

Information and guidance for the preparation of this trail guide were provided by Erik Kiviat and Ann Gabler. A previously published trail guide entitled "A Walk Down the Saw Kill" and the booklet "Ecology of Bard Lands", both by Erik Kiviat of Hudsonia, Ltd., were particularly helpful, and are highly recommended. These guides were produced by the Office of Publications of Bard College, and were funded by the Zoos, Botanical Gardens and Aquariums Grant Program which is administered by the New York State Office of Parks, Recreation and Historic Preservation for the Natural Heritage Trust.

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ABOUT THE BARD COLLEGE CENTER

The Bard College Center, described by the Rockefeller Foundation's Report of the Commission on the Humanities as "a model of mobilizing the resources of the college and the community", was established in 1978 as the College's public arm. Through workshops, national conferences, small group seminars, lecture series, summer institutes, publications and exhibitions at the Edith C. Blum Art Institute, the Bard Center explores timely issues in the sciences, arts, humanities and education to the benefit of the Bard community, the Hudson Valley region, and educators and policy makers nationwide. The Institute for Writing and Thinking, part of the Bard Center, is recognized as one of the leading institutes for the instruction and methodology of writing. The Center's varied efforts are complemented by the work of Bard Center Fellows, distinguished artists, scientists, scholars and writers appointed annually to serve as a "public faculty", who also teach Bard undergraduates.

Mountains & Mansions

A WALK ALONG THE
TIVOLI SOUTH BAY



BARD

Self-guided Nature Trail
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This guide describes the scenery and the natural history of a trail which starts at the Bard College Ecology Field Station and follows the border of the Tivoli South Bay to the mansion at Blithewood. This trail is a continuation of one beginning at the Bard water plant and following the Saw Kill to the Field Station. That portion of the trail is described in a guide entitled "A Walk Down The Saw Kill" by Erik Kiviat.

*Illustrations by Kathy Schmidt
Map by Roy T. Budnik and Associates
Cover: Downy woodpecker on cattail*

This stroll along the Tivoli South Bay of the Hudson River from the Bard College Ecology Field Station to the Blithewood Mansion traverses a steep bluff dissected by several ravines cut by intermittent streams. The clay soils of the bluff can become slippery when wet and, although the trail is well maintained, you should watch your footing. These soils are easily eroded especially if the vegetation and leaf litter are disturbed, therefore please stay on the marked trails.

One of the plants you will see in the woods along the trail is poison ivy. It grows as a ground-hugging, tree-climbing vine, or as a short, erect bush. During the growing season, it can be recognized by its three shiny green leaflets which may have a tinge of red especially in the fall. In the winter, look for clusters of small, white berries and dense, beard-like tendrils which attach the vine to surfaces. The sap which induces an allergic reaction in sensitive people is present all year long, so learn to recognize this common plant.

Remember, you are one of many visitors on this trail, so please travel quietly, carry out your litter and do not remove the vegetation.



Stinging nettles

Both trails are reached by Blithewood Road from Annandale (River) Road on the Bard College campus. You can find the beginning of this trail by following the Saw Kill trail or by taking

Bay Road from Blithewood Road opposite the new dormitories. Just follow the sign for the Field Station. Bay Road leads past the sewage treatment plant, through a gate and down to the Tivoli South Bay. Please do not drive to the Field Station. Park in the lots by the Alumni Dorms. Many of the trees have been labeled in the vicinity of the Field Station and along the trails.

The trail leaves the road on the west side of the Field Station and leads you north into a ravine and across a small stream traversed by flat rocks. This stream may be nearly dry in the summer, but is a full-flowing brook in the spring. Take care, the rocks may be slippery.

A branch of the trail parallels the stream to the edge of the Tivoli South Bay where you get a sea-level view of the broad Hudson River estuary. To your left (south) you can see the mouth of the Saw Kill beyond which is the forested bluff of Montgomery Place, an historic estate restored by Historic Hudson Valley and open to the public. Opposite you, to the west across the water, is a railroad embankment which separates the bay from the main body of the Hudson River (discussed elsewhere). On the far shore slightly to your right (northwest) you may see the Catskill Mountains, although a layer of haze often obscures the view in warm weather.

The Field Station is a teaching and research facility, originally constructed in 1971, with recently expanded and renovated laboratories, offices, a library and an herbarium. The facility is used for undergraduate and graduate courses in field biology, and as a research center for scientists studying the ecology of the Hudson Valley region. Inside are displays depicting the ecology and history of the area and you are welcome to visit when the building is open.

