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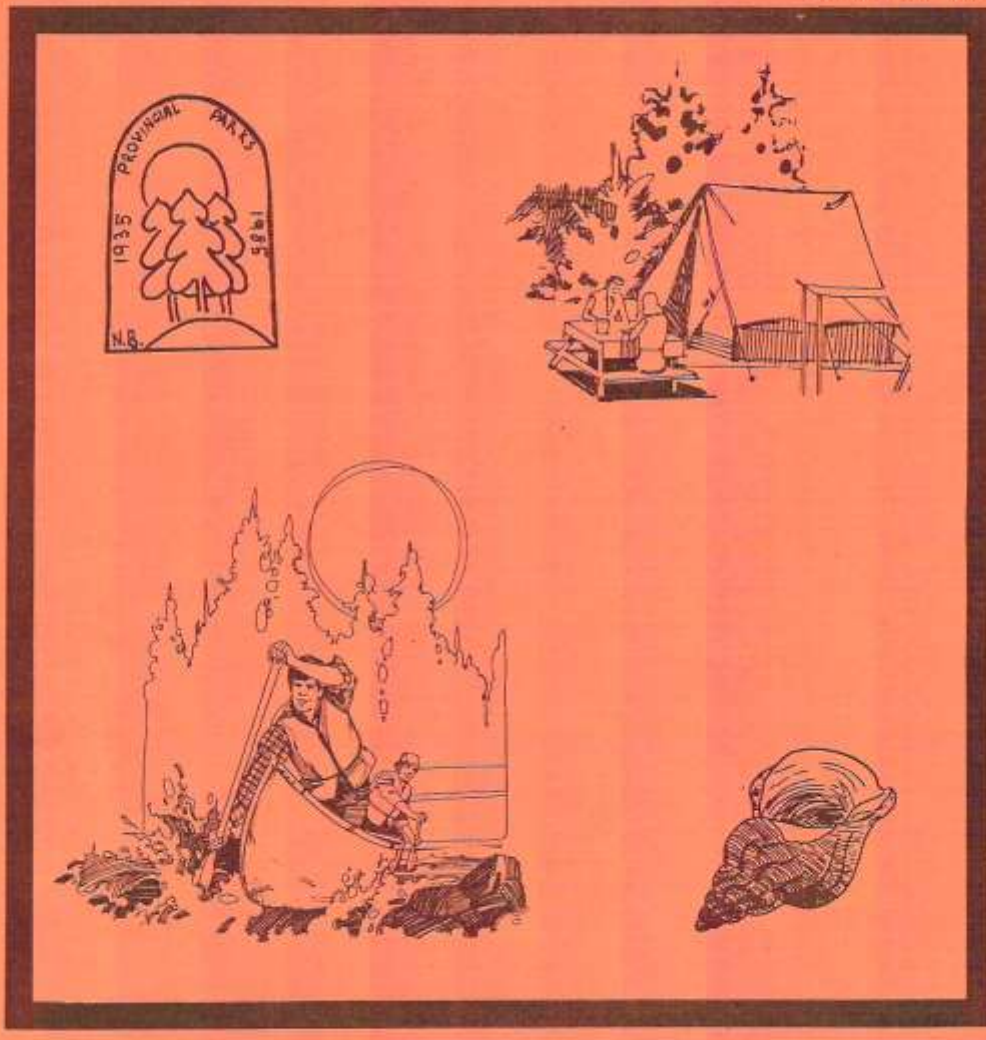

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From the Editor

Fifty years ago the first Provincial Park in New Brunswick came into existence. Today our province boasts almost 60 parks of various sizes and uses. Some are simple picnic or tenting places, others are recreational areas and one is a wilderness that best can be explored and enjoyed by those who like to "rough it."

Our last issue was devoted to National Parks, especially the two parks in our province. In a way it is fitting that both systems celebrate important anniversaries (50 and 100 years, respectively) in the same year. Both play an important role in the life of the inhabitants of New Brunswick, as well as those who visit us from other parts of the country, to refresh themselves and "recharge their batteries."

Provincial Parks often seem to play a secondary role but in reality they are of great importance. They provide welcome stopovers. They offer many opportunities for recreational use of our natural resources. They are easier to reach for much of our population. They protect beautiful or recreationally desirable locations (for instance beaches or ski slopes) from commercial development that might not be consistent with the environment. And they preserve a few larger, and at the same time very precious, natural areas of the province.

Provincial and National Parks often complement each other. Each can play an important role in education and informing the public in the "ways of nature", especially for children who take part in camps, hikes, and different events organized especially for them. We hope that in this issue you will find many new tips of where to travel, not too far from home but yet to a new and exciting place.

Our congratulations to the Provincial Parks program of the New Brunswick Department of Tourism on their anniversary and a special thank you to Eric Hadley of that department for providing the articles on our parks and many of the illustrations that adorn them.

Mary Majka

From Your President

Damp, but not our spirits! Our annual general meeting at Kouchibouguac National Park was a great success with many intrepid souls braving the wind and rain to help orchestrate a symphony of coyote callers, joining in a long conversation with a Barred Owl, and managing two nature walks and the shelter of our cars seconds before a major deluge descended upon us.

Our high spirits were maintained by the well-planned programs, by Pat Allen's talk on the archaeology of the Oxbow Site near Red Bank and Hank Tyler's illustrated talk on the Critical Natural Areas Project in Maine. The last provided new stimulation for many of us to continue our work towards identifying and protecting our own critical natural areas. Many thanks are due to the members of the Miramichi Naturalists' Club who organized the meeting in conjunction with the staff of Kouchibouguac National Park.

The nominations presented by Mary Majka were confirmed by the attending membership. Dave Smith, who has so successfully filled our treasurer's post for the past four years was succeeded by Harriet Folkins, previously a representative director from the Kennebecasis Naturalists Society. Ruth Rogers will continue her excellent service, I'm sure, as our secretary, and Angus MacLean, from Alma, has agreed to join us as Vice-President. I will continue as your president.

In the coming year we hope to expand our outreach to parts of the Province which have poor representation in the Federation as well as to find ways to interest more young people in the appreciation and study of nature.

David Christie and Mary Majka continue as editors of the newsletter. It is a formidable task for two individuals who have many other obligations. Please continue to support them with your nature articles and letters.

Hal Hinds

Provincial Parks Information

Want to know more? For information on New Brunswick's Provincial Parks write to the Department of Tourism, P. O. Box 12345, Fredericton, N. B. E3B 5C3, or phone toll free 1-800-442-4442 from within New Brunswick.

NEW BRUNSWICK'S PROVINCIAL PARKS CELEBRATE THEIR 50TH ANNIVERSARY

This year is the 50th anniversary of New Brunswick's Provincial Parks. A lot of changes have taken place since the first was created half a century ago at Glenwood on the Stewart Highway.

Today, 58 parks make up the New Brunswick system. They range from roadside picnic areas to comprehensive recreational compounds offering everything from camping to water slides, golf and skiing. They embrace mountains and seashore, forests and lakes, sand dunes and meadows full of wildflowers. They attract 2.5 million visitors annually and have become vital elements in New Brunswick's multi-million-dollar tourist industry.

But in the beginning, back in 1935, there was a strict utilitarian reason for building Glenwood – it was created as a protective measure against forest fires. The idea was to direct travelers, whose number was increasing because of the automobile, to a specific location where their campfires could be contained in stone fireplaces and where supervision was readily at hand from wardens.

Glenwood was a success, but because of the Depression and the Second World War, it wasn't until the late 1940s that plans for more parks reached the drawing boards. By then, work was underway on New Brunswick's first national park – Fundy. Moreover, there was a dawning realization that the make-up of the "typical" visitor to the province was changing. No longer was New Brunswick the destination of only the well-to-do hunter and fisherman; middle class families on vacation were beginning to show up too.

In 1951, a second provincial park, The Enclosure, near Newcastle, was established on land donated by Lord Beaverbrook. By the end of that decade the province had established 54 campgrounds along our highways, including the new Trans-Canada, and at some popular tourist attractions.

Another shift in parks direction came in the mid-1960s, by which time the provincial system was drawing one million visitors a year. It was decided to expand the parks concept to embrace comprehensive recreation facilities, including golf courses and ski runs, and to allow private enterprise to operate some of the facilities.

The 1960s saw the creation of Mactaquac Provincial Park, a large year-round multi-use park built in conjunction with the Mactaquac Hydroelectric Generating Station on the Saint John River. With its golf course, beaches, skating ponds and a host of other facilities, it was to become the showpiece of the provincial parks system.

More parks were built in the 1970s, including Sugarloaf at Campbellton and Les Jardins de la République near Edmundston, and annual park attendance peaked at four million visitors.

An ebbing economy and the energy crunch (as it was in the beginning, the parks system is still linked to the automobile) eventually caused the flow of visitors to level off. But the system has continued to expand and to be improved. Today, half a century after its modest beginning alongside the Stewart Highway, it encompasses nearly 2500 campsites, 2300 picnic sites, more than 30 beaches, a ski hill and two golf courses.

50ième ANNIVERSAIRE DES PARCS DU NOUVEAU-BRUNSWICK

Plusieurs changements se sont produits depuis l'aménagement du premier parc provincial au Nouveau-Brunswick il y a 50 ans à Glenwood le long de la route Stewart.

Aujourd'hui, le réseau de parcs du Nouveau-Brunswick comprend 58 parcs, comprenant aussi bien des terrains de pique-nique le long de la route que des terrains récréatifs offrant tous les services à partir du camping jusqu'aux glissades d'eau, ainsi que le golf et le ski. Ils englobent montagnes et rives côtières, lacs et forêts, dunes de sable et prés remplis de fleurs sauvages.

Chaque année, ils attirent 2,5 millions de visiteurs et deviennent un élément vital de l'industrie touristique du Nouveau-Brunswick qui représente plusieurs millions de dollars.

Mais au début, en 1935, le parc Glenwood a été aménagé pour des raisons strictement utilitaires. Il a été aménagé à titre de mesure de protection contre les incendies de forêt. Le but était d'orienter les voyageurs, dont le nombre

augmentait à la suite de l'avènement de l'automobile, vers un endroit spécifique où ils pourraient faire leurs feux de camp dans un foyer en pierre, ce qui permettrait aux gardes qui y étaient postés de surveiller facilement ces feux.

Le parc de Glenwood s'est avéré un succès, mais à cause de la dépression et de la deuxième grande guerre, on n'a pas commencé à prévoir l'aménagement d'autres parcs avant la fin des années 1940. À ce moment-là, les travaux d'aménagement étaient en cours pour le premier parc national du Nouveau-Brunswick, soit le parc Fundy, et on s'est rendu compte que les aspirations du visiteur "typique" qui venait dans la province changeaient. Le Nouveau-Brunswick n'était plus le lieu de destination uniquement des chasseurs et des pêcheurs à l'aise; les familles de la classe moyenne en vacances commençaient à venir à la province comme touristes.

Puisque ces gens avaient besoin de services différents, la province a entrepris un important programme de construction. En 1951, elle a ouvert le parc Miramichi connu sous le nom "L'Enclos" sur un terrain donné par Lord Beaverbrook et vers la fin des années 1950, la province avait aménagé 54 terrains de camping le long des routes, y compris la nouvelle route transcanadienne, ainsi que des attractions touristiques populaires dans toutes les régions de la province.

Un autre changement dans l'orientation des parcs s'est fait sentir vers le milieu des années 1960, époque où le réseau de parcs provinciaux attirait un million de visiteurs par année. On a donc décidé d'élargir le concept des parcs pour y inclure des installations récréatives intégrales, telles que terrains de golf et pistes de ski et aussi de permettre à l'entreprise privée de diriger certains de ces services.

Au cours des années 1960, il y a eu l'aménagement du parc provincial de Mactaquac, un grand parc à multi-vocations construit en même temps que la centrale hydro-électrique de Mactaquac sur le fleuve Saint-Jean. Grâce à son terrain de golf, ses plages, ses étangs pour le patinage et de nombreux autres services, ce parc est devenu le modèle du réseau de parcs provinciaux.

