



# The Blue Bill

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Submissions should be in MS Word format or in "plain text" format (PC or Macintosh) or unformatted in the body of an e-mail.

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## President's Page

*Erwin Batalla*

I hope that you all had an excellent summer despite the prolonged warm and humid period that characterized it. This weather must have been favourable to milkweed because the number of Monarch butterflies appears to have rebounded from last year's low.

Since I am beginning my second year as president, let me recount a few events of the past summer that are in keeping with my "lame duck" status.

In July, we visited Big Bend National Park in west Texas. We also went to the Davis Mountains and the Chiricahuas in Southeast Arizona. The temperature was high, often 40 degrees Celsius, but the humidity was low. Water levels were very low everywhere. The Rio Grande was especially dry and it would have been possible to walk from the US to Mexico without getting any mud on your shoes. As a result, after driving approximately 1,500 miles, we noted that our trip list did not include any ducks.

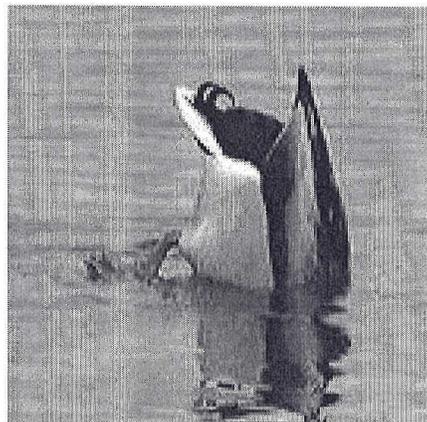
A week after returning to Kingston, a friend got in touch with us. When she went to feed her ducks and geese, she noticed a dead duck and a Great Horned Owl all muddled in the corner of the pen. We managed to put the owl in a cardboard box and I drove to Napanee with it. All the while I hoped that the tape on the box would not give way so that I would not have to contend with an angry owl while driving on the 401. I finally reached the Sandy Pines Wildlife Centre where Sue Meech examined the owl. It had a broken tail and Sue surmised that, driven by hunger because it was unable to fly and hunt its regular prey, it had gone into the pen to kill the bird which was (her words) a sitting duck. The owl is now flying and has gained weight.

Migration began in early August for shorebirds and recently little flocks of warblers have been noted. Soon, the large skeins of geese will be seen in the fall sky and ducks will congregate off Amherst and Wolfe Islands, at Belle Island and at the mouth of the Little Cataraqui.

Before I am accused of ducking the issues, let me report on some Club events this past summer. The BioBlitz was an enormous success and we surpassed our attendance record as well as the number of species observed. Some of you may have noticed that the Helen Quilliam Sanctuary sign went missing in late May. It was the victim of vandalism, but, fortunately, a neighbour out jogging located the sign in a ditch nearby and it should be back in place soon. We also have experienced some difficulties with the pumping system to provide water for the cows on our Amherst Island property, but thanks to the work of many volunteers, the problem seems to be rectified for now, though a more permanent solution may require more expenditure.

I encourage all of you to join us on rambles, field trips and general meetings. After all, if it walks like a duck and quacks like a duck, it must be a naturalist.

*Erwin Batalla*



## Kingston Field Naturalists Income Statement for the Year Ending March 31<sup>st</sup>, 2005

*George Irwin*

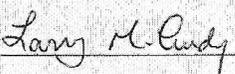
### REVENUE

BOOK AUCTION	569.50	
DONATIONS	4705.00	
GRAZING FEES -AMHERST ISLAND	1900.00	
GST REBATE	951.96	
INTEREST INCOME	6658.49	
MAY DINNER MEETING	2450.00	
MEMBERSHIPS	8207.00	
SALES (MERCHANDISE)	977.50	
DESIGNATED FUNDS	6839.87	
OTHER INCOME	27.50	
TOTAL REVENUES		33286.82

### EXPENSES

ADMINISTRATION	1675.62	
AWARDS - JUNIORS	200.00	
BANK CHARGES	59.45	
BLUE BILL (QUARTERLY MAGAZINE)	2835.30	
COMMUNITY ACTION PROJECT	623.71	
CONSERVATION COMMITTEE PROJECT	6188.07	
DONATIONS	775.00	
HABITAT PRESERVATION	285.00	
IBA PROJECT	8000.00	
INSURANCE	1565.00	
INVENTORY PURCHASE	464.25	
MAY DINNER MEETING	2128.50	
MEMBERSHIP EXPENSES	1714.89	
PROPERTY EXPENSES	11911.20	
PUBLICITY	1022.92	
RENT - MEETING ROOMS	2211.26	
SPEAKERS	143.69	
SUBSCRIPTIONS & MEMBERSHIPS	715.00	
TAX - PROPERTY	1056.49	
TELEPHONE LINE	473.37	
BOOKS INVENTORY REDUCTION	166.50	
BOND PURCHASE EXPENSE	422.96	
TOTAL EXPENSES		44638.18
LOSS		<u>-11351.36</u>

**Kingston Field Naturalists Balance Sheet for the Year Ending March 31<sup>st</sup>, 2005**  
*George Irwin*

KINGSTON FIELD NATURALISTS BALANCE SHEET FOR THE YEAR ENDING MARCH 31, 2005		
<u>ASSETS</u>		
BANK ACCOUNT	13,723.12	
RAFFLE BANK ACCOUNT	0	
WOOD GUNDY ACCOUNT	0	
BELL BOND	44,000.00	
GMAC BOND	10,000.00	
TRANSALTA BOND	30,000.00	
TOYOTA CREDIT CANADA BOND	15,000.00	
ROYAL BANK BOND	5,000.00	
PROPERTY	120,800.00	
EQUIPMENT	257.47	
INVENTORY	1,384.16	
TOTAL ASSETS		240,164.75
<u>LIABILITIES &amp; EQUITY</u>		
MARION WEBB FUND	28,000.00	
HABITAT PRESERVATION FUND	10,479.18	
LIFE MEMBERSHIP RESERVE	7,600.00	
NAN YEOMANS BEQUEST	1,000.00	
GENERAL EQUITY	193,085.57	
TOTAL LIABILITIES & EQUITY		<u>240,164.75*</u>
 <u>NOTE</u>		
* Total Equity-March 31, 2004	251,516.11	
Loss on 2004/2005 Operations	<u>- 11,351.36</u>	
Total Equity-March 31, 2005	240,164.75	
 We have reviewed the bank statements together with the supporting documents. We find the above statements accurately reflect the financial position of the Kingston Field Naturalists for the year ended March 31, 2005		
		
Larry McCurdy	Alexandra Simmons	

## Aspects of Amherst Island

### *Joe Benderavage*

The Sunday morning hike of 14 August 2005 began with an impromptu assembly at 7:15 AM around the Amherst Island ferry dock in Millhaven, Ontario. Outing leader Bruce Ripley welcomed everyone and gave a brief summary of the day's objectives, and temporarily assigned people to fill car space so that the smallest number of vehicles possible could board the 7:30 ferry to Amherst Island. We set sail punctually, and landed about 15 minutes later. I was a passenger in Bruce's van, and we travelled from the dock to the eastern end of the island, seeing en route a Red-tailed Hawk (*Buteo jamaicensis*) in a tree, and a flock of Canada Geese (*Branta canadensis*) grazing in a farmer's field.

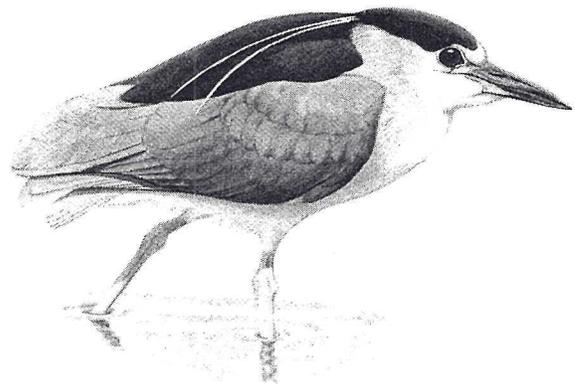
We parked at the road's end, and hiked along the south shore of the Club's property to a point at the northeastern end of the island. Along the way, we were treated to a relatively close view of a juvenile Black-Crowned Night Heron, the tautonymical *Nycticorax nycticorax*, along the shore of a pond as it stood in "still-hunt" pose, oblivious to several excited naturalists, including me and my son Ivor. Also encountered, but at greater distance, were a Double-crested Cormorant (*Phalacrocorax auritus*), a Mourning Dove (*Zenaidura macroura*), a Semi-palmated Sandpiper (*Calidris pusilla*), Savannah Sparrows (*Passerculus sandwichensis*), Least Sandpipers (*Calidris minutilla*), claimed to be the world's smallest sandpiper by Cornell Laboratory of Ornithology, Black Terns (*Chlidonias niger*), Cliff Swallows (*Petrochelidon pyrrhonota*), and Tree Swallows (*Tachycineta bicolor*).

The sky was overcast, there were sporadic showers, a south wind, and dark clouds approaching from the south. Yet along the limestone lakeshore we saw Baird's Sandpipers (*Calidris bairdii*), Stilt Sandpipers (*Calidris himantopus*), Wilson's Phalarope (*Phalaropus tricolor*), more of which were seen on floating kelp beds, and a Whimbrel (*Numenius phaeopus*). Beach Morning Glory (*Chalystegia*

*soldanella*) and Bur Weed, as well as Water Smartweed (*Polygonum amphibium*) grew along a beach littered with freshwater clam shells. We returned to the vehicles when rain became imminent. On the way back to the ferry dock, we saw an American Kestrel (*Falco sparverius*) in a roadside treetop.

We also toured the Wilton Creek area, but the dry creek bed of pavement-like limestone was only too evident because of recent drought conditions, so wildlife was notable for its absence.

On a side trip to the Amherstview Water Contamination Control Centre, we saw, in the ponds and puddles there, Short-billed Dowitchers (*Limnodromus griseus*), Lesser Yellowlegs (*Tringa flavipes*), Bank Swallows (*Riparia riparia*), Tree Swallows, Shoveler Duck (*Anas clypeata*), Bufflehead Duck (*Bucephala albeola*), Bonaparte's Gulls (*Larus philadelphia*), Herring Gulls (*Larus argentatus*), and Yellow Warblers (*Dendroica petechia*). I saw four of these warblers in one glance through the binoculars, but I heard someone else say they had seen nine! Also seen on the very far shore of the pond were a White-tailed Deer (*Odocoileus virginianus*) and its fawn.



## Discovering Ecuador

### Gail Gault

A group of ten intrepid KFN birders under the leadership of Kurt Hennige birded the north of Ecuador from March 5<sup>th</sup> to 17<sup>th</sup>, 2005. A second group, whose exploits will be the subject of another article, continued in the south for another week. For some, it was the first time in South America. Even those who had been there before were faced with a bewildering array of strange and confusing bird names to remember—Tinamous, Antbirds, Puffbirds, Trogons, Euphonias, etc., and birds that challenged our ability to distinguish between various shades of brown and various shapes of dots. We saw over 400 species in the two weeks, so I will mention only some of the highlights.

We travelled through a variety of climate zones. In Ecuador, as in other Andean countries, that means that instead of going north and south, we went up and down—from 9,200 feet in Quito, up to 11,000 feet in Yanacocha, back to Quito, down to Mindo at 5,600 feet, up to 7,500 feet at Bellavista, down to 1200 feet at San Pedro Maldonado, back to Quito, up to 14,400 feet in the Papallacta area, back to Quito, down to 730 feet in the Napo River area in the eastern lowlands which is part of the Amazon River Basin. We walked in Temperate Forest (9,000-12,000 feet), Cloud Forest (below 9,000 feet), Paramó (above 12,000 feet), Rain Forest and Coastal Lowlands. We experienced these climate zones in both the western and eastern ranges. The result was a wonderful learning experience, because there are different birds in the east and west as well as in the different climate zones.

#### Western Andes—Yanacocha

In Quito, a few experienced the effects of high altitude—sleeplessness, loss of appetite, headache and weariness. Nevertheless, warriors that we were, some of us birded in the Temperate Forest of the Yanacocha area in the western Andes on the morning after our arrival, leaving the afternoon for a relaxing city tour (I slept on the bus) and a little tour of the market for souvenir shopping.