The Field Station is headquarters for the Masters of Science in Environmental Studies program and also houses offices of the Hudson River National Estuarine Research Reserve and Hudsonia, Ltd.



Snail

During the summer and early fall the water surface in front of you is covered by the foliage of a floating plant called European water chestnut (unrelated to the commercially available

Chinese water chestnut). Along the shore you will see the black, sharp-pointed nutshells of this plant. Other plants you may identify in the water have arrowhead-shaped leaves: arrowhead with white flowers and pickerelweed with a spike of blue flowers.

Perhaps in the mud at your feet you can see tracks of a raccoon.

Retrace your steps along the small stream, cross it and continue along the edge of the bay under a canopy of hemlock and mixed hardwood such as oaks, sugar maple, beech and hickory. Shortly, the trail curves to the right, and immediately uphill adjacent to the trail is a chestnut sapling. The American chestnut was a major component of the eastern deciduous forest until nearly wiped out by a fungus accidentally introduced from Europe. Chestnut trees still sprout from old stumps and roots as this one has done, but usually succumb to the chestnut blight after a few years.

Continuing, the trail curves to the left and works its way uphill past a bed of irises (escaped from cultivation) to a wooded knoll. To the left you can see the charred evidence of a small ground fire which presumably was caused by a camper. Fortunately the fire did not spread far and did little damage, but there is potential for a serious one, so resist the temptation to make a campfire.

If you are visiting the trail during the spring, watch for warblers which pass through on their northward migration. Many stay for the season such as the black-and-white, prairie and cerulean warblers, and the ovenbird and American

The body of water in front of the Field Station, South Bay, and the one north of Cruger Island Road, North Bay, are referred to as the Tivoli Bays. They are part of a system of unique tidal wetlands collectively known as the Hudson River National Estuarine Research Reserve and are natural laboratories for ecological studies of these dynamic systems.

An estuary is a body of water broadly connected to the ocean which shares the tidal cycles of the sea. It is an area where freshwater and salt water meet. The Hudson River is an estuary with a tidal flux at Bard of 1.2 m, but no saltwater penetrates this far north. The shallow bays along the river's edge in this region were separated from the main body of the Hudson when the railroad was built in the 1850's. The bays communicate with the river via bridges, three of which can be seen in the railroad embankment opposite. At low tide, the South Bay is virtually a mud flat dissected by the channels from the Saw Kill.

redstart. These woods are also home to vireos, thrushes and woodpeckers. On this knoll to the right of the trail is evidence of a pileated woodpecker at work on a dead hemlock. The pileated chisels a characteristic rectangular hole into the wood in its search for a meal.



