-Science  
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## HEIRLOOM APPLES IN CENTRAL APPALACHIA

No more important fruit tree graces the homesteads, farms, and backyards of Appalachia than the apple (*Pyrus malus*, also known as *Malus pumila* and *Malus domestica*). When settlers headed west from the eastern seaboard, they took apple seeds because they didn't weigh too much or take up too much space.

Probably the best known apple aficionado is Johnny Appleseed (John Chapman). Born in Massachusetts in the late eighteenth century, Johnny traveled throughout the Central Appalachians and the Midwest sowing apple seeds and planting nurseries for frontier families and their homesteads. It's said that he gathered canoe-fulls of apple seeds from western Pennsylvania at cider-making time and headed westward. One of Johnny Appleseed's authenticated varieties, the Albemarle Pippin (also known as the Newtown Pippin) is one of the premier mountain varieties and is still available at a few nurseries.

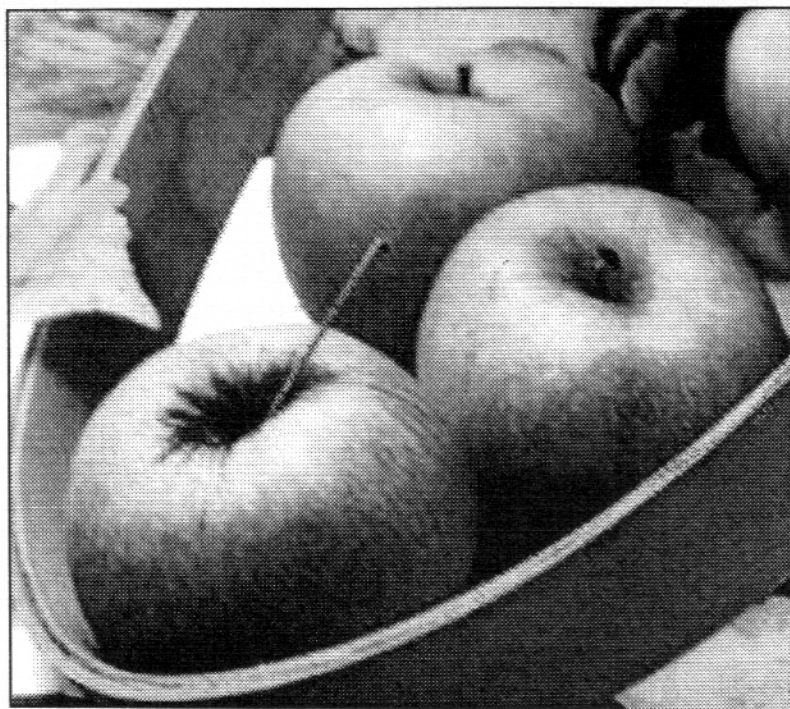
Origins of the apple are traced to Eurasia, possibly Kazakhstan, and were spread across Eurasia by the European Brown Bear (*Ursus Arctos*) even before they were domesticated in about 6500 BC. Even today one can find overgrown apple trees at old homestead cabin sites in the mountains where the bear-claw marks on the trunks and broken branches show that others, too, appreciate this tasty and nutritious pome fruit!

A member of the rose family (*Rosaceae*), the gently fragrant and delicate apples that blossom in spring-time resemble miniature roses, and their nectar is sought by bees, which are essential for their pollination. Most apple varieties require cross-pollination in order to bear fruit satisfactorily, and so two diploid pollinating varieties must be present to pollinate each other. Blackberries, hawthorns, cinquefoils, strawberries, plums, and cherries are also in the rose family.

Apples are the most prolific fruit grown in the northern temperate regions across the world, so Appalachia is no exception. As many as eight tons per acre can be harvested from a properly-managed orchard. In addition to the nutritional value of the fruit, apple wood is hard, durable, and very fine-grained, which makes it ideal for cabinetmaking. Apple wood chips are prized for use in imparting flavor to smoked fish.

The Greeks, Etruscans, and Romans all practiced grafting particularly favorite apples onto other apple and crab apple rootstock. Since apples are heterozygous and thus do not reproduce true to type, saving and planting seeds from a favorite apple tree will not always yield trees of that variety. Apple trees are reproduced by grafting or budding. By these methods a scion, or bud of the desired variety, is inserted into the base of the stem or trunk of a seedling tree known as the stock, and sometimes the stock itself is a vegetatively propagated tree.

Most trees are propagated, however, on seedling rootstocks, and several size-controlling rootstocks are available. Uniform moderate heights minimize the need for ladders during harvesting. Extremely dwarfed rootstocks are popular where space is limited, and espaliers can make picking very convenient as well as creating considerable beauty in an edible landscape.