The photographers were delighted to find a baby Sapphire-vented Puffleg, a hummingbird, which had just left the nest and still could not fly very well. We continued on to the hummingbird feeders and recorded Shining Sunbeam, Great Sapphirewing, Tyrian Metal, Sparkling Violet-ear, Buff-winged Starfrontlet and more Sapphire-vented Pufflegs.

The next day, the whole group returned to the area and birded more intensively, moving on to more distant hummingbird feeders and adding Rainbow-bearded Thornbill, Golden-chested Puffleg and the spectacular Sword-bill Hummingbird to our list of hummingbirds.

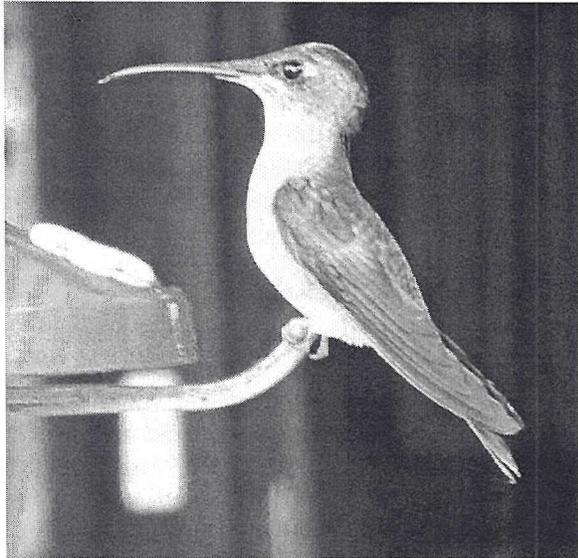
#### Western Andes—Old Mindo Road

When we left the Yanacocha Reserve, we continued through the Temperate and Cloud Forests of the Old Mindo Road which had the advantage of being so twisty and narrow that there was almost no traffic. We stopped on the side of the road for a box lunch and a Short-eared Owl and an American Kestrel flew by. We had a big hunt before finding the secretive but loud Tawny Antpitta, a bird that we continued to hear on both sides of the Andes but that we saw only once more. We also had an adventure. The road passes through the little town of Nono (pronounced No-no). Our bus stopped on the edge of the town so that we could bird. A little



White-necked Puffbird – photo by Gail Gault

truck approached. The driver yelled "Don't block the road!" Xavier, our guide, told him there was enough room to pass. The driver and his companions got out of the truck, and after some back-and-forth discussion of foreign Spaniards, indigenous owners of the land and who should be around Nono, the companions showed their friendliness by shaking our hands, offering cigarettes, and hustling the driver back into the truck. All three drunks drove away.



Female Emperor Brilliant – photo by Gail Gault

We searched for White Dippers and Torrent Ducks. Xavier saw a duck but no one else did. The day ended at Sachatamia Lodge where we spent the next three nights. We were welcomed with a hot spicy sweet liquor. In the morning, the breakfast tables were lined up along the window where we could get a good view of about eight hummingbird feeders. We added twelve hummingbirds to our list, even though it was pouring rain. My favourite was the Velvet Purple Coronet, large and brilliantly coloured. Others liked the Booted Raquet-tail with its flowing streamers, and the Purple-throated Woodstar, a bumblebee of a bird. We went birding on the property in the rain, and the birds were there although I could not see them well because of drops on my glasses and binoculars. After lunch, we birded along the roads around Mindo and went to a butterfly farm that raised butterflies to mount in plastic. They used to export them, but found the competition was too great. The bird that caused great excitement was

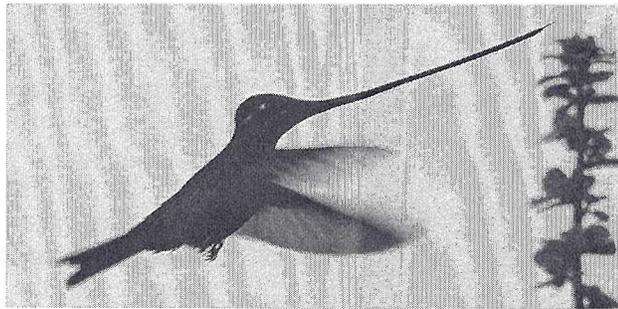
the beautiful Toucan Barbet. Only half of us got to see it before it retreated into the forest. But we found two White-capped Dippers, easily seen. After dark, and using lights, we found a pair of Lyre-tailed Nightjars.

In the morning, we had another adventure. We were away before dawn, equipped with rubber boots and flashlights to hunt for the Andean Cock-of-the-Rock. The local guide hopped out of bed when we came into his driveway and we started off through mud, water, and cowpaths to climb up to the lek (a mating display area). The ease of the trail had been a little understated and some of us stopped short of the goal. The walk was about half a mile with a rise of 300 feet. Of those who made it, only I failed to see the bird, despite everyone's best efforts to show me. I heard it, though. We had the Bellavista Lodge as our objective for lunch, so we birded toward it, back along the part of the Old Mindo Road that we had missed after dark on the way down. Along the way, we had great views of Red-billed Parrot, Swallow-tailed Kite, Crimson-mantled Woodpecker, Blue-winged Mountain-Tanager, Golden Tanager, Blue-black Tanager, Masked Trogon, Crested Quetzal, and Plate-billed Toucan. Bellavista had hummingbird feeders, and three of their gems were Collared Inca, Gorgeted Sunangel and Long-tailed Sylph. By lunchtime, it was pouring rain, so we returned to our lodge after lunch, and most of us read, socialized or watched hummingbirds from the dining-room window, while the lodge staff scurried around fixing the many leaks that appeared. A landslide took out the electricity for two or three hours. I was watching hummingbirds so I did not notice until dark.

### Western Andes—San Pedro Maldonado

The next day was much warmer because we descended to 1,200 feet in the San Pedro Maldonado region. We had been birding between 7,000 and 8,000 feet. At this lower level, there was more farming and open country. The farms were fairly new and Xavier was lamenting the loss of forest caused by them, even though he recognized that people had to eat. We saw Blue-headed Parrot, Pacific Hornero, Pacific Parrotlet, Scarlet-backed Woodpecker, Smoky-brown Woodpecker,

Guayaquil Woodpecker, Green Honeycreeper, Palm Tanager, Golden-hooded Tanager, Blue-necked Tanager and a special bird. By arrangement with a farmer, who was paid to protect the habitat, we were permitted to enter the property to see a Black-tipped Cotinga. Back near Sachatamia Lodge, we stopped for another try for the Toucan Barbet. The tape was played. We heard them away down across a large valley. I could scarcely believe it when two appeared only a few feet away, giving everyone an excellent view. We took the new road back to Quito, passing by Centro del Mundo (which means Centre of the World and is on the Equator, give or take 90 feet) to see the monuments erected at the Equator. One of the gallant men found flowers for the ladies at one of the stops.



Male Sword-billed Hummingbird – photo by Gail Gault

### Eastern Andes—Papallacta

On Thursday, we went to the eastern Andes. We saw lots of little birds such as the Pale-naped Brush-Finch, Brown-backed Chat-Tyrant, Giant Conebill, Red-rumped Bush-Tyrant, Andean Tit-Spintail, Plumbeous Sierra-Finch, Grassland Yellow-Finch, Blue-and-Yellow Tanager, Many-striped Canastero, Black-billed Shrike-Tyrant, Band-tailed Seedeater, Black Flowerpiercer. We drove up the mountain, definitely a Paramó climate zone, looking for Andean Condors and Seedsnipe. We got Bar-winged Cinclodes and Stout-billed Cinclodes. However, the birds of the day were definitely the two Andean Condors we saw later in the day at 14,354 feet. What luck! Instead of driving 40 minutes from the mountain to the Papallacta Lodge where we would be staying, we had decided to have lunch at the little wayside restaurant where we had stopped for coffee and relief. Then we had time to go back up the mountain. Just as we got to the top, the condors flew by, only once. I hope those who had difficulty with the restaurant food agreed that this result was worth it. On the way down the mountain, we got Andean Teal, Andean Ruddy Duck, Andean Coot, Silvery Grebe and a Great Horned Owl.

The Termas Papallacta Lodge was built around thermal springs, heated by a nearby volcano. Fifteen feet from your cabin door you could soak in deliciously warm water. Some of the group decided to enjoy this spa atmosphere and bird around the property instead of birding by bus. Although the lodge used to be more birder-friendly, now its interest is the spa. Breakfast could not be had before 7:30. No problem. We would bird from dawn, come back for breakfast and carry on. The gates were locked at 6 and it took a bit of time to find the guy with the key.

The rest of the day was great. Near Baeza, at a somewhat lower elevation, we saw a lot of colourful tanagers, flycatchers (including the Fork-tailed Flycatcher), Red-breasted Blackbird,

Peruvian Meadowlark

and Black-chested Buzzard-Eagle. It was the pair of Torrent Ducks sitting on a rock that really got our attention. We also saw a Southern Yellow Grosbeak and heard a Rose-breasted Grosbeak.

### Eastern Ecuador—Napo River Valley

We returned to Quito and the next day began another adventure. We flew to Coca (20 minutes or so) and during the flight, we were served a chicken salad snack. Air Canada, take note! At Coca, we were loaded onto a chiva bus, a truck with seats set on the open but covered truck bed, a railing to be used as a step to haul yourself up and in—large hips had to go up and over, not through the opening. Luggage was stored on top. The ride was only five minutes. Then we transferred to a motorized canoe that I would call a water taxi, for a two-and-a-half-hour ride down the Napo River, birding as we went. Then we transferred to two dugout canoes, each paddled by two men for two hours until we reached the Napo Wildlife Centre. We were met at the dock by Marcelo who had a cup of hot chocolate for each of us. This was a routine for each return from each excursion and varied only by the drink offered. On the hot afternoons, the cool juices were especially appreciated.

We spent five nights at this location, with barely enough free time to use the hammock provided on our verandah. There was a birding tower attached to the restaurant-lounge from which we observed Yellow-rumped Caciques, Russet-backed Oropendolas, Greater Yellow-headed Vultures, Blue-gray Tanagers (eastern variety with white on the wing) and Snail Kites. There was another tower, which Pauline Hockey said was 205 steps high, which we visited twice. It was good in the morning and awesome in the afternoon.

### **Parrot-dise (*pun courtesy of Rob Worona*)**

We visited two parrot licks, exposures of clay which the parrots eat in order to neutralize the poisons in the fruits they enjoy. Both licks are revenue sources for the National Park; the Wildlife Centre collects the fees on behalf of the government, which, prior to the establishment of the Centre, had no means of collecting revenue, protecting the birds or monitoring access. Comfortable blinds have been built. Other lodges bring their clients here as well.

Some of us took a jungle walk rated difficult, in search of a Trumpeter, but instead found lots of antbirds, woodcreepers, a Slate-coloured Hawk, a Blue and Yellow Macaw, a Yellow-billed Jacamar and a Least Bittern. Bud Rowe wanted to see a Motmot. Within two minutes of asking the guide, Giovanni, there was a Blue-crowned Motmot overhead. The others went to the tower, and while they were waiting for birds, their guide Jorge explained what it was like to live in their village, how they make their medicines, cook their food, etc.

The Napo Wildlife Centre is a fine example of a wilderness lodge becoming a source of employment of 160 Quichua people while respecting the integrity of the wilderness around it. It is located within the Yasuni National Park. The "community," as the guide Giovanni calls it, clears the trails, cuts out trees from the creek, digs out mud from the creek so the canoes can pass, lays logs and puts in handrails on the trail, cleans the cabins, puts up the mosquito-netting at night and does anything else that needs doing. Only four staff members are not part of the community, and I think that will change as they

get more training. The community have decided against putting out feeders because they do not want to bait the birds. However, they have planted shrubs the hummingbirds like, so that they were attracted naturally. It took eight years from idea to opening of the lodge which, by March, had been in operation for a year and a half, but it required the publicity and funding provided by the US organization Tropical Environment to attract clients.