*Small-flowered
agrimony*

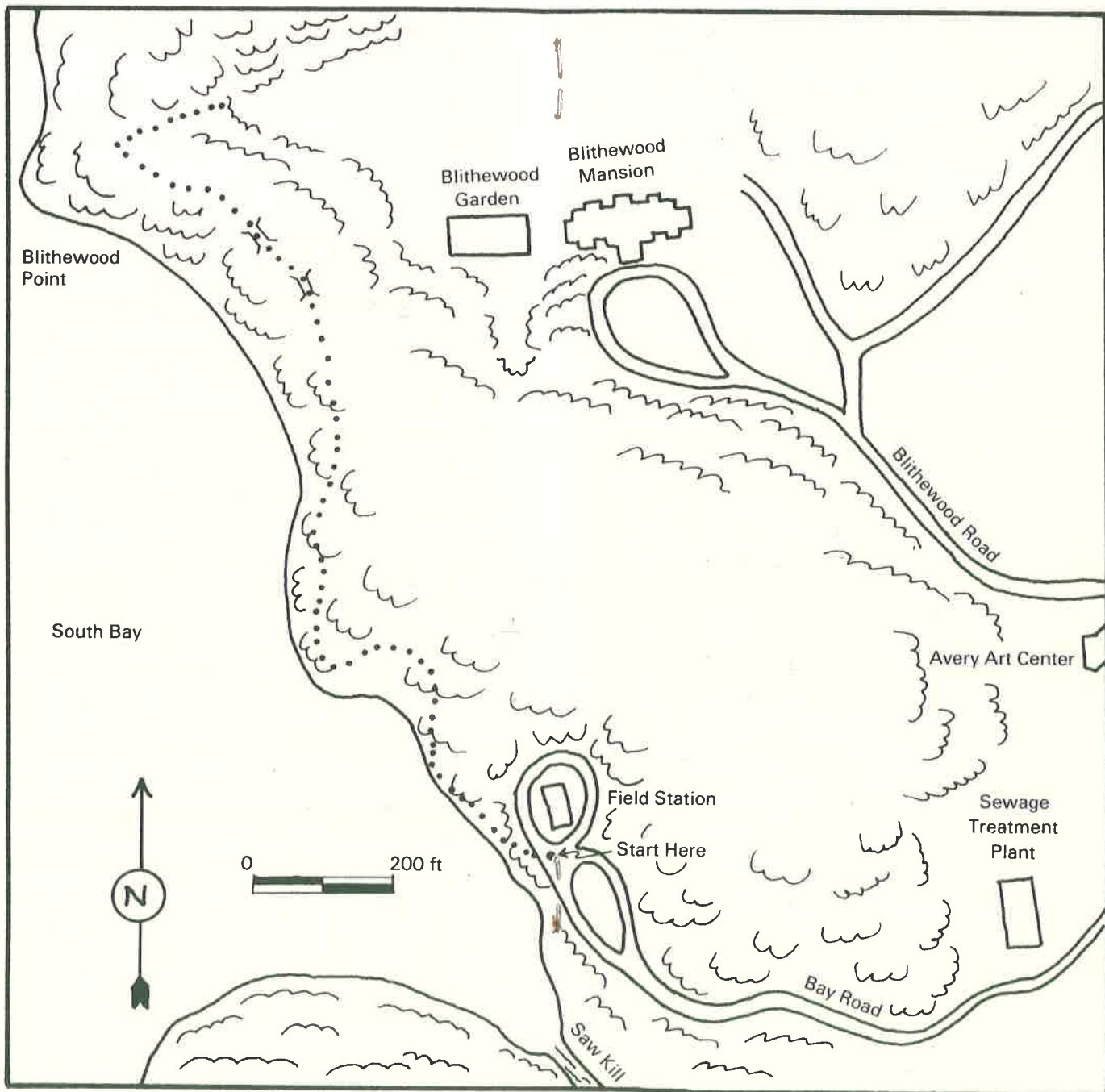
Spring is a special time for woodland wildflowers too. As you explore this trail, watch for the small, blue hepaticas, the pink spring beauties, yellow trout-lilies, white wood anemones and many others. The unusual looking jack-in-the-pulpit is very abundant in these woods. Look for long-stemmed, three-parted leaves and a greenish or purplish, narrow cup-like flower with a flap over the top and a club-shaped stalk inside. In the late summer you will see the fruits of this flower: a cluster of scarlet berries atop a bare stem.

Farther along you will come to two log steps. Pause here, turn around and look back. You have just walked along a ledge of ground which has "slumped" and to your left, uphill, the scar is still visible where the land gave way. The heavy clay soils of these bluffs along the Hudson occasionally become saturated with rainwater and acquire the consistency of stiff pudding. In the absence of sufficient vegetation to hold the soils, or on particularly steep slopes, the mass will creep downhill. Note that several of the trees in this area are curved at the base, evidence of past slumping. Trees always grow erect; thus, after being tipped by soil that slid, the tops grow upright and the trunk is eventually curved at the base. You will notice many of these during your stroll.

Throughout the woods along the trail are logs in various stages of decay. The organic material and nutrients of the wood are being recycled into the soil for use by living organisms nearby. Much of this decomposition is due to fungi and bacteria along with arthropods of various kinds. One can often see mushrooms on the rotting logs as well as coral fungus, bracket fungus or the dendritic pattern of the slime molds.

These rotting logs are miniature ecosystems. The bacteria and fungi which feed off the wood are eaten by insects, nematodes, sow bugs and earthworms who, in turn, are sought after by predators like centipedes and red-backed salamanders. Even a casual look under a fallen log will reveal a surprisingly complex world.

Please look, but carefully replace logs as you found them so these tiny creatures can continue their important work.





Cecropia

This curious flower is pollinated by flies which are attracted to its fetid odor. When bruised, the tissues smell of ginger and the rootstock can be used for candy and flavoring.

