

Capitol Reef National Park

List of Fruit and Nut Varieties, Including Heirlooms

Prepared for the National Park Service through the Colorado Plateau Cooperative Ecosystems Studies Unit by Kanin Routson and Gary Paul Nabhan, Center for Sustainable Environments, Northern Arizona University, Flagstaff, Arizona

ALMONDS (*Prunus dulcis*)

(Texas) Mission. Almonds first came into the Southwest in a delivery to Juan de Oñate at San Gabriel (near Taos) New Mexico in 1698. But it was not until 1891 that someone spotted a chance seedling in Texas with unique characteristics. It was first called Texas or Texas Prolific, but later became known as Mission, Texa or Texas Mission due to its association with old Spanish era churches. It was soon introduced to other parts of the Southwest, and its production took off on a large scale when it was introduced to Acampo, California.

This heirloom has hard-shelled nuts with relatively small kernels inside—roughly 25 to 28 per ounce. The trees are prolific bearers and extremely vigorous when young, but growth and yield decline markedly with age. The tree has an upright growth habit, and is easy to train to facilitate production, which occurs mostly on the spur branches rather than the shoots. Because it is susceptible to mallet wound canker, it is short-lived wherever this *Ceratocystis* infection occurs. It is also sensitive to alkaline soils and saline irrigation. Its tendency to bloom well after frost in the spring keeps it popular among dwellers in river valleys where temperature inversions freeze the blossoms of earlier blooming varieties.

We believe that the almonds in the Mott Orchard of Capitol Reef National Park are Mission Almonds. However expert knowledge or DNA are necessary to confirm this.

APPLES (*Malus X domestica*)

Ben Davis. The origin of the Ben Davis apple dates back to 1799 when William Davis and John Hills brought a young seedling from either Virginia or North Carolina to where they settled at Berry's Lick in Butler County, Kentucky. Others have placed its origin in Washington County, Arkansas, about 1880. Captain Ben Davis, kin to the other two men, planted the tree on his land where it began to attract attention. They took root cuttings and planted them out as a full orchard, which provided root suckers to many others passing though Kentucky. By the end of the

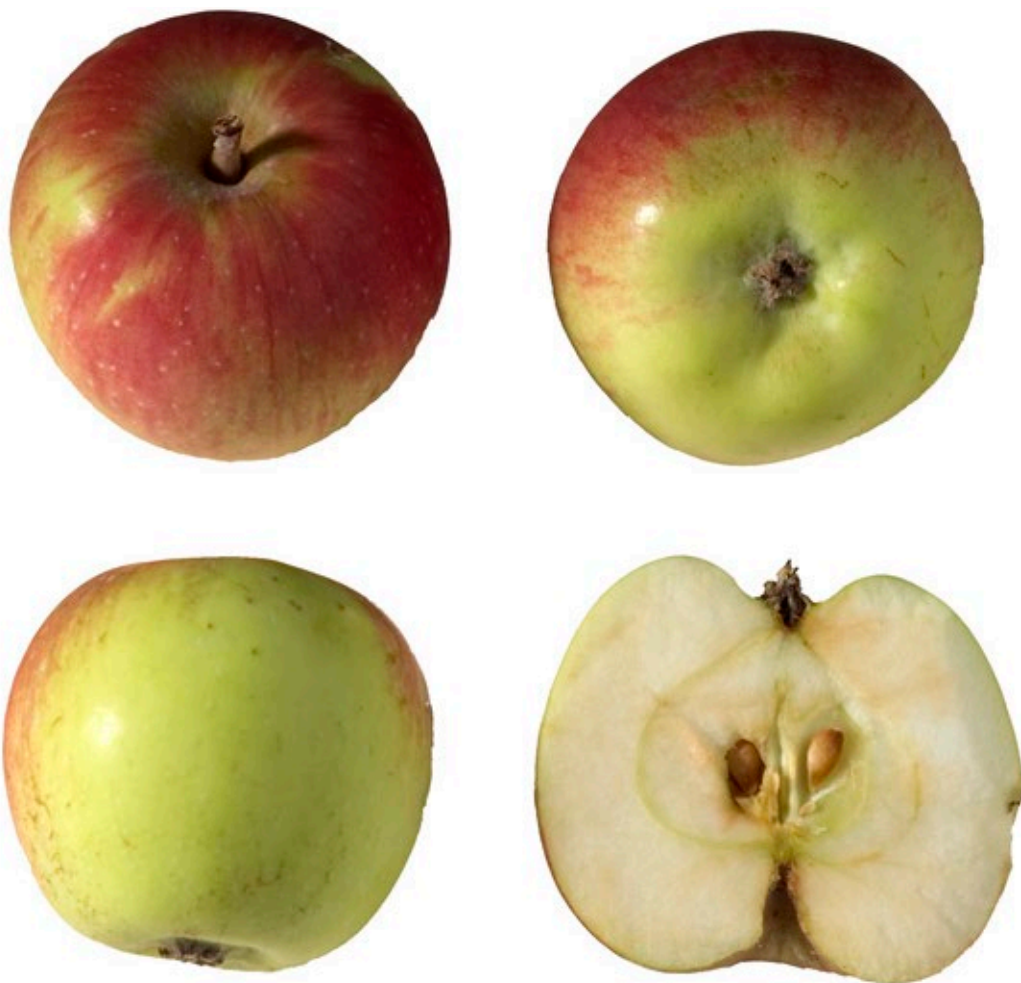
Civil War, millions of Ben Davis suckers had spread throughout the South and Midwest.

Apple historian Tom Burford reminds us that this tree was called Mortgage Lifter by growers who got out of debt by shipping this apple down the Mississippi and out on ships from New Orleans. As it spread south, north and west, many of its growers forgot the Ben Davis epithet for this apple, and offered it a different folk name in each locale where it took root. Many local synonyms for this variety include Baltimore Pippin, Baltimore Red, Baltimore Red Streak, Ben Davis, Carolina Red Cheek, Carolina Red Streak, Funkhauser, Hutchinson's Pippin, Joe Allen, Kentucky Pippin, Kentucky, Kentucky Red Streak, Kentucky Streak, New York Pippin, Red Pippin, Robinson's Streak, Tenant Red, Victoria Pippin, Victoria Red, and Virginia Pippin. It is grown in northern Arizona as well as southern Utah, where the fruiting season is long enough to mature the variety properly.

The fruit of Ben Davis is typically uniform in shape and size, which is medium to large. Its shape is usually round, especially at the base, though infrequently it is elliptical, conic or oblong. While maturing, its clear yellow or greenish skin is tough, and thick enough that it seldom bruises. Its skin is quite waxy, glossy or bright, and smooth. The green or yellow basal color is overwhelmed by a wash of splashes and stripes of bright carmine, often with subtle dots of white or brown. At maturity, it is a deep carmine or red striped apple. The flesh is whitish, tinged slightly yellow. It is somewhat coarse, dry and wooly, not very crisp, but firm, slightly aromatic, juicy, mildly sub-acidic, and keeps for over a year. However, its rather unspectacular taste and texture has long been the butt of jokes among apple enthusiasts. Madonna Hunt of Boulder Utah quipped, "Those Ben Davis apples? Yes, they were good keepers, because no one wanted to eat them!" Tom Vorbeck put it bluntly, "It keeps like a rock, but it's not a very good rock." Keith Durfey apprenticed to an apple expert who claimed he could be blindfolded and still tell any variety by flavor. His students at the end of a long sampling gave him a piece of cork. He sat blindfolded for a long while, then quipped, "You may have stumped me for once, but I believe that's the flavor of one of those old Ben Davis apples!"

Although never rating high in flavor, nurserymen like Ben Davis because of its free-growing habit and the rapidity with which trees produce fruit of marketable size. The tree is hardy when exposed to a range of climatic extremes, remaining healthy and vigorous. Although not particularly long-lived, it bears annually and abundantly from an early age. Its top growth can be rather dense, so when pruning young trees, special care should be taken to keep its shape open and spreading. This offers its fruit an opportunity to color well.

At Capitol Reef National Park, Ben Davis apple trees are located in the Nels Johnson Orchard.



Ben Davis

Braeburn. The Braeburn heirloom originated in New Zealand and was introduced into North America in 1952. Though the parentage is unknown, it is speculated to be a chance seedling or triploid sport of Lady Hamilton.

The high quality fruit is medium to large in size. The skin is yellow, overlain by an orange-red blush. The flesh is crisp with a tangy flavor. The triploid tree is fast growing, matures and bears fruit very early, but has low vigor, and is susceptible to scab, mildew, and fire blight.

Braeburn apple trees are located in the Jackson Orchard of Capitol Reef National Park.

Capitol Reef Red. This is a newly recognized variety known only from Capitol Reef National Park's historic Fruita orchards near Torrey, Utah. Scion wood has been propagated by the Van Well nursery in Wenatchee, Washington, and by Dan

Lehrer of Flatwood Flower Farm, of Sebastopol California for future distribution. It was discovered in the Fruita orchards around 1994, and propagated to produce some 80 trees.

Capitol Reef Red is similar to the Golden and Red Delicious apples in its conic shape with deep calyx basin and distinct bumps on its base. Fruits are colored with a pale yellow background, overlain with a bright crimson splash on the exposed cheek and shoulders. The pleasantly sweet, crisp, and juicy flesh is best suited for fresh eating, but is also a good candidate for pies. It is not tart enough for use in cider making. The trees are spur-type fruiting similar to Oregon Spur or other spur-type Red Delicious sports. It is a prolific bearer that can become so heavily laden with nearly stem-less fruit that its limbs bend toward the ground. This “new” heirloom” is uniquely adapted to the canyon microclimates of Utah’s slickrock country. It is honored on the Slow Food Ark of Taste.

The Capitol Reef Red apple trees are growing in the Jackson Orchard at Capitol Reef National Park. The last few rows on the north side of the Jackson Orchard all appear to be Capitol Reef Red apples. However, there are either numerous similar, but distinct varieties there, or the genetics of the Capitol Reef Red apple are not completely stable. Either way, apple trees 852 and 853 are what we consider to be the “true” Capitol Reef Red, and are the trees that were genetically analyzed.



Capitol Reef Red

Empire. This apple is a cross between McIntosh and Red Delicious, developed in 1945 by Dr. Roger Way at the New York Experiment Station in Geneva. Dr. Way introduced it in 1966. This apple is easy to grow and produces annual crops of attractive fruit that keep fairly well. Empire is best suited for fresh eating and dessert, but it is also a good apple for cider.