We saw: Double-toothed Kite, Slender-billed Kite, Black Caracara, Purple Gallinule, Hoatzin, Chestnut-collared Macaw, Many-banded Aracari, Collared Puffbird, 5 kingfishers, Spot-backed Antbird, Dot-backed Antbird, Spot-winged Antbird, Cinereous Antshrike, Scarlet-backed Antbird, Grey Antwren, White-crowned Manakin, Wire-tailed Manakin, White-fronted Nunbird, Eastern Sirystes, Blue Dacnis, Green Honeycreeper, Purple Honeycreeper, 3 Euphonias, Turquoise Tanager, Opal-rumped Tanager, Opal-crowned Tanager, and the loveliest of birds, the Paradise Tanager. We also saw Spider Monkey, Red Howler Monkey, Golden-mantled Tamarin, Squirrel Monkey, tracks of Tapir and Peccary, and Giant River Otter.

On night walks or paddles, we saw Tawny-bellied Owl, Marbled Wood-quail, Great Tinamou, a Rainbow Boa Constrictor (our one and only snake), Zigzag Heron, Green-and-Rufous Kingfisher, American Pygmy Kingfisher, Pauraque, and 9 Caiman (one was 14 feet long—no one took Kurt up on his invitation to go swimming).

Another highlight for Pauline and me was the roses. They were in the hotel lobbies, used as welcoming handouts when we got off the plane and so nicely priced that we were able to bring home a couple of dozen each.

I am sure you could tell that we had a wonderful time. Edith Costello continued on to Bolivia. Bob Stewart, Rob Worona and Bud Rowe stayed for the third week with Kurt. Lyn Bell, Joe Percy, Arlene Aish, Pauline Hockey and I had decided that two weeks of such intensive birding was all that we could absorb.

## BioBlitz 2005 Report

*Anne Robertson*

The seventh Great Canadian BioBlitz of the Kingston Field Naturalists was held June 17<sup>th</sup> and 18<sup>th</sup>, 2005 at the Lost Bay Nature Reserve. Despite poor weather, the turnout was good and the results impressive.

This year, Volunteer for Nature and the Kingston Field Naturalists surveyed a property of Ontario Nature called Lost Bay Nature Reserve. The Nature Conservancy of Canada holds an easement on this property and has a stewardship agreement with the Kingston Field Naturalists who monitor the property. The 43-hectare tract is very close to Gananoque Lake, and is located on the Algonquin-to-Adirondack corridor, on the Frontenac Axis and within the new Frontenac Arch-Thousand Islands Biosphere Reserve. It is made up of Great Lakes-St. Lawrence Islands forest types and has provincially significant wetlands—opportunity for a good selection of species.

For the first time this year, a committee was set up to run the event. They met twice indoors to plan and once on site before the event. The committee members were Erwin Batalla (who took responsibility for tally sheets), Chris Grooms (publicity), Bruce Ripley (BBQ and butterfly identification workshop), Bud Rowe (money matters), Cameron Smith, who was instrumental in setting up the reserve and lives nearby (trails and maps) and Anne Robertson (chair). All these people did a great deal of work and spent many hours preparing for the successful event. Their support was greatly appreciated. Many other members were involved in the smooth running of the event, including Maureen Addis Martin and Jacqueline Bartnik (for snacks and transportation), Bonnie Mabee and Susie Rance (for help with registration). We are particularly grateful to John and Lora Lee Buchta who allowed us to set up a base on their property. We had a small tent for supplies, a big notice board to record results and, at the last minute, a shelter for registration. This was also where the BBQ was held.

The weather was not the best. It rained much of the previous week, but by the start on Friday, the rain was easing up and the remainder of the Blitz period was mostly dry but dull and cooler. Not the best conditions for invertebrate life, but the people came! Overall, 68 people participated. This was more than twice as many as last year. Of these, 24 were KFN members and eight were neighbours. There were seven professionals and nine children. Six people came from the Cataraqui Region Conservation Authority and three came from Volunteer for Nature. Five were students and four others from out of town. Two people did not register. People came from Algonquin Park, Ottawa, Merrickville, Dorval, Lancaster, Peterborough and Guelph as well as the Kingston area. A shuttle was arranged to bring participants two kilometres from the parking area to the base site as there was little parking available at the base site. The time spent on the shuttle meant less time in the field, but overall this worked.

The kickoff at 5 PM on Friday was slow, but this gave the committee time to do some listing of their own. By 7 PM, 18 people were in attendance and the evening activities began. Brenda Schamehorn demonstrated the setting up of small mammal traps and led a group to place the traps in a number of locations. Ground traps were set for beetles, and moth attractant (banana, molasses and beer) was painted on trees in three locations. At dusk, a short excursion covered calling for owls (none heard), using a bat detector (no bats), calling wild animals (none came) and the display of a scat collection, which was appreciated by some! Although these activities did not add species, they were considered worthwhile for the educational value. The moth stations were checked after dark but yielded few moths, partly because of the weather but also perhaps the lighting was not bright enough. There were no beetles in the ground traps at that point, and by next morning they had all been dug up and licked clean of the molasses bait by raccoons, which left nice finger prints in

the containers. A better arrangement will be tried next year!

Birding began at 5:30 AM on Saturday and continued through the morning. At 8 AM, the mammal traps were checked and two species recorded. Minnow traps were set and later yielded three species of fish (identified by Mary Alice Snetsinger). At 9:30, pond dipping for invertebrates began and was enjoyed by the young people, ably supervised by Shirley Noble and Diane Lawrence. A dozen or more species were identified and listed here in addition to several land invertebrates. More insects were found using a sweep net, including 17 species of fly. (The expertise in this area was invaluable: thanks to Jessica Forrest and Terry Wheeler.)

Plant listing also began in earnest about 9:30 AM. These people did a terrific job, often educating as well as listing. The specialists for horsetails and ferns (Chris Eckert) found 17 species, and those for grasses and sedges (Dale Kristensen and Holly Bickerton) found 37 species of these groups. In addition, trees, shrubs and herbs were listed by a group led by Barry Robertson in addition to Eleanor Thomson and Dave and Margo McMurray. We appreciated the shorter lists made by several other participants too.

A very popular workshop (45 participants!) was led by David Bree in the morning to learn about dragonflies and damselflies. Eighteen species were recorded.

For the first time this year, we held a BBQ at lunchtime, run by Chef Bruce Ripley. This was a big success. Apart from delicious food, it brought most of the participants together for the only time during the Blitz. With everyone sitting

on the magnificent deck to eat lunch, Anne was able to publicly thank the Buchtas and presented them with a bird nest box. Cameron Smith and Emily Conger were presented with *Birds of the Kingston Region* for their part in shuttling people back and forth. At this point, a Bald Eagle soared overhead and circled round for all to see—a special moment.

The afternoon was spent on a short butterfly workshop (the weather was not conducive to many species) and on filling in gaps of expected species. Some participants were able to cover different trails to expand their lists. No reptiles were seen, despite boards having been laid down six weeks earlier to attract them.

A tired but cheerful crew helped tidy up the site which was finally emptied about 5:30 PM. But it wasn't all over. The tally sheets needed to be integrated and written up with scientific names. Bruce Ripley listed the Invertebrates (a total of 94 species), Erwin Batalla listed the Birds (71 species), Anne Robertson listed the other Vertebrates (14 species), and Barry Robertson and Eleanor Thomson did the big job of listing the Plants (a total of 286 species). Altogether, the grand total was 465 species, beating our previous record of 400. A very respectable count for the weather conditions!

The comments from participants were encouraging: the word most used was "great." We made a small profit on the event. We'll be back next year! Again thanks to one and all.



**BioBlitz 2005**  
**June 17<sup>th</sup>–18<sup>th</sup>, 2005, Lost Bay Nature Reserve**

**MAMMALS****Rodents**

Eastern Chipmunk	<i>Tamias striatus</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>
American Beaver	<i>Castor canadensis</i>
White-footed Mouse	<i>Peromyscus leucopus</i>
Common Deer Mouse	<i>Peromyscus maniculatus</i>
Muskrat	<i>Ondatra zibethicus</i>

**Carnivores**

Northern Raccoon	<i>Procyon lotor</i>
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**Herbivores**

White-tailed Deer	<i>Odocoileus virginianus</i>
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**BIRDS**

Common Loon	<i>Gavia immer</i>
Great Blue Heron	<i>Ardea herodias</i>
Turkey Vulture	<i>Cathartes aura</i>
Wood Duck	<i>Aix sponsa</i>
Mallard	<i>Anas platyrhyncho</i>
Hooded Merganser	<i>Lophodytes cucullatus</i>
Osprey	<i>Pandion haliaetus</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Red-shouldered Hawk	<i>Buteo lineatus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Ruffed Grouse	<i>Bonasa umbellus</i>
Virginia Rail	<i>Rallus limicola</i>
Ring-billed Gull	<i>Larus delawarensis</i>
Rock Pigeon	<i>Columba livia</i>
Mourning Dove	<i>Zenaidura macroura</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
Whip-poor-will	<i>Caprimulgus vociferus</i>
Ruby-throated Hummingbird	<i>Archilochus colubris</i>
Belted Kingfisher	<i>Ceryle alcyon</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Eastern Wood-pewee	<i>Contopus virens</i>
Least Flycatcher	<i>Empidonax minimus</i>
Eastern Phoebe	<i>Sayornis phoebe</i>
Great-crested Flycatcher	<i>Myiarchus crinitus</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Warbling Vireo	<i>Vireo gilvus</i>
Yellow-throated Vireo	<i>Vireo flavifrons</i>
Red-eyed Vireo	<i>Vireo olivaceus</i>
Blue Jay	<i>Cyanocitta cristata</i>
American Crow	<i>Corvus brachyrhynchos</i>
Common Raven	<i>Corvus corax</i>
Purple Martin	<i>Progne subis</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Black-capped Chickadee	<i>Poecile atricapilla</i>

**BIRDS (continued)**

Red-breasted Nuthatch	<i>Sitta canadensis</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
Hermit Thrush	<i>Catharus guttatus</i>
Wood Thrush	<i>Hylocichla mustelina</i>
American Robin	<i>Turdus migratorius</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Brown Thrasher	<i>Toxostoma rufum</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Yellow Warbler	<i>Dendroica petechia</i>
Magnolia Warbler	<i>Dendroica magnolia</i>
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>
Yellow-rumped Warbler	<i>Dendroica coronata</i>
Black-throated Green Warbler	<i>Dendroica virens</i>
Pine Warbler	<i>Dendroica pinus</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
American Redstart	<i>Setophaga ruticilla</i>
Ovenbird	<i>Seiurus aurocapilla</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Scarlet Tanager	<i>Piranga olivacea</i>
Eastern Towhee	<i>Pipilo erythrophthalmus</i>
Chipping Sparrow	<i>Spizella passerina</i>
Song Sparrow	<i>Melospiza melodia</i>
Swamp Sparrow	<i>Melospiza georgiana</i>
White-throated Sparrow	<i>Zonotrichia albicollis</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Indigo Bunting	<i>Passerina cyanea</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Common Grackle	<i>Quiscalus quiscula</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Baltimore Oriole	<i>Icterus galbula</i>
Purple Finch	<i>Carpodacus purpureus</i>
American Goldfinch	<i>Carduelis tristis</i>
House Sparrow	<i>Passer domesticus</i>

**AMPHIBIANS****Frogs and Toads**

Bullfrog	<i>Rana catesbeiana</i>
Green Frog	<i>Rana clamitans</i>
Northern Leopard Frog	<i>Rana pipiens</i>

**FISH**

Spotchin Shiner	<i>Notropis heterodon</i>
Northern Redbelly Dace	<i>Chrosomus eos</i>
Brook Stickleback	<i>Culaea inconstans</i>

**ANNELIDA****HIRUDINAE****RHYNCHOBDELLIDA**

Leech sp.	<i>Hellobdella sp.</i>
Leech sp.	<i>Erpobdella sp.</i>

**MOLLUSCA****GASTROPODA****PULMONATA**

Spotted Cone Snail sp.  
Cone Snail sp.  
Land Snail sp.  
Orb Snail sp.  
Slug sp.

**ARTHROPODA****CRUSTACEA****SUB CLASS COPEPODA**

Copepod sp.

**ARACHNIDA****ARANEAE**

Wolf Spider sp.  
Jumping Spider sp.