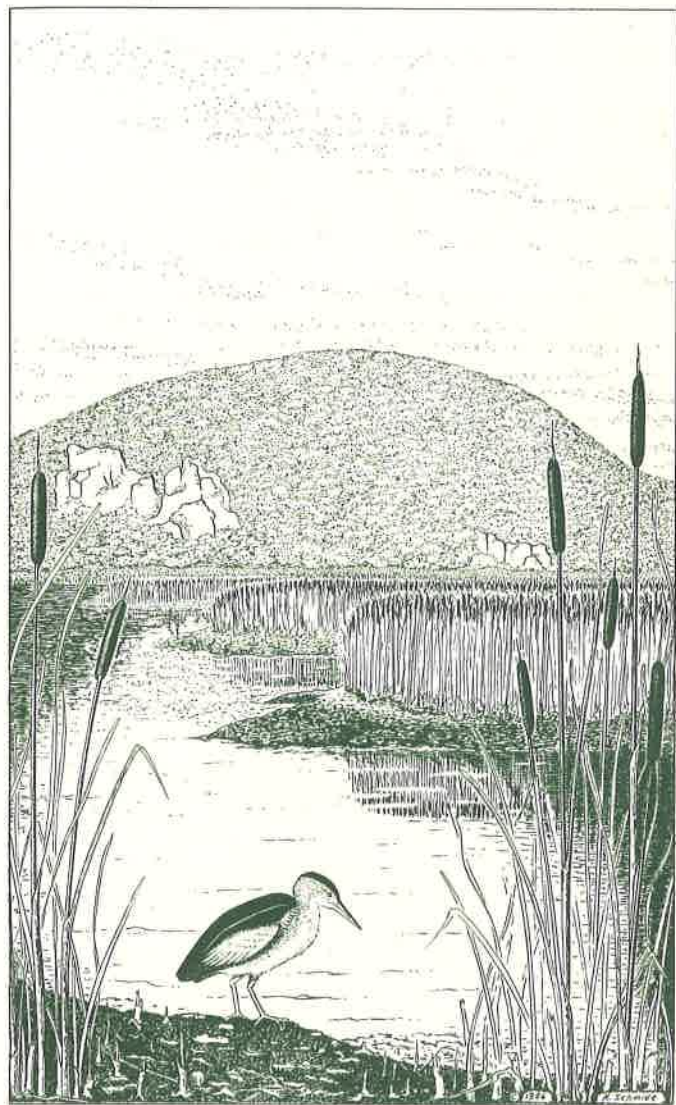
Proceeding, you will shortly come to a wooden footbridge across a gully deeply eroded by an intermittent stream. Uphill the ground is covered by periwinkle or "myrtle," a low plant with shiny leaves which has escaped from cultivation. It produces a delicate, lavender-blue, five-petaled flower in the spring. The trees were removed from the uphill side of the trail at this point to improve the view of the Hudson River and mountains as seen from the Blithewood lawn. Just downhill from the bridge you will see spicebush, a shrub having elliptic, toothless leaves which emit a spicy aroma when crushed. In the spring, this common woodland bush has yellow flowers which produce oval red berries in the fall.

On your way to the second bridge, you pass a small ironwood tree on your left. It has smooth gray bark, sinewy-looking trunk and heavy, tough wood.

At the second footbridge, there is poison ivy on the ground to the right, and growing up a severely reclining sugar maple to the left. (How would you account for the odd posture of this large tree?)

From here the trail slopes gently uphill along another large, old slump. The final ascent to the ridge is by wooden steps (to reduce erosion) at

See the numerous broad, heart-shaped leaves near the ground along here. This is wild ginger. In the spring, look for the cup-shaped, red-brown flower with three "petals" lying on the ground.



Least bittern

the top of which a spur trail to the left leads to an overlook on Blithewood Point. As you approach the edge of the cliff, notice the severe erosion of the clay soil. Decades of foot traffic killed the plants whose roots and fallen bodies would have slowed water runoff. Be cautious here, especially if the ground is wet, because clay becomes very slippery and it would be easy to fall on this steep terrain. If it is wet it would be best to stay away from here. Soon there will be a wooden observation platform at this site and foot traffic on the bluff will be discouraged.

From this vantage point you can see south to the Kingston-Rhinecliff bridge. To the west beyond the low hills across the river is a good view (depending on the haze) of the eastern escarpment of the Catskill Mountains. The closest of the peaks you see is Overlook Mountain (3100 ft) with broadcast antennas and a fire tower on top.



Water milfoil

At the south end of the bay you can see a small rock outcrop called Skillpot Island which is made up of Ordovician sandstone bedrock like that at the edge of the water below you. At the north end of the bay, just beyond the railroad bridge is the wooded landscape of Cruger Island.

The trees and shrubs of the swamp bordering Cruger Island Road mark the northern boundary of the South Bay.

In the river, numerous pleasure boats may be seen when the weather is nice. Commercial freighters, tankers and barges also ply the Hudson to and from the port of Albany. When it freezes in the winter, South Bay is popular with ice boaters, and it is quite a sight to watch these "sailboats on ice skates" in action.