D'autres parcs ont été aménagés dans les années 1970, y compris le parc Sugarloaf à Campbellton et Les Jardins de la République près d'Edmundston et l'affluence annuelle dans les parcs a atteint quatre millions de visiteurs.

L'instabilité économique et la crise énergétique – parce que le réseau de parcs est relié, comme il a toujours été, à l'automobile... ont même à une stabilisation du nombre de visiteurs. Mais le réseau a continué de s'améliorer. Aujourd'hui, un demi siècle après l'aménagement du premier parc, ce réseau comprend environ 2 500 emplacements de camping, 2 300 terrains de pique-nique, plus de 30 plages, une pente de ski et deux terrains de golf.

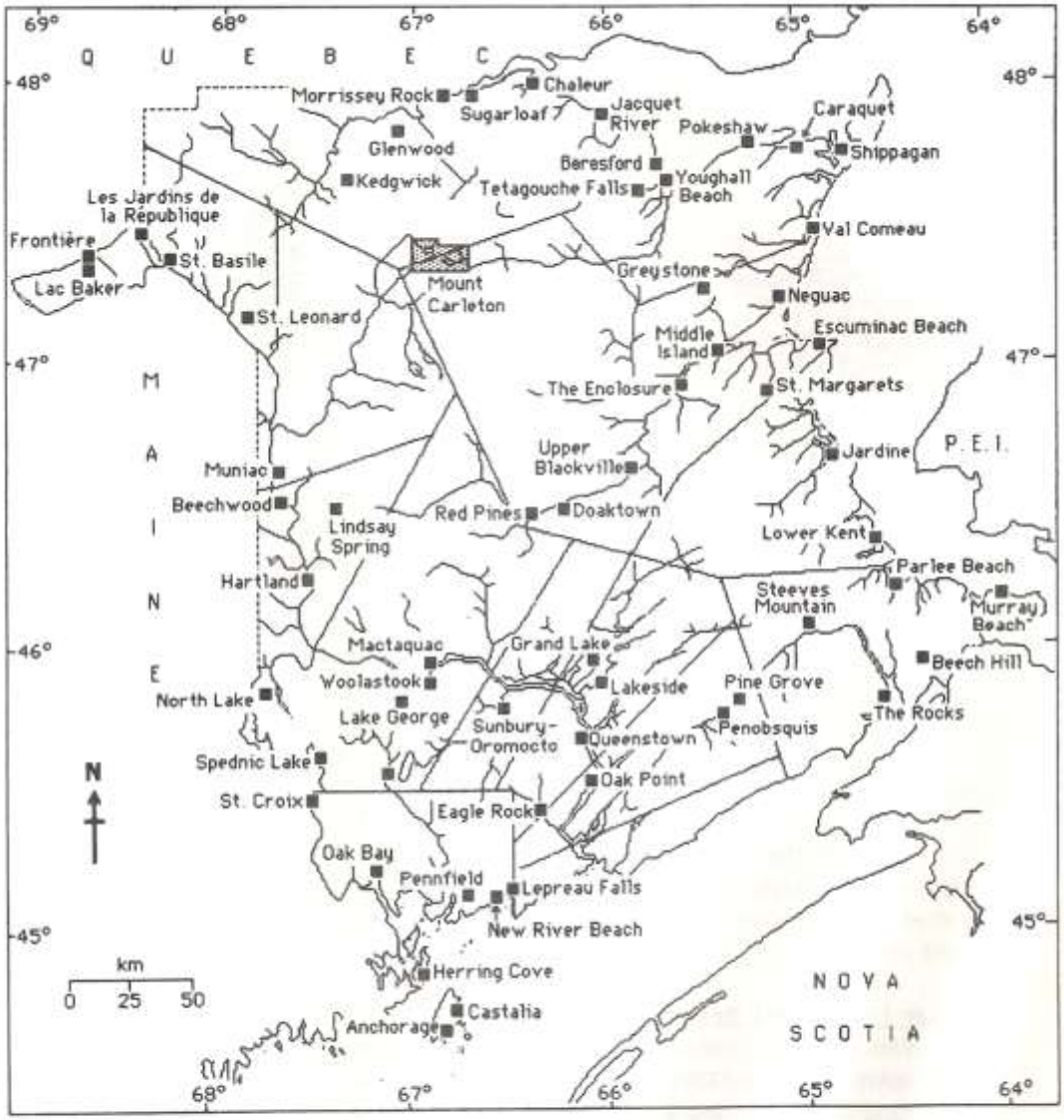
SOME PROVINCIAL PARKS AND THEIR SPECIALTIES

Parlee Beach – One of the most popular recreation parks is Parlee Beach, near Shediac. Its 90-acre site offers camping, picnicking and a supervised public beach. It's popular as both a day resort and camping destination.

No wonder – the beautiful, white sandy beach leads into some of the warmest saltwater north of Florida. The ocean offers hours of fun and recreation and also features a bounty of shellfish. Throughout the season, the town's many fine restaurants offer an abundance of delicious seafood at reasonable prices, but the summer's ultimate moment arrives with the famous Shediac Lobster Festival in July.

Back at the beach, you may find yourself in the middle of a sand sculpture contest, a volleyball competition or even a magic show, all annual events at Parlee. You can cheer your favorite team as it constructs the frail and beautiful sand structures.

Other East Coast Beaches – Persons who prefer a slower pace and find Parlee Beach too bustling, should enjoy Val Comeau Provincial Park, situated on a point between the Tracadie River and the Gulf of St. Lawrence. A beautiful beach with high sand dunes shelters a protected bay where terns dive for small fish. Other parks featuring sandy beaches and warm salt water include Jardine Beach and Murray Beach along the Northumberland Strait. Further north, provincial parks at Shippagan and Caraquet offer camping, picnic sites and swimming.



PROVINCE OF NEW BRUNSWICK

PROVINCIAL PARKS SYSTEM

Chaleur Park – Near New Brunswick's northernmost point, is Chaleur Park, at Eel River Bar, just a stone's throw from the town of Dalhousie. Here, a barrier beach separates the ocean waters from a sheltered lagoon, which is an excellent birdwatching area, especially good for ducks, herons, shorebirds and gulls.

Visitors to Chaleur Park can rent board-sailing equipment at the beach. The waters are not rough, so even the most inexperienced can try riding the wind. There is the choice of a sheltered cove or the open ocean and experts can join the races which are part of the summer's province-wide board-sailing regatta.

Visitors to the area are struck by its natural beauty. The Gaspé coast looms large in the distance, and at dusk you can scan the horizon for signs of the Chaleur Phantom, a blazing ghost ship often seen in the bay. These days another Chaleur Phantom plies the waters of the bay – a pleasure boat for scenic tours of the area.

New River Beach – This 835-acre park, west of Saint John, is perfect for beachcombers, birdwatchers, sun bathers and for swimmers sturdy enough to brave the cold waters of the Bay of Fundy. Two nature trails, Barnaby Head Trail and the Chittick's Beach Trail, take you along the sandy beach to rocky cliffs and sheltered inlets, furnishing impressive views of the bay.

On the shore, a watchful visitor can find crabs and periwinkles, starfish and New Brunswick's famous edible seaweed – dulse. Inland, insect-devouring pitcher plants and other unique bog flowers can be seen. And keep an eye out for eider ducks and the herring weir at Tommy's Cove.

Les Jardins de la République – Il s'agit d'un parc de 107 acres situé près d'Edmundston. On trouve dans le parc, des terrains de camping, de volleyball et de tennis, une grande piscine surveillée, un terrain de jeux pour les enfants, des jeux de fers à chevals, un terrain de softball et des installations pour jouer à la pétanque, jeu traditionnel des Acadiens. Le parc est muni également d'une rampe de mise à l'eau sur la rivière Madawaska et d'un musée d'automobiles d'autrefois.

Un amphithéâtre présente de nombreuses manifestations culturelles. Les soirs d'été, la musique, les chansons et le rire sont des bruits bien familiers. C'est l'esprit créateur des Acadiens qui se manifeste par ces présentations musicales et théâtrales.

Une des manifestations au parc illustre bien la joie de vivre des Français. Il s'agit du Nöel des campeurs qui a lieu non pas en décembre mais en juillet. On y chante des chants de Nöel, on présente un arbre bien décoré ainsi que toutes les accessoires de fête, sauf la neige. Ensuite le Nöel des campeurs est a peine fini que c'est le temps des compétitions et des jeux des campeurs – 10 jours de gaiété et de fête en août.

Mactaquac Provincial Park – This 1406-acre park was begun in 1965 on former farm fields and woods overlooking the headpond of the Mactaquac Dam on the Saint John River. Since then it's developed into one of the province's most diverse and popular parks. At the very least Mactaquac warrants a few days stay and, for some, there are enough activities to keep one busy all summer.

Golf is very popular here. A staff pro imparts secrets of the game, and the 18-hole championship course is among the province's finest. Clubs and carts can be rented, and caddies are available. Mactaquac has sailboat and powerboat marinas, a supervised playground, lodge, boat-launching ramp, canoe rentals, two supervised beaches, 16 km of walking trails, and tours of the nearby Mactaquac Hydroelectric Plant and Salmon Culture Station.

If all of this isn't enough, there are Woolastook Wildlife Park and King's Landing Historical Settlement, both near at hand. Woolastook features animals indigenous to the region presented in a forest setting. In addition, it has two water slides and offers boat rentals. King's Landing, a popular place in summer and winter, recreates life a century ago. Even the food at the King's Head Inn is vintage fare. It's wise to set aside an entire day to explore the village and take in the show at the King's Theatre.

The Oland International Bass Tournament is held at Mactaquac. Sport fishermen from all over North America come to Mactaquac Lake for this tournament and a chance to reel in a prize bass that may be worth anywhere from $250 to $5000. A full week of festivities accompanies this event in early July.

Sugarloaf Provincial Park – This park has a lodge with lounge and restaurant and 65 campsites located on 2880 acres of land near Campbellton. Summer or winter, the view from the top of Sugarloaf is spectacular. You look over the Restigouche Valley and the mouth of the Restigouche River to the scene of the last naval encounter between the French and English in 1760.

Sugarloaf Park has lighted tennis courts, hiking trails and a jogging path named for Marathon of Hope runner Terry Fox. Ball pitching machines test your baseball skills and, for fun on the water, you can try the bumper or paddle boats. In winter there are the ski slopes.

A new attraction is a half-mile-long Alpine slide, the only one of its kind in Atlantic Canada. A scenic chair-lift takes you to the top where you catch the slide for a fast trip to the bottom. Don't worry. You can control the speed of the sled you're riding.

Grand Manan Parks – Visitors making more than a one-day trip to Grand Manan will find camping facilities at the 285-acre recreation park and bird sanctuary known as The Anchorage.

Grand Manan is famous for the variety and number of birds that occur there. Atlantic Puffins, Razorbills and Arctic Terns frequent nearby Machias Seal Island, and on Grand Manan itself you can see numerous shorebirds, gulls and songbirds, with a good possibility of strays during migration. Castalia Park, a rest area with picnic tables and a public beach beside a tidal marsh, is a great area for birdwatching.

The island is a paradise for lovers of nature and the outdoors. Complementing the outdoor attractions is an indoor one – the Grand Manan Museum includes the Allan Moses Bird Collection and a gallery of marine history.

Campobello Island – On another Fundy isle, Campobello, is Herring Cove Provincial Park, one of the most scenic in the New Brunswick parks system. Multi-coloured pebbles, flowers and scattered driftwood on a crescent-shaped beach are part of the combination that forms the charm of this island park.

This 294-acre park with camping facilities also includes an excellent 9-hole golf course overlooking Herring Cove Beach. It has a pro shop and a lodge, and fresh seafood is a daily special in the licensed restaurant.

For years, Campobello was the summer home of former U. S. President Franklin D. Roosevelt. Now, one of the Island's most interesting attractions is Roosevelt Campobello International Park. Jointly administered by the Canadian and United States governments, it's the site of the 34-room Roosevelt cottage. The public can tour the cottage and there are spectacular views of Passamaquoddy and Cobscook Bays.