**ACARINA**

**Hydrachnidae**  
Fresh Water Mite                      *Hydrophantes ruber*

**MYRIAPODA****DIPLPODA**

**Julidae**  
Giant Millepede                      *Julus sp.*

**INSECTA****ORTHOPTERA**

**Gryllidae**  
Field Cricket                      *Gryllidae*

**Acrididae**  
Grasshopper                      *Melanoplus sp.*

**ODONATA**

**Lestidae**  
Swamp Spreadwing                      *Lestes vigilax*

**Coenagrionidae**  
Marsh Bluet                      *Enallagma ebrium*  
Eastern Forktail                      *Ischnura verticalis*  
Sedge Sprite                      *Nehalennia irene*

**Aeshnidae**  
Green Darner                      *Anax junius*

**Gomphidae**  
Dusky Clubtail                      *Gomphus spicatus*

**Corduliidae**  
Prince Baskettail                      *Epicordulia princeps*

**ODONATA (continued)****Libellulidae**

Calico Pennant	<i>Celithemis elisa</i>
Halloween Pennant	<i>Celithemis eponia</i>
Eastern Pondhawk	<i>Erythemis simplicicollis</i>
Chalk-Fronted Corporal	<i>Ladona julia</i>
Dot-Tailed Whiteface	<i>Leucorrhinia intacta</i>
Belted Whiteface	<i>Leucorrhinia proxima</i>
Slaty Skimmer	<i>Libellula incesa</i>
Widow Skimmer	<i>Libellula luctuosa</i>
Twelve-Spotted Skimmer	<i>Libellula pulchella</i>
Blue Dasher	<i>Pachydiplax longipennis</i>
Common Whitetail	<i>Plathemis lydia</i>

**HEMIPTERA****Gerridae**

Water Strider                      *Gerris sp.*

**HOMOPTERA****Notonectidae**

Back Swimmer                      *Notonecta sp.*  
Pygmy Back Swimmer                      *Neoplea sp.*

**Nepidae**

Water Scorpion                      *Ranatra sp.*

**Belostomidae**

Giant Water Bug                      *Lethocerus americanus*  
Smaller Water Bug                      *Belostoma sp.*

**Corixidae**

Water Boatman                      *Corixa sp.*

**Cercopidae**

Spittlebug sp. (larva)

**NEUROPTERA****Mantispidae**

Mantidfly sp.

**COLEOPTERA****Carabidae**

Ground Beetle                      *Calosoma frigidum*

**Chrysomelidae**

Leaf Beetle sp.

**Haliplidae**

Crawling Water Beetle                      *Halplus fasciatus*

**Dytiscidae**

Diving Beetle                      *Dytiscus sp.*

**Gyrinidae**

Whirligig Beetle                      *Dineutus sp.*

**Lampyridae**

Firefly sp.

**COLEOPTERA (continued)****Hydrophilidae**Water Scavenger Beetle *Hydrophilus sp.***Chrysomelidae**Swamp Milkweed Beetle *Labidomera clivicollis***Coccinellidae**Three-Banded Ladybird Beetle *Coccinella trifasciata*Asiatic Ladybird Beetle *Harmonia axyridis*  
Fourteen-Spotted Ladybird Beetle *Propylaea quatuordecimpunctata***TRICHOPTERA**

Caddis Fly sp.

**LEPIDOPTERA****Lasiocampidae**Eastern Tent Caterpillar Moth *Malacosoma americanum*  
Forest Tent Caterpillar Moth *Malacosoma disstria***Lymantriidae**Tussock Moth sp.  
Gypsy Moth *Lymantria dispar***Psychidae**Bagworm Moth *Psyche casta***Noctuidae**Toothed Somberwing *Euclidia cuspea***Geometridae**White Slant-Wing *Tetracis cachexiata***Hesperiidae**Arctic Skipper *Carterocephalus palaemon*  
Indian Skipper *Hesperia sassacus*  
Hobomok Skipper *Poanes hobomok*  
Northern Cloudywing *Thorybes pylades*  
European Skipper *Thymelicus lineola***Lycaenidae**Silvery Blue *Glaucopsyche lygdamus***Nymphalidae**White Admiral *Limenitis arthemis arthemis*  
Northern Crescent *Phyciodes cocyta***Satyridae**Little Wood Satyr *Megisto cymela***BLATTODEA****Blattidae**

Cockroach sp.

**PHASMIDA****Phasmidae**Walking Stick *Diapheromera femorata***DIPTERA****Agromyzidae**Leaf-Miner Fly *Cerodontha sp.***Chloropidae**Grass Fly *Thaumatomyia sp.***Culicidae**Mosquito *Culex sp.***Dolichopodidae**Long-Legged Fly *Campsicnemus sp.***Drosophilidae**Pomace Fly *Chymomyza sp.***Empididae**

Dance Fly

**Opomyzidae***Geomyza tripunctata***Otitidae**Picture-Winged Fly *Chaetopsis sp.***Rhagionidae**Snipe Fly *Chrysopilus sp.***Sarcophagidae**Flesh Fly *Sarcophaga sp.***Sepsidae**Small Dung Fly *Sepsis sp.***Stratiomyidae**Soldier Fly *Stratiomys sp.***Syrphidae**Flower Fly *Rhyngia nasica*  
Flower Fly *Toxomerus sp.***Tabanidae**Deer Fly *Chrysops sp.***Tachinidae**

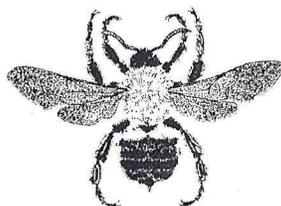
Tachinid Fly (3 sp.)

**Tipulidae**Crane Fly *Tipula sp.***HYMENOPTERA****Pompilidae**

Spider wasp sp.

**Tenthredinidae**

Common Sawfly

**Vespidae**Paper Wasp *Polistes sp.***Bombidae**Bumblebee *Bombus sp.*

## PLANTS

The plant families are listed in taxonomic order according to *Plants of the Kingston Region*. Within families, the genera and species are listed alphabetically. In general, the nomenclature follows *Plants of the Kingston Region* except that the Horsetails and Ferns and the Mosses and Lichens have not been subdivided into families. English names follow *Plants of the Kingston Region* on the whole, except that grasses and sedges which follow according to NIHC (Natural Heritage Information Centre).

\* Introduced species



### HORSETAIL FAMILY

Field Horsetail  
Meadow Horsetail  
Wood Horsetail

### FERN FAMILY

Maidenhair Fern  
Northeastern Lady Fern  
Rattlesnake Fern  
Fragile Fern  
Crested Wood Fern  
Evergreen Wood Fern  
Marginal Shield Fern  
Sensitive Fern  
Royal Fern  
Common Polypody  
Christmas Fern  
Bracken Fern  
Marsh Fern  
Rusty Woodsia

### PINE FAMILY

White Pine  
Eastern Hemlock

### CYPRESS FAMILY

Common Juniper  
Eastern Red Cedar

### CATTAIL FAMILY

Broadleaf Cattail

### FROG'S-BIT FAMILY

European Frog's-bit

### GRASS FAMILY

Spreading Bentgrass  
Water Foxtail  
Awnless Brome  
Japanese Brome  
Canada Bluejoint  
Orchard Grass  
Poverty Oat Grass  
Wavy Hair Grass  
Tall Fescue  
Nodding Fescue  
American Manna Grass  
Fowl Manna Grass  
Rice Cutgrass  
Tall Millet-grass

### EQUISETACEAE

*Equisetum arvense*  
*Equisetum pratense*  
*Equisetum sylvaticum*

### POLYPODIACEAE

*Adiantum pedatum*  
*Athyrium filix-femina*  
*Botrychium virginianum*  
*Cystopteris fragilis*  
*Dryopteris cristata*  
*Dryopteris intermedia*  
*Dryopteris marginalis*  
*Onoclea sensibilis*  
*Osmunda regalis*  
*Polypodium virginianum*  
*Polystichum acrostichoides*  
*Pteridium aquilinum*  
*Thelypteris palustris*  
*Woodsia ilvensis*

### PINACEAE

*Pinus strobus*  
*Tsuga canadensis*

### CUPRESSACEAE

*Juniperus communis*  
*Juniperus virginiana*

### TYPHACEAE

*Typha latifolia*

### HYDROCHARITACEAE

*Hydrocharis morsus-ranae*\*

### POACEAE

*Agrostis stolonifera*  
*Alopecurus aequalis*  
*Bromus inermis ssp.inermis*  
*Bromus japonicus*  
*Calamagrostis canadensis*  
*Dactylis glomerata*  
*Danthonia spicata*  
*Deschampsia flexuosa*  
*Festuca arundinacea*  
*Festuca subverticillata*  
*Glyceria grandis*  
*Glyceria striata*  
*Leersia oryzoides*  
*Milium effusum*

### GRASS FAMILY (continued) POACEAE

Woolly Panic Grass

Reed Canary Grass  
Meadow Timothy  
Canada Bluegrass  
Fowl Bluegrass  
Kentucky Bluegrass  
Alpine Meadow Grass  
False Melic Grass

### SEDGE FAMILY

Bebb's Sedge  
Brome-like Sedge  
Bristly Sedge  
Fringed Sedge  
Crested Sedge  
Dewey's Sedge  
Yellow Sedge  
Graceful Sedge  
Meadow Sedge  
Shining Bladder Sedge  
Finely-nerved Sedge  
Hop Sedge  
Common Oak Sedge  
Plantain-leaved Sedge  
Broad-leaved Sedge  
Retorse Sedge  
Stellate Sedge  
Pointed Broom Sedge  
Sedge  
Long-beaked Sedge  
Awl-fruited Sedge  
Slender Sedge  
Tuckerman's Sedge  
Fox Sedge  
Least Spike-rush  
Blunt Spike-rush  
Dark-green Bulrush  
Rufous Bulrush

### ARUM FAMILY

Sweetflag  
Jack-in-the-Pulpit

### DUCKWEED FAMILY

Lesser Duckweed  
Greater Duckweed  
Columbia Water-meal

*Panicum acuminatum var fasciculatum*

*Phalaris arundinacea*  
*Phleum pratense*  
*Poa compressa*\*  
*Poa palustris*  
*Poa pratensis*  
*Poa pratensis ssp. alpigena*  
*Schizachne purpurascens*

### CYPERACEAE

*Carex bebbii*  
*Carex bromoides*  
*Carex comosa*  
*Carex crinita*  
*Carex cristatella*  
*Carex deweyana*  
*Carex flava*  
*Carex gracillima*  
*Carex granularis*  
*Carex intumescens*  
*Carex leptonevia*  
*Carex lupulina*  
*Carex pennsylvanica*  
*Carex plantaginea*  
*Carex platyphylla*  
*Carex retrorsa*  
*Carex rosea*  
*Carex scoparia*  
*Carex spicata*  
*Carex sprengeii*  
*Carex stipata*  
*Carex tenera*  
*Carex tuckermanii*  
*Carex vulpinoidea*  
*Eleocharis acicularis*  
*Eleocharis obtusa*  
*Scirpus atrovirens*  
*Scirpus pendulus*

### ARACEAE

*Acorus calamus*  
*Arisaema triphyllum*

### LEMNACEAE

*Lemna minor*  
*Spirodela polyrrhiza*  
*Wolffia columbiana*

**RUSH FAMILY**

Soft Rush

**LILY FAMILY**

Canada Mayflower  
False Solomon's Seal  
Hairy Solomon's Seal  
Red Trillium  
White Trillium  
Large-flowered Bellwort

**IRIS FAMILY**

Larger Blue Flag

**ORCHID FAMILY**

Helleborine

**WILLOW FAMILY**

Large-tooth Aspen  
Trembling Aspen  
Beaked Willow  
Slender Willow

**BAYBERRY FAMILY**

Sweetgale

**WALNUT FAMILY**

Bitternut Hickory  
Shagbark Hickory  
Butternut

**BIRCH FAMILY**

Speckled Alder  
Yellow Birch  
White Birch  
Blue Beech  
Ironwood

**BEECH FAMILY**

American Beech  
White Oak  
Red Oak

**ELM FAMILY**

American Elm

**NETTLE FAMILY**

False Nettle  
Stinging Wood Nettle  
Clearweed  
Stinging Nettle

**SANDALWOOD FAMILY**

Bastard Toadflax

**BIRTHWORT FAMILY**

Wild Ginger

**JUNCACEAE***Juncus effusus***LILIACEAE**

*Maianthemum canadense*  
*Maianthemum racemosum*  
*Polygonatum pubescens*  
*Trillium erectum*  
*Trillium grandiflorum*  
*Uvularia grandiflora*

