

The Brandywine Trail

STATE
LAW



TO



The Brandywine Trail

The Brandywine Trail is 36 miles long. It runs along the East Branch of the Brandywine Creek and the Brandywine River from Ludwig's Corner to Brandywine State Park in Delaware. 2.6 miles of this trail has been paved and runs along Rt. 322 through East and West Bradford Townships. This trail is marked by a white blaze and also has an alternate trail marked by a white blaze ALT. The alternate trail leads off of the paved trail for .7 miles providing hikers with a dirt path as an alternative to walking on the paved trail.

The Brandywine Trail was started by the Wilmington Trail Club in 1941 shortly after the club was founded. It was planned to follow the Brandywine River north from Wilmington towards the Horseshoe Trail which connects to the Appalachian Trail north of Harrisburg. Permission was granted from various landowners and work commenced in 1942, and by 1948 the trails connected near Bacton, PA. During the 1970's, the Chester County Trail Club took over maintenance of the trail north of Chadds Ford. At this time, the upper section of the Brandywine Trail was rerouted to the Horseshoe Trail in Ludwig's Corner, PA.

Gibson's Bridge

Gibson's Bridge, also known as Harmony Hill Bridge, was built in 1872 by Edward Hall and Thomas Schull. Prior to Gibson's Bridge, a bridge was built in 1870, but that bridge was destroyed in 1871 by a flood. The following year, the County Commissioners opened the construction of the bridge to auction, which received six bids. The original cost of construction was \$2,666. The bridge is 78 ft. long and 14 ft. wide. The truss design used for this bridge is the Burr arch truss.

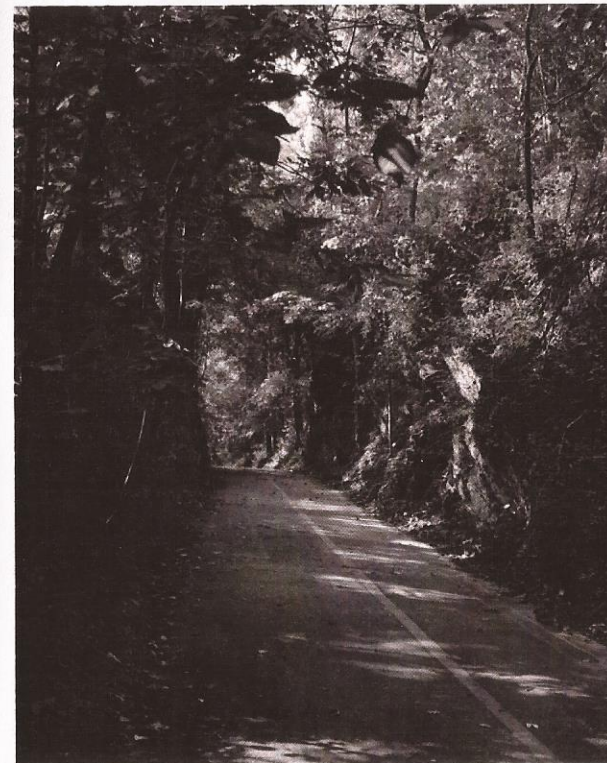
Located two miles south of Downingtown, it spans the East Branch of the Brandywine Creek connecting East and West Bradford Townships. One of eleven covered bridges that originally spanned the East Branch of the Brandywine, it is the only one still standing. It acquired the name Gibson's Bridge from a local farmer, James Gibson, who owned the land adjacent to the bridge on the east. The trolley line that ran between West Chester and Coatesville once had a stop at the east end of the bridge. The bridge was repaired and strengthened in 1959 for \$3,470. In 1999, Hurricane Floyd hit the region and cracked the support. It was repaired for a cost of \$650,000 and took over four years to repair.