Most of the park has been preserved in a natural state. Hiking trails offer views of Lake Glen Severn, Herring Cove, Raccoon Beach, the Duck Ponds, and farther away, The Wolves, Quoddy Head and Grand Manan Island.

LA BEAUTÉ DES PAYSAGES

Le Nouveau-Brunswick est riche en attractions historiques et naturelles et plusieurs parcs provinciais sont, à juste titre, situés dans des sites de beauté pittoresque munies de tables de pique-nique et de cabinets d'aisance. Ce sont des lieux où on peut s'arrêter pour déguster un repas ou y admirer la beauté de la nature.

Une de ces haltes routières se trouve à Hartland non loin du plus long pont couvert au monde. C'est un site pittoresque qui offre une vue magnifique du fameux pont ainsi qu'un endroit où vous pouvez vous arrêter pour vous délasser en route.

Une autre halte routière panoramique se trouve à Lepreau Falls près de Saint-Jean. Aménagé en 1956, ce parc est visité par un grand nombre de gens qui vont faire du camping au parc provincial de New River Beach.

Le parc provincial des Chutes Tétagouche est une des haltes routières panoramiques que l'on trouve près de Bathurst. Ce terrain de pique-nique donne une vue splendide des chutes et de la rivière Tétagouche qui se plonge dans la gorge étroite. Un sentier serpente jusqu'à la rivière dont les eaux rafraîchissantes sont un lieu idéal pour la natation. Prudence, cependant: la natation est limitée et non surveillée. Tout près, on peut encore voir les vestiges d'un ancien barrage et d'une mine de manganèse.

À quarante kilomètres à l'est de Bathurst se trouve le parc provincial de Pokeshaw. Ce parc a été ajouté au réseau de parcs en 1982. La principale

attraction de Pokeshaw est une île et un tropeau de cormorans. Vous pouvez à n'importe quel temps de la journée apercevoir des centaines d'oiseaux perchés sur des arbres sur le fait de l'île.

Cependant, les îles les plus impressionnantes de ce genre se trouvent au Cap Hopewell à mi-chemin entre le parc national de Fundy et Moncton. Les roches en forme de pots de fleurs sont de renommée mondiale. L'eau et la glace ont continuellement rongé la rive, laissant plusieurs grandes tours de pierres qui dominent la région aujourd'hui et qui semblent vouloir défier la loi de la gravité.

Un parc provincial fut aménagé à cet emplacement en 1958. On y trouve quarante aires de pique-nique; le camping est interdit dans le parc, mais il y a des gîtes touristiques dans les régions environnantes du parc.

Le meilleur temps de la journée pour explorer les rochers est à la marée basse. Même à marée haute, on peut s'adonner à de nombreuses activités différentes. On peut marcher le long des anciennes digues acadiennes ou chercher des pierres ou des coquilles sur la grève. On trouve toutes sortes de plantes colorées, de fongus et d'oiseaux dans la zone du parc également. Ou on peut tout simplement s'asseoir pour regarder la marée descendre quatorze mètres.

HIKING TRAILS

New Brunswick's scenic beauty makes it a natural place for hiking. Several provincial parks offer self-guided interpretive walks and longer hiking trails.

Guidebooks for most trails are available from the Department of Tourism. Good walking shoes are a must and you'd be wise to carry insect repellent and a change of socks. Otherwise, all you need is a sense of adventure and an appreciation of the beauty of the outdoors.

Mactaquac: At Mactaquac, six trails, ranging in length from 0.5 to 4 km, traverse a variety of habitats, such as a stand of sugar maples with 200- to 300-year-old

hemlock, a stand of largetooth aspen, an active beaver pond, and the Little Mactaquac Stream. The Jones Field Trail leads to a beautiful view of the Mactaquac headpond.

New River Beach: Two of the province's finest nature trails are in New River Beach Provincial Park. The first, Chittick's Beach Trail, goes through coastal forest carpeted with moss and wildflowers and along a beach to four coves. Then Barnaby Head Trail winds out to Barnaby Head and along a 15-m cliff to a spruce bog sprinkled with unique and beautiful flowers.

Anchorage: Another excellent coastal hiking trail is at Anchorage Provincial Park on Grand Manan Island. It's a great place for birdwatching, rock hunting and photography. Breathtaking views of the Bay of Fundy are part of the appeal.

Mount Carleton: For those who prefer true wilderness, there's hiking in rugged and beautiful Mount Carleton Provincial Park in the north-central highlands. Hikers here should wear sturdy footwear, be in good physical condition and carry suitable equipment. Hikers should register at park headquarters, indicating their intended route, and should also report in when they return.

Several trails are available depending on a hiker's interest and endurance. The Mount Bailey Trail, for example, is a moderately difficult 6-km route through hardwood stands to a summit offering spectacular views of Nictau Lake, Mount Carleton, Sagamook Mountain and Bald Mountain Brook valley.

The Mount Carleton Trail is an easy-to-moderate 4.4-km climb, and when you reach the summit, you're standing at the highest point in the Maritimes – 820 meters. Another trail (5.2-km) provides a different route down the mountain.The Sagamook Trail is more demanding – 2.5 km up and 3.7 km down. It offers great views of the Nepisiguit and Nictau Lakes.

The William's Falls Trail winds an easy 1.5 km among spruce and fir trees before coming to a falls where water spills three meters over a rock ridge. Similarly, the Dry Brook Trail is a moderate 6-km hike through stands of impressive trees and past waterfalls and beaver dams.

Another easy trek is the 9-km Big Brook Trail, which affords an excellent view of Mount Carleton. And, although crossing from peak to peak, the 4.25-km Mount Head Trail is relatively easy [once you have climbed Carleton or Sagamook to reach it].

You can also have a 2-km stroll on the Pine Point Trail. It runs through a unique pure stand of Red Pine and offers a view of two interesting islands in Nepisiguit Lake.

Hiking is good exercise and an enjoyable activity that brings you closer to nature. It can be done at parks throughout New Brunswick, but be sure to be well-prepared with food, clothing and supplies.

CANOE TRIPS

With 2400 km of boating and canoeing water and place names that echo out of the past, New Brunswick is a paddler's delight.

Rivers like the Miramichi, Restigouche and Nashwaak are famed for their Atlantic Salmon. But even people who don't get enthused about sport fishing can appreciate the quiet and unspoiled beauty of New Brunswick's waterways.

Many people use the provincial parks as a base from which to begin a canoe trip. Mount Carleton, for example, is a popular spot for the outdoor enthusiast. This 43,062-acre resource park in the north-central highlands is a great jumping off spot for canoe trips down the beautiful Tobique River. Canoes and guides can be hired at nearby Nictau and Riley Brook. Within the park, Nictau Lake and Nepisiguit Lake are popular for canoeing, fishing and swimming.

There is also canoeing on the tranquil waters of the Madawaska River, for which you can put in at Les Jardins de la République Provincial Park. And near Mactaquac Provincial Park you can rent canoes for a peaceful interlude on the headpond.

Many people use Grand Lake Provincial Park as a base from which to explore tributary creeks in search of Snapping Turtles and Osprey. But it' wise not to venture out too far on the lake, as storms can spring up suddenly.

North Lake Provincial Park, on the Maine–New Brunswick border near Canterbury, is popular for canoeing. In this area one can follow a canoe route once used by the Indians between the Saint John River and Maine's Penobscot River. The park provides access to an appealing system of lakes along the international boundary.

St. Croix Provincial Park, north of St. Stephen, is a rest area and base for the St. Croix waterway. The park is near the border of a large wilderness area. The St. Croix is one of New Brunswick's most challenging rivers. Whitewater rafting trours are available, if you enjoy a real thrill and challenge. Because tours are available for both beginners and experienced rafters, it's a good idea to get some advice before booking. The New Brunswick Department of Tourism can help.

Details on canoe trips are also available from the New Brunswick Department of Natural Resources. The department has topographical maps for accurate trip planning and lots of other useful information, including lists of guides and canoe rentals. Mactaquac is the only park where canoes can be rented nearby, but throughout the province private outfitters rent canoes and other equipment.

Fundy National Park Management Plan

Parks Canada is beginning preparation of a Management Plan for Fundy National Park and invites members of the general public to participate in the process by providing suggestions about the various types of decisions that should be made. Send your views about the future management of the park to the Superintendent, Fundy National Park, Alma, N. B. E0A 1B0.

"WHEN THE SNOW FLIES"

Time was when parks were used only in summer. No more. In three of New Brunswick's provincial parks, winter is as busy as summer – and as much fun too.

Sugarloaf Provincial Park is a busy winter spot. For one thing, it offers the challenge of alpine skiing. Eight trails (some lighted for night use), ranging in length from 137 to 1091 meters, are open for skiers from beginner to expert. These trails are served by two lifts.

A ski shop offers equipment rental and repairs as well as lessons in both alpine and cross-country. The Canadian Ski Patrol is on duty at all times. Cross-country trails are well-groomed for maximum enjoyment. There are also a toboggan slide and trails groomed especially for snowmobilers.

At the end of the day, welcome comfort can be found at the park lodge where you can warm up around the fireplace. There is no winter camping at Sugarloaf, but lots of accommodation is available in nearby Campbellton and Atholville.

Mactaquac Provincial Park has 50 kilometers of marked snowmobile trails through campground roads and fields, and another 42 km along the Mactaquac headpond and through adjacent areas.

For cross-country skiers, the park has 5-km and 2.5-km trails. And there's a skier's lounge in the Mactaquac Lodge where you can rent equipment and wax your skis. A toboggan run, two lighted skating ponds, and 10 km of snowshoe trails are also part of Mactaquac's offering. And, armed with an angling permit, you can try your hand at ice fishing on the Mactaquac headpond.

Why stop at that? The really adventuresome can camp at the winter campsites. Electrical outlets, dry toilets, water and kitchen shelters with stoves and firewood are available. You need a camping permit, but it's easy to get one at the park office.

Mactaquac Lodge is a warm and inviting place. You can relax around the fireplace and enjoy a drink in the fully licensed lounge, or you can have a meal or snack in the dining room.

And how's this for a special treat – an old-fashioned sleigh ride down a country lane? You can do that at Mactaquac too.

For those who want to experience something a little more rugged in a winter outing, there is Mount Carleton Provincial Park. Located in the north-central highlands, it offers an extensive network of hiking, snowmobile, cross-country skiing and snowshoe trails.

If you're feeling truly hardy you can try winter camping. But, since these are not organized campsites, you have to be prepared to really rough it. It gets mighty chilly in the dead of winter.

1985-86 CHRISTMAS BIRD COUNT

The National Audubon Society has announced the dates for the 86th annual Christmas Bird Count. Counts should be conducted on one day during the period December 18, 1985 to January 5, 1986. The results of over 1400 North American Christmas Counts are reported in the summer issue of *American Birds*, a publication of the Audubon Society.

To participate in an established New Brunswick count, contact your local compiler as listed annually in the late winter issue of the *N. B. Naturalist / Le Naturaliste du N-B*. To start a new count or for any further information, contact David Christie, RR 2, Albert, N. B. E0A 1A0 (tel. 882-2100).

Lena Morehouse, long-time compiler of the Pennfield Christmas Bird Count wishes to pass her responsibility on to someone else. If anyone is interested in organizing a count in the St. George–Pennfield–Letete–Beaver Harbour area please contact Mrs. M. C. Morehouse, Pennfield, N. B. E0G 2R0.

THE DOBSON TRAIL

S. Fraser Hale

This year marks the 25th anniversary of the Dobson Trail, which extends from the Town of Riverview all the way to the boundary of Fundy National Park. In the course of a journey over this hiking trail, one can sample some of the finest wooded areas of the province and certainly some of the most beautiful parts of Albert County. Patterned after the Appalachian Trail, it was conceived and designed by Dr. J. A. Dobson to provide present and future generations with an opportunity to be in contact with nature and enjoy and experience the great outdoors.