The Empire apple is medium in size, but small if not thinned. Its shape is round to roundish conical. The typically dark red fruit may turn yellow on the under-side, and has creamy white, sweet, crisp, juicy flesh. It ripens in mid September.

The trees of Empire are vigorous, upright, and come into bearing at an early age. Their branches form wide angles and strong crotches between branches that help to reduce limb loss during heavy fruit set. The tree has the tendency towards a spur-type habit, producing fruit close to the branch.

Empire apple trees can be found in the Jackson Orchard of Capitol Reef National Park.

Fuji. Modern apple geneticist H. Niitsi of the Horticultural Research Institute of Morioka, Japan developed the Fuji cultivar from two reputable and deeply rooted American parents, Ralls Janet and Red Delicious. Ralls originated, according to Beach in *The Apples of New York*, 1905, in the nursery of Caleb Ralls, an acquaintance of Thomas Jefferson, in Amherst County, Virginia, before 1805. Fuji quickly became an international success, first in Japan and China, then in warmer regions of the United States that have sufficiently long growing seasons.

Not much to look at compared to some varieties, its sweet taste and crisp texture are sufficiently appealing in the modern market. Its cream-colored flesh is firm, fine-grained and altogether distinctive, filling the mouth with sweetness and juiciness. Fuji comes out on top in many flavor competitions among late-maturing varieties. However, Fuji requires a long, relatively warm frost-free season for it to be ready for harvest, and is therefore considered a “desert” not a “dessert” apple. Fuji is regarded as the best keeper of any sweet variety, and the apples retain their toothsome firmness for up to a year if refrigerated.

Fuji apple trees are located in the Jackson Orchard of Capitol Reef National Park.

Ginger Gold. Ginger Gold is a patented cultivar that appeared as a chance seedling in the orchards of Clyde and Ginger Harvey of Lovingston, Virginia. The story is told by the Harveys that it appeared in a young Winesap orchard after the devastating hurricane Camille that killed more than 100 in the Lovingston area in 1969.

Its large, somewhat oblong but uniform fruit has a thin skin that can bruise. Upon ripening, its skin turns an attractive yellow tinged with beige-pink, with a blush on the exposed cheek. Ripening six weeks before its kin, the Gibson Golden, its flavor has a distinctive spice-like aftertaste. A fair keeper, Ginger Gold keeps in storage for up to six months.

Ginger Gold apple trees can be found in the Jackson Orchard, and in The Mott orchard of Capitol Reef National Park.



Ginger Gold

Golden Delicious. Unrelated to Red Delicious, the Golden Delicious also began as a volunteer seedling, perhaps of Grimes Golden, on the hillside farm of A.H. Mullins near Bomont in Clay County, West Virginia. It was originally called Mullin's Yellow Seedling. In 1914, William P. Stark bought rights to the tree's legacy for five thousand dollars, renamed it, and began to offer Golden Delicious through the Stark Brothers Nursery out of Missouri. Sure that it would be commercially in demand, Stark protected his investment in a rather formidable, locked cage that was equipped with a burglar alarm to discourage would-be bio-pirates. Some nurseries that offer the apple under the name Yellow Delicious breached the Stark patent.

Tall and almost conical in shape, this apple tends to be large. The skin of a ripened Golden Delicious is pale yellow and thin. It will, however, have a chartreuse hue if

picked prematurely or a darkened yellow hue if picked when over ripe. Its flesh is firm, crisp and juicy, but may be stained with red. Once you've been introduced to it, its flavor and fragrance remain unmistakable. The Golden Delicious strikes some cooks as somewhat bland for use in cooking, but it can be used for pies and sauce with little or no sugar. Its distinctive aroma imbues sweet ciders, both hard and soft.

It ripens relatively late in many places, from mid-September through late October. Its skin is quick to shrivel if the harvest is left at room temperature, but Golden Delicious often keep well if refrigerated in a crisper or in a plastic bag.

Golden Delicious trees are located in the Amasa Pierce Orchard, the Chesnut Orchard, Gifford Farm, Jackson Orchard, Max Krueger Orchard, and The Mott Orchard at Capitol Reef National Park.

Gibson Golden. This is a smooth-skinned selection of Golden Delicious apple that shows less russeting than the standard Golden Delicious. The tree is vigorous, productive and easy to handle. The fruit ripens in October. For further details, see Golden Delicious (above).

At Capitol Reef, the Gibson Golden is planted in the Jackson Orchard.

Granny Smith. The first green apple to become well known among American consumers, Granny Smith was discovered by Mrs. Anne "Granny" Smith growing on a creek in Ryde, New South Wales, Australia in the early 1860s. It appears to have been a chance seedling from some discarded French crab apples that Granny and her husband Thomas Smith brought back from either Sydney, or the island of Tasmania, depending on who told the tale. When it fruited in 1868, Granny used its fruit for cooking, but her grandson claimed it was better eaten fresh. The Smith family began to propagate it in their orchard and market its fruit in Sydney, where it rapidly gained popularity. It began to be exported to England in the 1930s, and soon afterward was introduced to France, Spain, Italy and the United States.

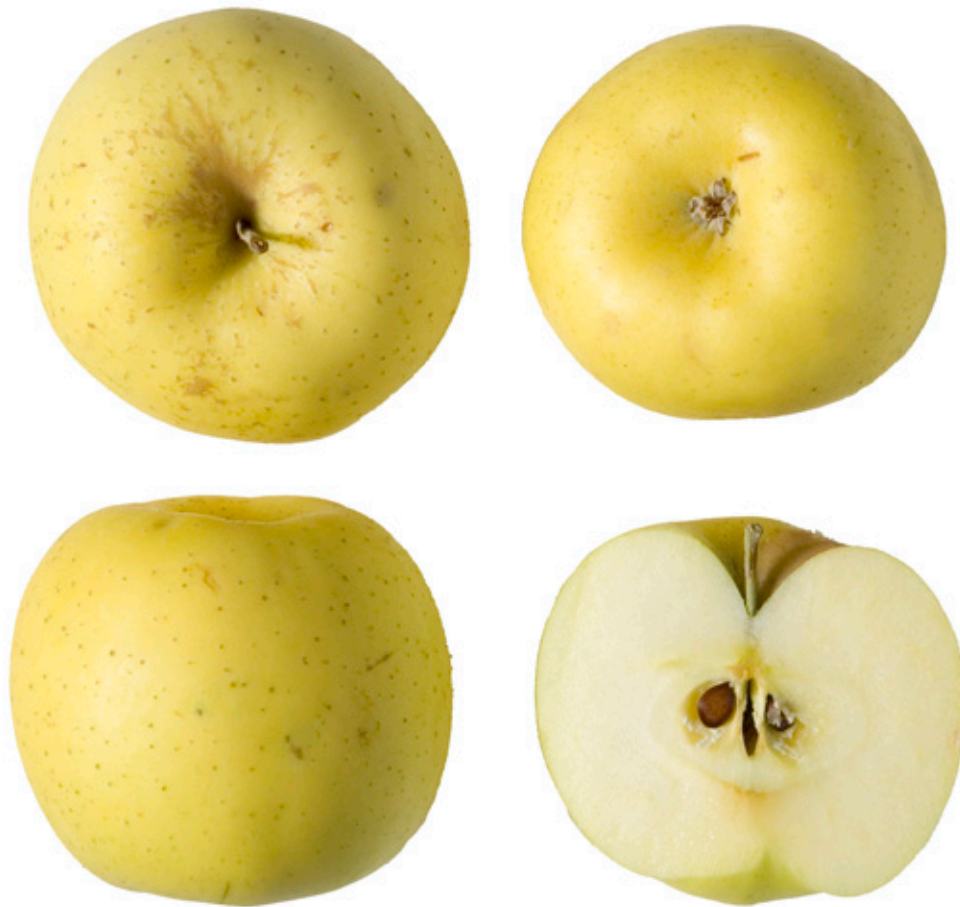
Granny Smith fruit are medium to large sized, with a somewhat rectangular or truncate conical shape. Its bottom is convex, and ribbed at the eye. Its skin ranges from a grassy green to yellow green, with a fine-netted russet appearing at the time of ripeness. Its flesh is greenish to yellowish white in color, and its texture is crisp, and so firm that it is bruise-resistant. Its mild flavor is subacid, and moderately sweet. The harvest season for Granny Smith is relatively late in the fall. Considered to be excellent both for eating fresh and for cooking, Granny Smith keeps its texture during baking and does not get mushy. Regarding its firmness, apple historian Roger Yepsen goes further, by claiming that it is "resilient as a tennis ball. . . holds up well in shipping [and] will tolerate a half year of cold storage." Not suited for cider, it is fine for pies.

At Capitol Reef, a Granny Smith apple tree can be found in the Max Krueger Orchard.

Grimes Golden. New Orleans traders, who obtained the variety from Thomas Grimes of West Virginia in 1804, brought this notable cider variety to the nursery trade. The medium to large-sized golden-yellow fruit is crisp, juicy and sugary. Grimes Golden is a highly esteemed dessert apple, as well as a highly prized cider variety. It is noted for its high alcohol content (12% in unblended ciders), and excellent flavor. The apple does not keep well, making it undesirable for commercial orchards.

The medium-vigor tree is self-fruitful, and produces abundant crops biennially, or semi-annually beginning at a young age.

At Capitol Reef, there is a single Grimes Golden apple tree growing in the Chesnut Orchard.



Grimes Golden

Jonathan. This classic American apple, kin to Esopus Spitzenburg, originated in 1826 as a sport on the farm of Mr. Philip Rick of Woodstock, Ulster County, New York, where the original tree stayed alive at least until 1845. The first published account, which we find of the Jonathan, is that given by Judge J. Buel of Albany, New York, who then listed it as the (New) Esopus Spitzenburg, with the synonym Ulster Seedling. A bit later, Buel simply called it the New Spitzenburg, but the next name he gave it superseded all others: Jonathan, in honor of Jonathan Hasbrouck, who had first called the judge's attention to the unique traits of this sport, which he had noticed growing on a scrubby hillside on the old Rick farm. It spread quickly after that, soon ranking in the top six of American apples in terms of sales. It is now grown not only in North America, but in Italy, Austria and Poland as well.

