

THE BRODIE CLUB



ROYAL ONTARIO
MUSEUM OF ZOOLOGY

THE 967th MEETING OF THE BRODIE CLUB

The 967th meeting of the Brodie Club was held on May 21 in Room 432 of the Dept. of Zoology of the University of Toronto.

Chairman: Bill Crins
Secretary: Oliver Bertin
Attendance: 13 members and two guests
Guests: Rosemary Addison and Nina Whelan, guests of Ed Addison

The minutes of the 966th meeting were approved with no changes.

Most members were away at Long Point and other birdwatching spots, attending the Baillie Birdathon. Members were invited to donate to the cause, which helps fund Bird Studies Canada and the Long Point Bird Observatory.

After some discussion, Bill Carrick invited members to his film studio on Sunday, June 9 for a joint meeting with the Pickering Field Naturalists Club. Carrick said he has some nesting Mute Swans and a pair of Sandhill Cranes, in addition to other birds and baby beavers. Bring a lunch.

Michael Boyer suggested that members attend a Save the Rouge Valley meeting that was to be held on May 27 in the McConochie Centre on Yonge St., just north of Major Mackenzie Dr. Participants were to discuss government plans to build 6,000 houses in a sensitive area of the Oak Ridges Moraine.

Bertin recommended the book *A Bright & Savage Land* by Ann Moyal, published by Penguin Books Australia Pty in 1993. It sells for \$16.95 (Aus), but is available in Canada for \$3 on remainder shelves. It is a fascinating history of natural science in Australia from 1768 when James Cook and the naturalist Joseph Banks first went searching for the rumoured Great South Land, to the early years of the 20th century when William Farrer bred strains of rust-free wheat that could tolerate the high temperatures and dry weather of the Australian bush. The book details the search for the Platypus, an animal so bizarre that most naturalists thought it was a mischievous fabrication, the controversy over the existence of a marsupial lion and the battles between Australian colonists who wanted to be independent of the patronizing English botanists far away in Kew Gardens.

Bertin asked for the forgiveness of members for any misspelt bird names. He is painting his bookshelves and the bird books are buried in the basement.

SPEAKER:

Carrick introduced the speaker, Tom Mason, who is curator of invertebrates and birds at the Metro Toronto Zoo. He worked on entomology at the University of Guelph before moving to the zoo in 1980.

Mason is a founder and president of COTERC, the Canadian Organization for Tropical Education and Rainforest Conservation, the Canadian body that has run the Cano Palma Biological Station in Costa Rica for the past eight years. The station is located on 48 hectares of land in the Refugio Nacional de Fauna Silvestre Barra del Colorado, a wildlife refuge on the Caribbean coast, close to the Nicaraguan border. This is one of the most endangered ecosystems on earth.

The locality is ideal because it is one of the few locations with access to swamps, forests, freshwater and saltwater. It is also home to many endangered species of plants and animals. Of the 16 endangered species of mammals in Costa Rica, 13 are found nearby.

This area has some of the little remaining tropical rain forest in Costa Rica, partly because it includes the wettest lowlands in Central America. Between six and 12 metres of rain fall in the area every year. About two metres of rain fell last November alone, the worst month of the rainy season when floods reach halfway up the cabin walls. Mason joked that the station manager found the best fishing hole in the area was in his kitchen! "It's downright wet," he said. It can also rain in the dry season, with floods in May and sometimes in July. About two feet of rain fell in one day -- in the dry season.

The nearest village is Tortuguero, the original home of a Campbell Soup factory that harvested the many Green Sea Turtles that come to lay eggs on the local beaches. The factory eventually closed, leaving a virtual ghost town with only five families. The locals tried logging for a few years, then fishing and finally found they could make a living through ecotourism. About 50,000 tourists visit the area every year, even though it is extremely wet, and they must travel in by boat or by airplane.

Mason decided to build the station in that location partly to teach local Costa Ricans how to preserve their rain forest from the ravages of a growing population and the inevitable deforestation. There has been a massive movement of people into the tropical rain forest, and immigrant farmers typically clearcut many square miles of forest to plant bananas. Costa Rica is the second-most important banana producer in the world, with a crop that occupies about 80 per cent of the total area. It is a particularly devastating plant because it uses so much nitrates and water. After a few years, the locals are left with a near-desert, with soil so poor that virtually nothing will grow. To make it worse, bananas only produce one cash crop in their life cycle.

The locals usually cut down the banana trees after six or eight years, and then try to raise cattle in the fields. But the soil is so infertile that even cattle do poorly.

The station is set up for visiting biologists, who stay in rustic dormitories. Recent projects include bird banding (partners in Flight from California); bat ecology studies (York University and the Royal Ontario Museum); poison dart frog vocalizations (Simon Fraser University); moth biodiversity (Fredonia University); and a tropical ecology course put on by Texas Wesleyan University.

Despite the ravages of agriculture, the area is so rich in wildlife that it attracts thousands of ecotourists every year. Mason has tried to boost the local eco-tourist industry. He invites visitors to walk on the local trails or cruise through the swamps and rivers in the station's outboard motor boats. He helped build a butterfly garden in the local town where the local residents can make a living by breeding butterflies and selling the pupae to collectors overseas.