Dr. Dobson built the trail, originally known as the Fundy Hiking Trail, with the assistance of many groups. The first section, from Riverview to the Tower Road, 9.3 miles (15 km) of unbroken forest, was completed in 1960. From there the trail continued on towards Prosser Ridge, across the Kent Hills to Blackwood Lake and to the Broad River and Shepody Road at the Fundy Park boundary. Thus we have 37 miles (59 km) of footpath available to the serious backpacker, as well as the day hiker. The route was planned in such a way that it passes points of interest such as the Mill Creek meadows and Hayward Pinnacle (on a short side trail), as well as Blackwood Lake and an old gold mine.

Access to the Dobson Trail is possible at points where it crosses secondary roads. The user of the trail can plan to travel for an afternoon, overnight, or several nights, according to his or her time and ability. The trail is easy to follow and the trail committee has made a concerted effort to reblaze the entire trail. We are experimenting with the use of blue plastic markers in the hope they will solve problems experienced with paint peeling off the trees. Originally the trail had two Appalachian style, overnight huts, which were rebuilt with the help of a 1978 Canada Works grant. These huts, however, have fallen victim to vandalism and there is no plan to replace them.

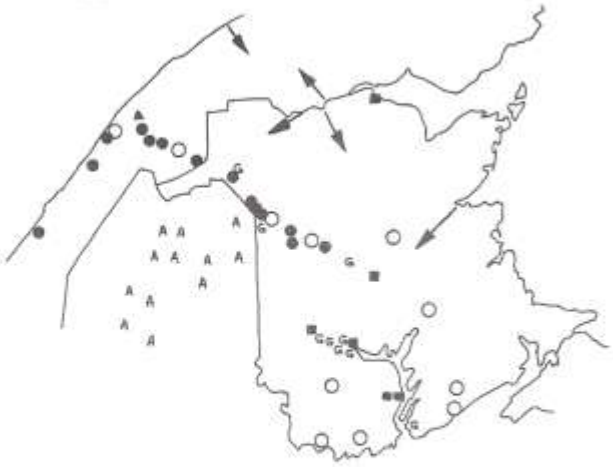
Because New Brunswick lacks a Trail Protection Act (The Trail Committee has one ready for presentation to the Government), the Dobson Hiking Trail continues to suffer damage from oil exploration and fuelwood and timber harvesting operations. It is very discouraging for the few volunteers who maintain the trail to find sections destroyed, flattened by those who should know better.

The Fundy Hiking Trail was incorporated in 1975 but the name was later changed to the Dobson Trail, to avoid confusion with proposals for a Fundy Trail highway along the coast, as well as to honour the contribution of the trail's founder. The trail organization, supported by the sale of books and memberships at $2 per person, extends an invitation to all interested persons, hiker or non-hiker, to join and support this worthwhile project. (Contact: Fraser Hale, 716 Blythwood Ave., Riverview, N. B. E1B 2H6)

The year 1978 saw the printing of *On Foot to Fundy*, a comprehensive guide to the Dobson Trail, edited by Brenda Parsons. This valuable book includes a waterproof map of the trail and has proven very popular. While a few portions of the trail have changed, for the most part this still available guide will serve the user very well.

The traveller along the Dobson Trail, whether hiking through its entire length or just a short section, will find a great feeling of oneness with nature as well as a sense of accomplishment. The Dobson Trail belongs to the people of New Brunswick and could one day become part of the proposed National Trail, now in the planning stages. The Trail Committee is dedicated to the promotion, conservation and protection of the Dobson Trail and lands surrounding it. With this aim in view, the future of the trail is assured.

We hope that users of the Dobson Trail will enjoy the time spent there and return again and again to our province's woodland heritage, of which we all can be proud.



Distribution of *Cambarus bartoni* in New Brunswick and adjacent Quebec and Maine.

- ● Our collections and observations
- A P.S. Andrews (1973, Maine forage crustacean project. Unpublished mimeo report. State of Maine Project F-23-R, Job A-1).
- ▲ National Museums of Canada collection.
- ■ New Brunswick Museum collections.
- G and ← (pointing upstream along rivers). Localities listed by W.F. Ganong (1887. Bull. Nat. Hist. Soc. N.B. 6: 74-75).
- o Localities where I have looked for crayfish without finding any.

THE RANGE OF THE CRAYFISH *(Cambarus bartoni)* IN NEW BRUNSWICK

Frederick W. Schueler

Of the many species of crayfish in the unglaciated eastern United States only *Cambarus bartoni* has spread northeast across glaciated territory to New Brunswick and the base of the Gaspé Peninsula, though several other crayfish are found in Maine. *C. bartoni* also ranges north at least to the Moose River in the James Bay drainage of Ontario, and seems to be a dominant species in the depths of the upper Great Lakes. It inhabits unsilted gravelly areas of rivers and clear streams in Ontario and New York, often well up into tiny headwaters, and of cobble beaches on the Bruce Peninsula, where I have even seen one walking about out of the water at night.

In the spring of 1976 Aleta Karstad, Franklin D. Ross, and I looked for crayfish and salamanders in many streams in New Brunswick and adjacent Quebec, and this led me to draw a map of known records of *C. bartoni* from this area. Beyond documenting geographic distribution, we were interested in the possibility that here, where *C. bartoni* is the only species of crayfish, it would occur in a wider range of habitats than it does in Ontario and New York, where it occurs with two or three other species of crayfish. We looked for background-matching coloration as evidence of daytime surface activity, because in Ontario and New York, where they live with two species of open-water *Orconectes* crayfish, *C. bartoni* and the related *C. robustus* are a uniform "basic brown" in colour and engage in surface activity only at night, whereas the *Orconectes (O. virilis* and *O. propinquus,* especially smaller individuals) are often active at the surface in daylight, and have dorsal colorations which closely match the colour of the stream or pond bottom on which they live. Background-matching variation in coloration or daytime surface activity by eastern *C. bartoni* would be evidence that it has occupied some of the 'niche space' of the *Orconectes* species.

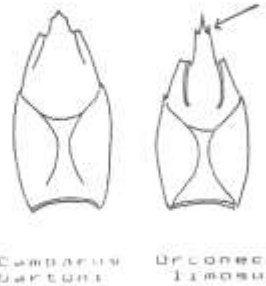
The colours of the *C. bartoni* taken in 1976 ranged from pale greenish brown to dusky brick red with bluish chelipeds ("claws"), and this suggested that there was an increase in colour variation among the eastern populations. In October 1984 I tried to quantify the colour variability by collecting crayfish through a wider area, especially in southern New Brunswick, where there were no records away from Saint John. Samples from Quebec and northern New Brunswick appeared no more variable than those that I had collected in New York and Ontario, but when I searched streams east and west of Saint John there were no crayfish, and small boys in St. Martins and biologists at St. Andrews did not know of local crayfish. This led me to wonder if the range of the species in the province as

known in the nineteenth century (see map) was in fact the true range, and not just the result of uneven collecting effort, since modern records do not extend the range, but largely confirm it.

C. bartoni is found throughout northern Maine. No other crayfish has been reported from New Brunswick or eastern Quebec, and no crayfish occur in Nova Scotia or Prince Edward Island. *Orconectes limosus* has been found in easternmost Maine, and *Orconectes virilis* occurs in the uppermost Allagash drainage, which is tributary to the St. John River, and O. *rusticus, O. obscurus* and *Paracambarus acutus* have been introduced to Ontario, so some of these species may be found in Atlantic Canada in the future. The figure shows the difference in the shape of the rostrum between the eyes of a *Cambarus* and an *Orconectes*: any *Orconectes* found in New Brunswick is a new species for the province, and should be deposited in the New Brunswick Museum.

The possibility that crayfish are naturally absent from the southeastern and southwestern parts of New Brunswick suggests that those in the Saint John River system may have descended the river from the head waters rather than dispersing between coastal drainages, and this, in turn, suggests that the dispersal is relatively recent, even that the coastal drainages had risen from the sea by isostatic rebound from the weight of glacial ice before crayfish were able to move along the coast to populate them.

Crayfish are popular bait among certain groups of fishermen (especially in the United States), and it is only a matter of time before all crayfish distribution is blurred by populations founded by released bait animals. I would be very interested in hearing from any naturalist or fisherman who knows of sites where crayfish occur in New Brunswick, and equally of streams where crayfish do not occur, or of areas where people have never heard of "freshwater lobsters". My address is Bishops Mills, RR 2, Oxford Station, Ontario K0G 1T0



Dorsal views of the carapace of *Cambarus bartoni* and *Orconectes limosus*. The arrow points out the more sharply angled rostrum of *Orconectes*.

CRAYFISH NOTES FROM THE MIRAMICHI*

Harry Walker

Personally, I have never seen crayfish in New Brunswick, but have seen many of them in Ontario.

As a boy, I lived in a farmhouse beside which flowed a small sluggish stream. It had a very muddy bottom and a lush growth of water plants – water cress, cat-tails, jewelweed, etc. – on the banks. In places, this vegetation almost filled the stream. Above, damselflies flitted about and dragonflies zoomed along, stopping suddenly at times to hover in mid air, then suddenly dashing off again.

This was one of my favorite haunts and many summer hours were spent paddling and puddling about in it – catching and examining all the creatures that could be found there. Among the most common were the crayfish (or crabs, as we called them). They had a peculiar characteristic – they travelled much faster in reverse than they did when going forward.

When undisturbed, they would lie motionless with their head and claws peeking out from under a rock or other hiding place, or they would crawl slowly about on the bottom, always moving forward. But, when frightened, they would disappear in a flash in the opposite direction. This was accomplished by a sudden flip of the tail which propelled them backwards , almost as though shot out of a gun. This action often stirred up a cloud of mud which further helped to conceal their whereabouts.

Since a crayfish looks like a small lobster, one might expect it to be very similar to a lobster in the details of its life history. However, there are some surprising differences.

For instance, whereas a female lobster lays thousands of eggs in a season, a female crayfish lays 200 or less, and whereas a lobster's egg hatches into a tiny larva bearing no resemblance to its parents, a crayfish's egg hatches into a miniature crayfish very similar to the adult. In other words, a newly hatched crayfish is much more fully developed than is a newly hatched lobster.

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* Excerpts from Harry's regular column in *Miramichi Weekend*

H. C. White, in a 1957 report of the Department of Fisheries, says that there is only one species of crayfish in New Brunswick, and that it is found only in parts of the three main river systems – the Saint John, the Restigouche and the Miramichi, where it is found only in the Southwest Branch. He further states that it has not been found in any of the lower tidal tributaries of these rivers, nor in any of the smaller coastal streams.

In September 1984, Les McKinnon found some crayfish living in a spring beside his home in Chelmsford. They were about four or five inches in overall length. Les says that a very small stream runs from the spring and empties into Southwest about four or five miles below the upper tidal limit. So, it would appear that the crayfish found there are an unusual occurrence.

In response to my mention of Les McKinnon's crayfish in one of my columns in *Miramichi Weekend*, a number of other readers reported crayfish in the area.

Stirling Burchill says he has seen crayfish on a number of occasions; but, in only one case, can he recall exactly where – in the Semiwagan River, at the bridge on the South Barnaby Road, about 45 years ago. There were about half a dozen of them and Stirling estimates that none would measure more than three inches in length.

Steven Landry reports crayfish in the small stream that runs by Burchill's Mill in South Nelson, at the bridge on the new bypass. He saw them there ten to fifteen years ago and, as he recalls, they were a muddy olive green in colour and about three or four inches long.

Norman Stewart of the Lockstead Road, near Blackville, says he has never seen crayfish in the Miramichi but he has found them in Dunbar Stream, a tributary of the Nashwaak in the Saint John system.

Rev. John (Bonner) Long reports seeing two crayfish in a spring-fed stream near Jack's Lake [near Tuadook Lake]. From its source on a mountain ridge, the stream flowed along the surface for a short distance, then went underground, disappearing in broken rock and rubble, to reappear again farther down. From there, it ran through a bogan into the Little Southwest Miramichi [a tributary of the Northwest]. The crayfish were above the underground portion, about 300 to 400 yards from its source. This may be the first record of crayfish occurring in the Northwest Branch of the Miramichi River system. John says these two crayfish differed in colour – one being a normal dark muddy green, the other an unusual light orange.