This popular heirloom and commercially-renowned apple can be exceedingly beautiful at maturity, though it is not as large or as good of a keeper as its Esopus Spitzenburg parent. The shape of this apple may be round, slightly conic or ovate, and medium to small in size, or somewhat truncate with a deep furrowed bottom basin or cavity. Its tough but thin, smooth skin may be pale yellow in undertones that are completely covered with deep carmine hues. These hues deepen into lively reddish-purples on the side exposed to the sun, and clear pale yellows on its shaded side and in its basin. If it does not get full exposure to the sun, the skin may be red-stripped in appearance, exposing minute dots. Its flesh may be whitish or pale yellow, tinged with a bit of red. The flesh is usually firm, stained with red, moderately fine, crisp, tender and juicy. Its flavor varies from tart to mild, often aromatic, sprightly subacidic. It is usually of excellent quality whether eaten fresh as a dessert, cooked into sauces, or used for tart ciders.

Jonathan exceeds many of its Spitzenburg kin in hardiness, productivity, health and vigor. It is widely adaptable for growth in a wide range of climates, where the trees can be either moderately vigorous or slow in their growth and maturation. The trees may have a round or spreading shape, sometimes with drooping, dense branches.

The Jonathan can be found in the Jackson Orchard, the Max Krueger Orchard, The Mott Orchard, and Nels Johnson Orchard of Capitol Reef National Park.



Jonathan

Lodi. Also known as Improved Transparent, R. Wellington selected Lodi in 1911 at the New York Testing Association, which later became the New York State Agricultural Experiment Station of Geneva. It appears to have been a cross between Montgomery and White Transparent. It remains extremely popular in some regions, and is available from more than three-dozen nurseries.

Lodi is a large green cooking apple whose skin is actually clear yellow when examined closely. It has firm white flesh that is mildly subacidic, so that it is simultaneously sweet and tart; it is crisp and juicy. When it reaches full size, the fruit is irresistible for pies, for fine, frothy white applesauce, and fresh eating.

It ripens early on large, dependably productive trees that require cross-pollination. They are resistant to apple scab. The fruit are less vulnerable to bruising than are Yellow Transparent.

The Lodi apple historically grew in Fruita, but is currently extinct in the area.

McIntosh. This heirloom is originally from Dundela, Dundas County, Ontario, Canada. It was discovered by immigrant John McIntosh near Dundela in 1811. Its local nursery propagation began around 1835, but John's son, Allan McIntosh, did not introduce it into trade until 1870. The McIntosh is derived either from a Saint Lawrence seedling, or a cross between a Fameuse and a Detroit Red. McIntosh has in turn fathered many well-known varieties, such as Cortland, Empire, Macoun, and Spartan. The fruit is good for fresh eating, pies, and makes an aromatic cider. It was the replacement variety for the great Baldwin orchards of New England that were destroyed by the 40 degrees below zero temperatures during the winter of 1933-1934.

McIntosh fruit are medium to large, and quite uniform in shape and size. It is typically round or oblate, somewhat angular, and strongly or weakly ribbed. Its skin is thin and readily separates from the flesh. The skin is noticeably tender, smooth and therefore easily bruised. Its underlying skin color is clear whitish-yellow or greenish, but it is deeply blushed with bright red, and striped with carmine. Fruit exposed to the sun is richly colored, dark, almost purplish-red, so much so that the carmine stripes may be completely obscured. The flesh of a McIntosh is white or slightly tinged with yellow, sometimes veined with red. This apple is firm, fine-textured, crisp, tender, very juicy, agreeably aromatic, perfumed, sprightly, and subacidic. It becomes mild and a bit sweet when very ripe, but then lacks firmness suitable for packing and long distance transport. It is among the best apples.

Maturing from October to December in late-frosting zones, the McIntosh produces a reliable crop that begins to bear early, before offering an extended season of fruit. It may yield good crops biennially or even annually. However, the crop ripens unevenly, making it suited for two or three periodic pickings two to three weeks apart.

At Capitol Reef, McIntosh trees can be found in the Nels Johnson Orchard.

Prime Gold. This patented cultivar appears to have fallen out of favor with nurserymen, and was last available from Van Well Nursery in Wenatchee, Washington, which has recently dropped it from its catalog. The fruit are elongated, golden yellow, and russet free. The tree tends to be well structured with wide branch angles.

Prime Gold can be found in the Jackson Orchard at Capitol Reef National Park.

Red Astrachan. This widely distributed heirloom originated on the Volga River in Russia several centuries ago. Swedish botanist P.J. Bergius first noted it in 1780, having been grown in Sweden for some time. It was introduced to Western Europe and England by 1816, and then crossed the ocean to the US in 1835. Since its arrival in the United States, this heirloom has picked up some 75 additional folk names as synonyms: Abe Lincoln, American Red, American Rouge, Anglesea Pippin, Anglese Pippin, Astracan, Astracan Rosso, Astracan Rouge, Astrachan, Astrakhan, Beauty of Whales, Carmin de Juin, Castle Leno Pippin, Cerven Astrahan, Deterding's Early Deterling's Early, Duke of Devon, Hamper's American, Rother Astrachan, Transparent Rouge, and Waterloo. The name Abe Lincoln came from its long association with the Lincoln home in Springfield, Illinois, where this apple became available during Lincoln's own lifetime, and two trees have continued to be grown in the backyard at the Lincoln Home National Historic Site near the Visitors Center at South Seventh Street in Springfield and at a nearby nursery.

Red Astrachan is a medium size, very beautiful early summer apple. Valued for home use as a culinary apple before it is fully ripe, and as it ripens and mellows, as a dessert apple. Tree comes into bearing at a young age and is a reliable, often biennial cropper. The fruit lacks uniformity, perishes quickly, and the crop matures unevenly, making it ill adapted for commercial planting. The fruit is medium, sometimes large, but not very uniform in size or shape. Roundish to oblate, inclined to conical, somewhat ribbed, and a little unequal. Thin skin, moderately tender, smooth, pale yellow or greenish, overspread with light and dark red splashes, and irregularly striped with deep crimson or carmine, and covered with a distinct bluish bloom. Flesh is white, and often tinged with red. Rather fine, tender, crisp, juicy, brisk subacid, aromatic, sometimes astringent, good to very good. Its season is from late July to September.

Red Astrachan apple trees are located in the Nels Johnson Orchard of Capitol Reef National Park.

Red Delicious. One variety that needs no introduction is Red Delicious, the most widely grown apple in the world. It possibly originated from a seedling rootstock after the scion had broken off a graft on the farm of Jesse Hiatt of Peru, Iowa. It was first called Hawkeye for the Hawkeye State of Iowa, and other lesser-known selections of Hawkeye still persist. This particular selection, championed by the Stark Brothers of Missouri after 1895, has been called "a triumph of style over substance, good looks over taste." More than thirty-five variants of the Red Delicious are now marketed, from Ace Spur and Bisbee, to Roan and Ultra Red, but most of them have the same fatal flaw of exuding more glamour than flavor.

This is a big apple, with thick, bitter skin that remains intensely red even when it has turned to mush inside. As it matures, its round shape becomes elongated, so that at maturity it is tall and tapered. It has fine-grained, crisp, slightly tart, juicy, yellow

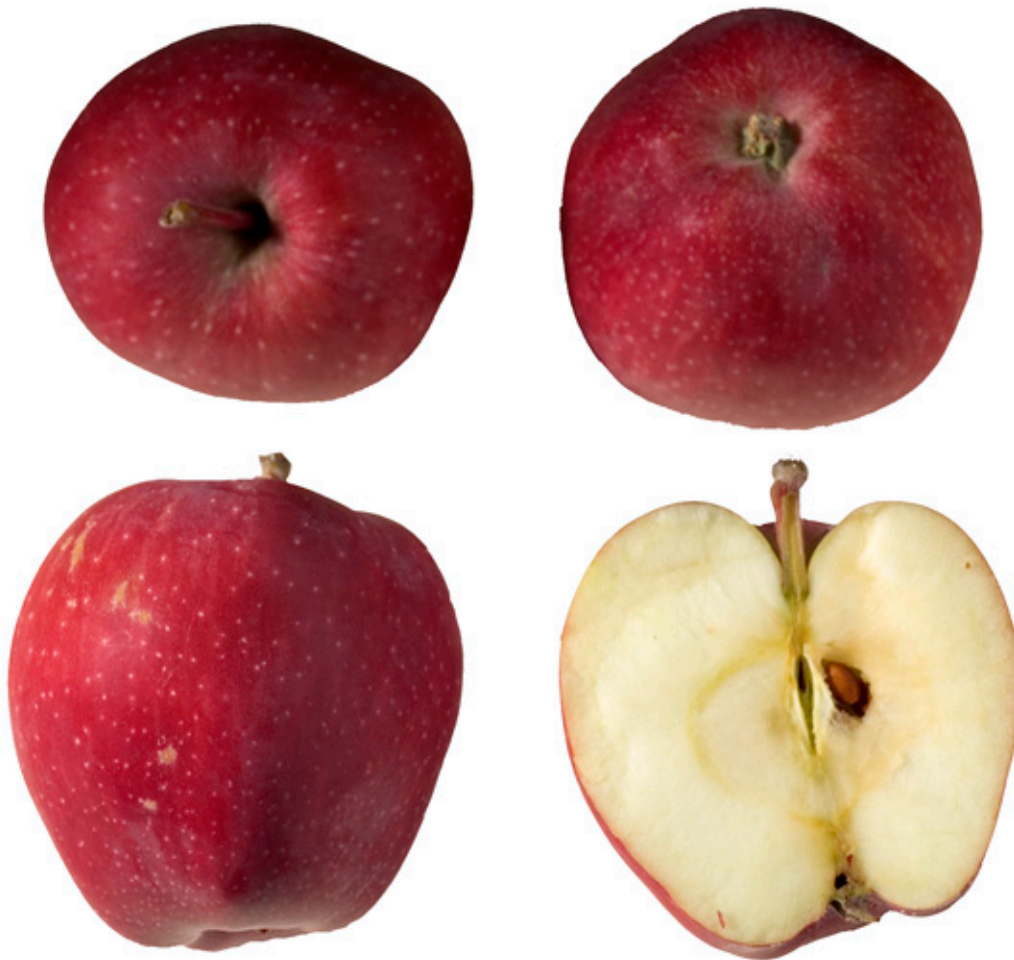
flesh that becomes tender, then tastelessly pulpy as it undergoes the extended storage that commercial markets put it through. This apple ranks at the bottom of the barrel when cooked, but remains popular as a dessert apple among those who have never ventured to taste anything else. Because these trees are prolific and fast growing, it plagues the continent and displaces many worthier apples. Like an over-the-hill Hollywood actor, Delicious retains its cheerful good looks long after all real taste has departed from the mealy pulp beneath its thick skin.