**IRIDACEAE***Iris versicolor***ORCHIDACEAE***Epipactis helleborine\****SALICACEAE**

*Populus grandidentata*  
*Populus tremuloides*  
*Salix bebbiana*  
*Salix petiolaris*

**MYRICACEAE***Myrica gale***JUGLANDACEAE**

*Carya cordiformis*  
*Carya ovata*  
*Juglans cinerea*

**BETULACEAE**

*Alnus rugosa*  
*Betula alleghaniensis*  
*Betula papyrifera*  
*Carpinus caroliniana*  
*Ostrya virginiana*

**FAGACEAE**

*Fagus grandifolia*  
*Quercus alba*  
*Quercus rubra*

**ULMACEAE***Ulmus americana***URTICACEAE**

*Boehmeria cylindrica*  
*Laportea canadensis*  
*Pilea pumila*  
*Urtica gracilis*

**SANTALACEAE***Comandra umbellata***ARISTOLOCHIACEAE***Asarum canadense***KNOTWEED FAMILY**

Fringed Bindweed  
Arrow-leaved Tear-thumb  
Climbing False Buckwheat  
Sheep Sorrel  
Curly Dock

**PINK FAMILY**

Mouse-ear Chickweed  
Bladder Campion  
Lesser Stitchwort

**WATER-LILY FAMILY**

Yellow Waterlily

**BUTTERCUP FAMILY**

Doll's Eyes  
Canada Anemone  
Thimbleweed  
Wild Columbine  
Sharp-lobed Hepatica  
Kidney-leaf Buttercup  
Tall Buttercup  
Hooked Crowfoot  
Early Meadow Rue  
Tall Meadow Rue

**BARBERRY FAMILY***Blue Cohosh*  
*thalicroides***POPPY FAMILY**

Bloodroot

**FUMITORY FAMILY**

Allegheny Vine  
Pale Corydalis

**MUSTARD FAMILY**

Shepherd's Purse  
Wormseed Mustard

**STONECROP FAMILY**

Mossy Stonecrop

**SAXIFRAGE FAMILY**

Mitrewort  
Early Saxifrage  
Foam Flower

**GOOSEBERRY FAMILY**

Wild Black Currant  
Bristly Gooseberry  
Skunk Currant

**ROSE FAMILY**

Agrimony  
Serviceberry  
Wood Strawberry  
Wild Strawberry

**POLYGONACEAE**

*Polygonum cilinode*  
*Polygonum sagittatum*  
*Polygonum scandens*  
*Rumex acetosella\**  
*Rumex crispus*

**CARYOPHYLLACEAE**

*Cerastium fontanum\**  
*Silene vulgaris\**  
*Stellaria graminea\**

**NYMPHAEACEAE***Nuphar variegatum***RANUNCULACEAE**

*Actaea pachypoda*  
*Anemone canadensis*  
*Anemone virginiana*  
*Aquilegia canadensis*  
*Hepatica acutiloba*  
*Ranunculus abortivus*  
*Ranunculus acris\**  
*Ranunculus recurvatus*  
*Thalictrum dioicum*  
*Thalictrum pubescens*

**BERBERIDACEAE***Caulophyllum***PAPAVERACEAE***Sanguinaria canadensis***FUMARIACEAE**

*Adlumia fungosa*  
*Corydalis sempervirens*

**CRUCIFERAE**

*Capsella bursa-pastoris*  
*Erysimum chieranthoides\**

**CRASSULACEAE***Sedum acre***SAXIFRAGACEAE**

*Mitella diphylla*  
*Saxifraga virginensis*  
*Tiarella cordifolia*

**GROSSULARIACEAE**

*Ribes americanum*  
*Ribes cynosbati*  
*Ribes glandulosum*

**ROSACEAE**

*Agrimonia gryposepala*  
*Amelanchier sp.*  
*Fragaria vesca*  
*Fragaria virginiana*

<b>ROSE FAMILY (continued)</b>	<b>ROSACEAE</b>	<b>TOUCH-ME-NOT FAMILY</b>	<b>BALSAMINACEAE</b>
Yellow Avens	<i>Geum aleppicum</i>	Spotted Jewelweed	<i>Impatiens capensis</i>
White Avens	<i>Geum canadense</i>	<b>GRAPE FAMILY</b>	<b>VIACEAE</b>
Shrubby Cinquefoil	<i>Potentilla fruticosa</i>	Virginia Creeper	<i>Parthenocissus inserta</i>
Rough Cinquefoil	<i>Potentilla norvegica</i>	Riverbank Grape	<i>Vitis riparia</i>
Marsh Cinquefoil	<i>Potentilla palustris</i>	<b>LINDEN FAMILY</b>	<b>TILIACEAE</b>
Rough-fruited Cinquefoil	<i>Potentilla recta*</i>	Basswood	<i>Tilia americana</i>
Old Field Cinquefoil	<i>Potentilla simplex</i>	<b>ST. JOHN'S WORT FAMILY</b>	<b>GUTTIFERAE</b>
Pin Cherry	<i>Prunus pennsylvanica</i>	Common St. John's Wort	<i>Hypericum perforatum*</i>
Black Cherry	<i>Prunus serotina</i>	<b>VIOLET FAMILY</b>	<b>VIOLACEAE</b>
Blackberry	<i>Rubus allegheniensis</i>	Downy Yellow Violet	<i>Viola pubescens</i>
Wild Red Raspberry	<i>Rubus idaeus</i>	<b>LOOSESTRIFE FAMILY</b>	<b>LYTHRACEAE</b>
Black Raspberry	<i>Rubus occidentalis</i>	Water Willow	<i>Decodon verticillatus</i>
Purple-flowering Raspberry	<i>Rubus odoratus</i>	Purple Loosestrife	<i>Lythrum salicaria</i>
Dwarf Red Raspberry	<i>Rubus pubescens</i>	<b>EVENING PRIMROSE FAMILY</b>	<b>ONAGRACEAE</b>
Narrow-leaved Meadowsweet	<i>Spiraea alba</i>	Enchanter's Nightshade	<i>Circaea lutetiana</i>
Steeplebush	<i>Spiraea tomentosa</i>	<b>GINSENG FAMILY</b>	<b>ARALIACEAE</b>
Barren Strawberry	<i>Waldsteinia fragarioides</i>	Wild Sarsaparilla	<i>Aralia nudicaulis</i>
<b>BEAN FAMILY</b>	<b>FABACEAE</b>	<b>CARROT FAMILY</b>	<b>UMBELLIFERAE</b>
Hog Peanut	<i>Amphicarpaea bracteata</i>	Bulb-bearing Water-hemlock	<i>Cicuta bulbifera</i>
Pointed-leaved Tick-trefoil	<i>Desmodium glutinosum</i>	Honewort	<i>Cryptotaenia canadensis</i>
Bird's Foot Trefoil	<i>Lotus corniculatus*</i>	Queen Anne's Lace	<i>Daucus carota*</i>
Black Medick	<i>Medicago lupulina*</i>	Sweet Cicely	<i>Osmorhiza claytonii</i>
White Sweet Clover	<i>Melilotus alba*</i>	Canada Snakeroot	<i>Sanicula canadensis</i>
Hop Clover	<i>Trifolium aureum*</i>	Black Snakeroot	<i>Sanicula marilandica</i>
Alsike Clover	<i>Trifolium hybridum*</i>	Yellow Sanicle	<i>Sanicula odorata</i>
Red Clover	<i>Trifolium pratense*</i>	Water Parsnip	<i>Sium suave</i>
White Clover	<i>Trifolium repens*</i>	<b>DOGWOOD FAMILY</b>	<b>CORNACEAE</b>
Cow Vetch	<i>Vicia cracca*</i>	Alternate-leaved Dogwood	<i>Cornus amomum ssp. alternifolia</i>
<b>WOODSORREL FAMILY</b>	<b>OXALIDACEAE</b>	Silky Dogwood	<i>Cornus foemina ssp. obliqua</i>
Yellow Wood Sorrel	<i>Oxalis stricta</i>	Grey Dogwood	<i>Cornus racemosa</i>
<b>GERANIUM FAMILY</b>	<b>GERANIACEAE</b>	Round leaf Dogwood	<i>Cornus rugosa</i>
Herb Robert	<i>Geranium robertianum*</i>	<b>PRIMROSE FAMILY</b>	<b>PRIMULACEAE</b>
<b>RUE FAMILY</b>	<b>RUTACEAE</b>	Starflower	<i>Trientalis borealis</i>
Prickly Ash	<i>Zanthoxylum americanum</i>	<b>OLIVE FAMILY</b>	<b>OLEACEAE</b>
<b>CASHEW FAMILY</b>	<b>ANACARDIACEAE</b>	White Ash	<i>Fraxinus americana</i>
Poison Ivy	<i>Rhus radicans</i>	Red Ash	<i>Fraxinus pennsylvanica</i>
Staghorn Sumac	<i>Rhus typhina</i>	<b>DOGBANE FAMILY</b>	<b>APOCYNACEAE</b>
<b>HOLLY FAMILY</b>	<b>AQUIFOLIACEAE</b>	Spreading Dogbane	<i>Apocynum androsaemifolium</i>
Winterberry	<i>Ilex verticillata</i>	Indian Hemp	<i>Apocynum cannabinum</i>
<b>STAFFTREE FAMILY</b>	<b>CELASTRACEAE</b>	<b>MILKWEED FAMILY</b>	<b>ASCLEPIADACEAE</b>
Climbing Bittersweet	<i>Celastrus scandens</i>	Swamp Milkweed	<i>Asclepias incarnata</i>
<b>BLADDER-NUT FAMILY</b>	<b>STAPHYLEACEAE</b>	Common Milkweed	<i>Asclepias syriaca</i>
Bladder-nut	<i>Staphylea trifolia</i>	<b>PHLOX FAMILY</b>	<b>POLEMONIACEAE</b>
<b>MAPLE FAMILY</b>	<b>ACERACEAE</b>	Blue Phlox	<i>Phlox divaricata</i>
Red Maple	<i>Acer rubrum</i>		
Silver Maple	<i>Acer saccharinum</i>		
Sugar Maple	<i>Acer saccharum</i>		

**MINT FAMILY**

Creeping Charlie  
 Motherwort  
 Cut-leaved Water-horehound  
 Catnip  
 Wild Basil

**NIGHTSHADE FAMILY**

Bittersweet Nightshade

**FIGWORT FAMILY**

Hairy Beardtongue  
 Mullein

**BLADDERWORT FAMILY**

Common Bladderwort

**PLANTAIN FAMILY**

Common Plantain

**MADDER FAMILY**

Cleavers  
 Rough Bedstraw  
 Northern Bedstraw  
 Wild White Licorice  
 Yellow Wild Licorice  
 Marsh Bedstraw  
 Fragrant Bedstraw  
 Partridgeberry

**HONEYSUCKLE FAMILY**

Bush Honeysuckle  
 Twinflower  
 Fly Honeysuckle  
 Climbing Honeysuckle  
 Red Elderberry  
 Maple-leaved Viburnum

**ASTER FAMILY**

Common Yarrow  
 Common Ragweed  
 Field Pussytoes  
 Plantain-leaved Pussytoes  
 Common Burdock  
 Heart-leaved Aster  
 Heath Aster  
 Large-leaved Aster  
 New England Aster  
 Panicked Aster  
 Nodding Bur Marigold  
 Devil's Beggar Ticks  
 Straw-stem Beggar Ticks  
 Ox-eye Daisy  
 Canada Thistle  
 Bull Thistle  
 Daisy Fleabane  
 Common Fleabane  
 Joe Pye Weed  
 Boneset  
 White Snakeroot

**LABIATAE**

*Glechoma hederacea\**  
*Leonurus cardiaca\**  
*Lycopus americanus*  
*Nepeta cataria\**  
*Satureja vulgaris*

**SOLANACEAE**

*Solanum dulcamara\**

**SCROPHULARIACEAE**

*Penstemon hirsutus*  
*Verbascum thapsus\**

**LENTIBULARACEAE**

*Utricularia vulgaris*

**PLANTAGINACEAE**

*Plantago major*

**RUBIACEAE**

*Galium aparine*  
*Galium asprellum*  
*Galium boreale*  
*Galium circaezans*  
*Galium lanceolatum*  
*Galium palustre*  
*Galium triflorum*  
*Mitchella repens*