Trolley line

The paved trail runs in the bed of an old trolley line. This can be shown at the trail end near the Skelp Level Rd. trail head where the trail runs through a cut in the rock that was created to allow one trolley car to pass at a time. The line was built to connect West Chester and Downingtown. The trolley line was constructed in March of 1901 by Italian workmen under the supervision of Edgar A. Tennis. This is 10 years after the start of the trolley service in West Chester. The first car left West Chester on August 30, 1902. It left the West Chester station at 4:37p.m. and arrive at the Swan Hotel in Downingtown at 6:57p.m. The trolley was opened to the public on September 1, 1902. This section had two cars running opposite of each other. The Downingtown line took passengers from Hannum ave., where it followed the roads until it reached the Copeland Schoolhouse. At that point, it crossed the road near Sugar's Bridge. It continued along the East Branch of the Brandywine, which is today's paved trail. At this point, the two trolley cars met up with each other. Since there was only one track, Alton Station was built to allow the cars to pass each other. The track then ran into Brandywine Ave at Kerr's Mill and stopped at Lancaster Ave. This line was later extended to Coatesville in 1906. After World War 1, this section of the trolley was the most profitable of any line in Chester County. The trolley stopped operation in 1926 when Rt. 322 was built between West Chester and Downingtown.



Trail Gap near
Sugar's
Bridge Road.
Picture taken
in 1902



Trail Gap near
Sugar's
Bridge Road.
Picture taken
in 2012

Photo taken by:
Ginia Apostolocus

Plants found along the Brandywine River

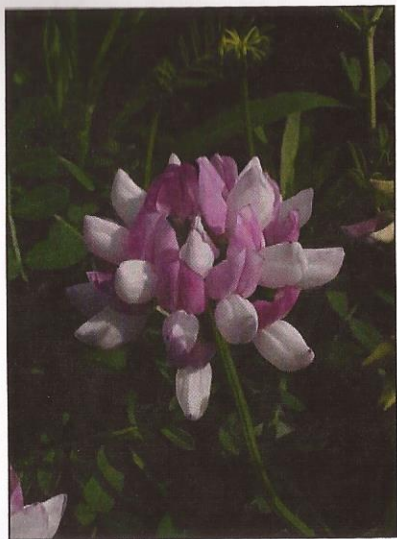
There are 395 different types of plants found along the Brandywine River. They range from mighty trees to small delicate flowers. Approximately 30% of these species are considered to be alien species to this area. The following pages contain information about some of the most common and interesting plants.

American Elm



The American Elm is a deciduous tree, which commonly grew to 100+ ft. tall with a trunk 4 ft. around. Dutch Elm disease had a negative affect on this tree preventing it from growing to this height. The crown forms a high, spreading canopy with open air space beneath. The leaves are alternate, 3-8 inches long. The tree is hermaphroditic, having perfect flowers, (both male and female parts) and is therefore capable of self-pollination. The flowers are small, purple-brown, and, are wind-pollinated. They emerge in early spring before the leaves. The fruit is a flat samara .7 inches long and .5 in broad, with a circular wing surrounding the single 4-5 mm seed. American Elm is wholly insensitive to daylight length, and will continue to grow well into autumn until injured by frost. This species occurs naturally in a variety of habitats, like rich bottomlands, floodplains, stream banks, and swampy ground, also it thrives on hillsides, uplands, and other well-drained soils. The wood of the elm is hard and tough. It was used by early Americans to make wagon wheels, and barrels.

Crown Vetch



Crown Vetch is one of the alien species to this area. Crown Vetch is a perennial herb in the pea/legume family. It has creeping stems that can reach two to six feet in length. The leaves are dark green, and bear 15 to 25 leaflets. The pea-like, pinkish-white to deep pink flowers occur in clusters at the end of extended stalks and appear from late spring through summer. Crown vetch prefers sunny, open areas, however, it is tolerant of temperatures down to -33°C , (-27.4°F) periods of drought

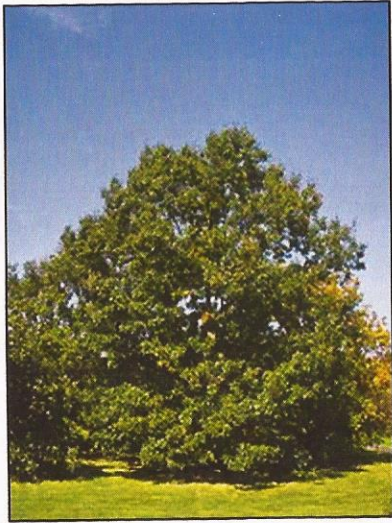
and periods of heavy precipitation. It was originally planted to help with erosion control. It is found most commonly along roadsides, open fields, waste grounds and on gravel bars along streams. Crown vetch becomes a problem when it invades natural areas, such as native grassland prairies and dunes, where it works to exclude native vegetation by fully covering and shading those native plants. Crown vetch is from the Mediterranean region of Europe, northern African and southwest Asia.