The Red Delicious has been planted in the following orchards of Capitol Reef National Park: Amasa Pierce, Behunin Grove, Chesnut Orchard, Gifford Farm, Holt Orchard, the Jackson Orchard, the Max Krueger Orchard, the Merin Smith Place, The Mott Orchard, and the Tine Oyler Place.

Red Delicious Oregon Spur II. This cultivar is a patented selection of Red Delicious.

The fruit are large and of excellent shape. The skin is bright red with dark striping. The pure white flesh is of better quality than its parent. Trees are vigorous and early bearing. Tend to be of the spur type. For further detail, see Red Delicious (above).

Oregon Spur apple trees are planted in the Jackson Orchard of Capitol Reef National Park.



Oregon Spur II

Rhode Island Greening. The Rhode Island Greening originated in the vicinity of Newport, Rhode Island. Here, there is a place known as Green's End, where Mr. Green, an orchardist who loved to raise apple trees from seed, kept a tavern. Among the trees that came up in Green's orchard was one which bore a large green apple, hence the double meaning of this heirloom's name. Scions from this tree were in such demand in the early 1700s by Green's tavern's guests that his prized tree died eventually from excessive cutting. As its scions were dispersed far and wide, they were called by the following folk names: Burlington Greening, Greening, Green Newton Pippin, Jersey Greening, and just plain Rhode Island. Cuttings were sent to London and, from there, to many parts of Western Europe in the early 1800s, and it was widely grown throughout the United States in the nineteenth century.

This medium to large-sized apple begins autumn as a waxy, deep grass green, but later, as it ripens, it develops yellow hues with brownish-red blushes and greenish-white dots. It may take on a dull blush and occasionally develops a rather bright red cheek but never stripes. Its shape varies from round to oblate to conical and elliptical. It is slightly ribbed. Its skin is moderately thick, tough, and smooth. The firm yellow flesh is moderately fine-grained, crisp, tender, juicy, rich, and sprightly subacidic, with its own peculiar flavor suitable for tart ciders.

The Rhode Island Greening produces reliable, abundant crops in many localities. It is generally regarded because of its acidity as one of the very best cooking apples grown in the U.S., nearly on par with Esopus Spitzenburg and its more recent kin, Jonathan. It is used for many culinary purposes and for fresh desserts. Hovey claimed that:

As a cooking apple, the Greening is unsurpassed; and as a dessert fruit of its season, has few equals. To some tastes it is rather acid; but the tenderness of its very juicy flesh, the sprightliness of its abundant juice, and the delicacy of its rich fine flavor is not excelled by any of the numerous varieties that we at present possess. It ripens up of a fine mellow shade of yellow, and its entire flesh, when well matured, is of the same rich tint.

A triploid, it is a poor pollen producer that should be grown with two different pollen-producing varieties. The tree does not come into bearing when it is young, but is vigorous and long-lived. Its form is wide spreading, somewhat drooping, and rather dense. The fruit hangs well on the tree until it begins to ripen. The tree has the tendency to form a rather dense canopy in fertile soils, so special care should be taken while pruning in order to keep the head sufficiently open so that the light may reach the foliage in all parts of the tree. However, the orchard keeper should avoid cutting out large branches from the center of the tree thereby exposing the remaining limbs to injury by sunscald. It is better to thin the top every year, by removing many of the smaller branches to make it uniformly open. This keeps the longest fruit-laden branches from ending up so close to the ground that they interfere with the free circulation of the air beneath the tree.

At Capitol Reef, Rhode Island Greening apple trees can be found in the Mott Orchard.



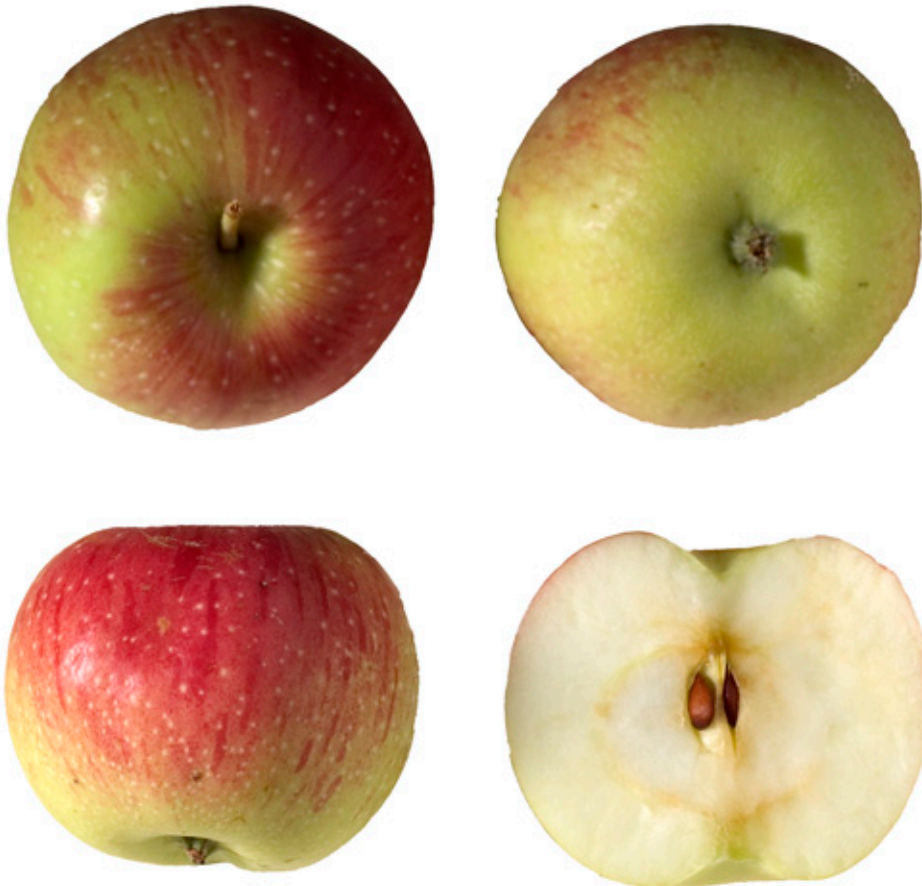
Rhode Island Greening

Rome Beauty. Originating with Zebulon, Joel and H.N. Gillett in Rome Township, Lawrence County, Ohio, the original Rome Beauty tree was bought in 1827 from Israel Putnam, a nurseryman in nearby Marietta. It was first brought to the attention of fruit growers at an Ohio Fruit Convention in 1848, and later distributed across the United States, Europe and Australia. Its synonyms include Rome, Starbuck, and Gillette's Seedling. There are at least nine commercially available variants of Rome Beauty, with Red Rome being the most popular one in nursery trade. It was popular with orchardists because it is late blooming and thus a dependable producer in areas with late frosts.

Rome Beauty fruit are medium to very large, round to slightly conical to oblong, and often faintly ribbed. They can be symmetrical or slightly unequal but almost always

have a large deep, furrowed cavity. Their thick skin changes from solid yellow-green to carmine red, without ever becoming russeted. Rome Beauty skin is thick, tough, smooth, and highly colored, with numerous small dots. Its flesh may be almost pure white, or have a hint of yellow-green; it is firm-fleshed, fine-grained or a little coarse, always crisp and juicy. However aromatic Rome Beauty flesh becomes, it is mildly subacid, passing in flavor but never really excellent in quality. Rome Beauty stands handling and is a good keeper, maintaining its qualities in cold storage as late as May. Beauty trees are strong growers and attain good size in the orchard. At first, the tree form is upright but later it rounds out, becoming spreading and drooping, with many slender, bending lateral branches.

Rome Beauty apples grow in the Gifford Farm and the Nels Johnson Orchards of Capitol Reef National Park.



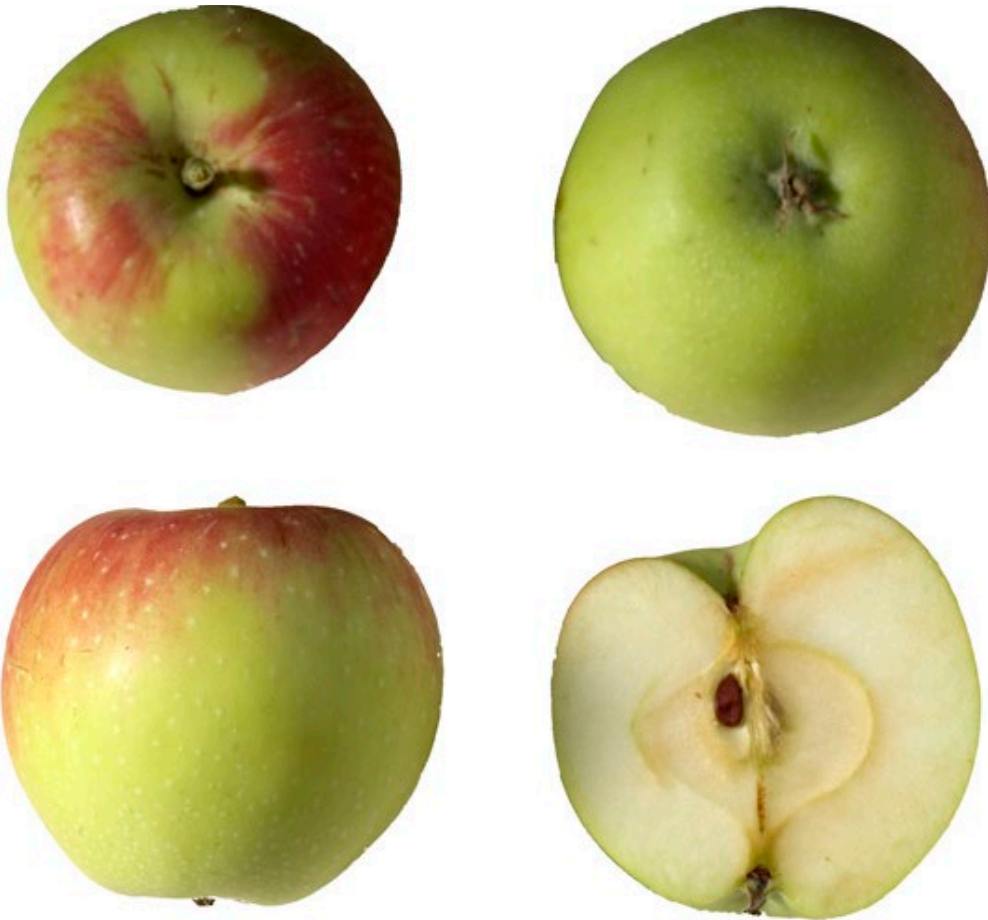
Rome Beauty

RubINETTE. Walter Hauenstein of Rafz, Switzerland near the German border, raised this hybrid. Also known as the Rafzubin cultivar, this is a patented cross between Golden Delicious and Cox's Orange Pippin. These medium-sized handsome fruit have a thin skin of a golden color that is overlain with bright red striping and subtle russeting. Handsome when sliced, with a rich blend of sugars and acids, its yellow flesh has an intense honeyed flavor. Its growth characteristics are similar to Golden Delicious, and like its parent, it is a good pollinator. Only two nurseries currently carry this variety, one in Canada, the other, in Washington State.

