



David Kiphuth, cartography, 2006

Numbered stakes or stones mark each of the following sites

1. Partners in Stewardship: The Paul Schaefer (Yellow) Trail begins at the new Center for the Forest Preserve at 897 St. David's Lane. The Center houses administrative and educational facilities and the Adirondack Research Library of the Association for the Protection of the Adirondacks. The Association was founded in 1901 to act as citizen advocate for New York State's six-million-acre Adirondack Park. The Center incorporates the former homestead of the renowned Adirondack conservationist Paul Schaefer. Mr. Schaefer was a long-term member and officer of the Association. The Adirondack Research Library (ARL) and the Adirondack Room with its great relief map of the Adirondacks are features of the Center. The ARL houses unique materials on the natural, cultural and political history of the Adirondacks available for research and education. For information visit www.protectadks.com or join with the staff to discuss your interests.

2. Seeing The Forest For the Trees: Touchstones to a much different past, American Chestnuts grow here to pole size before succumbing to the alien Chestnut Blight. Find examples of the regularly serrated leaves reaching 10 inches in length. The American Chestnut was once a major element in our regional forests but with the advent of the Chestnut Blight Fungus in New York City in 1904 a horrific decline of the species began, depriving wildlife of a major food source, and humanity of one of its finest carpentry woods. Along the trail, look for differences in forest species composition and age classes. You will notice an absence of understory in this segment, attributable perhaps to heavy forest shading and special chemicals released by the plants of more mature forest.

3. A Venerable Giant: Look up the stem of this towering Pitch Pine, one of the few surviving in the Sanctuary. Do you see any young of its kind in the area? The bare stem supporting the brush of needles in the crown indicates shade intolerance. Young trees never receive enough light to prosper. When this tree falls one of the final vestiges of the pine bush once growing on this site will be gone. Can you see cones still clinging to the branches of the crown? The twisting needles gathered in groups of three, tolerance of sandy soil, and the clinging cones mark the species. Visit the Albany Pine Bush Preserve to best understand the appearance of this site hundreds of years ago.

4. Little but Venerable!: Find examples of Club Mosses growing at this site. They are less than a foot tall, and evergreen with small spiraling leaves. They are vascular, colonial and have an ancient pedigree. Their ancestors, the lycopsids, formed towering forests during the Carboniferous Period (345 to 290 million years ago). Their remains contributed greatly to the coal deposits that we now burn to drive much of our energy-hungry world. How many kinds of Club Moss can you find along the trails of the Sanctuary?

5. Vernal Pools: In the early spring Wood Frogs and other amphibians gather and breed in the shallow pools near the Center for the Forest preserve. Other species such as Royal Fern, Cinnamon Fern, Interrupted Fern, Sassafras and Black Gum also favor these (usually) seasonal wetlands and their margins. How are these depressions formed and where does the water come from that fills them? Pausing quietly next to one of the pools will reveal their importance to the birds of this distinctive habitat.

6. The Aliens Have Landed: The proliferation of invasive species is a serious threat to bio-diversity. The preserve has been invaded by aggressive non-natives such as the Tartarian (or Tatarian) Honey-suckle, a scraggly, deciduous bush with opposite leaves. Its bright red or orange fruits are readily eaten by birds, and the seeds spread far and near through their droppings. The resulting plants quickly shade out native species. Garlic Mustard, Oriental Bittersweet, and Common Reed are other aggressive aliens unfettered by native herbivores and diseases. How many of these do you know? How many can you find in the Sanctuary? Why are alien species at such a competitive advantage?

7. Errant Rocks: Walk westward about 150 feet on the short side trail to reach this site. Hundreds of years ago, the first settlers cleared the land of its rocks and forest to plant crops and graze cattle, sheep and horses. They collected the rocks into piles and fence rows. But where did these rocks come from and how did they get here? Why are they more-or-less rounded and how many different kinds can you find? Answer: Glacial ice, more than a mile thick, moved southward across this land carrying a great burden of material collected in the Adirondacks to deposit it as the ice melted away. The moving ice also depressed and smoothed the land. These glacial erratics and the mantle of glacial till, exposed elsewhere in the Sanctuary, tell part of this almost unbelievable story.

8. Red Pine Grove (Southern): Due mainly to overcrowding and attack by the Ips Engraver Beetle, the Preserve's two Red Pine groves, planted by Paul Schaefer and his associates in the mid-1930s, are in decline. In 2005, selected trees in the northern grove were removed in the Bird Club's first-ever management effort. This southern grove was left untouched as a control plot. How does the Red Pine differ from the Pitch Pine? How do the two Red Pine plantations compare? Moving on to the next station note the beginning of the Southern Blue Trail (marked by the double blue blazes) on the south or your left. Eagle Scout Matthew Greppo and Brian Shimkus and their teams built fine bridges on the Southern Blue Trail. Take a look.

