



THE SPRUCE MOOSE

A publication of the Adirondack Ecological Center

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Bringing the Backcountry to the Forefront: Distance Learning Technology Planned for HWF



Dr. William Porter

Message from the Director *by Dr. William F. Porter*

We love to see expressions of amazement.

Standing in a gentle rain on a warm afternoon in early August, 40 teachers peered through a fence. Whether they were from Long Island or Oregon, jaws dropped and eyes widened in amazement as they began to understand what they were seeing. On the far side of the fence was a thicket of yellow birch stems almost uniformly 30 feet tall and one inch in diameter. In stark contrast was the confusion of maple, ash, cherry, beech and birch, some short and others tall, in which they were standing. What was the difference? In that moment, ecology came alive for 40 teachers.

Now imagine those 40 teachers making science come alive for their students. Consider how many students could physically visit Huntington in a year. Then consider how many could participate in a virtual field trip. Imagine creating that Aha! experience for thousands of students through an interactive video link connecting the students and a scientist. Imagine the scientist standing at that fence posing questions to the students, eliciting their observations about the vegetation they were seeing, and then stimulating them to deduce the ecology.

These imaginings are within our grasp. Through the wonders of telecommunication technology, we are about to inject the Adirondacks into science classes throughout New York and beyond. We intend to engage students in a dialog with scientists via remote minicams and teleconferencing capabilities.

At the same time, advances in telecommunication are also driving us to bring more science into the Adirondacks. Installation of telemetry equipment around Arbutus Lake will allow real-time access to monitoring equipment that is measuring such variables as the acidity of rainfall, as well as provide video of current conditions via the Internet. This new capability will engage scientists from around the country, producing the new insights into the ecology of the Adirondacks that will become the Aha! moments of the future.

Our motto says: "Give us an afternoon and we will change your mind."

We did that for those 40 teachers and we are excited about the potential to be able to do that for more teachers and their students who will make a virtual visit to Huntington Forest.

RESEARCH NEWS AND UPDATES

AEC to Assist DEC Via Data Sharing, GIS Services *by Jennifer Gagnon*

If you've ever hiked, paddled or ridden through the Adirondack Park, you've enjoyed the thousands of acres of public forest preserve. This forest preserve is divided into 53 different management units. The Department of Environmental Conservation (DEC) foresters are responsible for writing Unit Management Plans (UMPs) for each unit. Planners are often faced with conflicting public interests, time restrictions, and limited access to data making completion of the UMPs an arduous task. ESF's Adirondack Ecological Center has partnered with Audubon New York, The Nature Conservancy, The Adirondack Park Agency, and other research and conservation organizations to provide additional data and geographic information services (GIS) support to DEC planners.

The Adirondack Research Consortium partners met Aug. 4 to discuss the "Application of GIS to Rapid Inventory for Unit Management Planning" (UMP-GIS) project. The goal of the UMP-GIS project is to provide planners with additional natural resources data, and help them use existing GIS data by providing interpretation, analyses, training and technical support services. The consortium's efforts are focused on improving the inventory portion of the UMPs as they have often lacked adequate data and failed to show how the facilities and resources are distributed. Dr. William Porter, AEC director and ESF professor of wildlife management, and Stacy McNulty, AEC wildlife ecologist, lead the project. The purpose of the meeting was to report the progress made during project's first year and discuss future objectives.

Several tools have been developed to assist planners with facilities data collection and decision-making during the first year. We have also completed analyses on land cover, breeding birds, potential deer yard habitat, and are involved with developing a new data set on ecological communities. Many of our analyses are conducted at the park-wide level, allowing planners to understand how their management units compare to the surrounding units and to the

park as a whole. For example, one analyses based on breeding bird data showed which management units are able to support bird species that are otherwise declining.