RubINETTE apple trees have been planted in the Jackson orchard at Capitol Reef National Park.

SIXTEEN OUNCE COOKING. This triploid variety is not synonymous with the diploid 20 Ounce Cooking. However, there is no written documentation for an apple named the 16 Ounce cooking. Whether this apple is a local variety or a misnamed variety remains unclear at this point, however additional genetic work may lend further insight into this apple. Regardless, the tree is heavy bearer of medium-sized green fruits splashed with red on the exposed cheek. Tart fruits are well suited for cooking as implied by the name.

The Sixteen Ounce Cooking tree grows in the Merin Smith Place in Capitol Reef National Park.



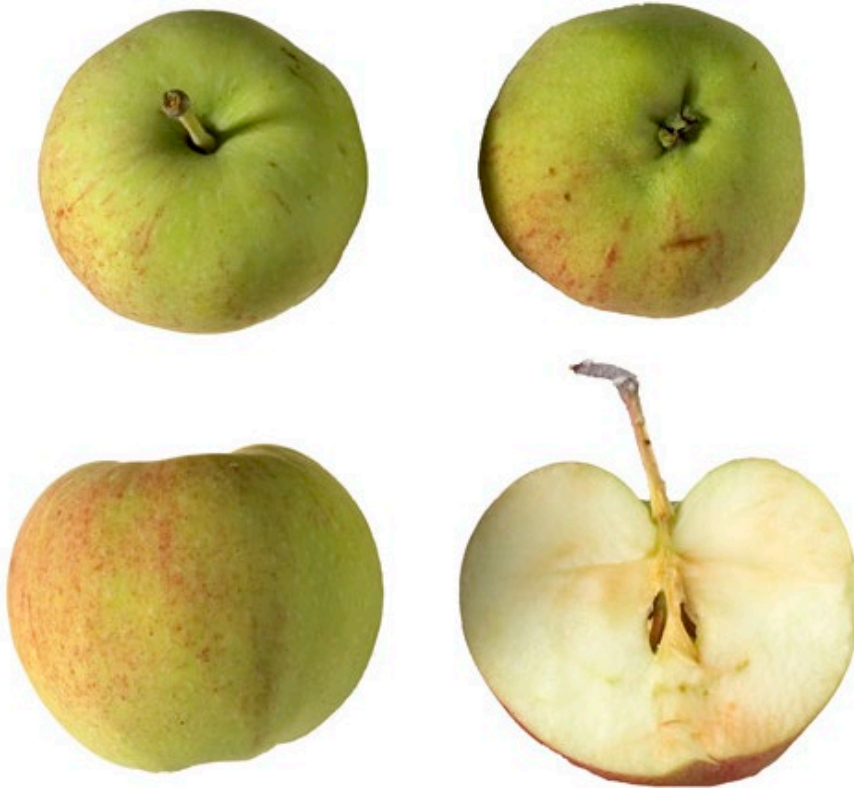
Sixteen Ounce Cooking

Winesap. Although it is one of the oldest and most popular apples in America, the origin of the Old Fashion Winesap has been obscured. Dr. James Mease of Moore's Town, New Jersey first recorded it in 1804, who noted that Samuel Coles had already grown it there for some time. It had appeared in trade by 1817, when Coxe spoke of it as being "the most favored cider fruit in West Jersey." Also, it was known in colonial times in Virginia. Other folk names suggest different origins: Holland's Red Winter, Royal Red of Kentucky, and Texan Red. Like various other older heirlooms, the Winesap has produced many seedlings, which have been selected for characters slightly different from those of their parental stock. The best known of these are Arkansas or Arkansaw, Arkansas Black, Paragon, also known as Black Twig and Stayman.

This is a round, medium-sized apple. Its skin is moderately thick, tough, smooth, glossy, and deeply red. It may have purplish-red stripes and blotches that are even darker, and rather small, scattered, whitish dots, especially toward the cavity, but the prevailing effect remains a bright deep red. Its flesh is crisp and juicy, tinged with yellow, with reddish veins; it remains very firm, rather coarse, and sprightly subacid. The tree can be vigorous and is a remarkably regular cropper. It grows best on light

but rich, deep soils and does not fare well on heavy clays or in low, damp locations. It is a good shipper and stands heat well before going into storage. Winesaps are great for cooking applesauce, dessert, and cider. It is one of the few apple varieties that grow well throughout all apple-growing regions.

Winesap apple trees can be found in the Mott Orchard and the Nels Johnson Orchard of Capitol Reef National Park.



Winesap

Winter (Yellow) Banana. The Winter Banana originated on the farm of David Flory near Adamsboro, Cass County, Indiana, where it was first selected as an heirloom around 1876. The Greening Brothers of Monroe, Michigan introduced it into commercial trade in 1890. Its most common synonym is simply Banana.

Winter Banana was one of the most popular varieties for pollination, especially for the pollen-sterile Winesap and its kin. At one time Winter Banana was a variety selected for dehydrating because the slices would stay bright and white after processing.

Its fruit are large and variable in shape, often elliptical and ribbed, with a distinct suture line. Its smooth, tough, waxy skin is colored a clear pale yellow, with beautiful contrasting pinkish-red blush. Its whitish flesh is tinged with yellow, with a characteristic aroma of bananas, and is moderately firm, coarse, crisp, tangy to mildly sub-acid and juicy, of good dessert quality, but is too mild in flavor to excel for culinary uses. The medium-sized tree grows well, has a rather flat, open form

with branches that tend to droop. It comes into bearing while young, and then continues to bear modest crops almost annually. In ordinary storage, it keeps until March, but its color is so pale that any bruises show easily.

The Winter Banana apple grows in the Nels Johnson Orchard of Capitol Reef National Park.



Winter Banana

Winter Pearmain. This may be the oldest known apple in the English-speaking world, dating back to at least 1200 A.D. in the British Isles. In 1822, Thatcher gave the following account of the Winter Pearmain of the old Plymouth Colony in Massachusetts:

The Winter Pearmain is among the first cultivated apples by the fathers of the old Plymouth colony, and is, undoubtedly, of English descent. Many trees of this kind are now supposed to be more than one hundred years old, and grafted trees from them produce the genuine fruit in great perfection.

Its synonyms include Autumn Pearmain, Campbell, Ducks Bill, Great Pearmain, Green Winter Pearmain, Hertfordshire Pearmain, Old English Pearmain, Old Pearmain (Lindley), Parmain D'Angleterre of Knoop, Parmain d'Hiver, Paramain-Pepping, Pearmain, Pearmain Herefordshire, Pepin Parmain d'Angleterre, Pepin Parmain d'Hiver, Permenes, Permaine, Permein, Platarchium, Sussex Scarlet Parmain, White Winter Pearmain. Unfortunately, several other, distinctive varieties have gone under the name Winter Pearmain both in Europe and in the United States. There is a Red Winter Pearmain that originated in North Carolina and described by the pomologist Warder in 1867.

Its fruit are medium in size, uniform, and tapering to the crown. The skin is smooth, with a grass-green base color that can be a little red on the sunny side, maturing to a pale yellow or a red apple with numerous dots. Its flesh is a rich yellow, fine-grained, crisp, tender and juicy; its flavor is slightly aromatic, pleasantly rich, and always agreeable. It has been the favorite dessert apple in the Midwest for nearly two hundred years, and remains one of the best all-purpose heirlooms. The tree is tall and upright, forming a handsome regular top. It is hardy, widely adaptable and vigorous, and will flourish in a light soil.

At Capitol Reef, Winter Pearmain apple trees grow in the Mott Orchard.

Yellow Transparent. Imported from Russia by the United States Department of Agriculture in 1870, its value was first brought to the attention of Americans by Dr. T. H. Hoskins of Newport, Vermont. It has been disseminated throughout the more northerly apple-growing regions of this country, from New England and the Northern Plains clear to the Pacific Northwest, and is now commonly listed by nurserymen in those regions. Its synonyms include White Transparent and Sultan.

Its fruit is medium to large in size, round ovate to round conic, and slightly ribbed, with unequal sides and a narrow cavity. Its skin is thin, tender, smooth, waxy, dotted and is always transparent but changes color from pale greenish-yellow to an attractive yellowish-white. Its flesh is a crisp, juicy white, moderately firm, fine-grained, tender, sprightly subacid with a light, pleasant flavor. Sliced, it can easily be solar-dried, and is excellent for culinary use and acceptable for dessert.

Maturing early in northern climes, it is a more reliable cropper than many other apples where growing seasons are short. It yields good crops nearly every year, ripening continuously over a period of three or four weeks, so that two or more pickings are required. However, it bruises easily so fruit must be secured while in prime condition and carefully stored. The tree is somewhat vigorous, hardy, healthy, and comes into bearing very young. At first, its form is rather vertical, but with age, it becomes spreading and rather dense.

Yellow Transparent apple trees can be found at the Group Campsite and in the Mott Orchard of Capitol Reef National Park.

APRICOTS (*Prunus armeniaca*)

(Chinese) Sweet Pit. Also called Chinese Golden, Sweet Pit, Mormon Chinese, Large Early Montagemet or Chinese Mormon, this apricot may have been brought into Utah from Chinese immigrants that carried it into the Great Basin from California, while working on railroads and in mines. It spread northern from there, well into British Columbia, at the limits of where apricots can survive. It is called a "sweet pit" because you can eat the oil-rich kernel like you would an almond, as well as enjoying the flavorful fruit. It is available from ten nurseries.