9. Stinky and Tough: Skunk Cabbage produces the many fountains of green seen during the warmer months from this vantage point. Its strange flowers, composed of outer spathe and inner spadix, heat up in the early spring to melt through the ice and then open to release a "fragrance" pleasing to only certain kinds of insects, these serving in pollination. The flowers are then overtopped with great leaves that harvest the spring sunlight drawing nutrients from the dark, anoxic soil. This species, or a very close relative, also occurs in eastern Asia. How can you explain this "disjunct distribution"? The False Hellebore, one of the most deadly of plants growing in the Sanctuary, grows nearby at the drier margins of the swamp. Its corrugated leaves are smaller and are carried on an erect stem that may rise to a height of three feet or more. Can you find examples of this species? Just why are so many plants poisonous, malodorous, spiny and otherwise noxious?

10. What grows up must come down: This void in the otherwise crowded canopy was created when these large oaks fell and now sun-loving species are fostered. One of the few places in the preserve where downed trees litter the forest floor, these decaying trunks will also provide nutrients and shelter for countless forest fungi, plants and animals, that slowly recycle crucial nutrients to the soil. What caused the trees to fall?

Join the HMBC! Help manage the Reist Sanctuary. Volunteers are needed

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Congratulations! You have completed the 20 sites but realize that every time you come back they will be different. Now try the GPS challenge.

20. Bridges – Helping Hands: We walk the trails of the Reist Sanctuary during the wetter times in relative comfort and ease because of many helping hands that have built bridges and boardwalks. Matthew Greppo, James Claus and Brian Shimkus have earned the rank of Eagle Scout by designing bridges and organizing work teams to construct them. Michael Palmioto and other members of the Hummingbird Manor Community have constructed other bridges as well. You might enjoy seeing the bridges built by Eagle Scout Jim Claus, and team, on the Morgan Ave. Red Trail. It is just a few dozen yards off the Schaefer (Yellow) Trail. Can you find it? Several bridges use Black Locust planks provided by the Eastern New York Chapter of The Nature Conservancy. The larger bridges use Eastern Hemlock planks coming from the Lake George region of the Adirondacks. Both Black Locust and Eastern Hemlock are renowned for their resistance to decay.

19. Wild Sarsaparilla: Look for a single, erect leaf composed of many leaflets arranged for the maximum capture of sunlight. This species is well adapted to life in the shade. Which leaflets best illustrate this efficiency of light capture? What is the difference between a leaf and a leaflet? Keep your eyes open for the flowers of this species. In olden days the roots of this species were used to make root beer but this is no longer allowed in the USA because some of the constituents are now considered dangerous to eat or drink. Curiously the word sarsaparilla is Spanish meaning spiny vine. Try and explain this!

18. Red Trillium: Look for examples of this species when it is in flower in late April. If you have a "good nose" you might detect the flower's odor of wet dog! Like many plant species it may also be present but unseen. Corms, bulbs, seeds and other perennating structures allow a plant to remain hidden in the ground until stimulated to grow. One may thus miss seeing many kinds of plants on a single visit to a wild area. Curiously, the Red Trillium (or a very closely related species) like the Skunk Cabbage, is also found in eastern Asia. We ask you again, how can this "disjunct distribution" be explained? For more curious facts on the Red Trillium google the words "trillium, strophole". You will be surprised!

17. High and Dry Places: Take a short sidetrip on the Thackeray Red Trail to the top of the small hill. What forces could have produced this great pile of sand that supports species more tolerant of drought? The Tromohawk, parent river of the modern Mohawk River, deposited vast amounts of sand on the floor of Glacial Lake Albany and, when the lake finally drained, this sand was exposed to strong winds that created, some 10,000 years ago, the dune you now stand on. How does the flora of this small, sandy upland compare with the surrounding lowlands?

16. Red Pine Grove (Northern): This Red Pine grove was thinned in 2005. This area hosts a mix of Pipsissewa, Partridgeberry, Virginia Creeper, and Spicebush in profusion, a feast for the eyes and for the animals. The Spicebush responded briefly to the thick covering of wood chips by developing huge leaves. Examples of these are available to see in the laminate collection stored at the Center for the Forest Preserve. Virginia Creeper has also prospered and now covers much of the ground of the site – but note that only a few (sickly) creeper vines climb the pine trees. What's happening here? It is fascinating to learn how the chipping project has changed the biota of this site and what processes regulate these changes. What other differences can you detect using the southern Red Pine grove for comparison? Come back at least once a year to follow this experiment!

15. The Hidden-River Trail: The development and maintenance of a sewer line right-of-way through the preserve has breached the forest canopy, creating a mixed assembly of grasses, trample, oriental bitter-sweet, goldenrod, asters, and...oh yes...honeysuckle. Old-field forms thrive here as nowhere else on the grounds.

14. Witness Trees: Sit on the green bench and look westward. In the distance look for a blaze on one or more trunks of old "witness trees". The blaze is oval in form and about eight inches wide. Beginning at the bench take the short side trail west to this old boundary. Before the advent of modern cartography, long-lived tree species were often blazed and left untouched to attest to property boundaries. Can you explain why some trees have the blaze on the east side, others on the west side, and some on both north and south sides? The yellow posting signs will help orient you as you walk northward along the boundary to the point where you may return to the main trail. Does this experience help answer the questions of Station 13?