**CAPRIFOLIACEAE**

*Diervilla lonicera*  
*Linnaea borealis*  
*Lonicera canadensis*  
*Lonicera dioica*  
*Sambucus racemosa*  
*Viburnum acerifolium*

**COMPOSITAE**

*Achillea millefolium*  
*Ambrosia artemisiifolia*  
*Antennaria neglecta*  
*Antennaria plantaginifolia*  
*Arctium minus\**  
*Aster cordifolius*  
*Aster ericoides*  
*Aster macrophyllus*  
*Aster novae-angliae*  
*Aster simplex*  
*Bidens cernua*  
*Bidens frondosa*  
*Bidens tripartita*  
*Chrysanthemum leucanthemum\**  
*Cirsium arvense\**  
*Cirsium vulgare\**  
*Erigeron annuus*  
*Erigeron philadelphicus*  
*Eupatorium maculatum*  
*Eupatorium perfoliatum*  
*Eupatorium rugosum*

**ASTER FAMILY (continued)**

Orange Hawkweed  
 Yellow Hawkweed  
 Elecampane  
 Wild Lettuce  
 White Lettuce  
 Tall Rattlesnake Root  
 Blue-stem Goldenrod  
 Canada Goldenrod  
 Early Goldenrod  
 Field Sow-thistle  
 Dandelion  
 Yellow Goatsbeard

**MOSESSES**

Ciliate Hedwigia Moss  
 Juniper Moss  
 Awned Hair Cap Moss

**LICHENS**

Lichen  
 Yellow-green Lichen  
 Reindeer Lichen  
 Lichen  
 Coral Lichen  
 Lichen  
 Rock Tripe  
 Plitt's Rock Shield

**FUNGI**

Chicken-of-the-woods

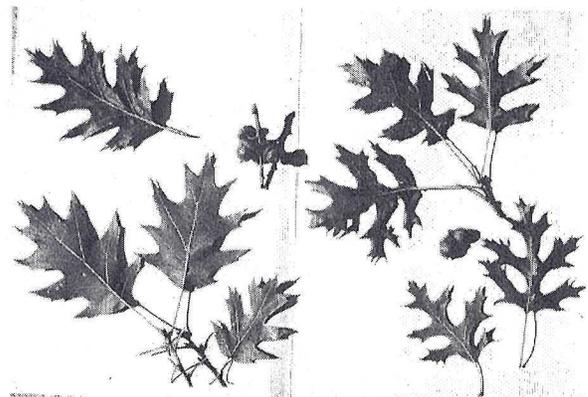
**COMPOSITAE**

*Hieracium aurantiacum\**  
*Hieracium piloselloides\**  
*Inula helenium*  
*Lacuta canadensis*  
*Prenanthes alba*  
*Prenanthes trifoliata*  
*Solidago caesia*  
*Solidago canadensis*  
*Solidago juncea*  
*Sonchus arvensis*  
*Taraxacum officinale\**  
*Tragopogon pratensis*

*Hedwigia ciliata*  
*Polytrichum juniperum*  
*Polytrichum piliferum*

*Cladina arbusculus*  
*Cladina mitis*  
*Cladina rangiferina*  
*Flavoparmelia caperata*  
*Stereocaulon sp.*  
*Umbilicaria deusta*  
*Umbilicaria mammulata*  
*Xanthoparmelia plitti*

*Polyporus sulphureus*



## Ivory-billed Woodpecker Rediscovered in the Big Woods of Arkansas

*Jay Harrod, Miyoko Chu, and Blaine Friedlander*

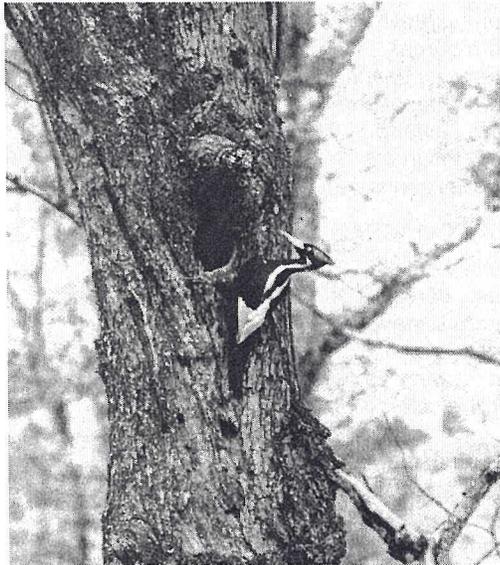
Reprinted with permission from the Cornell Lab of Ornithology's  
Ivory-billed Woodpecker web site: <http://www.birds.cornell.edu/ivory>

Long believed to be extinct, a magnificent bird—the Ivory-billed Woodpecker—has been rediscovered in the Big Woods of eastern Arkansas. More than 60 years after the last confirmed sighting of the species in the United States, a research team today announced that at least one male ivory-bill still survives in vast areas of bottomland swamp forest.

Published in the journal *Science* on its Science Express web site (April 28, 2005), the findings include multiple sightings of the elusive woodpecker and frame-by-frame analyses of brief video footage. The evidence was gathered during an intensive year-long search in the Cache River and White River national wildlife refuges involving more than 50 experts and field biologists working together as part of the Big Woods Conservation Partnership, led by the Cornell Laboratory of Ornithology at Cornell University and The Nature Conservancy.

“The bird captured on video is clearly an Ivory-billed Woodpecker,” said John Fitzpatrick, the *Science* article’s lead author, and director of the Cornell Laboratory of Ornithology. “Amazingly, America may have another chance to protect the future of this spectacular bird and the awesome forests in which it lives.”

“It is a landmark rediscovery,” said Scott Simon, director of The Nature Conservancy’s Arkansas chapter. “Finding the ivory-bill in Arkansas validates decades of great conservation work and represents an incredible story of hope for the future.”



Ivory-billed Woodpecker, Singer Tract, Louisiana, 1935. Copyright Cornell Lab of Ornithology.

Joining the search team at a press conference in Washington DC, Secretary of the Interior Gale Norton announced a Department of the Interior initiative to identify funds for recovery efforts. Through its cooperative conservation initiative, the Fish and Wildlife Service has a variety of grant and technical aid programs to support wildlife recovery.

“These programs are the heart and soul of the federal government’s commitment to cooperative conservation. They are perfectly tailored to recover this magnificent bird,” Secretary Norton said. “Across the Nation, these programs preserve millions of acres of habitat, improve riparian habitat along thousands of miles of streams and develop conservation plans for endangered species and their habitat.”

The largest woodpecker in North America, the Ivory-billed Woodpecker is known through lore as a bird of beauty and indomitable spirit. The species vanished after extensive clearing destroyed millions of acres of virgin forest throughout the South between the 1880s and mid-1940s. Although the majestic bird has been sought for decades, until now there was no firm evidence that it still existed.

The rediscovery has galvanized efforts to save the Big Woods of Arkansas, 550,000 acres of bayous, bottomland forests and oxbow lakes. According to Simon, The Nature Conservancy has conserved 18,000 acres of critical habitat in the Big Woods, at the request of the partnership, since the search began. “It’s a very wild and beautiful place,” Simon said.

While kayaking in the Cache River National Wildlife Refuge on February 11, 2004, Gene Sparling of Hot Springs, Ark., saw an unusually large, red-crested woodpecker fly toward him and land on a nearby tree. He noticed several field marks suggesting the bird was an Ivory-billed Woodpecker.

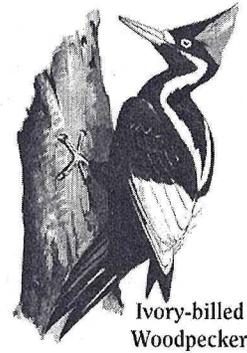
A week later, after learning of the sighting, Tim Gallagher, editor of the Cornell Lab of Ornithology's *Living Bird* magazine, and Bobby Harrison, associate professor at Oakwood College, Huntsville, Ala., interviewed Sparling. They were so convinced by his report that they travelled to Arkansas and then with Sparling to the bayou where he had seen the bird.

On February 27, as Sparling paddled ahead, a large black-and-white woodpecker flew across the bayou less than 70 feet in front of Gallagher and Harrison, who simultaneously cried out: "Ivory-bill!" Minutes later, after the bird had disappeared into the forest, Gallagher and Harrison sat down to sketch independently what each had seen. Their field sketches, included in the Science article, show the characteristic patterns of white and black on the wings of the woodpecker.

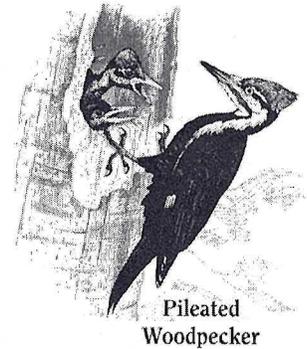
"When we finished our notes," Gallagher said, "Bobby sat down on a log, put his face in his hands and began to sob, saying, 'I saw an ivory-bill. I saw an ivory-bill,'" Gallagher said he was too choked with emotion to speak. "Just to think this bird made it into the 21st century gives me chills. It's like a funeral shroud has been pulled back, giving us a glimpse of a living bird, rising Lazarus-like from the grave," he said.

The sightings by Sparling, Gallagher and Harrison led to the formation of a search team, which later became the Big Woods Conservation Partnership. On April 5, 10 and 11, three different searchers sighted an ivory-bill in nearby areas. The views were fleeting, leaving little opportunity to take photographs.

David Luneau, associate professor at the University of Arkansas at Little Rock, said he thought the best chance to film the elusive bird would be to have a camcorder on at all times. On April 25, Luneau captured four seconds of video footage showing an Ivory-billed Woodpecker taking off from the trunk of a tree.



Ivory-billed  
Woodpecker



Pileated  
Woodpecker

Frame-by-frame analyses show a bird perched on a tupelo trunk, with a distinctive white pattern on its back. During 1.2 seconds of flight, the video reveals 11 wing beats showing extensive white on the trailing edges of the wings and white on the back. Both of these features distinguish the Ivory-billed Woodpecker from the superficially similar, and much more common, Pileated Woodpecker.

On three occasions, members of the search team heard series of loud double-raps, possibly the Ivory-billed Woodpecker's display drumming. On February 14, 2005, Casey Taylor of the Cornell Lab of Ornithology heard the drumming for 30 minutes, then watched as an Ivory-billed Woodpecker, being mobbed by crows, flew into view.

In addition, autonomous recording units detected sounds, among thousands of hours of recordings, which resembled double-raps and possible calls of the ivory-bill—reminiscent of the sound of a tin horn. Researchers say ongoing analyses of the recordings have not yet enabled them to rule out other potential sound sources, such as the calls of blue jays, which are notorious mimics.

In all, during more than 7,000 hours of search time, experienced observers reported at least 15 sightings of the ivory-bill, seven of which were described in the *Science* article. Because only a single bird was observed at a time, researchers say they don't yet know whether more than one inhabits the area.

So far, the search team has focussed its efforts in approximately 16 of the 850 square miles in the bottomland forests of Arkansas. Fitzpatrick of the Cornell Lab of Ornithology said that the next step will be to broaden the search to assess whether breeding pairs exist and how many ivory-bills the region may support. To expand the area being monitored and minimize disturbance to the endangered woodpecker, the team will continue

to use acoustic monitoring technologies as well as on-the-ground searching. Fitzpatrick said the team will also encourage others to search for the ivory-bill elsewhere in suitable habitats throughout the South.

Simon of The Nature Conservancy said that over the years, state and federal agencies, conservation organizations, hunters and landowners have aggressively worked to conserve and restore the bottomland hardwood and swamp ecosystem. "Now we know we must work even harder to conserve this critical habitat—not just for the Ivory-billed Woodpecker, but for the black bears, waterfowl and many other species of these unique woods," he added.

The partnership's 10-year goal is to restore 200,000 more acres of forest in the Big Woods. The effort will include conserving forest habitat,

improving river water quality, and restoring the physical structure of the river channels, focusing in locations with maximum benefit in reconnecting forest patches and protecting river health.