Rare New Brunswick Plants

Seabeach Groundsel – Island Exotic

Hal Hinds

Grand Manan Island is not only a place to see exotic "Patagonian Blue-footed Dove-Snipes", but also harbours rare plants. One such is the Seabeach Groundsel (*Senecio pseudoarnica*), an exotic plant of sandy or gravelly beaches.

In New Brunswick the plant has only been found in the Grand Manan archipelago on Bill's Island near Grand Harbour, on Green Island, and on Long Pond Beach near Ox Head. This latter site is the largest and most conspicuous locality, yet was not mentioned by Weatherby and Adams in their *Vascular Plants of Grand Manan, New Brunswick* published in 1945. It hardly seems possible that those keen-eyed botanists could have missed such a conspicuous plant in a relatively accessible place. Therefore this station must have been established after 1945. The plant appears to be spreading in the Long Pond Beach area.

Seabeach Groundsel has both an Atlantic and Pacific distribution, being found from the coast of Labrador, around the mouth of the Saint Lawrence River and Newfoundland to Nova Scotia and New Brunswick; and from northeast Asia, the Aleutians and Alaska to British Columbia. In Nova Scotia the plant occurs near Yarmouth, at Canso and one location on the Bras d'Or Lakes in Cape Breton, as well as on Sable Island, the southernmost station.

This is a plant you could hardly miss when in flower. It has a fanciful resemblance to a giant sunflower except the rays are narrower and the whole plant more or less white wodly. The flower heads are up to 7 cm wide (nearly 3 inches) and the coarsely toothed leaves are shiny above, wooly below. The plant is often over one meter tall and usually occurs with many stems clumped together from deep perennial roots. It blooms from August to September.

The French name, *Roi des champs*, gives the right impression for the Seabeach Groundsel. On your next trip to Grand Manan check it out. You might also see a "Gull-eyed Wippersnapper"!

DREDGE SPOIL ISLANDS ATTRACT NESTING BIRDS AT BATHURST

Peter A. Pearce and Gary R. Stewart

Bathurst Harbour forms a natural, shallow estuary of the Nepisiguit, Little, Middle and Tetagouche Rivers. It is almost closed at its mouth by two sand bars, probably of natural origin, which separate it from Nepisiguit Bay (Figure 1). The area covered is about 15 km^2 and the mean tidal range is 1.6 m.

Siltation of Bathurst Harbour is rapid and has resulted in several dredging operations to deepen the main channel. Their history cannot be precisely determined since no written record could be found. Discussion with local residents has, however, permitted identification of the most relevant dates. Much dredging took place in the 1930s. Spoil material, largely soft mud and sand, was deposited in the harbour. By the early 1940s gulls, probably only Herring Gulls (Larus argentatus), and Common Terns (Sterna hirundo) were nesting on a dredge spoil island (island #1) off Carron Point. By 1950 three other small, low-lying islands had been created in the harbour. On their highest parts vegetation, chiefly marram grass, gradually became established. Indian Island, in the southeast of the harbour, is a natural, wooded island. Spoil from dredging activities subsequent to 1950 has been deposited outside of the harbour in deeper water in Nepisiguit Bay. Spoil from the most recent dredging in 1984 and 1985 at the marina site was also deposited outside the harbour. Spoil islands have not been created since 1950 nor have the existing islands been added to.

All the islands soon supported populations of nesting birds. Interest in them heightened in 1965 with the discovery of nine nests of the Ring-billed Gull (L. delawarensis). For many years it was the only site in New Brunswick where that species was known to breed. The nesting population of Ring-billed Gulls has steadily increased from the pioneering few to about 400 pairs in 1983 and 1984 (Table 1). During that period Ring-billed Gulls have occupied all the artificial islands for nesting, the main colony shifting among the islands from year to year. Common Terns have also nested on all the islands, the total breeding population apparently fluctuating between about 500 and 900 pairs. Until the late 1970s less attention was paid to the breeding Herring Gulls and Great Black-backed Gulls (L. marinus), most of which occupied the higher western side of island #1. Many of the eggs of both species had hatched when the islands were visited, usually during the first week of June but sometimes as late as 20 June. There were also probable differences in the ability of the various observers consistently to distinguish nests, eggs and young of the two species. Those difficulties notwithstanding, it is felt that good estimates of the breeding population in the 1980s of combined Herring and

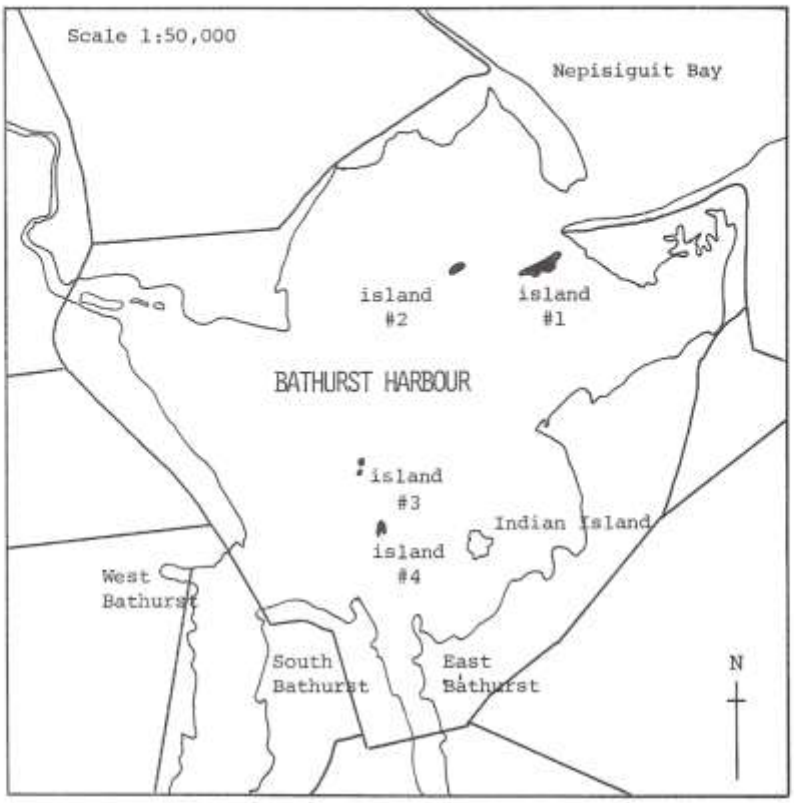


Figure 1. Map of Bathurst Harbour showing location of dredge spoil islands.

Great Black-backed Gulls ranged from 300 to 400 pairs, in the approximate ratio of three to one. One has the impression that Great Black-backed Gulls have steadily increased since the islands were first visited. Whether that was at the expense of other species is not known.

In addition to the gulls and terns several pairs of Red-breasted Mergansers (Mergus serrator) breed each year in Bathurst Harbour, nests having been found on all the dredge spoil islands, a high of 15 in 1979. The occasional pair of Spotted Sandpipers (Actitis macularia) also nests on them. During the nesting season an Arctic Tern (S.paradisaea) has twice been observed on island #1 but there was no evidence of a breeding pair.

When high spring tides are accompanied by strong east winds the islands may become inundated, sometimes only the most elevated part of island #1

Table 1. Number of nests of Ring-billed Gull and Common Tern on dredge spoil islands in Bathurst Harbour, New Brunswick, 1965-84[a,b].

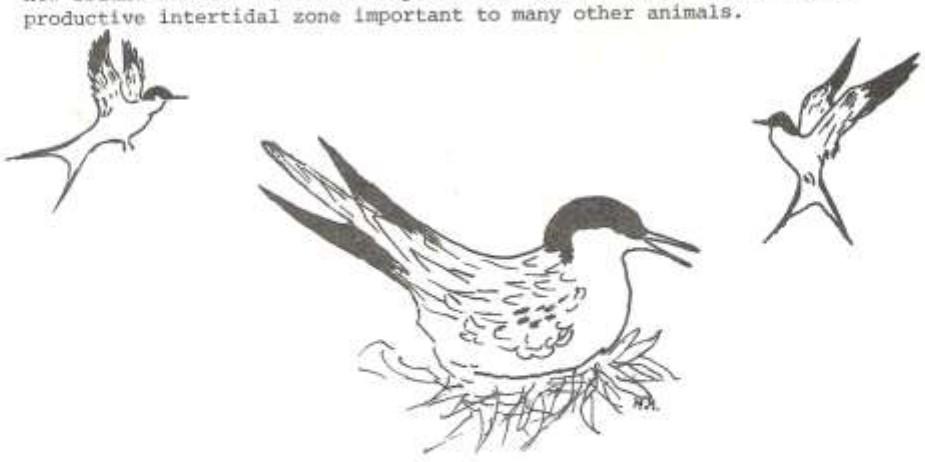
Year	island #1[c]		island #2		island #3		island #4		Observer[d]
	RbG	CT[e]	RbG	CT	RbG	CT	RbG	CT	
	Number of nests								
1965	9								HC
1966	29								HC
1967	32								HC
1970	0	702	42	43					PP/ST
1972	119	171							PP/JD/SH
1974	0	338							PP
1975	0	216	15	58					AS/WB/BH
1977	29	133	0	130					GS/NP
1978	0	221	0	107	0	214	54	130	GS/MG
1979	0	128	0	165	150[f]	101	8	500	GS/PP/CM
1980	0	161	0	159	335	0	1	445	GS/PP/CM
1981	0	110	0	133					PP
1983	0	109	0	224	0	64	406	58	AL
1984	0	163	25	337	0	25	328	0	PP/SG/MP

(a) Compiled from records filed with the Maritimes Nest Records Scheme.
(b) Blanks in table mean island not visited or nests of particular species not counted.
(c) See Figure 1.
(d) Observer: WB - W.R. Barrow, HC - H. Chiasson, JD - J.V. Dobell, MG - M. Gaudet, SG - S. Gilliland, SH - S. Homer, BH - W.B. Hughson, AL - A.R. Lock, CM - C.F. McAleenan, PP - P.A. Pearce, MP - M.E. Phinney, NP - N. Prentice, AS - A.D. Smith, GS - G.R. Stewart, ST - S.M. Teeple.
(e) Species: RbG - Ring-billed Gull, CT - Common Tern.
(f) Estimate, based on number of young that had already left nests and number of adults seen.

remaining above water. Coincidence of the two phenomena during the nesting season has resulted in severe colony disruption, with nest and egg destruction. At extremely low tides, that island can become accessible, albeit with difficulty, to man on foot, and an occasional marauding dog has been noted there. Despite such disturbances, the gulls and terns have shown a remarkable attachment to the islands for nesting.

The Ring-billed Gull colony at Bathurst is no longer the only one in New Brunswick, several others having been discovered in the province in 1983 and 1984. They are at Dalhousie, where the birds nest on an old slash pile near a pulp mill, and at Tracadie, Tabusintac and Neguac, possibly indicating a seeding from the nucleus at Bathurst. Recently the Ring-billed Gull has also been found to breed in Prince Edward Island, reflecting the population explosion and range extension that species is currently experiencing. The incredible response of Ring-billed Gulls to artificially-created habitat in Toronto harbour is well known. If the Bathurst colony continues to grow it should be interesting to note the reaction of other gulls and the terns present there.

Colonisation of the Bathurst Harbour islands is a good example of wildlife exploitation of man-made habitats. It should be possible to manage those islands to maximize benefits to the nesting birds. After careful selection of the sites, parts of the islands could be raised beyond the reach of the highest tides by deposition of spoil material from future dredging operations. Possibly new islands could be created and, if eventually necessary, the natural succession of vegetation could be controlled by careful use of dredge material. A lesson can be learned from the Bathurst experience. Channel deepening of estuaries elsewhere in the province could, in the absence of conflicts with other renewable natural resource interests, also provide opportunities to create valuable new island habitat for varied species of nesting birds as well as a productive intertidal zone important to many other animals.