Only a few remnants of the 1,300 known varieties that once grew in the Appalachians and the Southeastern United States have been preserved. Most commercial apple production is limited to just a few varieties. In the Shenandoah-Cumberland area the principal commercial varieties are: the York Imperial, Delicious, and Stayman Winesap. In the North Carolina mountains, Red Delicious, Golden Delicious, and Rome comprise 90% of commercial production.

Heirloom apple varieties are a special group of apples developed by common people during the European settlement of North America. These apples do very well in the Appalachians, and many of them are found to have special purposes — for making cider, applejack, vinegar, applesauce and apple butter, dried apples, apple leather, winter keeping, and some even to perfume a home!

Many of these varieties have relatively good resistance to pests and diseases without having to resort to agri-chemicals, and many have unusually long or late seasons which allow them to elude late spring frosts and freezes. Cultural heritage conservators, organic gardeners, sustainable agriculturalists, edible landscapers, and conservationists will find partial fulfillment of their visions by helping to conserve and propagate some of these heirloom varieties. Here are a few of the most notable heirloom mountain apples and their qualities that are worth exploring and conserving:

**Arkansas Black** — This variety is said to have come from a Winesap seedling in the Ozark mountains near Bentonville. It bore its first fruit in 1870. It's a beautiful apple and a good winter keeper, quite disease resistant except to apple scab, and the fruit may have some resistance to codling moth. Rock-hard when first picked, the apples soften and improve in flavor with storage. Fruit is medium size, nearly round, sometimes slightly conical; skin is yellow covered with a deep red, almost black on the sunny side; dots are numerous, small, and white; stem is short to medium length in an acute, rather small, partly russeted, often lipped cavity; the calyx is closed; the basin is small, very shallow, slightly furrowed; the flesh is very firm (hard when picked), yellow, rather fine-grained, crisp, moderately juicy, sprightly subacid. It's ripe from November through April. Catalog listings: MD, VA, NC, SC, GA, TN, KY, LA, TX, AR (1890-1928).

**Brushy Mountain Limbertwig** — The origin is thought to be from the Brushy Mountains of Alexander County in North Carolina. A past catalog of Henry Mortonn's nursery describes this apple as a dull red



with lemon yellow flesh. Round and a little bit pointed but not conical. Very juicy with a most unusual aromatic flavor. It will keep until June. Ripens in October. A weeping type.

**Crow's Egg** — Also known as Raven's Egg or Black Annie may be the same as the Black Gilliflower. Although oddly oval-shaped, it receives high praise as an excellent eating apple. Fruit is medium or smaller, oblong, extremely conical narrowing to a point at the calyx end; the skin is yellow almost covered with dull dark red; the stem is short to medium in a shallow, lipped cavity; dots are small, numerous, and obscure; calyx is closed; basin is very shallow, lumpy, irregular; the flesh is yellow, crisp, firm, not very juicy, fine-grained, almost sweet. It ripens in mid-November in the mountains and is considered a winter apple.

**Grimes Golden** — Also is known as Grimes Golden Pippin, and Bellflower (in Arkansas). Lee Calhoun recounts that out on West Virginia Route 27, two and one-half miles east of Wellsburg, there is a granite monument beside the road, and carved upon it is the name "Grimes Golden." Described as one of the greatest American apples in its own right, it is also the parent of the Golden Delicious which is grown all over the world. This variety is listed in almost every southern nursery catalog from 1870 on, makes excellent applesauce and outstanding cider. It blooms late and thus substantiates its reputation as being an extremely reliable producer, and is resistant to apple scab and cedar-apple rust. Fruit is medium or larger, usually roundish or slightly oblong, often flattened on the ends, and the sides are often unequal; skin is yellow, tough, rather rough with russet patches; dots are moderate in number, small or medium in size, and russet; the stem is short in a broad, deep, often russeted cavity; the calyx is closed or open; the basin is very abrupt, deep, sometimes furrowed; flesh is yellow slightly orange, firm, tender, crisp, juicy, aromatic, sprightly subacid. It ripens in October and November in the mountains. Catalog listings: MD, VA, NC, SC, GA, AL, TN, KY, LA, TX, AR (1870-1928).

**Hoover** — Also known as Watauga, Black Coal, Baltimore Red, Welcome, Black Hoover, Thunderbolt, and Watauga. Reputed to be one of the best eating-apples, in 1908 the USDA said of it: "In passing through the mountain sections of North Carolina, one sees this variety very commonly. During the fall, it is the one most often brought to the stations for sale to passengers on the train." Fruit is large, roundish oblate, slightly conical; the skin is yellowish splashed with two shades of dark red, sometimes almost black, with a light bloom; the dots are large, conspicuous, light colored, interspersed with patches of russet; the stem is rather long in a large and thinly russeted cavity; the calyx is open; the basin is slightly furrowed; the flesh is yellowish (some references say white), firm, tender, moderately juicy, sprightly subacid. It ripens through September and October and is a good keeper. Catalog listings: VA, NC, SC, GA, KY (1856-1917).