Black Locust



The black locust tree reaches a height of seventy feet and has a trunk about 2.5 ft. across with thick, deeply furrowed blackish bark. The leaves are about 4-10 inches long. Each leaf usually has a pair of short thorns at the base. The flowers are white, and smell like orange blossoms. The fruit is a legume and contains 4-10 seeds. It is native in the United States from Pennsylvania to northern Georgia and westward as far as Arkansas and Oklahoma. It spreads by underground shoots. The wood is very hard, resistant to rot, making it prized for furniture, flooring, paneling, fence posts and small watercraft. It is one of the heaviest and hardest woods in North America. Black Locust is highly valued as firewood for wood-burning stoves; it burns slowly, with little visible flame or smoke, and has a higher heat content than any other species that grows widely in the Eastern United States, comparable to the heat content of anthracite. Black locust is also popular because of its ability to burn even when wet. In fireplaces it can be less satisfactory because knots and beetle damage make the wood prone to "spitting" coals for distances of up to several feet. If the Black Locust is cut, split, and cured while relatively young (within ten years), thus minimizing beetle damage, "spitting" problems are minimal.

Black Oak



The Black Oak is a relatively small tree, reaching a height of 65–80 ft. and a diameter of approximately 35 inches. Its leaves are alternately arranged on the twig and are 4–8 in long with 5–7 bristle tipped lobes (like fingers). The upper surface of the leaf is a shiny deep green, the lower is yellowish-brown. There are sometimes hairs on the underside of the leaf that grow in clumps. Black Oak leaves turn red in the fall.

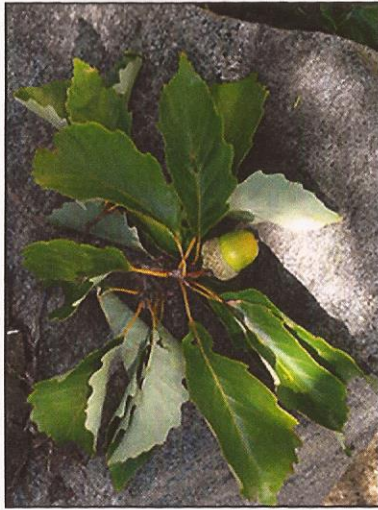
The bark of the Black Oak is smooth and gray on young trees, but as it gets older the bark turns back and thick with deep furrows (wrinkles). The inner bark of this tree is orangish-yellow. The Black Oak fruit is an acorn, about $\frac{3}{4}$ inch long. Black Oak acorns take about two years to mature and grow. These trees are found with other trees, such as American Elm, Black Walnut, and the Red Maple. The Black Oak is home to many animals, especially woodpeckers. The acorns are eaten by squirrels, mice, voles, white-tailed deer, and insects. Many birds, such as Blue Jays and Turkeys, also eat them. Gypsy Moths can be dangerous to the Black Oak because they eat all the leaves and after a few seasons will kill the tree.

Witch-hazel



The Witch-hazel is a deciduous shrub, akin to a small tree growing to 9.8–26 ft. tall. The leaves are approximately 5 inches long, turn yellow in the fall, and stay attached to the tree all year long. These trees grow in central Canada and central and southern United States. They can be found on partially shaded slopes, country lanes and lining fence rows. They are popular ornamental plants, grown for their clusters of rich yellow to orange-red flowers which begin to expand in the autumn as or slightly before the leaves fall, and continue throughout the winter. The bark, leaves, and twigs can be collected and used to make an extract that has medicinal properties. Extracts are used in aftershave lotions and lotions for treating bruises and insect bites. Witch-hazel helps to shrink and contract blood vessels back to normal size, hence its use as the active ingredient in many hemorrhoid medications. It is also used in treating acne. Witch-hazel is also used in treating psoriasis and eczema. In addition, Witch-hazel is sometimes found as an ingredient in eye drops.