This clingstone is medium in size—up to two and a half inches in diameter-- and has yellow to deep orange skin that is nearly free of fuzz. Its sweet, firm fruit are juicy, and their flavor, texture and quality are good, but the fruit ripen on the tree over an extended period, making a single harvest difficult. The fruit are good for home-use, drying, and roadside markets. They are susceptible to moth and insect damage, but well suited to both northern climes and high elevations. The trees are early bearing, heavy producers except where frosts persist very late in the spring. The spreading tree grows fifteen to eighteen feet tall, is self-fruitful, and blooms somewhat later than most varieties.

Chinese apricot trees can be found in the Nels Johnson Orchard, Capitol Reef National Park.

Moorpark. Originating as a chance seedling of a Nancy apricot, this heirloom was selected by Admiral Anson at his estate in Hartford, England around 1860. It remains widely available from nurseries.

This is a very large, round freestone apricot with fuzz-free, deep yellow skin that blushes orange. Its deep orange flesh is juicy and delectable. Good for shipping, canning, or drying, it is a good shipper. Its trees have showy pinkish white blossoms and are self-fertile. The dwarf version of Moorpark grows up to ten feet tall and is an early, dependable producer.

Moorpark apricot trees grow in the Mulford Orchard and in the Nels Johnson Orchard of Capitol Reef National Park.

CHERRIES (*Prunus avium* and hybrids)

Bing. The selection of the most-widely loved cherry in the United States from a Black Republican planting in 1875 was the crowning achievement of Seth Lewelling

of Milwaukie, Oregon. He also originated several other fine cherries in the Salem Oregon area. Mr. Lewelling named the variety after Mr. Bing, his Chinese-American assistant who faithfully helped him develop this prize. When Bing cherries were first exhibited at the 1876 Centennial Exposition in Philadelphia, people at first thought they were crab apples, judging from their enormous size!

Bing fruit are one inch in diameter, broadly chordate, somewhat compressed, and slightly angular with deep cavities. Their color is very dark red, nearly black, with small russet dots. Their stems vary in thickness. Their tough skin is of medium thickness, and adheres to the pulp. Their flesh is purplish-red, rather coarse, firm, very meaty, brittle, and sweet. Their large stones are semi-free, ovate or oval, blunt, with smooth surfaces. Bing cherry trees tend to be large, vigorous, and erect, but the branches spread with age, the canopy becoming rather open. The cherries hang well on the trees, and the crop ripens simultaneously so they can be harvested in one picking.

Bing cherry trees have been planted in the Holt Orchard and the Tine Oyler Orchard of Capitol Reef National Park.

Lambert. This cultivar was also developed in Salem, Oregon after the Lewelling property was sold to Joseph Hamilton Lambert in 1857. Its namesake, Mr. Lambert, found and introduced this cultivar in 1870. Lambert is second only to Bing in commercial trade in the United States. It has dark red, heart-shaped fruit that are smaller than Bings. They grow on strong, upright trees that are hardy and heavy-bearers. They require cross-pollination from another variety and appear to be resistant to spring frosts. However, they are not necessarily more productive than Bings.

Montmorency (*Prunus avium* x *P. tomentosa*). Montmorency originated in France in the 17th century, and came to the United States as early as 1760.

Montmorency is known as the standard for pie cherries, because of its rich, tart and tangy flavor, and because it does not get mushy during processing. This cherry is renowned for pies, juice, preserves and jellies.

The fruit are medium to large, and bright red. The yellow flesh produces a fine clear juice. This heirloom ripens in late June. The trees are large and spreading, attaining a height of fifteen feet. This heirloom is self-pollinating.

At Capitol Reef, Montmorency cherry trees are planted in the Nels Johnson Orchard.

Royal Anne. This sweet cherry is an old French heirloom that has also been called Queen Ann, Napoleon, Napoleon Royal Ann, and Napoleon Bigarreau. As with

Lambert and Bing, Royal Anne was made famous by Seth Lewelling, who brought it from Iowa as a Napoleon Bigarreau, but renamed "Royal Anne" for reasons now long forgotten. From this single misnamed tree, the most profitable cherry variety grown in the Pacific Northwest had its origin. It is still available from nearly two dozen nurseries.

The Royal Anne has large, firm tallow-skinned fruit that gain a rose blush when ripened. Their light flesh is firm, juicy and sweet, and holds its shape well. These cherries are excellent fresh, dried or brined and canned as maraschinos. These upright trees reach twenty-five feet in height and bear heavily in years when spring frosts do not persist too late.

Van. Introduced in 1944 by the Summerland Research Station of British Columbia, this sweet cherry is available from two dozen nurseries in the U.S. and Canada. It has shiny, almost mahogany, reddish black fruit that are not quite as large as Bing, but firmer. They tend to have a blocky shape, but stay firm, without cracking. Although they have a good flavor, they do not ship well for long distances. However, the strong, upright trees are excellent annual producers if another variety is available for cross-pollination.

GRAPES (*Vitis labrusca*)

Concord. Ephraim Wales Bull in Concord, Massachusetts, developed this classic American grape in 1849 just across the Lexington Road from the home of the distinguished American writer, Nathaniel Hawthorne. Bull, who is now acclaimed as the Father of the Concord, began his search for the perfect grape at an early age, growing more than 20,000 seedlings of wild *Vitis labrusca* for evaluation in his seventeen-acre garden. In 1843, he found one wild grape that interested him, planted its seeds, pulp, and skins in sandy soil on a southern exposure, and tended the plants for six years before deciding that it was the winner. The parent vine still grows next to his home in Concord, in a landscape now considered a National Historic Landmark. Four years later, in 1853, Bull took his seedling's grapes to the Boston Horticultural Society Exhibition, where they won first place in the exhibition. Bull introduced them into trade the following year, and they soon won the Greeley Prize, with Horace Greeley calling them "the grape for the millions." Today, Concord is considered to be the standard of quality for bluish-black table and juice grapes, and its production constitutes about 8% of the total grape production in the United States.

Concord is typically dark blue-black or purple, and large-seeded; however, a mutant white form has appeared in some vineyards. It is a slip skin grape that is highly aromatic. Its unique flavor is an identifiable characteristic of bottled grape juice and grape jelly, as well as many artificially flavored candies and sodas. While its primary commercial use is for grape juice, Concord is cherished as a table grape for desserts.

A Concord grape grows in the Doc Inglesby Picnic Grove at Capitol Reef National Park.

Niagara. Introduced into trade in 1882, Niagara is white grape that appeared as a chance seedling among blue-black Concord grapes that were selected from wild grapes just four decades earlier. It not only has the white color mutation, but ripens a few days earlier than its Concord kin. It remains the most popular white *labrusca* grape, especially in the North, and is still offered by more than forty nurseries across the continent. In places such as Fruita, Utah, it has been called White Concord instead of Niagara, and in this way, its genealogy can be more widely celebrated.

The fruit of this heirloom are enormous, and come in large compact clusters. Their slipskins are thick, and range from pearly white to anemic green. Their flavor, as one would expect from recent origins, remains somewhat foxy, but can be tangy and delicate at the same time. Niagara is fine to eat as a table grape, but makes a distinctive white wine as well. Its vines are incredibly hardy and resilient in cold weather, and can be trellised to climb arbors in attractive patterns. This New England original has been cultivated in New Mexico for no less than seventy years.

At Capitol Reef, Niagara grapes grow along the fence between the Doc Inglesby Picnic Grove and the Nels Johnson Orchard.

PEACHES (*Prunus persica*)

Elberta. Now the most popular of all peaches in the markets, Elberta emerged as a selection grown by Samuel H. Rumph, Marshallville, Georgia, from a seed of Chinese Cling planted in the fall of 1870. The most appealing feature of Elberta is wide adaptability, or as one author has said, “freedom from local prejudices of either soil or climate,” creating the most cosmopolitan of its species.

Its fruits average two and three-fourths inches long, two and one-half inches wide, are round, slightly oblong or chordate, usually with a slight bulge at one side. Its cavity is deep, flaring, and often mottled with red, while its suture is shallower. The fruit skin is thick and tough and easily separates from the pulp. Its immature color is greenish-yellow, ripening to orange-yellow, with half of the skin overspread with red. Its hairs are densely fuzzy and coarse. The flesh of Elberta is deep yellow, but it is stained with red near the pit. The sweet pulp is juicy, somewhat stringy, firm but tender, mildly subacidic, and separates free from the stone. Some fully ripened Elberta peaches leave a bitter, tangy aftertaste in the mouth, which some peach connoisseurs find disagreeable. They claim that because Elberta is now picked green and allowed to ripen not on the tree but in refrigerated market bins, it is deemed scarcely edible by those who know good peaches.

What Elberta lacks in flavor it makes up for in fruitfulness. If frosts or freezing winds do not force it to drop its blossoms, the trees are laden with fruit year after year. Elberta trees routinely withstand insects and fungi, and grow to be large, vigorous, upright-spreading, densely topped specimens.

The Elberta peach has been planted in the Carrell and the Max Krueger orchards.

Garnet Beauty. A bud mutation of Red Haven, this cultivar was selected in the Garnet Bruner Orchard, of Ontario, Canada. Introduced to the United States in 1958, it is sometimes simply called Garnet. A dozen nurseries continue to offer it.

The fruit has red, almost fuzz-free skin, is medium to large sized, and slightly elongated. Garnet is similar to its parent except that it ripens somewhat earlier. The semi-freestone flesh is yellow, with red streaks near the pit. The texture is smooth, fine grained, and firm, making it a good candidate for most culinary uses: pies, preserves, canning, and freezing.

The Garnet Beauty peach has been planted in the Max Krueger Orchard.

J.H. Hale. This variety began its career as a chance seedling found by its namesake J.H. Hale of South Glastonbury, Connecticut. Judging from its characters, it is clearly either an offspring or a close kin to Elberta; in fact, to the untrained eye, they are identical. Nevertheless, after J.H. Hale evaluated its performance in Connecticut and Georgia, he deemed it worthy of introduction, selling his rights to the William P. Stark Nurseries in Stark City, Missouri. The Stark nursery began to distribute the Hale variety in 1912.

In fruit size and shape, J.H. Hale is on the average larger and more perfectly spherical than Elberta. They are lemon yellow washed with a dark red blush and splashes of carmine. The skin of J.H. Hale is lightly fuzzy, but firmer and tighter, and although it is a freestone, its skin does not separate as easy from the pulp. Its trees are as productive as Elberta, being vigorous, upright spreading, and open-topped. Like Elberta, it is widely adapted to a variety of climes and soils.