**Kinnaid's Choice** — Also known as Kinnaid, Red Winter Cluster, Kinnaid's Favorite, Kennard, Kinnard, and Black Winesap. Thought to be a cross of Winesap and Limbertwig, a prominent Tennessee orchardist and nurseryman in 1896 called it "the finest apple grown in Middle Tennessee." According to a 1908 USDA Bulletin, it was widely observed in Virginia and North Georgia orchards and was highly praised: "There appears to be no reason why Kinnaid has not been more generally planted (in the South). Its good size, attractive dark red color, and pleasing dessert quality are all factors in its favor, and the tree appears to be productive." Its late blooming allows it to avoid being damaged by spring frosts. Fruit is medium to large, roundish to slightly oblate, slightly conical, sides sometimes unequal; the skin is thick, tough, yellow almost covered with dark red when exposed to the sun; the dots are numerous, small to large, light colored; the stem is medium length, sometimes by a

lip, in a wide, deep, russeted cavity with the russet extending out over the top of the apple; the calyx is closed; the basin is large, deep, furrowed; the flesh is yellowish, moderately fine-grained, crisp, tender, juicy, somewhat aromatic, mild subacid. It ripens in October in the mountains. Catalog listings: MD, VA, NC, GA, AL, TN, KY, MS, TX, AR (1870-1928).

**Magnum Bonum** — Also known as Bonum, Maggie Bowman, Bona, Magna Bonum, and Red Bonum, it is celebrated as one of the ten greatest southern apples. A lovely apple of fine flavor, the tree is hardy and productive. Nineteenth century nurseries called it “the standard fall apple,” and “the king of all fall apples.” It is particularly well adapted to high calcium levels in the soil which improves the quality of the fruit. Fruit is medium or below, roundish or roundish oblate; the skin is yellow mostly covered with light red with indistinct darker red stripes; dots are numerous, white or russet, many with a darker center; the stem is long and slender in a wide, abrupt, deep greenish russeted cavity; the calyx is closed; the basin is wide abrupt, corrugated; the flesh is white, juicy, fine-grained, aromatic, mild subacid. It ripens in September and October and can be kept for several months if picked hard ripe and refrigerated. Catalog listings: MD, VA, NC, GA, KY, MS, AR (1853-1928).

**Newtown Pippin** — Also known as Albemarle Pippin, Green Winter Pippin, New York Pippin, Virginia Pippin, Back Creek, Large Newtown Pippin, Petersburg Pippin, Yellow Pippin, Pippin, Yellow Newtown Pippin, Green Newtown Pippin, Green Ohio Pippin, Green Winter Pippin, Hunt’s Fine Green Pippin, and Mountain Pippin. Along with Winesap, Ben Davis and York Imperial, this variety was one of the leading commercial apples grown in the nineteenth century due to the overwhelming overseas demand, especially in England. The eating quality of the Newtown Pippin improves with storage. John Creech of Turkey Hollow Nursery in Kentucky recently wrote: “When our Newtown tree had its first crop, I attempted to eat the apples right off the tree. For a couple of years the fruit was considered worthless and was mixed in with cider. Then one spring, when cleaning out the cellar, I ran across a peck of Newtown Pippins and absently bit into one. What a revelation! Needless to say no more Newtowns have gone into cider; they are jealously guarded until mid-March and then rationed out until the first of June.” Green Newtown Pippin: Fruit is medium to large, variable in shape and color. The shape is usually roundish oblate, often oblique, sometimes elliptical; the skin is rather tough, smooth or slightly roughened with russet dots, grass green at harvest but turns much more yellow when stored, often with some brownish or pinkish color near the stem end; the dots are white, submerged, more numerous near the blossom end; the stem is short to medium length in a deep, acute, often russeted cavity; the basin is medium in width and depth, furrowed; the flesh is yellowish or tinged green, firm, crisp, tender, rather fine-grained, juicy, sprightly, aromatic, subacid. It ripens in October and keeps until February or later. Yellow Newtown Pippin: Very similar in most respects to the Green Newtown Pippin but perhaps slightly larger. At harvest, Yellow Newtown Pippin is more yellow and has more pink tones near the stem end. Less highly colored fruit often has streaks of light green showing through, giving a slightly striped effect. The flesh of Yellow Newtown Pippin has a more yellowish tinge, is milder or less sprightly, and is more aromatic. Catalog listing as Albemarle Pippin or Yellow Newtown Pippin: VA, NC, GA, KY (1845-1924).