The progress reported by ESF graduate student Benjamin Zuckerg and Jennifer Gagnon, AEC GIS analyst, sparked even more enthusiasm for the project and stimulated questions and discussions about future contributions to the UMP process, including GIS training for planners and incorporating data from research on recreational use of the forest preserve. The partnership has been a great success. We have been invited to present our work at the next Forest Preserve Advisory Committee meeting.

Representatives from DEC Forest Preserve Bureau, DEC Wildlife Habitat Inventory Bureau, Adirondack Nature Conservancy, Audubon New York, Association for the Protection of the Adirondacks, Adirondack Council, Wildlife Conservation Society, Adirondack Park Agency, University of Vermont School of Natural Resources, Sweet Water Trust, and AEC/ESF staff and graduate students were in attendance.

STUDENT SPOTLIGHT

How Do You Value Your Recreational Experience?

by Nate Peters

EDITOR'S NOTE: Nate Peters is a graduate student studying recreation resource management in the Adirondack Park.

In 2003 I began a study on recreational use in various wilderness and wild forest areas of the Adirondack Park. This project has been a partnership between the Department of Environmental Conservation (DEC), Adirondack Park Agency (APA), Cornell University and ESF with the primary goal of aiding managers in developing individual Unit Management Plans for the areas studied.

The study was divided into two main components:

- How recreational experiences are affected by management conditions
- Estimate of use.

Data regarding use and travel patterns was obtained using trail registers and infrared trail monitors that record the date and time people pass through on a particular trail. Field interviews were conducted and surveys were mailed to gather detailed trip-related information about individuals' experiences. Using the data collected we made recommendations to managers as to how



Nate on location to interview park users.

recreationists perceive the current level of management and what improvements they would like to see. This adaptive style of management allows planners to make more informed management decisions while gaining insight from those who use these areas.

The Adirondack Park is a unique place requiring a similar style of management to ensure it remains a sustainable resource for years to come. The next time you're out enjoying the park and you're approached by an individual seeking input on management, take an active role in preserving these areas by voicing your opinions and concerns so they can be addressed to better manage the areas you cherish.

Winter Research Planned: White-tailed Deer Migration Patterns and Yard Placement

by Susan Walker

White-tailed deer have been trapped and tagged, fitted with radio collars, and tracked on summer range for roughly 40 years on Huntington Wildlife Forest. Even now this research continues, and this spring and early summer I led the trapping season, sharing the experience with ESF workstudy students. Despite the low capture success for the 2004 season, trapping and handling even one strong, healthy adult deer is a challenging yet exhilarating experience, altering a common perception of the white-tailed deer as a delicate creature.

As this research began answering questions about the matrilineal groups of deer on summer range within HWF, more questions arose regarding those female groups on winter range. This



Radio telemetry is used to locate collared deer.

winter, I will be evaluating microclimate within winter deer yards where locations have shifted from the historical areas predominated by coniferous cover to residential areas. Previous research on winter range has suggested these deer may be shifting their yard placement in response to a combination of factors, such as winter-feeding within residential areas and widespread habitat changes within the Adirondack Park as a result of softwood harvesting on private land, fires and blowdowns.



THE SPRUCE MOOSE is a semi-annual publication of the Adirondack Ecological Center. Submissions regarding news, research or events associated with the AEC or Huntington Wildlife Forest are welcome. Due to space limitations, *The Spruce Moose*

reserves the right to edit, omit or postpone submissions at our discretion. Submissions, comments, letters to the editor, and questions can be directed to Ray Masters or Marianne Patinelli-Dubay at aecbwf@esf.edu.

Now that winter-feeding has been officially banned by the Department of Environmental Conservation, I intend to determine if winter migration patterns and yard placement are influenced by microclimate variation within the residential and historical winter yards. This research will attempt to elucidate another detail in the knowledge base of the social groups of white-tailed deer studied on HWF.

Advancing Technology: Instrumentation Grant Awarded to Improve Ecological Research

by Blair Page



Blair discussing research at the Arbutus Outlet on HWF.