J. H. Hale peaches have been planted in the Carrell and the Max Krueger orchards.

Redhaven. This cultivar is a cross between Hale Haven and Kalhaven that was introduced by Michigan State Agricultural Experiment Station in 1940. Redhaven is now considered the standard for early red peaches, and is available from dozens of nurseries. Its name is also spelled Red Haven.

This is a medium sized fruit that lacks any fuzz. Its skin is bright crimson red all over. The firm yellow flesh becomes freestone as it ripens. Redhaven is well suited for desserts, canning and freezing. The fruit handle well and resist browning or bruising.

The trees set fruit abundantly, if they are not exposed to leaf curl, brown rot, Oriental fruit moth or twig borer. In other words, they are not very tolerant to many pests, diseases or to cold winters.

Redhaven peaches grow in the Max Krueger Orchard.

Rosa. Also spelled Roza, this cultivar was developed at the Washington State Agricultural Experiment Station in Prosser, Washington. Its availability has been in decline, and it is available only from three U.S. nurseries.

A large, round freestone peach, its skin is faintly streaked over a medium red blush across three-quarters of its surface. It has firm yellow flesh that is coarse textured but highly flavored. It typically ripens somewhat later than Redhaven. It is best for home use but moderately tolerates shipping for market trade. Its vigorous trees are productive and self-fertile.

Rosa peaches grow in the Max Krueger Orchard.

PEARS (*Pyrus communis*)

Bartlett. This pear was brought to North America from England in the 1790's. In parts of the British Isles, this classic heirloom was, and is still known as the William pear. Once in the U.S., this name was gradually forgotten, and by 1817, the variety had become better known as the Bartlett pear. It did not take long for the Bartlett to become the most widely planted pear in America. Its fruits remain more common in American grocery stores and roadside markets than any other pear.

The Bartlett attains a rather large size for a pear. Its shape is oblong-obtuse-pyriform, tapering toward the apex. The skin is thin, tender and easy to bruise, but smooth. The surface of the skin is subtly pitted and somewhat uneven. As it ripens from a pale green, the color of the skin turns toward clear yellow, and gains a faint rosy blush on the exposed cheek. The skin is often thinly russeted around the basin, with scattered dots that are small and green or russet. The mature flesh can be fine-grained, but is often slightly granular near the center of the fruit. Fully ripened, a Bartlett can be buttery, juicy, vinous, and mildly aromatic, but today it is often picked, shipped, sold and eaten before these qualities accumulate.

Bartlett trees are adapted to a wide range of soil types, climates and growing conditions. They bear many large fruit from a rather early age, and can be long-lived. The disadvantages of the Bartlett are that the trees are very vulnerable to blight, extreme winter cold and summer heat. They are simply not as cold hardy or as heat-resistant as some newer varieties. Furthermore, other pears are better flavored more richly perfumed than the reliable but commonplace Bartlett. There is, however, no

other pear that is so easily grown in North America, and so readily available for canning.

The Bartlett pear has been planted in the Behunin Grove, the Chesnut Orchard, the Group Campsite, the Holt orchard, the Merin Smith Place, the Mott Orchard, the Nels Johnson Orchard, and the Tine Oyler Place of Capitol Reef National Park.

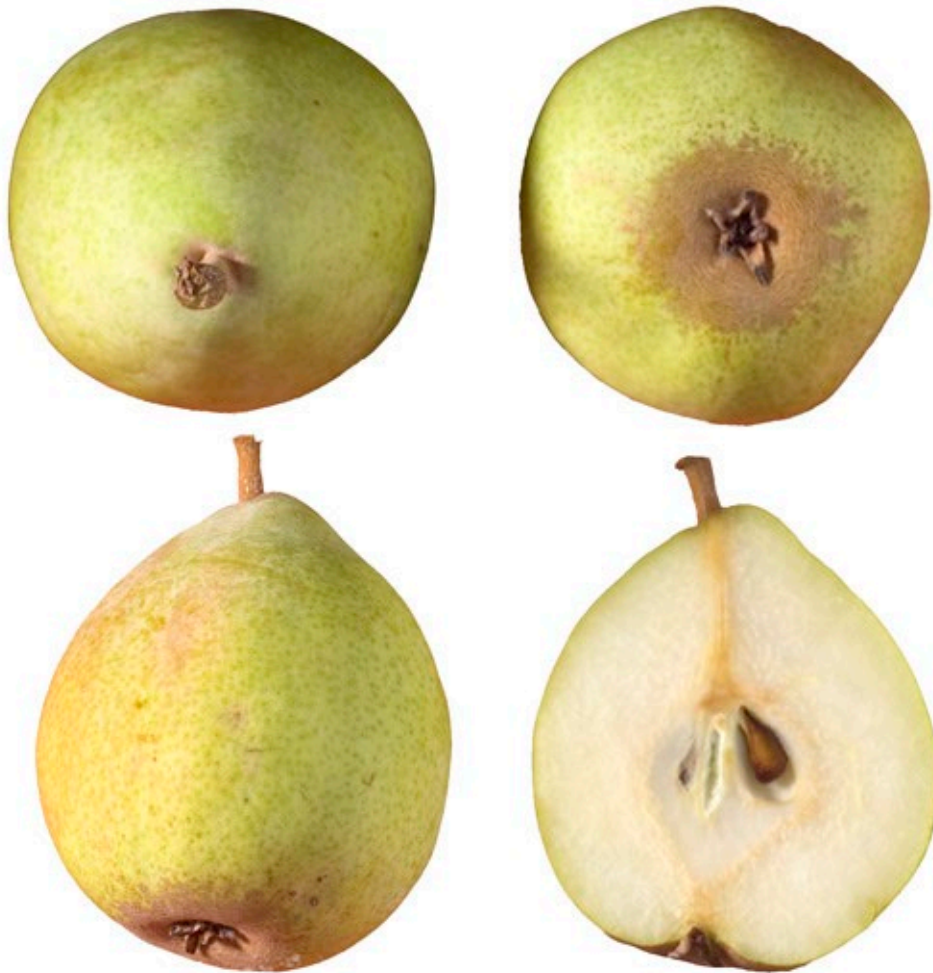
Flemish Beauty. The parent to Flemish beauty is said to have been a seedling found growing in the woods near Alost, Eastern Flanders, Belgium. It was first brought into trade under the name of Bosc peer, or “pear of the woods.” Flemish Beauty was introduced in 1810 under another name, Fondante des bois, under which it was grown in England for many years. Lindley, writing in 1831, was the first to describe this heirloom variety under the name of Flemish Beauty.

The fruit of Flemish Beauty is large, two and three-fourths inches long and two and a half inches wide and rather uniform in shape, which is as round as it is ovate pyriform. Its skin is thick, tough, and dull rather than glossy. Skin color is a clear yellow, overspread on the exposed cheek with a dotted and marbled reddish blush. These underlying colors are overlain with numerous russet dots. Its flesh is creamy yellow, firm and smooth. As it fully ripens, it becomes melting and tender, rather granular but juicy. The Flemish Beauty has a sweet, aromatic musky flavor of the finest quality.

To attain its most exquisite flavor and fragrance, these pears must be picked just as they reach their fullest size, and then they must after-ripen, wrapped in paper, in a cold cellar. It is said that a slowly after-ripened Flemish Beauty is incomparable in the pleasure it offers, for its rich flavor is delicately balanced between sweetness and sourness, with a musky aftertaste not unlike certain dessert wines.

Flemish Beauty trees are late bearing, but remain vigorous and fruitful for many years. This heirloom was at one time the leading commercial fruit variety in certain regions of the eastern U.S. renowned for their pears. However, because of its susceptibility to pear blight and scab fungus, the Flemish Beauty has been replaced by other, disease-resistant varieties in all but the most remote locales that are isolated from the spread of these diseases.

Flemish Beauty pears grow at the Gifford house, the Holt Orchard, the Jackson Orchard, and the Nels Johnson Orchard.



Flemish Beauty

Winter Bartlett. Sometimes known simply as Winter Pear, this heirloom appears to have originated around 1880 in or near Eugene Oregon. It was then introduced into trade by D.W. Coolidge, a Pasadena California nurseryman. Its superficial resemblance to other Bartletts is the basis of the assumption that it was a chance seedling derived from that variety.

Larger in size but showing the characteristic pyriform shape of Bartletts, this winter pear has yellow uneven skin that blushes red on the sun-exposed cheek, while being splashed with russets on the other sides. The firm flesh is creamy yellow white, fine-grained and tender. Sweet and pleasant in flavor, the pulp is juicy and of good to very good keeping quality. The fruit are typically harvested later than classic Bartletts, and fully ripen in storage between December and January. The trees are unusually large, with loose spreading canopies that mature to fruiting size quite rapidly. The

Greenmantle Nursery in Garberville, California is the only mail-order outlet still known to carry this heirloom.

We believe the two unknown pears #672 and #673 in the Cook Orchard are the variety Winter Bartlett, though this will need genetic verification.



Winter Bartlett

PECANS (*Carya illinoensis*)

Native. Native or seedling pecans are those that have not been grafted and do not have a varietal name. Native pecans have been widely used by indigenous peoples within its native range, from northeastern Mexico through most of the southeastern US, and their shells occur in many archaeological sites in the Mississippi watershed. Their formal cultivation began around the 1700s, but then declined with the development of named cultivars and improved grafting techniques in the mid-nineteenth century.

Native pecans are small, difficult to shell, and have a low percentage of edible kernels relative to their thick shells. The nuts have high oil content, an excellent flavor, and are preferred by many rural folks because of these characteristics. They are excellent for pastries and candies because of this rich flavor, but their small size and thick shells preclude their widespread use.

A row of Native Pecan trees is planted in the Tine Oyler North Orchard, to the east of the Holt House.

PLUMS (*Prunus* species)

Duarte (*Prunus salicina*). A Japanese plum now offered by just two nurseries in the United States, the Duarte has also been the raw material for an improved cultivar of the same name. It has very large, heart-shaped fruit with blood-red skin and flesh. Among the best-tasting plums found in western fruit markets, they are both sweet and tart, dry well and have long storage lives. The semi-dwarf trees seldom grow beyond a height of twelve feet, begin bearing in as little as three years, but are short-lived. They require the presence of another Japanese plum variety as a cross-pollinator to bear well.