**Roxbury Russet** — Also known as Boston Russet, Putnam Russet, Howee’s Russet, Belpre Russet, Marietta Russet, Russet Golden, Sylvan Russet, Warner Russet, Leather Coat, Shippen’s Russet, Russet, Warren Russet. Although unfairly discriminated against because of its rough skin texture, this oldest of American apples remains a delicious eating apple, makes excellent cider, and is also a good keeper. The trees bear heavily each year and are healthy and resistant to several apple diseases, including cedar-apple



rust and scab. Fruit is usually medium size, sometimes larger, variable in shape but usually roundish or oblate, conical; the skin is dull green covered with a rough yellowish brown russet, sometimes with a bronze or reddish blush on the sunny side; the dots are minute, scattered; the stem is short to medium in an acute, sometimes lipped cavity; the calyx is closed; the basin varies but usually is medium in width and depth; the flesh is greenish white, moderately juicy, firm, somewhat coarse, breaking, sprightly subacid. It is ripe from September through October and often keeps until January or longer. Catalog listings: MD, VA, NC, GA, KY, TX, (1845-1928).

Table 1. Heirloom Varieties of Mountain Apples

Arkansas Black	Green Cheese	Royal Limbertwig
Aunt Sally	Green Skin	Rusty Coat
Ben Davis	Grimes Golden	Sine Qua Non
Blacktwig	Hoover	Smokehouse
Brushy Mountain	Jarrett	Stayman
Limbertwig	Johnson's Fine Winter	Striped Ben Davis
Buckingham	Kinnaird's Choice	Striped June
Buff	Lewis Green	Summer Rambo
Burning Green	Lowland Raspberry	Sweet Dixon
Clarke's Pearmain	Magnum Bonum	Sweet Rusty Coat
Coffey Seedling	Maiden's Blush	Virginia Beauty
Cotton Sweet	Northern Spy	White Bausel
Crow's Egg	Northwest Greening	William's Favorite
Dula Beauty	Notley P.	Winesap
Early Harvest	Old fashion Limbertwig	Winter Jon
Early Strawberry	Pippin	Wolf River
Fall Pippin	Pound Pippin	Yellow Bellflower
Fallwater	Presbyterian	Yellow Sheephose
Faust's Winter	Rattle Core	Yellow Transparent
Fired Sweet	Red June	
Gragg	Red Limbertwig	

Since many heirloom varieties have a natural resistance to pests and diseases, growing these apples can minimize the use of harmful chemicals. Leading diseases of apples are apple scabs, mildew, and fire blight. Insect pests include the codling moth, the apple maggot, the red-banded leaf roller, aphids, leaf hoppers, mites, San Jose scale, and oyster-shell scale. Rodents, particularly pine and meadow mice and rabbits, cause severe damage to trees unless proper control measures are employed.

Several horticultural methods are used in apple culture. One system is based on clean culture, with winter cover crops such as Hairy vetch and Austrian Winter Pea sown throughout the orchard.

Another method includes permanent sod and sod mulch utilizing Dutch White Clover (*Trifolium repens*). If a permanent living mulch system is used, nitrogen is fixed by the clover and erosion problems can be minimized, especially on steep slopes. Another benefit is that bees are attracted to the orchard for pollination by the clover's nectar. If clean culture is practiced, no additional cultivating is advisable after the first week in August in order to permit the trees to harden off, that is, to become adapted to the lower temperatures of fall and winter.

So please do consider conserving an important part of Appalachian heritage — plant heirloom apple trees and do your part to put the old-time “Apple” back in Appalachia!

For more information on heirloom apple varieties and workshops on apple tree grafting, contact: Paul Gallimore, Director, Long Branch Environmental Education Center, Big Sandy Mush Creek, POB 369, Leicester, NC 28748, 828/683-3662, Fax: 828/683-9211, E-mail: paulg@buncombe.main.nc.us, Web Site: <http://main.nc.us/LBEEC/>

## Sources

Calhoun's Nursery  
295 Blacktwig Rd.  
Pittsboro, NC 27312  
919/542-4480

Ted Hensley  
818 Cumberland St.  
Bristol, VA 24201  
703/466-2931

Tom Ray & Sons Nursery  
Rt. 4 Box 318  
Marshall, NC 28753  
828/656-2553

## References

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Sources for Heirloom variety seedlings: Calhoun's Nursery, 295 Black Twig Rd. Pittsboro, NC 27312, 919/542-4480.