TIMING OF BREEDING BY BIRDS IN NEW BRUNSWICK

A. J. Erskine

All species of New Brunswick birds breed each year, as do all other birds except for a few of the largest species (albatrosses, eagles) which have such long breeding cycles that they can breed only in alternate years. Not all individuals of a species breed each year, as some are unable to secure a territory or a mate or to accumulate the energy and resources necessary to produce a clutch. The proportion which breed in a year will depend on conditions, and on the species, as birds which will survive to breed in another year may improve their chances by passing up the opportunity of breeding in an unfavourable year. Most individuals as well as most species attempt to breed each year.

The total number of species of birds known to have nested in New Brunswick at some time is close to 200. Several of these have not been suspected of breeding for more than 50 years, but additional species are detected as breeding nearly every year recently. The number for which recent breeding schedules can be deduced from records in the Maritimes Nest Records Scheme and the New Brunswick Museum files is about 170. The expectable schedules for other species which do or may breed in the province fit the pattern found.

The timing of breeding in a seasonal environment is determined by when the supply of food suitable for the young birds is greatest, and by whether the parent birds can produce and incubate a clutch between their arrival and the time when food for the young is available. Depending on the types of food used and the length of the breeding cycle, some species of birds are able to rear two or three broods each year, whereas others can rear only one brood. Nearly all birds feed their young on animal food during the period of maximum growth. The exceptions in this region are the doves, whose young are fed on "pigeon milk", a secretion from the crop of the parent birds, and the carduelline finches, which feed their young by regurgitation on the predigested seeds of various trees (also a very nutritious food source). In general, raptorial birds, and omnivorous species which also make use of warm-blooded vertebrate prey (other birds and small mammals), may be able to start breeding earlier than those that depend on cold-blooded vertebrates and invertebrate prey forms which do not become active until warming takes place in spring. In New Brunswick, only the Rock Dove and the crossbills (carduelines) are known to be able to breed in every month of the year. The breeding of all other species occurs between late February and late September, with most breeding in May through August. Compared to regions with more temperate climates, this is a relatively compressed breeding season. It follows that effort devoted to

confirming breeding of birds in New Brunswick will give little return, except for a very few species, outside of the main period. This is hardly surprising, given that the majority of species here are largely or wholly migratory and many do not return to New Brunswick until mid- or late May when insect food first becomes readily available.

The timing of breeding becomes gradually later as one moves from the equator towards the poles, and also as one ascends a mountain. This reflects, in large measure, the drop in mean temperature along those gradients. However, other factors than latitude affect the temperature gradients, in particular the proximity of large water bodies which delay warming of adjacent lands in spring. As the Bay of Fundy remains cool all summer, whereas northwestern New Brunswick comes under the influence of warm southwesterly airflows from the interior of the continent, breeding schedules for late-nesting species may be earlier in the north than the south of the province, as the latitude difference is not great enough to counteract the maritime/continental effect. The mountains in New Brunswick are not high, and their influence on breeding chronology can be expected to be rather small, but this cannot be documented from the meagre data available to date from highland areas in New Brunswick.

A brief review, arranged chronologically through the year, will show how families with different foraging habits and body size vary in timing of breeding. Young Rock Doves, evidently hatched from eggs laid in December, have been seen in nests in late January, but only in cities where leakage of heat from buildings provides a warmer micro-environment. Urban pigeons feed on grain and other waste food, but feed "pigeon milk" to their young, thus bypassing the lack of other suitable food for them in winter. Crossbills of both species have been shown to nest in any month of the year in other parts of the continent, and there are old records of crossbill nests found in January and February in New Brunswick. None of the other finches which feed on tree seeds are known to nest unusually early in the year, and even crossbills do so only in years with exceptionally heavy cone crops. Apart from those special cases, only a very few species of raptors and scavenging species start nesting in March. Most of these are the largest species in their respective groups – Great Horned Owl, Bald Eagle, and Raven, but the Canada (Gray) Jay is unusually early for a bird of its size; that species has a very well-insulated nest in a sheltered environment (dense spruce foliage). In warm springs, a few Black Ducks may start laying before the end of March; these may be birds which have taken advantage of local feeding programs (city parks, for example), and thus accumulated energy reserves earlier than is typical of the species. Few other birds start laying before the last days of April, and those that do so are mostly relatively large species, many of which have protected nest-sites.

Examples are Common Goldeneye and Hooded Merganser, and Boreal and Saw-whet Owls, all of which nest in tree cavities. Exceptions, with no obvious nesting adaptations nor special food requirements for early timing, are Woodcock and Killdeer. The Crow is another omnivorous scavenger, and its later start than the related Raven presumably reflects both its smaller size and more open (exposed) habitat. Nearly all the species treated thus far are year-round residents, or species of which a part of the population winters although others migrate south.

In the last days of April and early May the first nestings of several groups of migrant species begin. Most of these birds return to New Brunswick in late March or early April, and most forage on ground insects but also use seeds or fruits to some extent. The main families involved are the Emberizinae (New World "sparrows" or buntings), especially the Song Sparrow and Junco, the Icteridae (blackbirds), especially Common Grackle and Rusty Blackbird, the Turdinae (thrushes), especially Robin, and the Alaudidae, Horned Lark. At the same time two alien passerines, House Sparrow and Starling, which are permanent residents depending on human offerings for winter food, start nesting. Other large birds, including several duck species, raptors, grouse, and the large gulls, also begin nesting at this time. The number of species of birds present and nesting increases rapidly through May. Most of the other water birds, loons, grebes, cormorants, herons, ducks, rails, and shorebirds, start nesting during that month, as do the small hole-nesting birds, woodpeckers, chickadees, nuthatches.

However, a large number of species, including most of the smaller insectivorous songbirds, do not arrive until mid-May or later, and these all start breeding at once in the last days of May and in early June, with the flush of insects in tree and shrub foliage and in the air. This assemblage includes all the flycatchers except the early Eastern Phoebe, all the swallows, the wrens, mimids, vireos, and the 22 species of wood warblers, as well as most of the blackbirds and several of the sparrows, besides smaller groups including the Black-billed Cuckoo, nighthawk, Chimney Swift, hummingbird, and Rose-breasted Grosbeak. Only a very few species delay the start of breeding until after the middle of June, with Cedar Waxwing and American Goldfinch being the obvious examples.

Some of the species which start nesting early also fledge their young relatively early. Usually these are large species whose young need an extended period of complete or partial dependence on the parents for food while they are perfecting their foraging skills, after attaining flight. Other early-nesting species, such as the Robin, Song Sparrow, and House Sparrow, continue nesting after the first brood has fledged, and late-hatched broods of these species may not

fly until late in August. The vast majority of species complete nesting and fledge young during July or August. The following table illustrates the number of species starting and finishing the nesting/flightless young phases of the breeding cycle in each half-month period. [Adequate data are not available for both starting and finishing dates for all species.]

Period	No. species starting	No. species ending
through 31 March	5	
1-15 April	6	
16-30 April	12	
1-15 May	29	
16-31 May	48	1
1-15 June	41	2
16-30 June	14	10
1-15 July		37
16-31 July		53
1-15 August		31
16-31 August		20
after 1 September		9
Totals	155	163

(Grand Total 169 spp.)

To judge from the figures in the table, less than one-third of all the species have started laying eggs before mid-May, and little more than one-third still have unfledged young after mid-August. The observation of paired birds in an area or courtship behaviour or nest-building extends the period in which breeding evidence may be usefully obtained for some birds, particularly resident species. There is little one can do to extend the end of the season, so most breeding bird atlas effort will have to be put forth during only a three-month period each year. People who expect to work in more than one square in a year will need to plan their trips so as to get as much out of them as possible. The month of June and the first half of July is the key period

Atlas Update

Maritimes Breeding Bird Atlas Goes Ahead

The bird atlas proposal mentioned last year in *N. B. Naturalist / Le Naturaliste du N.-B.* (Vol. 13, no. 4, p. 131-134) is now a reality. A trust fund, the Maritimes Bird Atlas Trust, has been set up to handle finances and a steering committee formed to provide technical guidance. The first issues of a quarterly atlas newsletter have been published, atlas workshops were held at Halifax and Moncton during May, and Atlas Day field trips organized in all three provinces (report following).

The project's aim is to map the breeding distribution of birds in the Maritimes on a 10 km by 10 km grid system. Field work will be concentrated on one out of each four squares, which are designated as priority squares. Volunteer observers are being sought to take part in the project. For more information and to receive the atlas newsletter, write Maritimes Breeding Bird Atlas, c/o Nova Scotia Museum, 1747 Summer Street, Halifax, N. S. B3H 3A6. – DSC

Atlas Day Field Trips

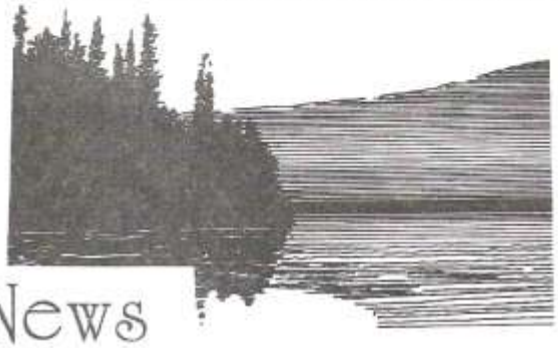
June 15 dawned warm and sunny for the Atlas Day field trip in square GA27 and nine observers in four groups spent 22 party-hours searching the varied habitats of the Saint John River floodplain, the villages of Gagetown and Jemseg, and adjacent uplands.

At one o'clock, the novice atlassers reunited to compare notes about birds seen or missed and the proper breeding category in which to record a certain type of behaviour. Following a picnic lunch on the shore of the Jemseg River, lists were combined to give a total of 102 species recorded in the square. Of those, 42, 25 and 32 species, respectively, were tallied as possible (PO), probable (P) and confirmed (CO) breeders. There was no evidence to suggest nesting by the three remaining species.

An estimated 125 breeding species are expected in the Gagetown square. None of the birds seen were unusual for the area but suggestions of breeding by Herring (PO) and Great Black-backed (P) Gulls were unexpected.

Certificates of achievement were awarded to Donald Kimball and Peter Pearce, who observed 92 species (O: 5, PO: 45, P: 14; CO: 28). Rob Walker found 42 species on Grimross Island alone. No matter what the number seen, everyone enjoyed the outing and learned a lot about bird atlas methods.

The same day, nine observers counted 51 species in a square east of Charlottetown, P. E. I., and nineteen more atlassers tallied 82 species in a square near Stewiacke, N. S. The following week, nine members of the Valley Naturalists held an atlas field day and found 74 species in square FB03, Charleston, Carleton County. All these efforts were aimed at firing enthusiasm and learning atlas methods in preparation for the 1986 start of the Maritime Provinces atlas' first field season. – DSC.



Federation News

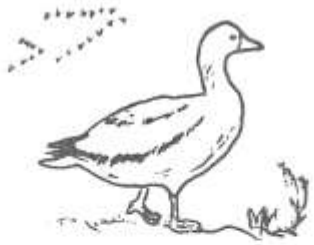
GEORGE STIRRETT PRIZE WINNER

The first George Stirrett Memorial Prize for Natural History Writing published in the *N. B. Naturalist / Le Naturaliste du N.-B.* was announced at the federation's annual meeting. The judges, members of the editorial committee, had a difficult time making the choice, because of the variety of styles of presentation represented among several excellent articles.

The 1984 winner is Tony Thomas, a research scientist at the Maritimes Forest Research Centre in Fredericton. Tony's popular "Bugs!" columns, explaining the life history of groups of New Brunswick insects, included articles on yellowjackets, horse flies and deer flies, dragons and damsels, and on "bears" and "tigers".

The annual prize is a tribute to the late George M. Stirrett of Grand Falls, biologist, author, and founder of the interpretive program in Canada's National Parks, for his lifelong commitment to promotion of popular understanding of our natural heritage.

Nature News



Spring 1985

David Christie

I recall this spring as having been cool and wet, an impression coloured very much by the fact that in Albert County, snow fell on five of the first fifteen days of May. Looking over the spring bird reports the weather does not seem to have particularly delayed spring migration. The earliest Coltsfoot bloom reported at Saint John (March 27 – Cecil Johnston) was a bit later than average but the first Spring Peeper and many Wood Frogs were calling at Mary's Point, near Harvey, Albert County, April 20, an average date there (DSC).