The Arbutus Lake watershed and the surrounding area have been used in the monitoring of water quality, atmospheric deposition, and various biogeochemical cycles since the early 1990s. This area is also used in various studies involving white-tailed deer, beaver, fish, amphibians, loons and other species.

The research in the Arbutus Lake vicinity is not only conducted by the faculty and graduate students at ESF, but also by researchers from Syracuse University, University of

Waterloo, SUNY Cortland, the USGS, the Adirondack Cooperative Loon Program and other institutions.

As an increasing number of projects continue to utilize this area, it became apparent that an improvement of the transportation and technological infrastructure of the Arbutus Lake watershed could significantly enhance current and future research opportunities at Huntington Forest.

Dr. Myron Mitchell and Pat McHale (EFB) were awarded a grant from National Science Foundation-Major Research Instrumentation (NSF-MRI) to enhance the research and education resources at the Huntington Forest with particular focus on the Arbutus watershed. This new major instrumentation can be used for addressing novel questions critical to field investigations. A coordinated suite of instruments will be acquired and a network developed for real-time data acquisition at the Arbutus experimental watershed. A combination of real-time measurements combined with wireless technology will be used to enhance this outdoor facility for both research and teaching. This facility will permit real-time monitoring of watershed hydrology, mercury biogeochemistry, wildlife telemetry with the ability to add additional functions as needs arise.

This new communications network will enable users to transmit and receive data through wireless links to various points within the watershed. As research in the ecological disciplines becomes increasingly more integrated, the ability to accurately monitor environmental, behavioral, hydrological, biogeochemical, and other variables in real-time will help to keep the work conducted at Huntington Forest at the forefront of scientific progress.

Recollections of the Second Webb Apprenticeship

by Jeremy Hurst

In 1948 William Webb published an article titled "Environmental analysis of a winter deer range." Recently, I too had the opportunity to study white-tailed deer winter yards in the Adirondacks. Aptly, the latter portion of my research was as the second recipient of the Bill and Helen Webb Apprenticeship.

My graduate studies first brought me to the Huntington Wildlife Forest briefly during the summer of 2001. I knew immediately that I needed to develop a research project to get me out of Syracuse and into the Adirondack Mountains. After pursuing a few deadends, Dr. William Porter and I focused on a simple observation made by the late Dick Sage: More deer seem to be wintering in residential areas today than 30 to 40 years ago. Questioning to what extent this observation was real, I set out to map winter deer yards and to track deer wintering in residential and non-residential areas.

What followed were dozens of early mornings and late nights fighting frostbite, hundreds of air miles, more than a thousand hours listening to radio signals, and a host of invaluable lessons in wildlife ecology. We determined that in 56 percent of the yards studied, deer had, indeed, shifted their wintering location toward either a residential area or a known feeding location. The possible reasons and mechanisms for these shifts are varied and too lengthy to be discussed here.

As my graduate program was coming to a close, I was awarded the Bill and Helen Webb Apprenticeship. This position afforded me the flexibility to simultaneously finalize my thesis and share in the supervision of workstudy students at the AEC. After spending long hours amidst the drudgery of analysis and writing, I was relieved to get out in the woods again. Deer trapping, of course, comprised the bulk of early summer work, but nest box surveys, loon surveys, grouse drumming counts, small-mammal trapping, and spotlight surveys of deer brought diversity to the schedule. We had a great crew of undergraduates and overall a wonderful and productive summer.

Now as I sit in my high school biology classroom waiting for the next group of students to come through the door, I reflect on the fantastic opportunities and experiences I had working at the AEC and living on the Huntington Wildlife Forest. I hope I can inspire some of my students to explore, look under rocks and rotting logs, learn bird songs, watch the sunrise over a swamp, and appreciate the diversity and creativity outside their windows.

NEWS AND NOTES

HWF Regeneration

by Paul B. Hai

If the only constant is change, than the Huntington Wildlife Forest is entering a period of remarkable constancy. Three major projects are underway which will significantly improve the facilities offered and research conducted on the HWF property. In addition, two projects in the planning stages will catapult the station to the leading edge of communications for sharing education and research programming.