Chestnut Oak



The Chestnut Oak has massively-ridged dark gray-brown bark, the thickest of any eastern North American oak. It may reach a height of 60 feet and a width of 50 feet when in an open area. The Chestnut Oak's leaves are about 5-8 inches long and are dark green with a leathery appearance. Its mature bark is different from other oak trees having ridges that are triangular in cross section with deep furrows in-between. Throughout its life, the Chestnut oak retains the light gray to medium gray color of its bark. The wood of the Chestnut Oak is used for fencing, fuel, and railway ties.

Acorns develop annually and are among the largest of native American oaks, surpassed in size only by the bur oak and possibly swamp chestnut oak. They are reddish brown and rough on the outside and about one and one half inches in length.

Hog Peanut



The Hog Peanut is a twining vine that may grow to 5 feet in length, climbing onto and over nearby plants. Leaves are clustered into groups of three, similar to poison ivy. These two plants also share similar woodland habitats but there are obvious differences. A hog peanut's leaves are slightly furry or hairy versus the often shiny leaves of poison ivy. The hog peanut twines as its length increases; poison ivy does not twine. Lastly, the hog peanut's leaves are 1 to 3 inches long, smaller than Poison Ivy leaves, which are about 3 to 4 inches long.

The hog peanut's name originated from the rounded seed pods that form near the plant's base or sometimes below ground.

Habitats include of floodplain woodlands, low wooded areas along streams, soggy thick, and damp sandy meadows. The fruits of its flowers are eaten by the Ruffed Grouse, Ring-necked Pheasant, Bobwhite, White-footed Mouse, and the Meadow Vole. To a limited extent, White-Tailed Deer also feed on the foliage.

Animals

The animals found near the Brandywine River are found throughout Chester County. There are countless species of reptiles, mammals, amphibians, and birds.

Snapping Turtle



The Snapping Turtle is a large freshwater turtle that can be found in all kinds of freshwater habitats. They are bottom dwellers and will eat a variety of plants but they will also eat fish, snakes, and crustaceans. They have very sharp claws and very powerful jaws. The force can remove a finger with one bite. They can not pull themselves into their shell like other turtles. They also grow between 10 to 12 inches long. Snapping turtles can be found all over North America

Largemouth Bass



Largemouth bass are very popular sport fish. They get their names from their very large mouths. They have been known to grow up to five pounds and in very rare cases, they can grow to 2ft. long and weigh 20 pounds. They are usually olive to dark-green with a dark stripe down the side of their body. They have spines on the front part of their dorsal fin. They can be found in schools around underwater objects like trees, rocks, drop offs, and under docks. They eat small fish, frogs, crayfish, and insects. Prey can be up to 25 to 50% of its body length.

White-tailed deer



The white-tailed deer, also known as the Virginia deer or simply as the whitetail, is a medium-sized deer native to the United States, Canada, Mexico, Central America, and northern South America. In 1959, the Commonwealth of Pennsylvania designated the white-tailed deer as official state animal. The white underside of the deer's tail waves when running and flashes as a warning when it senses danger. The white-tailed deer is able to run up to 40 miles per hour, jump 9 foot fences, and swim 13 miles per hour. Both native Americans and early settlers relied on the white-tailed deer for buckskin and food.

The white-tailed deer, the state's only big game animal, hasn't always been as abundant in Pennsylvania as it is today. There was a period of time (1904-1923) when the deer was absent in the state. During the 1920s and 1930s, natural movement of deer from neighboring states in Pennsylvania and the establishment and strict enforcement of hunting laws allowed the development of a herd that today occupies all 67 counties.

Most often, white-tailed deer are on the move at dawn and dusk. This behavior can prove hazardous to humans especially during the breeding season in the fall.

The white-tailed deer are often admired for their beauty and their grace.