13. Mixed Nuts: The left and right sides of this segment of trail show markedly different kinds and sizes of trees. To the west the trees are larger and long-lived. To the east the trees are smaller and of more diverse kinds. Can you explain this contrast? The next station will help.

12. Pain In the Neck: Though aesthetically pleasing, the tall, i.e. 100 feet or more, canopied forests accentuating White Pine and several species of oak which characterize the preserve can drive birders mad – and give them sore backs. However, scanning tree crowns often turns up the unexpected. Annual growth of the White Pine consists of a single whorl of lateral branches and the internode, the array making for an excellent nest foundation for birds. Check near the trunks for bird splashes, fecal matter and castings as possible signs of nesting Great Horned Owl and Red-tailed Hawk. Find a White Pine with a stem less than three inches in diameter and estimate its age.

11. This kind of Recycling permitted: See the hundreds of whitish bracts growing on the fallen trees at this site. They are the fruiting, i.e. spore producing, structures of the Turkey-tail Fungus or White-rot Fungus, *Trametes versicolor*. Members of the White-rot Fungus digest dead wood by means of various kinds of enzymes. The enzyme lignase breaks down the lignin of the wood, one of the most resistant and abundant of materials found in the forest. Many hardwoods are composed of 30% or more lignin. Without the White-rot Fungi the Sanctuary would be impassible because of the accumulation of fallen trees and branches. The breakdown also Recycles nutrients for new growth.

Climate (Albany Data) and Other Ecometrics
 Ave. precipitation: 36.7 inches
 Ave. snowfall: 63.6 inches
 Ave. number of frost-free days: 218
 Frost-free season – mid May to mid October
 Ave. annual air temperature: 47.5 d. F
 Ave. July air temperature: 71.1 d. F
 Ave. January air temperature: 22.2 d. F
 Glacial, lacustrine and aeolian deposits on Oligocene strata
 Drainage southwards to join the Lisha Kill
 Biomass: 380 MT/ha or 169 T/acre (Duvigneaud et al, 1967)
 Productivity: 11.8 MT/ha/y or 5.25 T/acre/y (Duvigneaud et al., 1967)

Selected References
Bogardus, Jackie, Denise Hackert-Stoner, David L. Martin, Barb Putnam and Scott Stoner (eds.). 2005. Birding New York's Hudson-Mohawk Region. Hudson-Mohawk Bird Club, Inc. 423 pages.
Budliger, Robert E., and Gregory Kennedy. Birds of New York State. Lone Pine Publishing International, Auburn, WA. 384 pp.
George, Carl J. 2006. The Scaffold Project: The Reist Sanctuary, Niskayuna, New York. Hudson-Mohawk Bird Club (available in the Adirondack Research Library of the Center for the Forest Preserve)
Schmidt, Claire K. 1992 (5th edn.). Natural Areas of Schenectady County. Environmental Clearinghouse of Schenectady and Schenectady Co. Environmental Advisory Council. 44 pages.
Young, Stephen M, Carl J. George and Ruth Schottman. 2005. Flora of the H. G. Reist Sanctuary, Niskayuna, NY (available in the Adirondack Research Library of the Center for the Forest Preserve)
Yunick, Robert P. 2005. A Story of Four Beginnings. Feathers 6 (67): 73-77.



Advice on the Trails
 See the map included in this guide.
 The Paul Schaefer (Yellow) Trail is 1.33 miles in length.
 Follow the yellow trail markers.
 There are a few moderate ups and downs.
 Several plank bridges cross streams.
 Some corduroy traverses wet areas.
 Spur trails offer alternative access.
 A few places host poison ivy and other poisonous plants.
 Use deterrents for ticks and biting insects.
 Feel free to remove fallen wood and vegetation from trails.
 Please enjoy at your own risk.



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A Field Guide to The Schaefer (Yellow) Trail
Henry G. Reist Wildlife Sanctuary
Niskayuna, New York
 Hudson-Mohawk Bird Club
 In Cooperation with
 The Association for the Protection of the Adirondacks
 Welcome to the Reist Sanctuary, one of the largest forest and open -space resources in Niskayuna. Owned by the Hudson-Mohawk Bird Club, Inc., the 111 acre preserve is a rich natural treasury, and embodies the stewardship values of the late Dr. and Mrs. H. G. Reist. Mrs. Margaret Reist donated the preserve to the Bird Club on 22 December, 1969, in memory of her husband.
 Consistent with the Reist's vision, the primary management goals of the sanctuary are to support and promote scientific research, education, and the quiet use and enjoyment by Bird Club members and the public.
 The Schaefer (Yellow) Trail commemorates and literally follows in the footsteps of the late conservationist Paul Schaefer, a close friend and neighbor of the Reist family, who helped care for this land and who also helped preserve the nearby Johannes Pearse homestead (1745-1790), one of the earliest domiciles in the area. We dedicate this guide to the memory of Paul Schaefer who convinced Dr. and Mrs. Reist to preserve these lands as a sanctuary.