Additions at the Rich Lake area

With a grant application to NSF funded this summer, two new bunkhouses are now in the engineering phase. The new bunkhouses, sited in the woods above the White Pines area, will complement the existing bunkhouses and provide additional year-round accommodations for undergraduate and graduate students. The new units will improve on the existing bunkhouse design by incorporating a screened-in porch and extended roofline for improved snow shedding. Completion and occupancy is anticipated for June 2005.

Expansion at the Rich Lake Dining Center

If, as the saying goes, “starving people make bad conservationists” then the Rich Lake Dining Center staff deserve credit for fueling 12 years of excellent conservation-related research. Now we are improving their ability to feed resident researchers and visiting groups through a significant kitchen renovation. The improvements will alleviate the chronic shortage of refrigeration space by providing a new walk-in cooler and freezer, as well as replacing inefficient kitchen equipment and creating additional storage. HUD has committed funds for the project through the efforts of Congressman John M. McHugh.

Renovations at the Arbutus Area

Perhaps the most far-reaching project currently in development at Huntington is the creation of a teleconference and distance-learning center. The first phase of this long-term project is the renovation and restoration of the Arbutus area. This endeavor revolves around embracing the history and historical significance of Arbutus and Huntington lodges.

Arbutus Lodge is the last remaining building of the original Mossy Camp, designed and built by William West Durant (1898). Janet Null of Argus Architecture and Preservation has developed a proposal that is at once sensitive and pragmatic for the restoration of these two structural treasures generously left to us by the Huntingtons. Argus was responsible for the restoration at Great Camp Sagamore in Raquette Lake, perhaps Durant’s greatest camp. Funding is currently being sought for this first phase.

Phase Two of the project will be a major undertaking to build a brand new, more efficient physical plant facility thereby allowing the transformation of the Stone Garage into the Carriage House Teleconference Center.

For more information, or to contribute, please contact Dr. William Porter (wjporter@esf.edu) or Brenda Greenfield (bgreenfield@esf.edu) in the ESF College Foundation office.

A Room With a View

The 2004 field season marked the beginning of a cooperation between the Adirondack Ecological Center and Elk Lake Lodge, North Hudson, NY. ESF graduate student Carolyn Spillman was the first to participate in this partnership; in exchange for work at the lodge Spillman received room, board and the opportunity to spend the summer on the 12,000-acre private forest preserve.

Employee Advancement

We are happy to announce the promotion of two staff members. Stacy McNulty, ecologist and GIS specialist for the AEC, began her fifth year of serving the college as a new research associate. Director Dr. William Porter noted Stacy’s “energy, initiative, and imagination are key to our success.”

Marianne Patinelli-Dubay has been appointed to a full-time permanent position at the AEC as administrative assistant to the director and staff. She continues to be responsible for budgeting and account maintenance, housing and accommodations, office management and co-editing the Spruce Moose.

Summer is Topped off with Huntington Reunion

by Ray Masters

The sixth Huntington Reunion held Aug. 27 to 29 was attended by more than 50 alumni, family and friends. The wine and cheese party Friday night at Huntington Lodge was well attended. Dr. William Porter’s recent initiatives in future planning for a distance learning center at Huntington Forest were recognized by the AEC staff when they presented him with a wrist-watch featuring the Spruce Moose logo.



Reunion guests relaxing at Arbutus Lake

Most of the Saturday and Sunday activities took place outside and although there were some clouds, the tour around the Huntington Forest and the ride/walk along Rich Lake were completed in dry conditions. The afternoon tour of the Cagnawauga Club was limited to the historic five-room log Guide’s Cabin due to time constraints. The cabin is in remarkably good shape given its 100-year age.

At the picnic at Rich Lake beach, we were treated to an especially beautiful sunset and steaks cooked over a charcoal fire. All of Sunday’s trips — the guided canoe paddle on Rich Lake, the gondola ride at Gore Mountain ski area and the float plane trip from Long Lake — were much enjoyed. We will keep you posted on the HWF reunion in 2006.