Hundreds of sea turtles come ashore every year to lay their eggs on the beaches. Mason sees Green Sea Turtles from April to August, Leatherback turtles, and sometimes Hawksbill turtles. But Loggerheads are rare. Most of them come ashore further north. Some ecotourists volunteer to protect the turtles from poachers, an age-old problem because the country is so poor.

Jaguars are so plentiful that they have become a nuisance. There are lots of deer, two species of Peccary, two species of sloth, seven kinds of marsupial, Manatees, Tapirs and lots of primates. Two endangered species are common, the Mantled Howler Monkey and the Neotropical River Otter. The mammals are so cautious they are rarely seen, with the exception of sloths and monkeys.

The water varies from seawater to brackish to fresh often in the same location, providing habitats for a wide range of fish. Three new species have been found nearby.

The station sits on the flyway through Central America and many of the birds are migratory. Of 170 species seen by one individual, 50 were passing by. There is an incredible variety of tropical bird life in the area, including Great Green Macaws, Chestnut-mandibled Toucans, White-collared Manakins, Great Curassow, Montezuma Oropendola, Great Tinamou and the Slaty-tailed Trogon.

Entomologists appreciate the abundance of moths. There are 60 species, of which 20 species have never been seen in Costa Rica before. There are also three species of tarantula, some seven inches in diameter, and three species of scorpion.

Reptiles include turtles and 93 species of snake, including the Fer de Lance, a snake so common and so venomous that it is the major cause of death in Costa Rica. Mason found 30 of these snakes in a three-week period. One of the local staff was bitten and would have died if he had not been rushed to hospital in the capital of San Jose. There are also Yellow Vipers, a gorgeous but venomous species that is coloured lemon-yellow.

The Black Cayrnan has gone, but 20-foot long American Crocodiles have been seen in the intracoastal waterway nearby. There are also Yellow-spotted Night Lizards, which have a placental birth; lizards shaped like a dead leaf and lizards so small, they fit on a five-cent piece. Eight species of turtle are found nearby, of which the most common are the black-river turtle, the red-eared slider and the ubiquitous snapper.

There are two species of salamander. One of the most colourful amphibians is the poisonous Strawberry Frog. It is also seen with blue legs, giving it the name Blue-jean Frog. It lays its eggs in the leaf litter.

The tropical rain forest has about 70 species of orchid, including a new species. Many of them float by the station on dead trees after a flood.

The speaker was thanked by Harry Lumsden.

NOTES & OBSERVATIONS:

- Boyer noted a nesting Robin with pure white primary feathers.
- Crins said he has seen Crows and Grackles with white feathers. He suggested the white coloration could be genetic or perhaps a result of stress during the nesting stage.
- Addison saw a tail-less Grackle at his feeder. Lumsden suggested that a new tail might take 30 to 40 days to grow, usually during the next moult.
- John Speakman saw a Hummingbird trying to feed from a geranium. He said the bird may have been suffering from the cold, wet weather of late. He put out a feeder and attracted four more Hummingbirds.
- Lumsden has seen reports of Whooping Cranes that were successfully escorted from Wisconsin to Florida using an ultralight. Bobcats caught a lot of them in Florida, but many returned on their own. He said the keepers dressed like cranes to avoid imprinting themselves onto the birds.
- Fred Bodsworth said this was the latest spring in 30 years judging by the breeding progress of Tree Swallows. The swallows are really suffering from the cold and the related absence of flying insects. He has seen dead swallows, and most of the Purple Martins seem to have disappeared. He found eggs on May 9 and on May 19. In previous years, eggs were laid from May 18 to May 24, depending on the location.

- Sandra Eadie saw swifts flying abnormally close to the ground on a trip to Toronto island. They appeared to be searching for food because there were few insects higher in the air.
- David Hussell said trees swallows are a good indicator of climactic change. The world is warming, he said, but with huge regional variation. Ontario had a very long winter with snow the previous weekend in some areas, while hundreds of people died from 50C heat in India.
- Hussell has noticed a high mortality of swallows in the Long Point area. They typically weigh between 16 and 29 grams, two to three grams less than normal at this time of year. Some dead swallows have weighed only 14 to 16 grams, suggesting they died of starvation. "They are not adapted to long periods of cold weather," he said.
- Jennifer Young has seen a pair of Sharp-shinned Hawks nesting behind her house since early March. The hawk appears to have driven many of the other birds out of the area. They apparently eat mice.
- Crins has seen three nesting pairs of Merlins in the Peterborough area, with others nearby. They used to be rare, but appear to be moving south towards urban areas.

The meeting adjourned at 9:55 pm.

FIELD DAY:

The annual field day will be held at Carrick's film studio at 10 am on Sunday, June 9. To get there:

- go north on Meadowvale Rd., past the Metro Toronto Zoo to the top;
- turn right on Plug Hat Rd. and go east to the T-junction;
- turn right on Beare Rd. and go south to the bottom;
- turn left onto Finch Ave. E, and go east to the first road on the left;
- go north on Scarborough-Pickering Townline to the first gate south of the railway track;
- park inside the gate or on the grass verge by the side of the road.
- Bring a lunch.

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