In the butterfly world, Red Admirals were especially prominent in late spring. Molly Smith reported one at Saint John West May 14 and two the next day while my first observation was of two at Fredericton May 16. Thereafter they were seen frequently, and on the federation's field trip June 2, at least 100 of these butterflies were flying about the South Richibucto Dune. All these presumably were migrants from areas further south, as few, if any, of this striking species are apparently able to overwinter this far north.

Birds

Rarest of the herons visiting us this spring were an adult Yellow-crowned Night-Heron at Williamstown, near Centreville, April 22 (Jean Carmichael) and a Tricolored (Louisiana) Heron at Rockwood Park, Saint John, April 30 (Tom Page). Few egrets were reported: a Snowy at Saints Rest, Saint John West, April 13 (Jim Wilson) and two Cattle Egrets at Riverview May 26 (John Loch *et al.*).

The most Glossy Ibises reported for several years appeared in April: one at Waterside on the 9th (DSC & Mary Majka), two at Daniels Marsh, near Hopewell Cape on the 11th (Brian Dalzell & Nelson Poirier), three there on the 13th (Angus MacLean & Doreen Rossiter) and ten, possibly more, at Saints Rest on the 13th (Wilson; Chad & Bruce Coles).

It was also a good year for Snow Geese. The first was flying with a flock of Canadas at Wood Point, near Sackville, March 28 (Stu Tingley). A group at Waterside increased from 18 on April 7 (Rossiter & John Wright) to 24 on April 20 (MacLean). There were also 13 at Musquash April 14 (Wilson), three near Oak Point April 26 (Don Malcolm), 15 at Maugerville April 29 (Wilson & Johnston) and a flock at Summerfield, near River de Chute, in April (*fide* Valley Naturalists).

The rarer ducks reported were a male of the Eurasian subspecies of Green-winged Teal at Red Head Marsh May 11 (Saint John Naturalists' Club); several Gadwall: a pair at Waterside April 9 (DSC & Majka) and one there on the 24th (MacLean), a pair at Red Head Marsh April 13 (Wilson & Coles), a male at Musquash May 20 (Wilson) and a pair at White Head Island May 27 (Wilson *et al.*); a Eurasian Wigeon at Waterside April 9-10 (DSC *et al.*).; and a male Ruddy Duck at Escuminac May 12 (Stirling Burchill).

A Red-shouldered Hawk was at Red Head Marsh April 13 (Wilson & Coles). Four Peregrine Falcons were sighted. A rather dark bird, probably an immature, was quite early at Mary's Point March 19 (Majka); an adult was there May 21 (DSC). One Peregrine was at Upper Coverdale April 18 (Dalzell) and Jaakko Finne watched one feeding on its prey while in flight at Saints Rest May 11.

The description of a large rail crossing the road at Chance Harbour April 10 (Marylou McLellan & Mrs. Thompson) tantalizingly resembled a King Rail but the bird cannot be positively identified. The King Rail is an extremely rare vagrant in New Brunswick. Among reports of American Coots were two in the north at Covedell, near Tabusintac, late in May (Sara and David Lounsbury).

For the second spring in a row American Avocets have shown up in this province. Two birds were at Saints Rest May 11 (Finne & Johnston) and 17 (Allan Francis). An Upland Sandpiper was quite early at Saints Rest April 19 (Ian Cameron). At the Salisbury nesting colony of this species, Brian Dalzell saw two birds May 16 and 12 on the 29th. He also found an Upland at Moncton Airport May 28. An American Woodcock was performing its courtship flight at Cambridge on a very early date, March 20 (Enid Inch). The usual small number of Wilson's Phalaropes were seen: one at Saints Rest May 11 (Doris Johnston), a female at Castalia May 31 through June 3 (Dalzell), and a pair at Newcastle June 8 (Harry Walker).

The Common [elsewhere, not here] Black-headed Gull may again be becoming fairly regular in Courtenay Bay, Saint John, after several years of scarcity. A first winter bird was seen March 20 and a different individual March 23-25 (Finne *et al.*). An adult was there April 30 (Wilson). Unexpected in that muddy habitat were two Black-legged Kittiwakes, an adult May 17 and an immature two days later (Finne). The only Caspian Tern reported was in the East Saint John area May 1 and 5 (Wilson & Finne).

An adult Red-headed Woodpecker was unique this spring at Grand Harbour May 30 (Al &Gloria Hobbs). A pair of Rough-winged Swallows were seen at White Marsh Creek, near Florenceville beginning May 22 (Jeannette Green *et al.*).

There was a very pronounced Blue Jay migration along the Bay of Fundy this spring. At Mary's Point, the earliest obvious migrants were seven on May 10 and the peak 75 on May 24, with movement continuing well into June. On snowy May 15, a remarkable 500+ were seen at Fundy Park (MacLean).

Eastern Bluebird reports were four: a male at Riverview May 3 (Dalzell), one at Lower Brighton, near Hartland, May 12 (Hubert Bryant), three at Oakland, near Florenceville, May 22-23 (Ansel & David Campbell) and a male at Mechanics Settlement May 28 (DSC). Northern Mockingbirds were well distributed throughout southern New Brunswick but only one Brown Thrasher was reported, at Alma May 15-16 (Stella & Angus MacLean).

Two Loggerhead Shrikes were reported. One at St. Andrews March 19 (J. W. Williamson) was identified by its unmarked breast, a field mark to be used with caution, as the bars of Northern Shrikes can sometimes be inconspicuous. At Moncton, in the first week of April, John Wright watched a shrike singing, which he thought was a Loggerhead because the mask seemed to continue over the bill. The dates of both sightings are more normal for Northern Shrike than Loggerhead.

Jim Wilson and Cecil Johnston made their regular spring trip to Grand Manan May 25-28, accompanied by David Clark, and for part of the time also by Jaakko Finne and Chad Coles. Their best finds were a Yellow-throated Vireo singing at Seal Cove May 28, a young male Summer Tanager at Southern Head Beach May 26 and a female Orchard Oriole at The Whistle May 26.

Other rare spring migrants were two Blue-gray Gnatcatchers, one at Campobello Island about May 1 (Norman Famous) and one at Alma May 10-15 (MacLean), and a male Prothonotary Warbler at White Head Island June 2 (Dalzell).

The only Field Sparrows reported were two at Coverdale May 22 (Dalzell). Fox Sparrows passed quickly through or over southern New Brunswick on their way to the breeding grounds this spring. Observers who did not miss them altogether saw very few. Several House Finches were noticed: a female March 24 and a male April 9 at Florenceville (Alward), one in nearby Oakland the same day (Campbells), two males and a female at Alma April 11-13 (Steve Woodley), a pair at a Fredericton feeder April 19 and for some time following (*fide* Peter Pearce), and a male at Moncton May 14-28 (Dalzell). This species, introduced to eastern North America in the 1940s, has spread widely in recent years and is quite well established as far northeast as central Maine. Readers are requested to take special note of House Finches, as they spread to this province.

"A rather bizarre story", as Enid Inch calls it, occurred in Gagetown this spring. "Paul Briggs, who lives a few houses from here, asked me one day what

could have happened to two Goldfinches which were coming to his feeder – each with a broken leg. On May 5, he phoned to say the mystery had been solved. They have a plastic feeder with several feeding ports and, while he watched a Purple Finch feeding at one of the middle perches, an Evening Grosbeak on the perch below reached up and grabbed the finch's leg and broke it. The Purple Finch went to a nearby tree and sat for a long time but eventually came back to the feeder, though it had difficulty balancing because of its injured leg."

I have used cylindrical feeders for several years but have never noticed unusual leg injuries, so perhaps these perches were particularly close together or this Evening Grosbeak's behaviour is rare (I have seen a grosbeak grab another grosbeak by the wing, on a feeding tray). If anyone has problems of this sort I would suggest removing the middle perches so that it is impossible for one bird to reach up to the next.

The last of the winter's Snowy Owls were at Florenceville March 24 (S. McCartney), Cambridge March 29 (April Robinson) and finally at Dieppe May 7-8 (Bob Surette); the last Bohemian Waxwing a single bird at New Horton, near Riverside-Albert, April 20 (MacLean); the latest Northern Shrikes April 11 at Turtle Creek (Dalzell) and at Oakland (Campbells); a Tree Sparrow at Florenceville Apr. 27 (Ford Alward) and a very late one at Saint John May 18 (David Smith) and the last Snow Bunting April 23 at Red Head Marsh (Wilson).

A small selection of early arrivals is: Osprey April 10 at Waterside (MacLean); American Kestrel Mar. 24 at Hammond River (Wilson) and Mar. 30 at Fielding, near Bristol (Albert Bell); Black-bellied Plover May 11 at Red Head (Wilson) and Good Corner, near Centreville, (Sandra McCartney); Killdeer Mar. 28 at Saint John (Wilson) and Moncton (Dalzell); Pectoral Sandpiper April 5 at St. Andrews (Wilson & Johnston); Common Snipe Apr. 7 at Florenceville (Gary Cullins) and Mary's Point (DSC); Whip-poor-will May 20 at Riverview (Dalzell); Ruby-throated Hummingbird May 11 at Gagetown (Inch) and Alma (MacLean) and May 12 at Moncton (Alma White); Northern Flicker Apr. 6 at Kenneth, near Glassville (Greene) and Apr. 7 at Fundy Park (Rossiter); Yellow-bellied Sapsucker Apr. 10 at Clearwater [Lake?, Victoria Co.] (Roger Jenkins); Eastern Phoebe **April 9 at Alma (Doreen Rossiter) and at Grand Harbour (Gloria Hobbs)** , Great Crested Flycatcher May 2 at Andover (Fred Tribe); Tree Swallow Apr. 9 at Red Head (Wilson); Barn Swallow Apr. 18 at Mary's Point (DSC), Ruby-crowned Kinglet Apr. 10 at Fundy Park (R. Walker); Cedar Waxwing May 20 at Riverside-Albert (DSC) and May 21 at Williamstown (Carmichael); Yellow-rumped Warbler Apr. 27 at Hammond River (Wilson), Moncton (Dalzell), and Sackville (Canadian Wildlife Service); Yellow Warbler May 11 at Red Head (SJNC) and at Williamstown (Carmichael); Scarlet Tanager May 10 at Sackville (Colin MacKinnon); Bobolink May 7 at Bloomfield, Kings Co. (Wilson) and May 11 at Hartland (Dianne Clark).

Seashore Strolls

GOOD PRESS FOR THE LOWLY BARNACLE

Robert Rangeley

Nowhere is the power and drama of the sea as exciting and accessible as on a rocky shore. In the Bay of Fundy one may sit on a rock and enjoy the surge and spray of huge rollers breaking nearby, where, several hours later, many fathoms of water will lie.

Due to the high tidal range of the Bay, reputed to be the largest in the world, vast intertidal areas are exposed twice daily. The rocky intertidal, the subject of this column, dominates not only the Fundy but much of the North Atlantic coastline.

Esthetically pleasing and fascinating for the naturalist, the rocky shore is a very hostile place to live: a fact which accounts for its relatively low species diversity. Stresses encountered by organisms on the shore include regular prolonged air exposure and marine inundation. Seasonal air temperature extremes range from -30° to +30° C and abrupt changes may occur when organisms, heated by the hot summer sun, are suddenly soaked by cold seawater. Salinity extremes range from salty, from the sea, to fresh, from runoff and rainwater.

However, despite the harshness of this ecosystem, there are high nutrient and food supplies supporting very high species abundances. (Just ask a dulse or periwinkle collector!). In this issue I'd like to focus on the most conspicuously abundant animal of rocky shores: the barnacle. On our exposed Fundy shores, this sessile crustacean is almost solely represented by the rock barnacle, *Semibalanus* (formerly *Balanus*) *balanoides*.

What is so interesting about these fouling creatures – whose members have plagued mariners and slowed their boats by as much as 30%, who are abundant pests on whales, turtles and fish, and who attach themselves on nearly any hard object from loose shells, to floating timber, wharf pilings and sheer rock cliffs?