Stalking Science Ed Through Moss-colored Lenses

by Professor D. Andrew Saunders

“Look closely and slow down!”

With this gentle reminder Dr. Robin Kimmerer opened the 18th edition of Stalking Science Education in the Adirondacks. She soon had 20 new bryologists bending over boulders and crawling along logs ... slowly, closely, examining the world of mosses. Few guest scientists have generated the compliments and appreciation Kimmerer elicited from this summer’s teachers, a tribute to her friendly, unpretentious teaching and mastery of subject area. Armed with Kimmerer’s book, “Gathering Mosses,” and the new Roosevelt Wild Life Station Science Education Module, “Mingling With Mosses,” the teachers were prepared to share their newly acquired knowledge of this seldom-noticed world with future generations of young naturalists.

From this auspicious beginning, the rest of the week flew by.

After intertwining great naturalists with nature journaling techniques, the teachers slipped into interpretive protocols in bog and forest alike, coupling introductions to natural communities with quantitative approaches amenable to any schoolyard setting. One day of practice in dissecting and reassembling a northern hardwood forest as an ecological narrative reassured practitioners of their new skills and earned everyone an evening off for a steak roast on Catlin Lake beach. The evening was enhanced by the camaraderie of dedicated teachers. During the week, the teachers designed and completed original research projects, sharing these models of fresh perspectives for the week's culmination.

Scott Jordon, science teacher from Cuba-Rushford Central School and former Stalking Science participant, provided a final accent with illustrations of Stalking applications in his classrooms. Mike Mallon and Dave Baker, veteran Stalkers, continued their roles in assisting with the program and its documentation. The Adirondack Park Agency Newcomb Visitor Interpretive Center staff shared trails, classroom and registration services. Naturalist Ellen Rathbone interpreted forest products as part of a trail routine. Teaching assistants Carrie White and Jenn Mokos, graduate students in ESF's environmental interpretation program, spent six months planning and preparing the program roster and then pitched in with the critical touches to ensure success. HSBC Bank USA and Camp Fire Conservation Fund, Inc., generously underwrote program expenses.

From nature journaling to electronic journaling, from interpretive skits to interpretive kits, the 18th edition of Stalking Science Education in the Adirondacks unfolded in a progression of novel strategies for teachers to take back to their schools. The strategies energize and enrich science education by engaging students in the process of science through the guided exploration of conservation themes and the nature closest to the classroom door.

RECOLLECTIONS AND REMEMBRANCES

My Love Affair with the Huntington Wildlife Forest

by Donald F. Behrend, Ph.D.

EDITOR'S NOTE: This is the second installment in a series of articles by Dr. Behrend, AEC director from 1960-73. He left the AEC for an administrative post at ESF and retired as chancellor of the University of Alaska at Anchorage. He and his wife, Joan, reside in Anchorage.

By the spring of 1961 we knew winter on the Huntington Forest could be as beautiful as summer. But now we needed to vacate the old Research Center for the incoming summer crew and we engaged in a frustrating search for a rental. With perseverance and luck, we found a place in Long Lake for a year. Then it was back to the forest for summer in the old quarters now known as the Algonquin Cabin, off to Syracuse for the 1963-64 academic year, back to the old quarters, and into a brand new ranch house in December.

Those early years taught us much about the joys and trials of living in the North Country. We learned the 22 miles of the old road from Long Lake to the hospital in Tupper could seem like 122 when Joan was within minutes of delivering Eric. We found spring and early summer could challenge our peaceful coexistence

with bears attracted to the easy pickings of neighborhood garbage. Worse, there was the ever-present problem of porcupines intent on devouring plywood doors, garage studs, and radiator hoses.