"The ivory-bill tells us that we could actually bring this system back to that primeval forest here in the heartland of North America," said Fitzpatrick, who is also a member of The Nature Conservancy's board of governors. "That's the kind of forest that I hope some generation of Americans and citizens of the world will get to come and visit."

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*Editor's note:* For information on new developments in Ivory-billed Woodpecker research and habitat conservation and restoration, check the Latest Updates link on the Cornell Lab of Ornithology's Ivory-billed Woodpecker web site: <http://www.birds.cornell.edu/ivory>.

### **Blackwater Brake Memories**

**Letter reprinted with permission from *BirdScope*, newsletter of the Cornell Lab of Ornithology, Summer 2005, <http://www.birds.cornell.edu>**

I just had to write to express my great exhilaration and excitement over the rediscovery of the ivory-bill. This great bird played a wonderful part in my upbringing and the news has brought back blessed memories from my past. In the late fifties, my father, L.A. ("Ham") Hamilton—a great outdoorsman, conservationist, and birdman—purchased, along with his cousins, Spring Bayou Plantation 12 miles south of Tallulah, Louisiana, in Madison Parish, almost literally across the fence from the Chicago Mill/Singer Tract.

I followed his 6'4", 250-pound frame many a mile through the swamps and hardwood bottoms of that beautiful 3,000-acre paradise after deer, ducks, and turkey. He was, above all, a birdman, and from an early age taught me all he knew about the woods, wildlife, and especially birds. He always believed that the ivory-bill still existed and reminded me continually to keep a watch out for him. From ages 10 to 20 I studied birds diligently and looked constantly for those majestic and distinctive features.

My father is gone now, and I am far away from the place of my youth. This discovery has brought it all back for me and I have been overcome today with deep and inexpressible emotions. While driving through this polluted and crowded city of 5 million people—who will never have the privilege of greeting the dawn from the edge of a blackwater brake in the big timber—I wept over a bird—yes, just a bird, but a glorious one that represents all that is wild and right about the last places in the Old South, and represents for me a father's life and heritage to his son.

So because of your commitments and efforts, this morning I awoke early and, at least in my mind and heart and memory, stood again on the edge of that blackwater brake looking up through the tall cypresses and whispered, "We found him, Dad... we found him." May he fly for many years to come and move many other young people to embrace the wild and fulfill the stewardship this majestic bird represents. Keep us posted and be assured we are with you in spirit every step of the way.

*With gratitude,  
Andy Hamilton, Southwest China*

## Autumn's Explosion of Colour

### Terry Sprague

Someone once said, "Autumn is a calendar season, but fall is the time when the colour comes swirling down from the treetops." And around the Kingston area, there are many places where one can travel to see this blaze of colour. One location my wife and I visit every fall is Jones Falls where the colour can be breathtaking.

And that spectacular annual showing of colour is beginning to showcase now. Fall colour and fall birds seem to go together. Along our road, a small band of Yellow-rumped Warblers works the darkening leaves of gray dogwood, rustling about with determination as they seek out the final insects of the season. A flash of yellow on the rump identifies them in their drab sparrow-like plumage. A Towhee is also actively scratching about under a hickory tree, and small family groups of chickadees are accented by the nasal sounds of several migrating Red-breasted Nuthatches. Golden-crowned Kinglets, minute in size, flit about in the conifers as they migrate through the area.

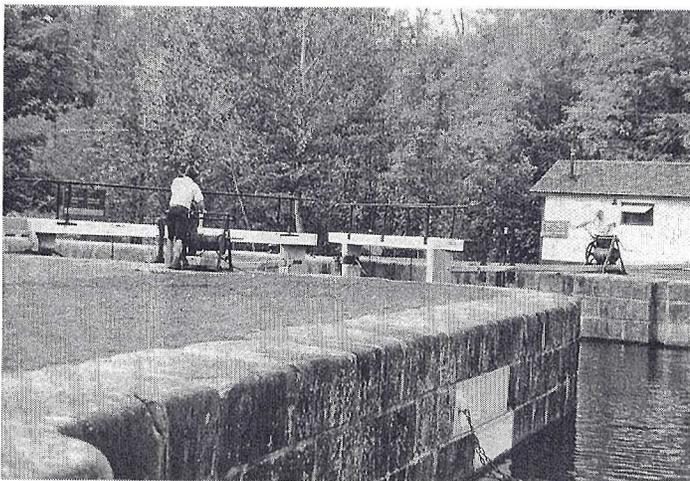
We take fall colour for granted, never knowing just when it will peak, but confident that it will arrive. What we do know is that fall colour is most intense during years in which a relatively dry sunshiny summer is followed by a rainy period in late August or early September, and

then by an autumn with moderately low night temperatures and bright crisp days. Everything in the formula appears to be on track this year.

Leaf colour is caused by the presence of chemicals called pigments. During spring and summer, leaves are green because chlorophyll, which reflects green light, is present in large quantities. Other pigments are there too, but their effects are masked by chlorophyll. But all this colour is sheer waste, in technical terms anyway. As the days become shorter and the tree begins to tire, sap circulation is sealed off. Production of chlorophyll ceases and disintegrates. The reds and purples appear when the sun has oxidized the sugars and acids abandoned in the leaves.

If you want to be one up, you can refer to these pigments as anthocyanins. They are responsible for the variety of hues from our most brilliant scarlets through a variety of reds, subdued lavenders, purples to deep blue. We are more familiar with these anthocyanins in other forms—apples, violets, grapes, blueberries and beets. These pigments tend to develop in some of our trees during the autumn and it is our maples that put on the best showing. Because pigments are many-hued in different species and since yellow pigments remain after the green pigments have gone, we end up with an explosion of colour in our trees. The red pigments are in the upper surface of the leaf and the yellows throughout the leaf result in all kinds of colour combinations. Some families of trees—the poplar comes to mind—are incapable of producing any of these red pigments, even in the faintest of hues. Thus we are offered only yellow and gold from this species.

The production of the anthocyanins, and therefore the intensity of the reds, is affected by many things - weather during summer and fall, the amount of available light, air and soil temperature, nitrogen supply and soil moisture. Even single leaves may not be evenly coloured if part of the leaf has been shaded by another. These other factors might explain why some



Fall leaves at Jones Falls – photo by Terry Sprague  
(Just imagine it in colour!)

trees, or even isolated branches of some trees, take on a bit of fall colour as early as July.

Contrary to popular belief, it is not frost that brings on the colour; indeed, a killing frost can turn leaves a dull, dirty brown, causing them to cling to the trees well into winter. Cool temperatures within reason, however, will encourage the formation of the red pigments. All we need to enjoy this spectacular fall show is a bright sunny day and that is when we will see the maples and sumacs in an absolute riot of colour.

Many of us tend to take the annual fall colour for granted. Not every country, or even every part of North America can boast the complimentary stage show we are treated to each fall. In South America, for example, this

colour does not occur, except for a small region in southern Chile. While parts of Europe, China and Japan can also boast the changing colours, it is here, in eastern North America, where the presentation is the most spectacular, for we have the tree species that produce the bright colours that are lacking in other parts of the world. It is this phantasmagoria of hues that compels people to head off each fall for the annual colour tour, whether by car or by bus.

*Terry Sprague is a naturalist, free-lance writer and KFN member who lives in Prince Edward County.*



## Dead Deer and Live Deer

*Terry Fuchs*

On Sundays during the fall, winter, and early spring, I hike with two friends in the rocky bush of hills, beaver ponds, and lakes forty kilometres north of Kingston, Ontario, where we all live. When the black flies swarm out of the fast-flowing streams swollen with melted snow and the openness we so prize is obscured by the green-out of new leaves, I turn to my cottage and canoe. One friend does the same; the other visits the country overseas where he was born and grew up.

One Sunday late in October, in a draw between two long ridges, we discovered a deer that had been killed by coyotes or wolves. The ridges thrust slopes of grey stone above spindly maples, shaggy hickories, and arthritic oaks, whose shawls of orange, yellow, and russet leaves were now threadbare. The draw was a kind of catchment for runoff from the ridges, but was not exceptionally wet, even though the fall

had been rainy. Near its head, however, just below a small cattail marsh, a decades-old abandoned beaver dam snaked across the draw. Its sticks were mostly composted to grassy mud, with even a tree or two growing out of it. We found the kill just above the dam, on a sodden island of tag alder in the rainwater the dam had impounded.

Advancing up the draw, we had passed shallow mica pits excavated in the nineteen-thirties and forties by a family who used to farm fields beyond the ridge to the south; slivers and laminated chunks of shiny mica had glittered like gem facets in the slag heaps around the rims of the pits. From a distance we saw the deer carcass through the drab trees. Or rather we spotted a swatch of bright red on the ground and at first I thought a tarpaulin or a blanket had blown in among the trunks. When we got a little closer I began to suspect, excitedly, what it

turned out to be, a very fresh kill, so fresh in fact that our approach may have frightened the pack off. Once we got near enough to recognize that it was a deer for certain, we saw that the bannerlike crimson was the exposed, still-bloody rib cage. Although the stomach and the meat on the hindquarters and back had been devoured, a clump of purple entrails was still nestled at the front of the ribs. In the tussle of the feast one hind leg bone had been wrenched over the deer's back and now lay awkwardly along the spine, like a scarlet-streaked white pipe. The head, chest, shoulders, and forelegs were still intact; their grey-brown fur was not even torn. The deer lay on its side, its front hooves and fetlocks in the water. The dark, glassy, bulging eyeball mirrored a small window of what looked like shadowed blue deep inside it.

We studied the kill from the dam—the gap of water between it and the tag-alder island was too wide to jump across. Besides, only the island's crown, which the deer covered, was above the water. The withes of the tag alders trailed and swayed on the current, and we could see the submerged clusters of bunched stems.

In more than twenty years of walking this Canadian Shield country, this was hardly the first kill I had seen. Relics of death are common amid all the life of bounding deer, black-fly larvae squirming into translucent, wriggling focus against the dark underside of a rock pried from a tumbling April stream, leafy, freshly clipped sticks woven into a winter food raft out from a beaver lodge, minute springtails peppering the glistening snow, with its blue-tinged tree shadows, on the first sun-warmed winter day, tender, vivid leaves trying to unfurl from prematurely burst red buds close to the trunks of young trees after a sustained mild spell in early December. Tiny chips of bleached rodent bones are scattered on slabs of exposed bedrock, or a juniper bush shades a little skull with a close pair of long, curving, yellowed upper front teeth. On ridges above swamps or beaver ponds we pick up empty turtle shells, their end-lit caverns still rank with the decomposition of their erstwhile tenants. The green scutes peel away from the plates of grey bone beneath like scales. Walking frozen ponds

we round a buttress of sheer grey and pink stone and confront a dismembered deer carcass folded and frozen into the ice. From a nest of long grass the gaping eye sockets of a deer skull, gnawed rack attached, stare up at us.

Practically awash on its oblong of chunky rock and tag alders, this dead deer had the greatest immediacy of any kill I had encountered except a beaver a few years ago in early winter. It, too, had been the unfinished meal of coyotes or wolves. The bloody, half-flenched corpse, with its rubbery tail flat behind it, lay on its stomach just up from the edge of a yet-unfrozen pond rippling as blackly as ink against the white of thin snow cover.



We crossed the beaver dam and climbed the north ridge, treading on the springy branches of sprawling ground juniper that overflowed a wide dish in the rock. From the ridge's long spine of bald granite and distant lofty white pine, we looked out at the grey sheen of the main basin of Devil Lake to the east. Its many bays and arms were tucked invisibly in clefts among the hills. Beneath us, at the end of a long valley below Bear Lake, was Hardwood Bay. It was broad and glassy, dark along the shore with the shadows and green reflections of the dense conifers that tapered to points short of our perch on the ridge.