Red Fox

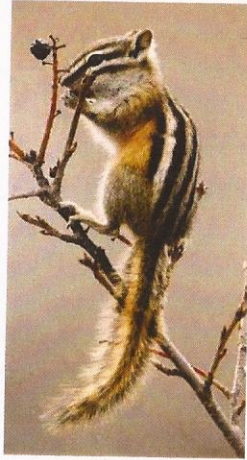


The red fox is the largest of the true foxes. It can be found across the entire Northern Hemisphere from the Arctic Circle to North Africa, Central America and Asia. The red fox is listed as Least Concern for extinction and it is also included among list of the "world's 100 worst invasive species". Red foxes live in dens dug into the soil. Foxes grow to be 30- 40 inches long with one-third of it

being the tail.

Red foxes are social animals, whose groups are led by a mated pair. Subordinates within a group are typically the young of the mated pair, which remain with their parents to assist in caring for new kits. The species primarily feeds on small rodents, though it may also target game birds, reptiles, invertebrates and young hoofed animals such as sheep, goats, pigs, and deer. Fruit and vegetable matter is also eaten on occasion. Although the red fox tends to displace or even kill smaller predators, it is nonetheless vulnerable to attack from larger predators, such as wolves, coyotes, and medium- and large-sized felines. The species has a long history of association with humans, having been extensively hunted as a pest and furbearer for centuries, as well as being prominently represented in human folklore and mythology. Because of its widespread distribution and large population, the red fox is one of the most important furbearing animals harvested for the fur trade. Red foxes are nocturnal animals and caution should be taken if one is spotted during the day. Red fox can carry the rabies

Chipmunk



The eastern chipmunk is a small squirrel found in eastern North America, the sole living member of the chipmunk genus. It has reddish-brown fur on its upper body and five dark brown stripes contrasting with light brown stripes along its back, ending in a dark tail. It has lighter fur on the lower part of its body. It has a tawny stripe that runs from its whiskers to below its ears, and light stripes over its eyes. It has two fewer teeth than other chipmunks and four toes each on the front legs but five on the hind legs.

The eastern chipmunk lives in deciduous wooded areas and urban parks throughout the eastern United States and southern Canada. It prefers locations with rocky areas and shrubs to provide cover. It is mainly active during the day, spending most of its day foraging. It prefers bulbs, seeds, fruits, nuts, green plants, mushrooms, insects, worms, and bird eggs. Like other chipmunks, it transports food in pouches in its cheeks. It can climb trees well but constructs underground nests with extensive tunnel systems, often with several entrances. To hide the construction of its burrow, the eastern chipmunk carries dirt to a different location in its cheek pouches. It also lines the burrow with leaves, rocks, sticks, and other material, making it even harder to see.

Eastern Gray Squirrel



The Eastern Gray Squirrel is the most commonly seen mammal in our area. They usually live in forests, but are often seen in yards, parks, and will live anywhere there are large deciduous trees.

As the name suggests, the Eastern Gray

Squirrel has predominantly gray fur but it can have a brownish color. It has a white underside and a large bushy tail. Particularly in urban situations where there are no natural predators, both white- and black-colored squirrels are quite often found.

The tracks of an Eastern Gray Squirrel are difficult to distinguish from its cousins the fox squirrel and Albert's squirrel. Like all squirrels, the Eastern Gray shows four fingers on the front feet and five on the hind feet. The hind foot-pad is often not visible in the track. When bounding or moving at speed, the front foot tracks will be behind the hind foot tracks. The bounding stride can be two or three feet long. It collects food and will then bury it underground to be used later during the winter. They can make up to 7,000 caches a year. They build nests in the fork of a tree. The squirrel is a smart animal. They will pretend to bury food if followed, and have a very well thought out defense system with other squirrels. They have incredible balance, are excellent swimmers, and live about 5 years.

Bluegill



Bluegills are found in lakes and rivers all over the country and can be found in most countries around the world. They hide around tree stumps, and roots. Bluegills can be found in brackish water because they can handle 1.8% salinity. They grow up to 12 inches long and can weight about 4.5 pounds. Their name comes from the blue coloring found on the gills. They eat about any animal that will fit in its mouth. They like insects, fish, baby birds, and turtles. Bluegills are a very common catch when fishing because they will eat any bait in the water like worms, crickets and even bread and corn. This fish can be a home to many different types of parasites. These fish can be eaten , provided they are cooked and cleaned before consumption.