The Duarte tree has been planted in the Mott Orchard of the Capitol Reef National Park.

Italian Prune (*Prunus domestica*). The Italian Prune is one of the most widely grown of all plums. As its name implies, it originated in northern Italy at least a century ago, where it was historically popular in the hills surrounding Milano. According to the London Horticulture Society, it had arrived in England by 1831. The following year, Prince described it as an excellent prune recently introduced to North America from Europe. Within decades, it was among the top four most popular plums along the Atlantic seaboard of America and the leading plum for drying into prunes in the Pacific Northwest.

The fruit are nearly two inches by an inch and a half in size, long oval, enlarged on the suture side, and slightly compressed, with the halves unequal. Their color is purplish-black, overspread with very thick bloom. The skin of Italian plums is thin, but somewhat tough, and separates readily from the flesh. The tart flesh is at first greenish-yellow, changing to bright yellow, and is juicy, firm, subacidic, and slightly aromatic. It is free stone.

The Italian plum has a fine flavor whether eaten fresh, stewed or cured as a prune. With cooking its color changes from yellow to a dark, wine color, but keeps a most pleasant, sprightly flavor. When cured as a prune, the flesh is firm and meaty, yet elastic.

The low-topped trees can be large, spreading or upright, and are usually productive. They are well formed and bear regularly, but seem to be susceptible to many diseases, insects, and hot, dry weather.

Italian Prune Plums are planted in the Max Krueger and Nels Johnson orchards.



Italian Prune

Potawatomi (*Prunus munsoniana*). This plum is native to the middle Mississippi and lower Missouri watersheds, but was apparently translocated to the Colorado Plateau and Great Basin either by Mormons or miners. In southern Utah, it is restricted to hedgerows and vacant lots in small Mormon villages, rarely reaching beyond these anthropomorphic landscapes into truly wild habitats. Sometimes spelled Pottawattamie, or simply called the wild or hog plum, its horticultural potential first came under the notice of J.B. Rice of Council Bluffs, Iowa in 1875, who named it after one of the countries of his home state, thereafter making it available to nurserymen in many other states.

The fruit are variable in both color and size, ranging from seven-eighths of an inch to an inch and an eighth inches in diameter. In shape, they are round to oval, and slightly compressed. There is a very shallow cavity on one side of them. Their skin color runs from a clear currant-red with thin bloom, to pale yellow and white. Over this basal color are a few whitish dots clustered about the apex. The skin of this plum

is tough, cracking under conditions of high heat, separating readily from the flesh of the fruit. The stem of each fruit is slender, three-quarters inch long, and weakly adheres to the fruit itself. The flesh of this plum is deep yellow, juicy, tender and melting. Most Mormons familiar with Potawatomi plums described them as sweet next to the skin but sour at the center, with a memorable flavor. The plum pit or stone clings closely to the flesh, is five-eighths by three-eighths inch in size. The pit is flattened, smooth, somewhat oval and turgid. Its dorsal suture is faintly grooved.

The trees are really dwarfish, multi-stemmed shrubs at maturity, seldom more than seven feet tall, and often forming hedges that average less than five feet in height. They are vigorous in their branching, and especially productive when receiving irrigation tailwaters, or growing alongside a ditch or a road. They are considered to be among the hardiest of the native plums, growing without danger of winter injury to tree or bud far into cold winter climes.

The Potawatomi is lauded in *The Plums of New York* as “possibly of greater cultural value” than any other wild American plum, for the flavor of its flesh is “of high quality. . . , the texture of the fruit being especially pleasing in eating, and though melting and juicy, it keeps and ships very well because of a tough skin. It escapes both the curculio and the brown-rot to a higher degree than most of its kind. . . .” Elderly Mormons claimed that as children during the Depression, they survived on this fruit more than any other grown in their villages of Mt. Carmel, Caneville, Henrieville and Torrey at that time. As Lulu More of Henrieville Utah told us,

“We didn’t have much food in those days when I was growing up. . . There were no big orchards around here then, so when us kids could find them Potawatomi plums, it was a real treat.”

Potawatomi Plums grow in Adams Orchard, Behunin Grove, Holt Orchard, and along the River Trail near Hattie’s Field.



Potawatomi Plum

Santa Rosa (*Prunus salicina*). Luther Burbank developed the Santa Rosa in 1906 from his trials of Japanese plums. Its place of origin, the Luther Burbank Home and Gardens in Santa Rosa, Sonoma County, California, is now a National Historic Landmark. This cultivar is widely available, and still distributed by more than forty nurseries in North America.

The Santa Rosa is very large for a plum, round, heart-shaped or slightly oval in shape, with purplish red skin carrying a thin bloom and light dots. Its clingstone flesh is purplish near the skin, but pink with yellow streaks near the pit. The flesh is fragrant and fine-textured with a flavor that remains memorable whether it has been eaten fresh or canned. The fruit ships well.

The trees are partially fertile, and bear best with cross-pollination in the presence of other Japanese plums. The trees grow vigorously and become quite large, but are susceptible to bacterial spot.

The Santa Rosa tree has been planted in the Mott Orchard of the Capitol Reef National Park.

Stanley. This is a European-type plum developed from a hybrid of Agen and Grand Duke cultivars that were introduced into trade by the New York State Agricultural Experiment Station in Geneva around 1926. It remains so popular that it is available from at least three-dozen nurseries across the United States. It may still be the most widely planted plum of its kind in the East, Midwest and South.

The dark blue Stanley plum carries a thick whitish bloom on its skin. It is medium to large in size, and oval in shape. Its freestone flesh is firm and fine-grained, and a yellowish-green that turns purplish red when canned. It has a sweet rich flavor excellent for eating fresh, for canning, drying or preserves.

Late bloomers but early bearers, Stanley trees are large and spreading. They are self-fertile but benefit from the presence of other varieties for cross-pollination, and either way, can be heavy bearers.

A Stanley Plum grows next to the Holt House in Capitol Reef National Park.

Yellow Egg. This cultivar sprang up as a chance seedling in the Tiddesly Woods near Pershore, Worcestershire, England. It became a very popular plum, but has since been largely replaced by other varieties. The fruit is good for both canning and fresh use. This plum is sometimes simply referred to as Pershore.

As the name implies, the Yellow Egg Plum is a large, oval plum that looks somewhat like an egg. The golden-yellow flesh is firm and juicy, with a semi-free stone pit. The flavor is rich and sweet when the fruit is fully ripe, but it is tart if eaten before maturity. The fruit ripens from mid-August to September, depending on location. The trees are vigorous, fast growing, and develop a tall and spreading habit. They are very productive and self-fruitful.

The Yellow Egg plum is planted in the Nels Johnson Orchard at Capitol Reef national Park.



Yellow Egg Plum

QUINCES (*Cydonia oblonga*)

Champion. Although this species is native to central and western Asia, it was introduced into the English-speaking world by 1275 A.D., and became a major raw material for marmalades in England by the sixteenth century. Because all quince cultivation declined as soft fruit became more storable in the nineteenth century, little is known of the origins of particular varieties. The fruit of this heirloom is bright yellow, and strongly russeted near the stem. The shape is described as obscure pyriform, that is, between the shape of an apple and pear. The calyx is set in a deep and strongly corrugated basin. The fruit is larger than the common quince, and

ripens later and more tenderly than that any other quince. The flesh is yellow, only slightly astringent, sweet, and has a delicate flavor.

It fruits at a young age on vigorous, very productive trees that tend to produce ripe fruit by mid-season. The tree grows twelve to fifteen feet tall, is very vigorous and hardy. Its shoots have a very dark color, which is a feature that can be used to distinguish it from other varieties. The flowers are big, white and showy. This variety is known to be somewhat difficult to propagate from cuttings.

Champion Quince trees are planted in the Nels Johnson Orchard of Capitol Reef National Park.



Champion Quince

Van Damen. This variety, developed by Luther Burbank, was a popular quince variety offered by Stark Brother's Nursery of St. Louis, Missouri. Burbank developed the variety by crossing Orange and Portugal quinces. Over 700 crosses were required to produce the desired characteristics of the variety. It was introduced into the nursery trade in 1881. The fruits are large, oblong, and bright yellow. They are highly valued for cooking and making jellies.

When mature, this heavy bearing quince grows ten to twenty feet in height, forming a large shrub or small tree.

An old Van Damen quince grows at the Gifford Place of Capitol Reef National Park.

WALNUTS (*Juglans* species)

Black Walnut (*Juglans niger*). A native of eastern North America, the Black Walnut can be found growing wild along rivers and streams from central Texas northwards to Ontario, Canada.

The fruit is deeply furrowed and has a semi-fleshy husk that typically drops off the nut in October. The nuts are round, two inches or so in diameter, and the unimproved varieties may be difficult to crack. While the meaty nuts are highly flavorful, difficulties in shelling them preclude their widespread use as food. However, the Black Walnut is also highly valued for its beautiful dark brown wood, which is easily worked into furniture.

The Black Walnut is a large deciduous tree growing to heights of one hundred feet or more. The bark is dark grey-black and deeply furrowed. The twigs have pithy centers filled with air spaces. The pinnate leaves are alternate, with 15 to 23 leaflets per frond-like leaf. They are widely available from nurseries.

A lone Black Walnut persists along the road near the Nels Johnson Orchard at Capitol Reef national Park.

Carpathian Walnuts (*Juglans regia*). Introduced into the US and Canada in 1939 by Reverend Paul C. Crath, who obtained seed from the Carpathian Mountains of Poland. Crath first distributed his Persian Walnut-like seed nuts through the University of Guelph in Canada, and through the Wisconsin Horticultural Society, and they have continued to be dispersed by more than two-dozen nurseries in North America.

Plump but thin shelled, this heirloom is slightly smaller version of the English walnut. The nuts have a rich, full-bodied flavor and keep their excellent quality in storage. In late fall, the nuts fall free of their husks.

Carpathian walnuts are much hardier and more pest and disease resistant than their pampered English cousins. Their canopies are quite symmetrical and as much as forty feet wide, while growing up to fifty feet in height. The sturdy limbs are dark grey, with lacey dark green foliage. The self-fertile trees prefer sunny spots, with well-drained, deep and fertile soils.

Carpathian walnuts have been planted in the Gifford Farm, The Mott Orchard, Nels Johnson Orchard, and in the Doc Inglesby Picnic Grove of Capitol Reef National Park.