Shallow water embayments like the South Bay are very productive areas which attract wildlife of all kind. Killifish and the fry of other species such as alewife are preyed upon by great blue herons which can frequently be seen in the bay. Along the edges you may see a bittern stalking its prey, or a kingfisher perched on a limb over the water watching for fish and laughing its loud, rattling call at you. Osprey, also called fish hawks, hover high over the water then suddenly plunge to grasp a fish from near the surface. Many species of waterfowl use the Hudson River as a migratory flyway in the spring and fall and can often be seen in large numbers.

During their spring and fall migrations, this is an excellent place to observe waterfowl. Among the species which may be seen are Canada goose, mallard, black duck, blue-winged teal and common goldeneye. Hunting is prohibited on Bard College property but sportsmen are permitted to use the bays and gunfire can frequently be heard in the late fall. The wooden structures erected on the bay are duck blinds used by the hunters.



Bald eagle

Other hunters are attracted to the bays: red-tailed hawks may be seen perched in the trees around the edge, osprey frequently hunt over the bay, and one might even be fortunate enough to see a bald eagle.

The trees around you are American ash, chestnut oak and arbor vitae. In the spring, look for wild sarsaparilla here (three rounded clusters of white flowers; five leaflets). In the bay you may see the white flowers of arrowhead, or the blue flower spike of pickerelweed. In the fall along the border of the bay look for the bright spikes of the purple loosestrife. In the summer you can see how the dense mats of water chestnut cover the surface of the bay.

Returning up the trail you may see flowering dogwood, early meadow-rue, false Solomon's seal and violets in the spring. In the fall look for asters, goldenrods and tick-trefoils (with their sticky fruits that adhere to clothing: "sticktight").

At the end of the trail beyond the wooden steps, you will emerge onto the lawn of the Blithewood mansion. To the right at the edge of the woods are hemlocks and sugar maples. To the left is another area which was clear cut to open up a spectacular view of the Hudson

These lands are home to a number of vertebrates in addition to the birds. Deer are abundant but shy. If you are quiet, you might surprise one hiding in a thicket or browsing around the edge of the woods. In the trees overhead live gray and red squirrels, and chipmunks can be seen foraging in the litter. Groundhogs and cottontails prefer more open areas like the edge of the Blithewood lawn as do the red fox and the gray fox.

If you watch at your feet you may be lucky enough to find a garter snake, the one most likely to be seen on the move. Milk snakes are rather shy, and the secretive ringneck and brown snakes are rarely found in the open. There are no poisonous snakes known on the Bard campus.

There are gray tree frogs in the woods, snapping turtles in the bay, moles and shrews in the soil, American toads among the fallen leaves and mice in logs.

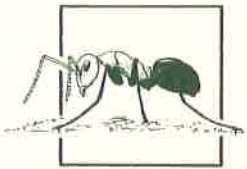
Valley. It was a popular custom of the last century to clear such "viewways" for the river mansions. This cutting is an attempt to restore the historic character of the original Blithewood landscape.



Bladder campion

At the top of the lawn note a line of tall evergreens with pendulous branches: Norway spruce. Nearby is a huge maple tree which the New York State Forest Practice Board certified as the largest (in circumference) of its kind in the state. It appears to be a hybrid of red and silver maples.

The formal gardens to the right are pleasant to walk through and have recently been renovated. The walls of the garden are covered with wisteria, which in the spring have showy, purple or white flower clusters that emit a pleasant perfume. In the fall, look for large, fuzzy seed pods.



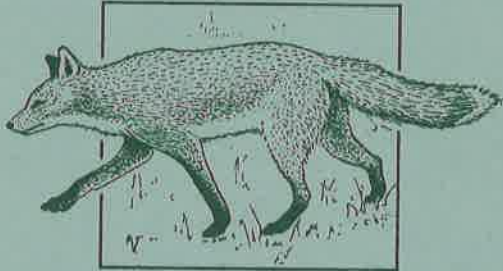
Mound-building ant

Blithewood was built around 1900 by A.C. Zabriskie and was acquired by Bard in 1951 after which it was used as a dormitory. It now houses the Jerome Levy Economics Institute affiliated with the college.

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From here you may return via Blithewood Road past the Milton and Sally Avery Arts Center to Bay Road. There is also a trail from the north end of the lawn which continues along the South Bay to Cruger Island Road. Once there you can follow it east to River (Annandale) Road, then south to Blithewood Road.

PLEASE DON'T THROW THIS BOOKLET AWAY!
YOU MAY KEEP IT, GIVE IT TO A FRIEND OR DROP IT OFF AT THE FIELD STATION



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Red fox

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