Cottontail Rabbit



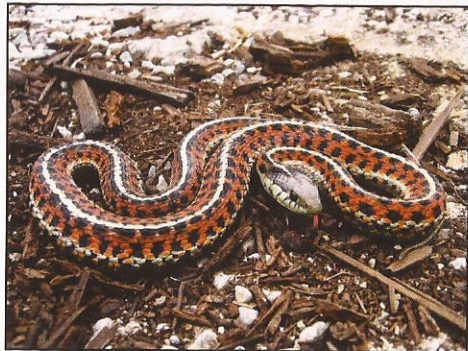
The Eastern Cottontail Rabbit is one of the most common mammals in North America and is most abundant in habitats that contain edges of open grassy fields and thorny or shrubby cover.

Cottontails are 15 to 18 inches long and weigh between 2 and 3 pounds. They can range in color from light brown to dark gray with white, fluffy tails. They have long, erectly held ears and large back feet. These large feet help the cottontail to travel at speeds up to 18 miles per hour.

Cottontails eat a variety of plants based on the season of the year. The cottontail is most active in the dawn and dusk hours of the day. Many types of predators utilize cottontail rabbits as a food source. Foxes, hawks, and owls are the most significant natural predators.

The average life span of a cottontail is less than 3 years. A mature doe can have up to 5 litters of three to eight young in a single season. Females have their litters in grass-lined, surface or underground nests. After birth, the young rabbits leave their nests after two weeks and fend for themselves.

Garter Snake



The Garter Snake is one of the most common snakes. They can grow up to 4ft. long and almost always have 3 yellow stripes. They are usually found near water. Their diet includes frogs, salamander, earthworms and other small animals. The

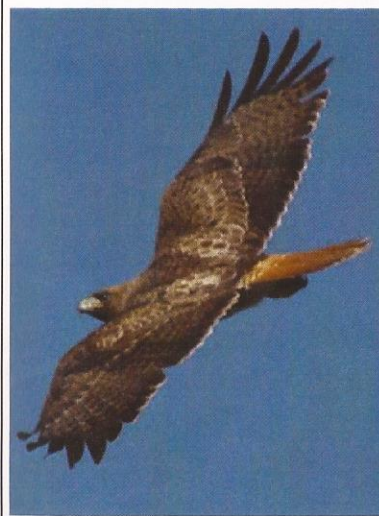
Garter Snake has a very mild neurotoxin venom that isn't powerful enough to affect a human significantly.

Copperhead



They are very poisonous. They have a triangular head and vertical pupils. Copperheads can reach over 4 ft. long and are copper colored. They are found hidden among rocks and river banks. They eat small mammals, insects, lizards and other snakes. They sit and wait for their prey to come within striking range.

Red-Tail Hawk



The Red-Tail Hawk is a member of the raptor family. They can grow up to 25 inches long and weigh 4 pounds. They are identified by their rust colored tail and unique shriek. They have great eyesight and can spot prey from over 100 ft away. They eat small mammals, birds, lizards, and snakes.

Canada Goose



Canada Geese are large water birds. They can grow up to 45 inches long and have a brown body with

black head. They eat plants like grass, cattails, and have been known to eat corn. Geese migrate south during the winter. They fly in a v shape. They are very group oriented animals. They will almost never be seen alone. Also geese can be very mean to people if they feel threatened.

Park land and preserves along the trail

Brandywine Meadows Preserve (48 acres)

Located on Rt. 322 across from Romig Road. This preserve participates in the United States Department of Agriculture - Natural Resource Conservation Service (USDA-NRCS). The preserve was created to provide habitat to wildlife and local plant species.

Harmony Hill Nature Area (240 acres)

Located along Harmony Hill Road and Skelp Level Road, the Nature Area contains about 6.5 miles of unpaved trails for hikers and bikers. It extends along the paved Brandywine Trail.

Sugars Bridge Nature Area

The Nature Area contains about half of the East Bradford Section of the Brandywine Trail. It connects the Harmony Hill Nature Area to the M. John Johnson Nature Center. It contains a section of the abandoned West Chester Street Railroad trolley bed.

M. John Johnson Nature Center

The Nature Center is owned by PECO but is under lease to the West Chester Fish, Game & Wildlife Association. It provides some trails, and parking for the Sugars Bridge Nature Area and the Brandywine Trail.

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