Early winters afield confirmed that while the forest was beautiful in winter it was more demanding than in summer. Attention to temperature, wind and the condition of ice on the waterways was a must. Field vehicles required constant attention too. The vehicles consisted of a two-tracked, government surplus cargo carrier known as "the weasel," and a single-track, single-ski Skidoo. The former was prone to throwing a track if not treated tenderly, the latter to refusing to be steered in certain snow conditions.

During one winter Catlin and Wolf lakes were sampled as part of a year-round study, including bottom samples. This required sizable holes in the ice to accommodate a large iron dredge. My job, among others, was to cut those holes through about 40 inches of ice with a chainsaw and an ice chisel. (Believe me, nothing short of heartfelt expletives can do justice to describing this chore.) Once a hole was established and the first samples taken, I placed cut brush in it trusting that the subsequent ice would be less solid and less thick the following month, and that the brush would serve as a site marker. This worked perfectly—almost. You might ask, "What happened when falling and blowing snow obscured the hole site, brush and all?" Simple. Carrying a long, stout pole I cautiously approached the suspected hole-site banging the end of the pole down hard on the ice and listening to the resulting sound: "bong," "bing," "bong," and there was the hole site at "bing."



"The weasel," was used to transport researchers and equipment on HWF.

"But," you ask, "what would happen if you somehow missed the hole site with the pole and the stepped forward onto the site?"

My sample of one at the 30-foot depth on Catlin Lake one March morning is small, but definitive. You go from -19 degrees F air to 32 degrees F water back to -19 degrees F air where your clothes freeze instantly but you don't care because you are still alive. Then, as you hope to remain so, you sprint for the weasel, start the engine and soon bask in enough heat to confirm you probably will survive for another sampling and another busy summer field season.

In the early '60s the summer crew arrived along with the blackflies and the rush to get the seasons fieldwork underway. My first experiences with songbird censusing came in 1961 and '62, the last two years of songbird studies in logged areas and the natural area which served as a control. This work involved a lot of sweat, blood and bug dope, and required much concentration to sort out and record individual species from a cacophony of bird songs. Small mammal trapping followed, rain or shine, with the joys of baiting and re-baiting hundreds of snap traps with peanut butter. Throughout the summer there was vegetation to be tallied, plots to be scarified, overhead shade to be reduced or removed, and enclosures to be made or mended in a variety of studies. Just in case you got lost on Cloud Nine, there were the blackflies, deerflies, mosquitoes, or punkies to bring you back to reality.

The summer of 1962 brought another pest to the scene. Complaints about wasps abounded, though I had few encounters. I ribbed the complainers about their overactive imaginations. This came to an abrupt end one afternoon as I was descending a slope to the north shore of Rich Lake with a mistblower on my back. Suddenly, I felt as if I had walked into nettles, but a glance at my legs revealed yellow jackets. A short dash put me in waist high water and freed me from the tormentors who had nailed me 14 times. Thus, the “ribber” became the “ribbee.”

About this time, it became clear that we needed to prepare for expanded studies of deer, which would require capturing and marking numbers of animals. We soon were trying to capture deer by

immobilizing them with drugs delivered by darts fired from a gas-powered gun, a technique then in its infancy.

Today, a paperweight on my desk reminds me of how far capture and marking techniques have since come. The paperweight is, I believe, the first “remote sensing” device ever placed on a Huntington deer. This blue and white sheep bell is missing much paint but it still transmits on the same frequency as it did when “Lulubelle” carried it around the Arbutus area 40 years ago. What followed this humble beginning is yet another chapter in my love affair with Huntington Wildlife Forest.

Adirondack Guide Boat



The Durant-designed Arbutus Lake boathouse, pictured left during the Huntington era, is one of the few belongings of Archer or Anna Huntington's to survive at Huntington Wildlife Forest. Perhaps the most intriguing, and largest, remaining artifact from the Huntington era is a dilapidated but structurally sound Adirondack guide boat. Its origins and history are being researched. Anyone with recollections or stories from individuals who used or remember the boat should contact Paul Hai at the Adirondack Ecological Center, 518-582-4551.