We descended a steep deer path through cedars on the ridge's north slope. The trail pitched among boulders and large, tumbled shards of

cliff and under spiky deadfalls, and the air had the gloom and dankness of permanent shade. Hooves had chopped up the cedar duff, turning clods of dirt and brown needles over. At the bottom was the stream draining from Bear Lake into Hardwood Bay. We were used to it running swift and shallow in its own deep, stony trough below the valley floor. A year ago, we had hopped it easily on black, slippery rocks that the water foamed around, but we were surprised to find that since then the beavers had strung a series of tall dams across it. The dams had created ponds behind them and raised the water to the level of the valley floor. We had to cross these reservoirs on a dam laced with freshly chewed sticks stripped of their bark. After the recent rains it was leaking and slopping water. We traversed the valley through a thicket of sumac around a long-caved-in log cabin that I could remember from when it was derelict but still standing, and climbed the hills beyond through crisp, rustling leaves underfoot. As we walked, our feet plowed up parallel windrows of leaves, like turning over furrows, and the ones still on the trees framed patches of soft grey sky and bare branches.

In the afternoon we retraced our steps. In the lead as we came out of the trees at the foot of the hills, I put up a deer before I saw him, and then another, and then a third. They had been lying behind a slab of stone. I saw them only as they heaved to their feet in succession, straightening their long legs, first the front ones, then pushing up with the back ones. They didn't run fast or far. They hardly even lifted their white scuts, and when we started across the valley floor, they were standing in a copse of saplings and cedar brush beside the distended stream. The biggest deer was mostly intent on browsing the unseasonably lush grass, but occasionally he raised his head and eyed us with what seemed indifference. A smaller one—a female?—and an even smaller one, probably from that year's crop of fawns, stood watching us, curiosity and a little uncertainty showing in their twitching oversized ears and the quizzicalness of their pale grey faces.

They were in our path and we eased towards them in slow steps. We moved as quietly as we

could in the swishing leaf litter, with long pauses, but our caution did not appear to matter. The deer were all grazing now, the two smaller ones only hesitating intermittently to glance up at us. When we were near enough that we could have reached out and almost touched them with the tall hiking staffs my companions carried, we stopped and watched. Marvelling at their tameness and proximity, we got bold. We stopped whispering and talked in normal voices, to each other and to them. Their docility also struck us as comical and we referred to them as the Three Stooges. We laughed. Provincial regulation banned hunting in the area and it was Sunday, but outside its boundaries deer-hunting season was about to begin. People I knew were in hunting camps waiting for Monday dawn so they could hunker in tree stands or prowl along deer trails with fresh heart-shaped tracks in the frost-candled mud, while here we stood barely six feet from three deer. "We could shoot these guys thirty-seven times if we were so disposed," I said laughing, without hushing my voice. And, of course, in one of the natural world's typical juxtapositions, beyond the rampart of cedar-fringed, pine- and oak-topped grey stone that towered above us were the remains of the deer kill. At the sounds of my voice and laughter and that of my friends, these deer didn't stir, shiver, or even lift their heads. They poked their snouts through the hummocks of thick, water-spangled, bright green grass bunched among the tan weeds, feeding so near that we could see their concentration on appetite in their liquid brown eyes.

We stood for a long time, observing the deer, still talking and laughing, ignored by them. But when the big one shifted a leg, raised his head, and looked right at us, the others left off eating and looked, too. With his neck extended and his head angled forward he stared at us. Then he took a hesitant step towards us, and then another, and then he was stepping slowly in our direction, one careful leg at a time, his head cocked at a wary angle, his eyes never leaving us.

As soon as the large deer had moved more than a few paces, the other two fell in behind, in single file, the midsized one and finally the

smallest. They advanced tentatively, as though out of curiosity, but just as I could have almost brushed the big one with my fingertips, he led them in a half circle past us. He bent his head around to keep us in sight until they were all strung out among spindly trees beyond us. While he was still within an arm's length, I could see a spark of fierceness in the brown jelly of his eye; however, I knew that if we lunged at them, their springy muscles would catapult them away, white scuts flailing. Instead, we swivelled carefully in their direction as they circled by. The eyes of the two smaller deer stayed on us also, but their gaze was more demure. The expression on the smallest one's face seemed more innocent curiosity than fear, incomprehension mixed with only a little doubt. They followed the big one into another stand of saplings part way across the valley floor behind us. Lush grass poked up through the coppery fallen leaves and they resumed eating.



Courtesy of US Fish & Wildlife Service

Our descent back into the valley had taken us closer to Hardwood Bay's dark glass and we recrossed the creek on slick stones in fast water below the last beaver dam. As we climbed the high bank to the level of the ponds, we speculated about the deer's lack of skittishness. In the morning when we started hiking, we had had to put on our rain pants and jackets. Although the rain had stopped several hours ago, the grey air was still saturated with moisture. Not even a breeze shivered the remaining leaves on the branches. In a couple of months, the skeletal rattle of the brown, curled oak and beech leaves would be, along with the booming or lightning ripple of ice cracking in the cold, one of the few sounds of winter, but now they

hung limply, like roosting bats, or stuck up stiffly, as if starched. It was so still and heavy that we could only hypothesize that the absence of air currents must have suppressed the transmission of our scent, which normally should have spooked the deer. All the way back to the base of the ridge we could see them in the trees on the creek's far side. Their heads were down, grazing. As we got nearer to the gloomy, boulder-studded slope where we would climb, we had to stop and peer and squint to make them out. Even though most of the leaves were on the ground, in the distance the deer's grey-brown coats camouflaged them against the wet-smearied bark of the trees. A few yellow or orange maple leaves were dropping around us as we walked. They twirled around their stems or rocked gently back and forth, falling straight down.

Even before stepping onto the low, grassy beaver dam at the bottom of the ridge where the kill had taken place, we spotted obvious changes in the deer carcass. The ribs that had been dark with blood this morning, like sticks fresh from stirring paint, were gleaming white. They were now severely truncated, their high, sweeping arch shortened to their side curve. Splintered ends exposed the pebbly bone under the polished surface. The little ball of purplish guts in the rib cage had disappeared. The obvious conclusion was that while we were hiking over the leafy slopes and along tree-stubbed beaver ponds to the north, or perhaps watching the Three Stooges on the opposite side of the ridge, the wolf or coyote pack had returned to the kill. The front legs, shoulders, and head were still intact, but the forelegs slanted more deeply into the water. I could imagine the coyotes' vigorous head-shaking and legs bracing in tussles with morsels of flesh and segments of ribs and the carcass jerking and splashing. With a thrill it occurred to me that if we had been secreted patiently on the ridge, we might have observed the pack at the kill. We did not carry binoculars, but in the dampness that discouraged the spread of scent, we might have been able to get close enough behind the ground juniper in the hallows to see the predators clearly.

The Sunday after discovering the fresh deer kill we purposefully returned to check on its state. In

the intervening week the last of the leaves had blown down to join the bright cascades preceding them. On maples and birches the stragglers that had clung in russet, pumpkin, and lemon tatters were now scraps of colour splayed on the carpets and banks of leaves already darkening to dun and rust. On a few oaks wind and weather would increasingly fray persistent leaves, but they would sound their crisp, dry rustle all winter.

It had rained less that week and the water level behind the hump of dam had receded. We were able to step from it onto the island where the deer had been brought down. The three of us crowded the tiny oval as we combed through the tag alders with the toes of our boots. Our search corroborated what our eyes had told us from the dam before we skipped across the now-narrow moat. During the week the coyotes had returned, again and again, to finish the feast. Or else, once we were no longer in the vicinity to disturb their meal, they had never even strayed. They had consumed all the rest of the deer, the forelegs, the shoulders, the breast. The muscles and fat, the flesh, even the leathery hide, all built by biological alchemy from summer grass and marsh hay, water and sunlight and sleep, were even now as we prodded the supple alder stems being converted into wolf muscle and flesh and twists of hair-matted turds along other deer paths. The deer's narrow skull had been cracked for the brains, the leg bones split and gnawed for their marrow, even the bone shards ground and

savoured in powerful jaws jagged with serrations of hard, pointed teeth.

It did not take long to examine the little island; we could do so by hardly budging from our muddy bootprints. Perhaps ravens hovering in the branches of the trees or gliding raucously overhead on the air currents off the peaks of the ridges had swooped in to filch a few morsels while the coyotes were scuffling or dozing or lapping water. The turkey vultures, normally final scavengers, had migrated south a month ago. Even so, the ground beneath the tag alders was clean of even a length of broken femur or a hinge of jawbone lined with a few pitted herb-eater's teeth. Had we crossed the dam for the first time on this particular Sunday instead of the previous one, we would have still identified the island as a kill site, but would have thought the event had occurred weeks or even months ago. All that remained of the deer was the indigestible hair. It was strewn deeply on the island, a heavy thatch of grey-brown back and flank hair, sifted with white from the belly. Before leaning into the northern ridge's uphill slope, we found another ring of it at the foot, around a birch and a pointed beaver-chewed stump. That abundance of wiry fibres lay on the fallen leaves as if it had rained out of the deer's hide as easily as an afternoon's worth of clippings on a barbershop floor. Any day now, with the leaves, these sweepings might be covered by snow.

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## *Notes on Natural History, No. 151, September 10, 1962*

*Helen R. Quilliam*

All summer we have been delighted with the antics of a large woodchuck and two smaller ones. With no dogs in the neighbourhood to molest them, they have become extraordinarily tame and have used our lawn as their favourite feeding place. In one spot, ragweed reared its ugly head and when our woodchucks displayed a fondness for this weed, they were more than

ever endeared to us. At first I did not know whether to blame certain depredations in the flower garden on them, but since in the daytime they never went near it, I knew that they could not be the culprits. The groundhog is a diurnal feeder so perhaps one or more of the numerous rabbits or even possibly a skunk was taking its toll in the dusk or at night.

I have always preferred the name woodchuck to groundhog. The childhood tongue-twister beginning, "How much wood can a woodchuck chuck" has always fascinated me. However, neither name seems particularly appropriate. Although the animal is closely associated with the ground, it neither resembles nor has any of the characteristics which we associate with pigs. And "woodchuck" makes still less sense for it neither uses wood as a food or as a place of dwelling. Nevertheless, the word "woodchuck" has a long association with this continent, for it is an adaptation of the Cree Indian name of the animal "wuchak" or "otchock."

The woodchuck or groundhog, whichever you prefer, is a marmot and this branch of the squirrel family has more members in the west than in the east where we have only the one. In the west, there are a number of marmots with the Hoary Marmot or whistler being the largest. Like other members of the squirrel family and the large order of rodents, they have two large front teeth on both lower and upper jaw, the incisors. These teeth and the lack of canines separate the herbivorous rodents from the carnivores or flesheaters. These strong teeth are the only means of defence that the woodchuck has, but when it is cornered or frightened it will fight savagely and can inflict severe wounds with its strong incisors. When alarmed, its shrill sharp whistle can be heard from some distance.

The opening of the burrow of the woodchuck is a familiar sight in many fields. The entrance is never disguised and the animal makes no effort to remove the large mound of earth which it has displaced in making the 20 to 40 foot tunnel with its several branches. At the end of one of these will be a largely chamber, neatly lined with grasses. To this it will retreat in September or October for the long winter sleep and here also the young will be born in the early spring.

The woodchuck does not collect a store of food for the winter but in the late summer and early autumn feeds voraciously, building up a good layer of fat. This fat will take it through its long winter hibernation when its metabolism will be at a very low ebb, only slowly consuming its own store of fat.

For some reason, a large woodchuck at the beginning of this summer developed a fondness for sunning itself on a concrete slab at the end of our verandah. Next to the slab is a very narrow crack where the wood of the verandah begins. The woodchuck comes lolloping up the lawn,

disappears under the verandah and then emerges slowly with careful looks all around. When fully out it either lies flat on the slab or half sits up. The wind ruffles the deep fur, blowing it apart in places, showing its softness and depth. Here it will remain sometimes for hours at a time, only taking temporary shelter under the verandah if we

approach too closely. Eventually the pangs of hunger send it back down on to the lawn where it nibbles selectively the plants of which it is fondest. A milkweed plant growing overlooked in the iris bed appealed to it one day, and since then I have often noticed while on walks that many milkweed plants have been eaten by animals.

The woodchuck has no particular economic value. Its pelt is too coarse to make a good fur and its meat is little esteemed. Its burrows are a nuisance to farmers, but nevertheless perform a valuable if indirect function in turning over the earth. So many animals appear to us to have no useful purpose because they may be destroying something which we do not wish to have destroyed. Nevertheless, they all have their place in the order of things, from the lowly earthworm which constantly turns and aerates the soil to the woodchuck which is doing the same thing on a larger scale.



Courtesy of US Fish & Wildlife Service