Up until 1830, before the larvae were studied, barnacles were classed as molluscs; after this period the naturalist Louis Agassiz described them as "nothing more than a little shrimp-like animal, standing on its head in a limestone house and kicking food into its mouth".

Nevertheless, our local species is truly amazing. In addition to withstanding air exposure and the extremes of temperature and salinity, it must also survive the crushing power of waves crashing upon the shore with forces up to 40 lbs. per square inch! The barnacles' conical shell shape helps deflect wave energy and their membranous base is securely clamped onto the substrate with a very strong adhesive: a fact which has not been overlooked by some investigators wishing to unlock its gripping secret for use in the dental industry.

And are they prolific! Under crowded conditions each adult barnacle (they are hermaphrodites) may produce over 7000 larvae to be released into the plankton, for 3–5 weeks, each May. This production may be an important, albeit short term, energy source in the marine food web. Despite high mortality, many survive to colonize the rocks where densities, around mean tide level, may reach 60,000 per square meter.

Watching the adult barnacle feed is an entertaining spectacle. During feeding the aperture plates open and the many finger-like appendages, called cirri, unroll and outstretch to scoop the water, like a fine net, for food particles. They will do this up to 140 times a minute while rotating 180 degrees to make best use of the currents.

To observe the feeding barnacle in the field your best bet is to locate a rock pool with some barnacles submerged along the edge. The best locations are those where the pool is draining quickly enough to cause a current to pass over the little animals. Then, get a bird's eye view, avoid eliciting a shadow response retreat from them, and, of course, wait patiently.

Book Reviews

Hummingbirds: Their Life and Behaviour. By Esther Quesada Tyrrell; photography by Robert A. Tyrrell. 1985. Crown Publishers, Inc. New York. 212 pp.

Reviewed by Marilynn Rudi

The hummingbird has long been regarded as a most extraordinary creature:

> "Of all animated beings, this is the most elegant in form and the most brilliant in colour. The stones and metals polished by art are not comparable to this gem of nature... The emerald, the ruby, and the topaz, glitter in its garb." (George Louis Leclerc, 1775).

In addition to its tiny size and dazzling plumage, the hummingbird has fascinated man with its ability to hover, to fly backwards and even to fly upside down!

In this well written photographic study of the North American species, the husband and wife team of Esther and Robert Tyrrell present a thorough examination of this poorly understood bird. Their purpose in compiling this collection of fact and fancy was twofold: to create an accurate and useful guidebook to aid identification and to assemble in one place what is known about the bird's biological nature and behaviour.

The book is successful in both areas. The photographs by Robert Tyrrell are reason enough to cherish this book. Tyrrell has discovered a photographic technique to freeze the wings of the birds in motion – no mean feat, as the wings can beat at speeds of 78 times per second. Each North American species appears in two clear, colourful photographs as well as a sketch of the female.

The text by Esther Quesada Tyrrell, deals clearly and plainly with such technical matters as the bird's anatomy, flight, courtship and nesting, food and metabolism, behaviour and wildflower pollination. Perhaps the most interesting items detail the unusual aspects of the hummingbird's life and behaviour. For example, the weight of its heart ranges from 1.75 to 2.5% of its total body weight – which makes it the largest among all animals, relatively speaking. While resting, a hummingbird's heart may beat 500 times per minute; when excited this may rise to over 1200 times per minute!

While 338 species of hummingbirds are known in the Western Hemisphere, only one, the Ruby-throated occurs in New Brunswick. The Tyrrells list all known

species of hummingbird-pollinated wildflowers; to find the birds first one must find the flowers. Despite the scarcity of hummingbirds in our area, this book would make a welcome addition to the library of any naturalist or biologist, both for the gorgeous colour photographs and also for the amazing natural history of the little "winged jewels"

AN OWL IN A TRAP

Hal Hinds

On October 7, 1984, while walking with friends on the shore of Belleisle Bay a few kilometers south of Hatfield Point, I flushed a Great Horned Owl from a low stump. The bird dropped from its perch to the shore and we could immediately see that a trap and length of chain was attached to one of its legs. We stood eyeing the owl for a few seconds when I motioned for my companions to remain in place while I slowly advanced toward the bird trying to calm it (confuse it?) by imitating its call.

Finally when a few meters away I rushed the bird and pinned its wings against its body, being careful to avoid the sharp talons of the free foot. One of my companions then came forward and released the trap from its toes.

Once free, the owl managed to fly low along the shore and finally gained enough height to ascend into a nearby elm where it managed to perch on its one good foot.

How had this owl managed to spring a leg-hold trap? I know of no instance of an owl taking carrion, only consuming creatures it has managed to catch.

I can only conclude that someone set the trap on the top of a pole and the owl was caught as it attempted to use the pole as a lookout for hunting or to consume its prey. Since very few people range chickens outside any longer, I cannot understand why anyone would deliberately seek to harm owls.

Does anyone have any suggestions or comments regarding this episode or other trapping experiences involving benign and protected wildlife?

General Hunting Licence

As part of a review of General Hunting Licence regulations, the Department of Natural Resources invited the New Brunswick Federation of Naturalists and a number of other interested groups to participate in a meeting, at Fredericton June 15, to address "legitimate concerns" about the licence. President Hal Hinds represented the Federation.

After outlining the goals of the Federation, Hal stated that although we do not oppose the the consumptive use of wildlife on moral grounds, provided it is done in accordance with sound ecological wildlife management principles, neither do we promote the consumptive use of wildlife. He stated that we believe that non-consumptive wildlife users and others have a right to use the countryside in perceived as well as actual safety and hoped that hunting will never be allowed on Sundays.

The Federation supports the resolution of "nuisance" animal problems by means other than the killing of the animals concerned. If animals must be killed, NBFN believes it should be done by a special permit system, appropriately modified if found administratively unwieldy. Opening the whole province year-round to hunting with no limits does not seem the right way to resolve specific, local problems. NBFN is particularly opposed to what amounts to a hunting season for any species of songbird and favours the restriction of practice shooting to designated places or "seasons" or both.

NBFN objected to the ambiguous manner in which species are designated in the regulations, for example "blackbirds", "pigeons" and "cormorants" do not indicate precisely which species are permitted to be killed. The federation recommended that no cormorant hunting be allowed between December and July in order to protect wintering Great Cormorants, to ease enforcement of waterfowl regulations in spring and avoid disruption of breeding colonies of cormorants and associated species.

Also represented at the meeting were the N.B. Wildlife Federation, the N.B. Trappers Association, the N.B. Bow Hunting Association, and the Madawaska Fish & Game Protective Association, all of which were in support of some features of the General Hunting Licence regulations but concerned about others.

Following completion of their review, the Department of Natural Resources decided not to make any changes in the General Hunting Licence for 1985-86, because there had been no significant problems with it and very few complaints of instances related to use of the licence. – DSC.

Taxation of Municipal Park Lands

In April, federation president Hal Hinds wrote to Hon. Yvon R. Poitras, Minister of Municipal Affairs, urging him to reconsider the provincial government policy of taxing municipal parklands, because it could discourage municipalities from expanding their parklands, or "even tempt them to divest themselves of certain properties." His letter asked specifically on what basis lands assembled for the development of a recreational park at Killarney Lake, north of Fredericton, will be assessed.

The Minister's reply noted that "taxation of parks has been in effect for a number of years." The federal and provincial governments pay a grant-in-lieu of taxes on all their parks and, "In 1983, legislation was passed which required a reciprocal tax contribution from municipalities." The Minister stated that "parkland is valued recognizing the perpetual dedication and current use. Recognition of the tax will certainly make municipal councils aware of their decisions in this regard, but I do not think that future development will be affected or retarded. Inclusion of parklands on the Assessment and Tax Roll is a recognition of the universality of the property tax."

Club News

Valley Naturalists Birdathon

To help raise money for its educational projects, the Valley Naturalists held a fund-raising "birdathon" May 27-28. Three parties observed a total of 76 species. Diane Clark's party was washed out by heavy rain at 28 species but Ansel Campbell's and Jean Carmichael's groups, which picked the better day, recorded 55 and 62 species, respectively. The Valley Naturalists invite anyone who wishes to contribute to their Education Fund to send donations to the club treasurer, Ansel Campbell, RR 1, Stickney E0J 1X0. Their first project was production of the slide and tape program on 50 common winter birds.

Would you let them destroy the pyramids of Egypt?

British Columbia's Queen Charlotte Islands hold treasures every bit as special as the pyramids. Yet these treasures may be lost forever!

Already centuries old when Columbus arrived in North America, the Sitka spruce, western hemlock and red cedar are among the largest trees on earth. But they are targeted for logging in South Moresby, the wildest and most beautiful part of the Queen Charlottes.

At this moment what is happening on the poor, old Charlottes resembles a desperate attempt to loot a treasure house before the owners, you and I, realize what's going on and take measures to stop it.

— Bill Reid, Haida sculptor

WHAT MAKES SOUTH MORESBY UNIQUE?

☐ The world's largest concentration of the rare Peale's peregrine falcon and the largest nesting concentration of bald eagles in Canada;

☐ Over one-quarter of all the nesting seabirds on the Canadian Pacific coast;

☐ More than one-half of Canada's Steller's sea lions;

☐ Eleven species of whales;

☐ The world's largest black bears;

☐ Plants, birds, mammals and insects found only on the Queen Charlotte Islands;

☐ Several hundred archaeological sites, including the Haida Indians' Ninstints village, a UNESCO World Heritage Site;

☐ Some of the most majestic scenery on earth.

WHY LOG IT?

South Moresby has only 2/10 of 1 percent of British Columbia's productive forest land. There are means to compensate the logging companies without loss of jobs.

WILL WE LOSE IT?

The federal and provincial governments must be shown that Canadians care about South Moresby.

Federal Environment Minister Tom McMillan and BC Environment Minister Austin Pelton have said that they place top priority on preserving the area. But they need strong public support to convince their governments that South Moresby needs to be preserved.

TIME IS RUNNING OUT; PLEASE ACT NOW!

Preserving bits and pieces [of South Moresby] is not good enough. It is like preserving a stately historic building and surrounding it with parking lots.

— Robert Bateman, artist

YOU CAN HELP.

Tell Prime Minister Brian Mulroney and Premier William Bennett of British Columbia:

Stop the logging of South Moresby NOW. Preserve this world treasure as a park for ourselves and future generations.

WRITE or TELEPHONE:

Right Honourable Brian Mulroney
Prime Minister
House of Commons
Ottawa, Ontario
K1A 0A6
(613) 992-4211

Honourable William Bennett
Premier
Parliament Buildings
Victoria, British Columbia V8V 1X4
(604) 387-1715

You can support the effort to save South Moresby by sending donations to:
The Save South Moresby Fund
c/o The Canadian Nature Federation
75 Albert Street, Suite 203
Ottawa, Ontario K1P 6G1
Telephone (613) 238-6154
Donations are tax deductible, and receipts will be issued on request.

NEW BRUNSWICK FEDERATION OF NATURALISTS
277 Douglas Avenue, Saint John, N. B., Canada E2K 1E5 Tel.: (506)693-1196

LA FEDERATION DES NATURALISTES DU NOUVEAU-BRUNSWICK
277, avenue Douglas, Saint-Jean, N.-B., Canada E2K 1E5 Tél.(506)693-1196

The federation is a non-profit organization formed in 1972 to facilitate communication among naturalists and nature-oriented clubs, to encourage an understanding of nature and the environment, and to safeguard the natural heritage of New Brunswick.

La fédération est une organization sans but lucratif formée en 1972 pour faciliter la communication entre les naturalistes et entre les divers clubs axés sur l'étude de la nature, pour encourager une meilleure compréhension de la nature et de l'environnement naturel, et pour sauvegarder le patrimoine naturel du Nouveau-Brunswick.

N. B. Naturalist /
Le Naturaliste du N.-B.

New Brunswick Federation of Naturalists /
La Fédération des Naturalistes du Nouveau-Brunswick
277 ave. Douglas Ave., Saint John, N. B. E2K 1E5, Canada

To / À: