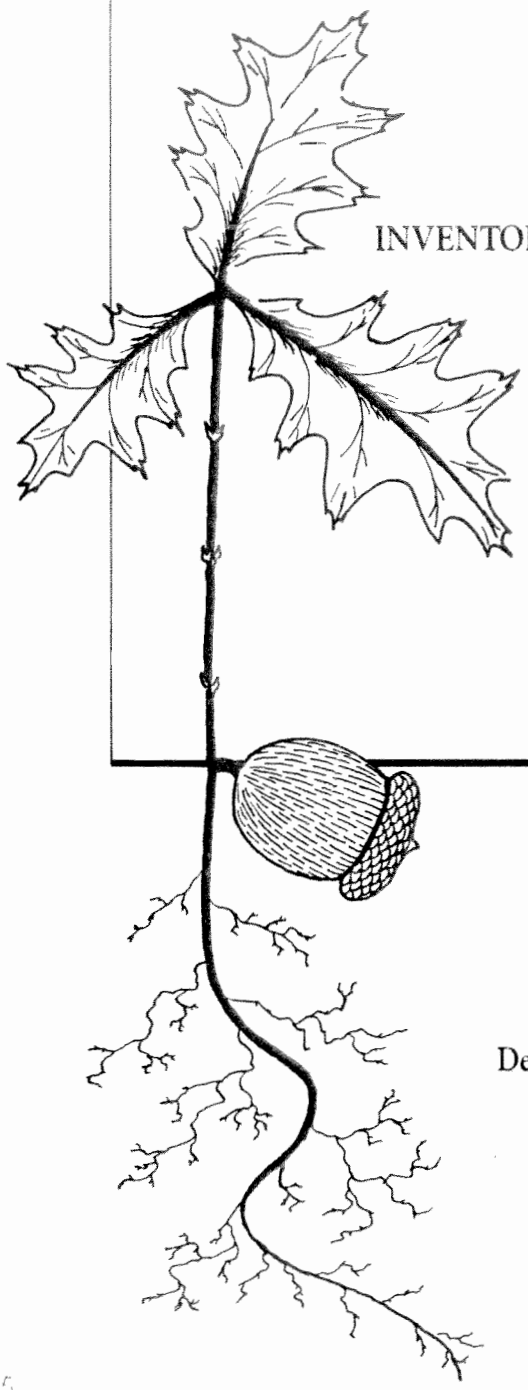

INVENTORY OF NATURAL SCIENCE SPECIMENS OF PRINCE EDWARD ISLAND

by

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An Island Studies Project
U.P.E.I. Department of Extension
in association with
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Dept. of Community & Cultural Affairs

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October 1982

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INTRODUCTION

To understand our past and interact effectively with our present environment, we must have some knowledge of the component parts of the system in which we live. One of the traditional building blocks for such an informed state is achieved by collecting representative samples of our flora, fauna and minerals. As the collection system progresses, an institution, generally a museum, comes into existence. One of its initial goals is the formation and care of a complete systematic documentation of the natural history comprising a complete species list, and examples of different states of growth, vegetative types and geographic areas. Such a collection, with supporting documentation, is the starting point for public education, the production of local publications, and the development of natural science units in school curricula.

Prince Edward Island has never established a natural sciences collection, and thus publications, public education and advanced knowledge of our natural history suffer from a paucity of such material. The lack of a central and obvious repository of natural history material has resulted in the loss or destruction of many of the scattered and restricted collecting activities that have taken place. Currently, there is no individual or institution charged with exploiting the limited activities that have occurred. In other words, we can't use effectively the limited material that is available.

In Prince Edward Island, it is absolutely essential to integrate human and natural history; we must understand the landforms and natural history to interpret effectively our human history. This report represents a beginning - a compilation of existing, available documentation of collections and surveys of natural science specimens (plants, animals, rocks, fossils) which have been done from Prince Edward Island. It was not possible, in the space of one month, to produce a complete inventory; the information contained herein represents beginnings and in no way bridges the gap. The worst possible scenario for this report would be for the ripples it causes to quell or the momentum to cease.

APPROACH

Several methods were adopted to develop this inventory. The most knowledgeable individuals for each systematic group were interviewed and their assessment of the condition of collections and accompanying documentation in that field was obtained. Concurrently, I contacted all institutions on Prince Edward Island that potentially had collections of preserved natural history specimens. Provincial museums and universities in Nova Scotia and New Brunswick were approached also to see what, if any, material in their holdings was collected from Prince Edward Island. In many cases, there were no indexes or detailed summaries of the holdings in the museum. For small collections, individuals sometimes compiled a list and sent it to me. I extracted whatever level of descriptive summary was available; the thoroughness was uneven across institutions and taxonomic groups. The following institutions were contacted and/or visited:

Prince Edward Island

1. University of Prince Edward Island - Biology and Engineering Departments
2. Prince Edward Island National Park (including Province House Historic Site)
3. Federal Department of Forestry and Agriculture
4. Provincial Department of Forestry and Agriculture
5. Provincial Department of Fisheries
6. Department of Fisheries and Oceans (Federal) (including Ellerslie Museum)
7. Department of Community Affairs (Fish and Wildlife Division)
8. Department of Highways and Public Works (Parks Section)
9. Heritage Foundation (including Artifactory, Green Park and Basin Head Fisheries Museum)
10. Holland College
11. Montague Museum
12. Marine Aquarium and Manor of Birds, Stanley Bridge
13. New Glasgow Recreation Centre
14. Marine Plants Experiments Ltd., Miminigash

New Brunswick and Nova Scotia

1. Nova Scotia Museum, Halifax, Nova Scotia (including Maritime Fisheries Museum)
2. New Brunswick Museum, St. John, New Brunswick
3. Acadia University, Biology Department, Wolfville, Nova Scotia
4. Dalhousie University, Biology Department, Halifax, Nova Scotia
5. Nova Scotia Agricultural College, Truro, Nova Scotia
6. Mount Allison University, Sackville, New Brunswick

New Brunswick and Nova Scotia cont'd

7. Canadian Wildlife Service Office, Atlantic Region, Sackville, New Brunswick
8. Chignecto Naturalists Club, Sackville, New Brunswick
9. St. Andrews Biological Station, Fisheries and Oceans, St. Andrews, New Brunswick

North American Museums

Natural history specimens collected on Prince Edward Island are believed to be scattered in science and natural history museums throughout Canada and the United States, and there is no easy information retrieval system whereby institutions containing collections from Prince Edward Island are identified. To obtain an exhaustive list of Island Collections, one would have to consult "The Official Museum Directory" published by the American Association of Museums (available at Confederation Centre Art Gallery, Charlottetown), identify museums containing natural history collections, and contact institutions individually. For the purpose of this report, the required effort is not warranted, but the Natural History Society of Prince Edward Island has agreed to embark on this task and will gather information on the history and distribution of natural science collections currently housed in North American Museums. A copy of their letter requesting such information is included in this report (Appendix I). Many of the collecting trips were made around the turn of the century or earlier.

Some of the institutions likely to contain Island material, as identified by Maritime museum personnel and naturalists, are:
American Museum of Natural History
Smithsonian Institute, Washington, D.C.
Field Museum of Natural History, Chicago
Museum of Natural History, Los Angeles County, California
Museum of Vertebrate Zoology, Berkely, California
Texas Memorial Museum
National Museum of Natural History, Washington, D.C.
U.S. Fisheries Commission
Lyman Museum, MacDonald College of McGill University, Montreal, Quebec
Academy of Natural Sciences of Philadelphia.

An advertisement soliciting information on Prince Edward Island natural history specimens was produced and aims to identify private collections (Appendix 2). It has been published in the following newsletters or journals:

1. Natural History Society of Prince Edward Island Newsletter, P.E.I.
2. Topics - University of Prince Edward Island
3. Environeer - Department of Highways and Public Works, P.E.I.
4. Gamut - Department of Tourism, Parks and Energy, P.E.I.
5. Island Nature Trust Newsletter, P.E.I.
6. Heritage Foundation Newsletter, P.E.I.
7. Corner Post, Department of Agriculture and Forestry, P.E.I.
8. Rural Delivery, Port Joli, Nova Scotia
9. Nova Scotia Museum Bulletin
10. New Brunswick Museum Bulletin
11. Museogram, Canadian Museums Association, Ottawa

Responses will be handled by Geoff Hogan, a volunteer naturalist and President of the Natural History Society of Prince Edward Island.* Information on privately-owned collections will be tabulated on inventory sheets which were prepared to achieve uniformity in gathering details (Appendix 3).

In summary, during the tenure of this report all local institutions potentially containing natural history specimens were contacted and a system for soliciting information on private collections was developed. As a special bonus and tangible gesture of support for the idea of a provincial natural sciences museum collection, the Natural History Society of Prince Edward Island has begun a long-term project on the history of collections of natural history specimens from Prince Edward Island.

* Note: The results of the Survey by the Natural History Society of P.E.I. as of October 1983 are presented in Appendix 31.

CHARACTERISTICS OF PRINCE EDWARD ISLAND

NATURAL HISTORY COLLECTIONS

1. Almost all collections are small and do not represent adequately Prince Edward Island flora, fauna, rocks, or fossils.

2. There has been very little expenditure of funds by institutions or individuals to build or maintain collections.

3. Most collections are static in size or deteriorating. Very little active collecting occurs, and most of that on an opportunistic basis.

4. Collecting activities are biased heavily to certain taxonomic groups and reflect personal interests rather than a systematic coverage.

5. In areas where considerable collecting has been done, collections are incomplete with respect to the total natural history cycle. For example, herbaria are limited in plant specimens from some habitats or seasons. In animal collections, adult forms may be available but larval or immature forms of the species are sparse.

6. Documentation and verification of specimens are, in general, very poor. Most collections would be assigned a "teaching or education" status. A limited number of reference collections of Prince Edward Island material are housed in federal collections in Ottawa.

7. If the information for proper documentation exists, no institutional resources are available to track it down and compile it.

8. Often only one method of preservation is employed in each collection, restricting its usefulness. For example, a method of preservation adequate for research purposes may be inappropriate for education or public displays.

9. Very limited expertise is available to assist and encourage talented amateurs to maintain and preserve their specimens. Thus many existing private and institutional collections are at risk due to inadequate care, security, and storage.

10. Many private and institutional collections are unavailable for public use. No agency is responsible for co-ordinating loans of specimens.

11. Because of the lack of a provincial museum to deposit specimens, collections are scattered throughout Prince Edward Island, other Canadian provinces, the National Museums of Canada, and the United States.

SURVEY OF

INSTITUTIONAL NATURAL HISTORY COLLECTIONS

Biology and Engineering Departments
University of Prince Edward Island
Charlottetown, P.E.I.

Contact - Dr. N. LeBlanc
Chairman, Department of Biology
892-4121

Collections - The University of Prince Edward Island has the largest collection and greatest variety of natural history specimens in the province. The collections are used primarily for teaching.

Rocks and Fossils - A collection with supporting documentation of rocks and fossils donated by F.A.S. Jones is housed in the Engineering Department (Appendix 4).

Plants - A herbarium of vascular plants contains 1367 sheets (564 species), representing 60% of Island flora. Specimens are organized and indexed (Appendix 5). There are small unverified collections of fungi, lichens and mosses. Collections are not expanding.

Animals - The University has the largest collection of Island insects. They are preserved primarily as dry mounts, but there is also a wet collection and a small slide collection. Most insect families are represented, but below that level much taxonomic work is needed. The collection currently holds approximately 13,000 specimens (approximately 2500 species) and is expanding. This is estimated to represent 30% of Island insect fauna. A complete representation of freshwater fishes exists and 50-70 species of marine fishes, mostly in adult stage. The bird collection contains 231 mounts

(113 species) and 28 skins (22 species), and a few undocumented sets of eggs and nests. A list of frozen bird specimens has been compiled (Appendix 6). There are 12 mammal mounts (9 species), 6 pelts, 38 skins (12 species), including 2 melanistic (black) snowshoe hare. Most of the bird and mammal material is old and in poor to fair condition with little or no documentation.

Prince Edward Island National Park
Parks Canada

Contact - Phil Michael
672-2211

Collections - There is a wide diversity of material in good condition, but collections are small and often unverified. Almost all material was found within the National Park. Some collections are being expanded, depending on needs and finances. Material is used mainly for public education.

Rocks and Fossils - Fifteen pieces from throughout the Island.

Plants - Three sets of algae were collected (Appendix 7). There is a small vascular plant herbarium (Appendix 8) and 25-30 specimens of mosses. There is also a photographic report of approximately 60 species of fleshy fungi (Appendix 9). With the exception of the algae, most of the plant material is unverified.

Animals - There is a collection of 45 species of marine organisms (Appendix 10) mainly invertebrates and displays of approximately 20 species of insects. A collection of shells is being built. The herptile collection is small and in poor condition, but a survey has been done recently on the herpetofauna. The bird collection contains 29 mounts and 22 skins (Appendix 11) and there are 18 mounts and 12 skins of mammals (Appendix 12). Appendix 13 reports bird and

mammal holdings as of 1982. Bird and mammal collections are expanding only when roadkills are found or programs require additional specimens. There is a complete collection of small mammals found in the national park, including a watershrew.

Department of Agriculture and Forestry, Federal
P.O. Box 1210
Charlottetown, P.E.I.

Contact - Dr. Winston Johnston
892-5461

Collections - The Federal Department of Agriculture and Forestry has an insect collection and a vascular plant herbarium, both of which began after a fire in 1951 destroyed the original collections. Both collections are well organized, but not indexed.

Plants - This herbarium has the most complete representation of Island flora (74%) on Prince Edward Island, but there are few duplicates. There are 696 species and, in total, approximately 800 sheets.

Animals - A dry and a wet collection of insects is expanding, but strongly oriented to agricultural insects. The dry insect collection contains approximately 3700 specimens (approximately 900 species) and the wet collection contains 150 specimens (50-60 species).

Department of Agriculture, Provincial
P.O. Box 1600
Charlottetown, P.E.I.

Contact - Weed and Pest Control Officer
892-5465

Collections - The Provincial Department of Agriculture has an insect and vascular plant collection, both of which are smaller and less complete than the federal collections. They are not being expanded.

Plants - A vascular plant herbarium in the Hurry Road office contains 180 sheets (149 species) - Appendix 14. There is also a reference collection of approximately 50 Island weed seeds.

Animals - The insect collection at the Hurry Road office contains 227 dry mounts and 48 wet specimens (38 species) - Appendix 15. In the Weed and Pest Control office at the Research Station on University Avenue there are 172 dry mounted insects.

Department of Fisheries and Oceans
P.O. Box 1236
Charlottetown, P.E.I.

Contact - Robert Arsenault
or Jim Jenkins
892-5346

Collections - Most of the preserved material collected by this department is contained in the Ellerslie Fisheries Museum, except for a 12 kilogram lobster mounted and displayed in a glass case in the Charlottetown office.

Animals - The three-room fisheries museum at Ellerslie is expanding its display. Currently there are approximately 20 fish and shellfish preserved in formaldehyde and displayed in glass jars, several species of fish preserved in plastic blocks and 4 attractive glass-covered display cases of shellfish. One room is devoted to oyster culture history and technique. This museum has the best public display of Island shellfish.

Department of Fisheries
P.O. Box 2000
Charlottetown, P.E.I.

Contact - Friend Herring
892-3493

Collections - No active collecting program.

Animals - In the Charlottetown office there are mounted displays of a queen crab, a large market lobster and a series of lobsters in different stages of growth.

Department of Community Affairs
Fish and Wildlife Division
P.O. Box 2000
Charlottetown, P.E.I.

Contact - Nelson Hurry
892-3561

Collections - No active collecting program. Birds and mammals are acquired from roadkills, research efforts or confiscations of illegal possessions.

Animals - Seventeen mounts of birds and mammals are owned by the Division and are on display in the Charlottetown office (Appendix 16). An unspecified number of birds and mammals are retained in a freezer at the field laboratory on the Beach Grove Road.

Department of Highways and Public Works, Parks Division
P.O. Box 2000
Charlottetown, P.E.I.

Contact - Bruce Smith
892-7431

Collections - Specimens are used for public display and natural history interpretation in various parks and at the Kings Byway Interpretive Centre, Poole's Corner, Montague.

Plants - A small collection of plants exists but specimens deteriorate quickly while on display.

Animals - There are limited collections of birds, mammals, invertebrates and marine fishes (9 species) (Appendix 17).

Heritage Foundation
2 Kent Street
Charlottetown, P.E.I.

Contact - Trude Oliver
892-1703

Collections - Natural history specimens occur in three locations: the Artifactory in the Industrial Park, Charlottetown, Green Park House, and Basin Head Fisheries Museum. Material is quite limited and, in fair to poor condition and state of documentation, with the exception of the Basin Head Museum.

Rocks and Fossils - The Artifactory has several rock and fossil collections, but it is not certain that they were found on P.E.I. Basin Head Museum has specimens of fossilized ferns and petrified clams.

Plants - Green Park has a display of Island wood types and Basin Head has a few marine plants on display.

Animals - The Artifactory has 6 mounted birds, 4 mammals and a number of fox pelts and tails. Basin Head Museum has 1 mounted bird, 1 mounted Tuna Tail and several attractive display cases of shellfish.

Garden of the Gulf Museum
Montague, P.E.I.

Contact - Mrs. Irma MacLaren
838-2528

Collections - The museum depends on donations of material. Natural history is not a major focus.

Rocks and Fossils - 1 piece of fossilized wood from Hampton, P.E.I.

Animals - 7 mounts of birds and 1 mammal, plus part of a walrus skull found near Bothwell Beach.

P.E.I. Marine Aquarium
and Manor of Birds
Stanley Bridge, P.E.I.

Contact - Mr. Williams

Collections - A private commercial collection. The majority of the collection does not contain Prince Edward Island material, but since it contains specimens of many species which occur here, the display has been included in this report (Appendix 18).

Plants - 1 display case of Irish moss.

Animals - There is a life cycle display of oysters and other Island shellfish. Butterflies of the world (mainly North America) are displayed in 14 cases. The primary attraction is the Manor of Birds, over 750 specimens from Quebec and around the world are displayed clearly. They contain data on sex, age, and date and location of collection, and include nests, eggs and young. Thirty-seven specimens (24 species) of mammals include most of those found on Prince Edward Island.

Lobster Culture Display
New Glasgow Recreation Centre
New Glasgow, P.E.I.

Contact - 264-2870

Collections - This is a private collection designed for public display.

Animals - Six glass cases contain specimens of lobster (age series), crabs, and 6 species of marine fishes (Appendix 19).

Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia

Contact - Lynton Martin
429-4610

Collections - The museum has the largest collection of Prince Edward Island natural history material in Nova Scotia.

Rocks and Fossils - 1 specimen of fossil fern.

Plants - Approximately 700 sheets of algae and vascular plants collected by D. Erskine, E. Smith and C. McFarlane.

Animals - Substantial mollusc material was deposited by R.W. Coleman (26 collections). In an insect collection of over 300,000 specimens, there are possibly 500 from Prince Edward Island. There is very little bird and mammal material.

Biology Department
Acadia University
Wolfville, Nova Scotia

Contact - Museum Curator

Collections - Acadia University has the largest museum collection of Nova Scotia plants, birds and mammals in eastern North America.

Plants - The Herbarium contains 100,000 sheets among which are an undetermined number of specimens from Prince Edward Island which have been deposited by D. Erskine, A.J. Smith, H.E. Aitken, D. Griffin and J. Fowler. There is no locality index.

Animals - There are 2084 mounts and skins of birds and 1806 of mammals in the museum. From Prince Edward Island there is one bird and a collection of 29 little brown bats collected by S. Bleakney at Green Gables House, Cavendish in 1958.

Biological Station Identification Centre
Department of Fisheries and Oceans
St. Andrews, New Brunswick

Contact - Leslie Linkletter, Curator

Collections - The Identification Centre of the Biological Station has some preserved material in its collection from Prince Edward Island, mostly from offshore areas of the Island, but some also from Ellerslie and Malpeque Bay.

Animals - A baseline description of the physical and biological resources of the Northumberland Strait was done and a report was written in 1975 (Appendix 20). The Biological Station at St. Andrews retains some of the material collected. The Identification centre also holds specimens of over 240 species of invertebrates (porifera, molusca, annelida, arthropoda, echinodermata) and 24 species of chordate fishes (Appendix 21).

The remaining universities and museums that were contacted in Nova Scotia and New Brunswick contained no material, or almost none, from Prince Edward Island in their collections. Dr. Donald McAlpine, from the New Brunswick Museum indicated that Philip Cox, a noted New Brunswick ichthyologist and herpetologist had done some collecting on Prince Edward Island in the 1880-1890(?) period. Several of the publications containing information on the Island are listed in Appendix 22. Some of the Philip Cox material is housed in the Chatham Museum, Chatham, New Brunswick.

There was not time during the tenure of this contract to do a thorough survey of the amount of Prince Edward Island material in federal collections. Before there is a complete picture of natural history specimens from the Island, it will be necessary to inventory the holdings of the following institutions in Ottawa. The job will be time consuming because for many taxonomic groups, these collections are not catalogued according to locality.

Department of Mines and Natural Resources
Geological Survey of Canada
National Museum of Natural Sciences
Department of Agriculture
Department of Fisheries and Oceans
Department of Forestry.

SYSTEMATIC SURVEY OF COLLECTIONS

This section of the report, regrettably, is weak because the extent of collections does not always equal the state of knowledge about status or distribution. In order to provide a detailed overview of the extent of documentation for the natural history groups, a careful and thorough review of the literature is required. I have contacted the individuals most knowledgeable in each particular field and referred to some publications but a thorough library search was not possible with the given time constraints. Recognizing fully this handicap, I will attempt to assess the state of documentation for the various systematic groups, and in so doing, identify major gaps where natural history material and information are lacking.

Rocks and Fossils

The surficial geology of Prince Edward Island has received reasonably thorough documentation during the past century. J.W. Dawson published a "Report on the Geological Structure and Mineral Resources of Prince Edward Island" in 1871. In the 20th century, V.K. Prest published maps and descriptions on the surficial geology of the province. The most recent report is by H.W. van de Poll in 1981: "Report on the Geology of Prince Edward Island". Fossil collections are by their nature incomplete, and for Prince Edward Island characteristically small. It is difficult to assess the completeness of rock collections because Prince Edward Island mineral material is almost entirely sandstone of various compressions, plus "tourist" rocks deposited by recent glaciers. Several small collections of rocks are owned privately. Parks Canada has a list of rocks contained in the Gesner collection (1861) in Province House, Charlottetown, but the specimens have disappeared (Appendix 23). The National Museum of Canada, Ottawa, has a display of redbed fossils from the province. The largest collection of Island rocks is housed in the Geological Survey of Canada office, Ottawa.

Plants

Algae - A thorough systematic survey of marine algae for Prince Edward Island has not been done, but Chris Lobban from Dalhousie University did an honours thesis on the topic in 1969. Small collections of Prince Edward Island marine algae occur at the Nova Scotia Museum and Prince Edward Island National Park. Dr. Louis Hanic, University of Prince Edward Island, has a personal collection of 40-60 species. Dr. Robert Staker surveyed a section of one stream on the Dunk River in 1973-74 for freshwater algae. He published two papers but made no collections since the material was microscopic.

Fungi - R.R. Hurst, Charlottetown Research Station, published in 1957, "A Preliminary List of Parasitic Fungi in Prince Edward Island". No systematic surveys have been done on slime molds or fleshy fungi. The University of Prince Edward Island has 12 species of true fungi, none verified. Phil Michael, Prince Edward Island National Park, produced a report describing 60 species of mushrooms found in the park, none verified.

Lichens - R.W. Coleman collected lichens along transects on Prince Edward Island and presented a paper entitled "Lichens from Islands of the Gulf of St. Lawrence" to the Iowa Academy of Science in 1982 (Appendix 24). The University of Prince Edward Island has a collection of about 40 species of mushrooms, none verified.

Bryophytes - mosses, liverworts and hornworts. Approximately 60 species of mosses that have been collected by the University of Prince Edward Island are being verified at the National Museum of Canada. Dr. Robert Ireland, curator of bryophytes at the National Museum, has a list of Prince Edward Island mosses compiled from unpublished sources. Prince Edward Island National Park has a collection of mosses which are identified, but unverified.

Ferns - No work has been published and no collections are known to exist on the ferns of Prince Edward Island.

Vascular Plants

The vascular plants of Prince Edward Island are the most thoroughly documented aspect of Island botany. The Plants of Prince Edward Island by D.S. Erskine and The Flora of Nova Scotia by A.E. Roland and E.C. Smith provide a good treatment of the Province. Approximately 940 species have been reported. The largest collection of Island vascular flora is housed at the National Herbarium, Biosystematics Division, Department of Agriculture, Ottawa, which has copies of 85-90% of the reported flora. The herbarium at the National Museum of Canada, Ottawa, also has an extensive collection. The Federal Department of Agriculture and Forestry Herbarium, Charlottetown, contains about 74% of the Island flora and the University of Prince Edward Island Herbarium contains about 60%. Several collections have been made for specific locations: Basin Head Sanddunes by Diane Griffin, Cable Head Sanddunes by Betsy Ives, Suffolk Road by Winifred Cairns (Appendix 25) and Prince Edward Island National Park. Acadia University has an unspecified but substantial number of Prince Edward Island specimens.

Although the flora is reasonably well documented for Prince Edward Island, much work needs to be done. Many collections contain only one specimen, even for highly variable plants and from only one season, habitat or geographic location. To determine specific characteristics of Prince Edward Island flora, more collecting is required.

Animals

Invertebrates- Benthic Invertebrates - Several surveys of benthos have been done by the Federal Department of the Environment. The most complete survey was done by Martin Thomas in 1970: "Studies on the benthos of Bideford River, Prince Edward Island", Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia. The 1975 Northumberland Strait Project surveyed the sediment and plant and animal components of Island offshore waters (Appendix 20). Some material was collected and deposited at the Biological Station, St. Andrews, New Brunswick. Annelids - one study has been done by J.W. Reynolds 1975. The earthworms (Oligochaeta: lumbricidae) of Prince Edward Island. Medadrilogica 2(7): 4-10. No information is available on the existence of an accompanying collection. The Identification Centre, St. Andrews, New Brunswick has a collection of 48 species of annelids from Prince Edward Island (Appendix 21).

Arthropods - The only crustacean on Prince Edward Island that has received any significant amount of attention is the lobster. The federal and provincial Departments of Fisheries have distributional and density information on this species. Collections of lobsters are housed at the Ellerslie Museum, the New Glasgow Recreation Centre, the Charlottetown offices of the Departments of Fisheries and Fisheries and Oceans, and the Basin Head Fisheries Museum. The Identification Centre, St. Andrews, New Brunswick has about 75 species of Arthropods from Prince Edward Island (Appendix 21).

No work has been done on Prince Edward Island spiders.

The class insecta has received the most attention among the arthropods; however, even here the treatment is very uneven. Because of the requirement for serious taxonomic work, the extent of the collections more or less reflects the systematic information available for insects of Prince Edward Island. About 30% of the insect fauna for Prince Edward Island has been collected and identified. Some work has been done on Island mosquitoes and a short unpublished report by Dr. Lawson Drake has been compiled. The butterflies, moths, grasshoppers, and crane and stoneflies are being worked on. Beetles, wasps, and flies have been ignored largely and lesser orders have received no attention. The largest insect collection on Prince Edward Island is at the University of Prince Edward Island and

and smaller collections are housed at the Federal and Provincial Departments of Agriculture and Forestry. The Lyman Museum, MacDonald College, Montreal has a collection of Prince Edward Island insects.

Molluscs and Echinoderms - Very little census work has occurred specific to Prince Edward Island but several surveys have been done and publications made on the Northeastern Seaboard of North America. Collections have been made of specific locations. Con Des Planaque from Amherst, Nova Scotia, made a collection of mulluscs at Cabot Park in 1971. He retains the collection and has provided a list (Appendix 26). Ursala Gregg, Halifax, Nova Scotia, made a collection of freshwater and terrestrial molluscs near Tyne Valley. At the Nova Scotia Museum, there are 26 collections of molluscan material deposited by R.W. Coleman. Prince Edward Island National Park is expanding its shellfish collection. The 1975 Northumberland Strait Project involved a survey of molluscs and echinoderms. The Identification Centre, St. Andrews, New Brunswick has over 100 species of molluscs collected on or around Prince Edward Island (Appendix 21).

Vertebrates - Fishes - Freshwater fishes are rather restricted fauna on Prince Edward Island and the University of Prince Edward Island has a complete collection. Marine species on the Island are not well documented, but Fishes of the Atlantic Coast of Canada by A.H. Leim and W.B. Scott includes records for the province. The University of Prince Edward Island has 50-70 species of marine fishes. One collecting project was conducted by students from the University (Appendix 27). Collections at the University contain mostly adult specimens and serve mainly as a teaching collection. Collections of eggs and larvae are needed greatly, in addition to more adult specimens. Preserved Prince Edward Island fishes occur at the Identification Centre, St. Andrews, New Brunswick and at the National Museum of Natural Sciences, Ottawa.

Herptiles - amphibians and reptiles. The National Museum of Natural Sciences of Canada has published a report on the herptiles of Prince Edward Island by F. Cook and S. Bleakney. The accompanying collection was sent to the National Museum. This work was based on one field season. L.D. Morton, J.M. Ouellette and W.H. Prescott have produced a preliminary report for Parks Canada in 1981 entitled "A Herpetofaunal Survey of Prince Edward Island National Park". The National Park has a few snakes and frogs preserved in formaldehyde but they are not identified or catalogued.

Birds - The Island's avifauna is reasonably well documented through updated checklists and bird sightings in the Natural History Society of Prince Edward Island Newsletter. However, the extent of collections available at the University, National Park, Fish and Wildlife Division and Parks Division do not reflect this. All of the collections are used for teaching and are not documented sufficiently to qualify as reference museum specimens. The largest collection, which is at the University, has representatives of considerably less than 50% of Prince Edward Island avifauna, and there are very few specimens of juveniles, nests or eggs. The National Museum of Canada has approximately 1000 bird skins. The University and the Fish and Wildlife Division also have considerable numbers of frozen specimens awaiting attention.

Mammals - The mammalian fauna of Prince Edward Island is well documented, but many of the existing collections are, at best, teaching collections, primarily because of the lack of accompanying information. The largest collection of Prince Edward Island mammals likely is at the National Museum, Ottawa. The University has the largest mammal collection on Prince Edward Island. Acadia University has a collection of 29 bats taken at Green Gables House, Cavendish in 1959. Life history studies have been done on red fox, muskrat, showshoe hare, red squirrel, and small rodent mammals; and some specimens, skins, skulls and organ measurements are available. P.E.I. National Park made two copies of a complete small mammal collection (including watershrews). The study skins are in excellent condition. One set is housed at the National Park; the other was sent to the National Museum, Ottawa. Dr. Howard Thomas collected small rodent mammals on Prince Edward Island and the other Maritime Provinces for his studies of systematics and zoogeography. Correspondence relating to his unpublished Ph.D. thesis, reprints of publications and disposition of specimens are included in Appendix 28.

SUMMARY RECOMMENDATIONS

A. Recommendations for Systematic Work:

1. Systematic work is necessary for all plants except the vascular flora simply to identify what we have.
2. More specialized work is required on vascular flora to determine changes over time, extent of range in habitat types, variations in vegetative characteristics, etc.
3. All invertebrates need basic and/or additional work, with the possible exception of the earthworms.
4. More survey collections are required for amphibians and reptiles.
5. Life history documentation is required on freshwater and marine fishes.
6. Reference collections are required for biogeographical studies on birds and mammals, excepting small rodents.
7. More extensive teaching collections of fishes, birds and mammals are needed.

The above recommendations summarize what we need in order to develop an adequate provincial natural science museum collection. Remaining sections will present suggestions on how to achieve this. The recommendations are organized into a "think/do" format.

B. We Should Think About:

1. We need to design collecting activities appropriate to the needs and interests of Islanders, and to areas particularly characteristic of the Province. For example, collections of agricultural or horticultural natural history specimens should be encouraged.
2. Before amassing major provincial collections, policies on the care and acquisition of specimens in other museums should be reviewed; e.g., Nova Scotia Museum policy (Appendix 29).
3. Initial planning activities should include investigations into systems of efficient cataloguing of specimens by computer so that information as to species identity, locality, date collected, date acquired, donor, verification, etc. can be retrieved easily. Such a system would reduce handling of specimens.

4. We need to assess the need to collect. Requirements for teaching, research and public education should be reviewed. The necessity to collect will also vary with the taxonomic group (e.g., insects vs. birds).
5. Priorities for collecting efforts should be assigned. Where collections are available from other agencies, a low priority should be assigned to duplicating that effort and a high priority to arranging a transfer from the donor institution to the Island collection.
6. It would be most useful to canvas needs and attitudes of the public toward the establishment of a provincial natural sciences collection. The perceived primary users (e.g. teachers, scientists at the university and in government, and natural history groups) should be involved in the planning. The Lord Report has laid the initial groundwork

C. We Should Do:

1. As a sequel to this contract, a project should be initiated to compile reports and published literature on studies of Island natural history. Such information, combined with this report on collections, would give complete coverage of the state of natural history documentation for Prince Edward Island.
2. A second sequel to this contract should be initiated to describe and inventory holdings of natural science specimens from Prince Edward Island in the Federal Collections in Ottawa.
3. Immediately, we should begin collecting, updating and furthering our knowledge of Prince Edward Island Natural history.
4. The Heritage Foundation currently is the provincial body charged with caring for our natural history. They should be approached with the following suggestions:
   a) To establish a committee to advise them on natural history concerns.
   b) To attempt to gain members on its Board who have an appreciation of and concern for Prince Edward Island natural history.
   c) To acquire a staff member with natural history and museum expertise.
5. We need a liaison person to expedite contact with museums in Ottawa and other provinces. For example, it is difficult often to identify specimens, and the amateur collector may not realize that assistance is available at the Geological Survey of Canada, National Museums of Canada or the Biosystematics

Division of the Department of Agriculture, Ottawa. Initially, the natural history staff member hired by the Heritage Foundation might serve as such a person and thus raise the quality of amateur collections.

6. No significant progress will be achieved on a provincial natural sciences collection until individuals affiliated with an institution are hired to collect, process, and disperse information on natural history specimens. In other words, we need a museum building to bring together the disparate collections that exist and we need to begin strengthening the weak areas.
7. Some collections which are deteriorating or are being destroyed would be available for donation. The existing institutions with museum material often cannot accept such donations due to limitations on space, maintenance or conservation. Our threatened collections badly need a home and a caretaker!
8. We need to compile information on the history of collecting activities in natural or human-altered communities.
9. We should encourage cooperation and assistance from naturalist groups and teachers who might benefit from a provincial natural sciences collection. Once major gaps are identified, individuals with an acknowledged interest in the field could be approached to begin or continue work on that subject and possibly could be assisted with logistics. With limited resources, modest and thorough efforts should be encouraged. Our resources may be limited, but our ingenuity need not be.
10. Some of the blatant gaps in our collections and documentation of Island natural history could be bridged by judiciously chosen specialized studies on a contract basis. One economical route is to recruit graduate students and furnish them with financial assistance for their field studies in exchange for a readable, publishable report.
11. We need, desperately, popular publications in almost all areas of Prince Edward Island natural science. In some disciplines, even a concise fact sheet would be impossible until some collecting efforts or surveys were made (e.g. spiders, ferns), but in other areas enough field studies have been done. They await a publisher!

ACKNOWLEDGEMENTS

I am indebted to the individuals listed below for helping me gather the information compiled in this report. Without their assistance and cooperation, I would not have been able to produce a comprehensive summary of the collections of Prince Edward Island natural science specimens housed in institutions on the Island, Nova Scotia and New Brunswick.

Especial thanks go to Mr. Harry Baglole, Community Studies Project Specialist of the Cultural Affairs Office of the Department of Community Affairs, who made all the arrangements for the study. Mr. Ian MacDonald, Department of Extension, University of Prince Edward Island was most helpful in providing logistics for the study. I am also grateful to Mr. Lynton Martin, Director of the Nova Scotia Museum for the time he spent with Geoff Hogan and myself and the arrangements he made for us to meet with his staff. Lastly, I thank Geoff Hogan, naturalist and President of the Prince Edward Island Natural Society for all the assistance he provided during the fall of 1982.

M. Georges Arsenault, U.P.E.I.
Mr. J.P. Arsenault, Dept. of Agriculture, Charlottetown
Mr. Robert Arsenault, Fisheries and Oceans, Charlottetown
Mr. Harry Baglole, Dept. of Extension U.P.E.I.
Dr. Sherman Bleakney, Acadia University, Wolfville, N.S.
Mrs. Mary Burnett, Artifactory, Heritage Foundation, Charlottetown
Ms. Winifred Cairns, naturalist, Charlottetown
Dr. Catherine Clough, Biology Dept., U.P.E.I.
Mr. Cyril Coldwell, Curator, Acadia University, Wolfville, N.S.
Ms. Rosemary Curley, Dept. of Agriculture, Charlottetown
Dr. Derek Davies, Nova Scotia Museum, Halifax, N.S.
Mr. Con DesPlanaque, Amherst, N.S.
Dr. David S. Erskine, Willowdale, Ontario
Dr. A.J. Erskine, Canadian Wildlife Service, Sackville, N.B.
Ms. Diane Griffin, Edmonton, Alberta
Dr. Louis Hanic, Biology Dept., U.P.E.I.
Ms. Gay Hanson, Mount Allison University, Sackville, N.B.
Dr. Joe Harvey, Dalhousie University, Halifax, N.S.
Ms. Iris Heartz, Dept. of Extension, U.P.E.I.
Mr. Friend Herring, Dept. of Fisheries, Charlottetown
Mr. Geoff Hogan, President of P.E.I. Natural History Society
Mr. Nelson Hurry, Fish and Wildlife Division, Charlottetown
Mr. Jim Jenkins, Fisheries and Oceans, Charlottetown
Dr. Ed Johnston, Biology Dept., U.P.E.I.
Dr. Winston Johnston, Biology Dept., U.P.E.I.
Mr. Don Jones, Manager, Marine Plants Experiments, Miminigash, P.E.I.
Mr. David Lane, Parks Canada, Charlottetown
Dr. Ninian LeBlanc, Biology Dept., U.P.E.I.
Ms. Leslie Linkletter, Fisheries and Oceans Biological Station, St. Andrews, N.B.

Mr. Barry Lord, author of The Museums of Prince Edward Island - A Programme for Development, Hamilton, Ontario
Mr. Dan McAskill, Dept. of Forestry, Charlottetown
Mr. Gerald MacDonald, Fish and Wildlife Division, Alberton
Mr. Ian MacDonald, Dept. of Extension, U.P.E.I.
Mr. Bruce MacLaren, Charlottetown
Mrs. Irma MacLaren, Garden of the Gulf Museum, Montague, P.E.I.
Dr. Ian MacQuarrie, Biology Dept., U.P.E.I.
Dr. John Maloney, Charlottetown
Mr. Lynton Martin, Director, Nova Scotia Museum, Halifax, N.S.
Dr. Don McAlpine, Curator, New Brunswick Museum, St. John, N.B.
Mr. Phil Michael, Parks Canada, Dalvay, P.E.I.
Mr. David Morgan, Holland College, Charlottetown
Ms. Trude Oliver, Artifactory, Heritage Foundation, Charlottetown
Mr. Reg Porter, Heritage Foundation, Charlottetown
Mr. Regan Paquet, Basin Head Fisheries Museum, Basin Head, P.E.I.
Dr. A.E. Roland, Nova Scotia Agricultural College, Truro, N.S.
Dr. Al Smith, Canadian Wildlife Service, Sackville, N.B.
Mr. Bruce Smith, Provincial Parks Division, Charlottetown
Mr. Don Stewart, Bunbury, P.E.I.
Mr. Dave Sudsbury, Ellerslie Fisheries Museum, Ellerslie, P.E.I.
Dr. Howard Thomas, Fitchburg College, Fitchburg, Mass., U.S.A.
Dr. Leith Thompson, Dept. of Agriculture and Forestry, Charlottetown
Dr. Alex Wilson, Nova Scotia Museum, Halifax, N.S.

APPENDICES

Due to the length of the 31 Appendices, approximately 500 pages, they have not been included with most copies of this Report.

Copies of the complete Report, including Appendices, can be consulted at the Prince Edward Island Museum and Heritage Foundation, the Prince Edward Island Archives, the Confederation Centre Library, or the Robertson Library, U.P.E.I.

APPENDICES

(Note: The Appendices which follow are printed as received, and many contain errors in spelling or identification.)

Appendix 1

Letter drafted to request information on Prince Edward Island natural history specimens in North American museums.

NATURAL HISTORY SOCIETY OF PRINCE EDWARD ISLAND
P.O. BOX 2346, CHARLOTTETOWN
Prince Edward Island, Canada

Dear

Prince Edward Island, Canada's smallest province, has a dynamic history of changing natural environments. The landscape has been modified from mature hardwood forest to patchwork farmland and second growth woodland to large exposed agricultural fields. No original woodlands exist and the coastline is being modified constantly. Consequently, many natural and human-influenced changes have occurred in the flora and fauna. However, remarkably little natural history documentation exists.

The Natural History Society of Prince Edward Island is gathering information about collecting trips and surveys that may have been made here. We know some collecting and documentation has occurred, particularly around the turn of the century, but the information and specimens are scattered throughout the continent. Prince Edward Island has never had an institution such as a provincial museum where information and specimens could be deposited.

Does your museum have any natural history specimens from Prince Edward Island in its holdings? If so, are they plants, animals, rocks or fossils? How extensive is the collection and who made it? When was the collecting done? Who donated them to your museum? We would greatly appreciate any detail you have on file.

We look forward to hearing from you.

Yours sincerely,

Geoff Hogan, President
Natural History Society of
Prince Edward Island

Appendix 2

Advertisement requesting information on Prince Edward Island Natural History specimens.

Request for Information

on

Prince Edward Island

Natural History Specimens

An Inventory of Natural Science Specimens is being developed as an Island Studies Project by the Department of Extension at the University of Prince Edward Island. This project is an initial step in the possible development of a provincial natural sciences museum collection.

We are interested in viewing preserved or mounted birds, mammals, insects, fish, plants, shells, fossils, and rocks from Prince Edward Island. If you have a collection or know of someone who does, please contact:

Kathy Martin or
Geoff Hogan
Biology Department
University of Prince Edward Island
C1A 4P3
phone 892-4121

Appendix 3

Form developed to inventory Prince Edward Island Natural History specimens.

Inventory of Prince Edward Island

Natural History Specimens

Owner or agency _____ ph _____ Date viewed _____

_____ Interviewer _____

_____

_____

Collection _____

Contents _____

_____

Method of Preservation _____

Name of Collector _____

Collecting Date _____

Specimens verified by _____

Specimen Condition - state of preservation _____

- accuracy of documentation as to identification _____

_____ geographical origin _____ date collected

_____; collector _____.

Current Use - Teaching _____; reference or research _____;

Education - in schools _____ or to the public _____;

private use _____

Size and Extent of

Collection is -static _____; declining because of use _____or

inadequate storage facilities _____; growing opportunistically

_____; increasing directionally _____

increasing towards complete representation _____

ıture Use of - Not available _____

ıe Collection - Available for donation _____; loan _____; sale _____;
reciprocal trading _____.

etails _____

Appendix 4

File of correspondence between F.A.S. Jones and several paleontologists concerning fossils found on Prince Edward Island. The file plus the collection of rocks and fossils was donated to the University of Prince Edward Island by his relatives.

1. Petrified wood.
Gymnosperm
probably Cupressinoxylon.

2. Same as above

3. Fern or seed-fern: rachis: stem & leaf.

4. Probably an impression of a twig

5. Same

6. Concretion ~~containing~~ formed around a stem which has since been weathered away.

7. Impression of wood

8. Wood preserved by hematite

9. Calcite and barite
(white or gray) (pink)

10 Barite

11 Barite with some hematite

TEXAS MEMORIAL MUSEUM

THE MUSEUM OF THE UNIVERSITY OF TEXAS
24TH AND TRINITY STREETS · AUSTIN 5, TEXAS

August 23, 1965

Mr. F.A.S.Jones
92 Queen Street
Charlottetown,
Prince Edward Island
Canada

Dear Mr. Jones:

Dr. V.K.Prest has sent me the photographs of the interesting specimen which you collected on P.E.I. There is always a degree of uncertainty about identification of fossils from photographs. However, yours are so clear that I can state without much doubt that the specimen is not a footprint of any vertebrate animal. If it had an organic origin this may lie in the plant kingdom. The red bedrock of P.E.I. is of early Permian age. By that time there was a variety of tetrapod animals and tracks made by these are not uncommon fossils in many parts of the world. I donot recall seeing any on P.E.I., but since bones of several different kinds of animals have been found there it is likely that tracks will also be encountered. They will show four or five digits (none in retrograde as in some birds) and some sort of a heel or palm impression. They will most probably be small with none longer than about six inches. They may occur in sequences of several tracks recording the progress of one or more animals over a soft substrate. Such trackways are of more interest to paleontologists than isolated individual footprints.

You asked about pamphlets and books. The National Museum of Canada published the results of my studies on P.E.I. a few years ago. I regret that my supply of reprints is depleted, but I sent several copies to Graham Rogers. If you cannot locate a copy on P.E.I. I'm sure you could obtain one by writing the National Museum of Canada in Ottawa. As for other reference material it is rather difficult for me to "prescribe" without knowing your background. I imagine a good standard geology text would be helpful and I recommend "The Geological Evolution of North America" by T.H.Clark and C.W.Stearn, published by The Ronald Press Company, New York (1960). An excellent little handbook is "Fossils, an Introduction to Prehistoric Life," by W.H.Matthews III, published by Barnes & Noble, Inc., New York, 1962.

Please give my regards to Graham Rogers when next you see him. I certainly enjoyed my stay on P.E.I. several years ago, and his hospitality was much appreciated.

Sincerely yours,

Wann Langston, Jr.
Vertebrate Paleontologist

WL/cg

cc: Dr. V.K. Prest

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C. 20560

August 31, 1965

Mr. F. A. S. Jones
92 Queen Street
Charlottetown
Prince Edward Island
Canada

Dear Mr. Jones:

Your letter was awaiting my return from a field trip and interestingly enough I had been collecting in northern New Brunswick and Gaspé; practically on your backdoor step.

I have very pleasant memories of a visit to Prince Edward Island in 1962 while I was on the staff of the Geological Survey of Canada. We collected materials of the type you describe in your letter.

Most of the fossil wood that occurs along the south shore and of the type you describe, can be assigned to the genus Cordaites, a gymnospermous tree that flourished through the Coal Period into Permian times. The deposits in Prince Edward Island are considered Permian.

Some of the rootlike structures you describe are casts and possibly do represent evidence of root growth; others, however, could be worm tubes or trails.

An interesting fossil occurs along the south shores associated with the petrified wood. It is a pith-cast of some one of the gymnospermous trees and is given the name Tylodendron. It has an interesting diamond-shape pattern over the surface. Specimens generally range from 1 to 2 1/2 inches in diameter and perhaps 3 to 5 inches in length. Have you seen any of these? They are obvious from the rest of the fossils because of the regular pattern on the surface. We found a few on our trip in '62.

Mr. F. A. S. Jones

I am sorry to say that we do not have a pamphlet prepared on the techniques of collecting and studying fossil plants. We are planning such an article but have not yet assembled it for publication. The Division of Paleobotany is a young segment of the Museum and still has a great deal to do in getting organized. My hopes are for a series of articles that can be used to help the interested collector in furthering his knowledge and increasing his pleasure in the study of fossil plants.

If you should have duplicate material of the petrified wood or perhaps some of the Tylodendron I would be very grateful to receive a few specimens for our reference collections and could arrange an exchange of other fossil wood with you.

Should you at any time have further questions, or if I can be of further help to you, please feel free to write.

Best regards,

Sincerely yours,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

Sept.9th 1965.

Dr.F.M.Hueber, Curator,
Division of Paleobotany,
United States National Museum,
Washington.

Dear Dr.Hueber,

Many thanks for your most welcome letter of Aug.31st. It was awfully good of you to write me so fully and at such length.

I would be most pleased to send you samples of the petrified wood or anything else. I do not believe I have found any Tylodendron. The specimens I have gathered are not large but if you would care to give me some idea of the pieces you could use I will be glad to send them.

I hope to get out quite a bit this fall and it would be a great help if I could enlarge my knowledge of likely search areas. Possibly you might have some suggestions. So far I know of only two productive places..Gallas Point and Hampden,near Victoria. The former is nearly all casts with small pieces of petrified nearby, while Hampden has larger pieces of petrified with no casts.

If you could tell me where you located the Tylodendron I will certainly make it a point to go there.

May I again point out that I am a complete amateur beginner and that while I enjoy the collecting I know practically nothing about it other than being able to recognize certain forms when I see them.

Again thanking you and hoping to hear from you again,

Yours faithfully,

F.A.S.Jones.

Prince Edward Island ancient plant formation stone of Lower Permian period, 200 million years old.

Ancient plant formation stone of the Lower Permion period. This is a genuine old piece of Prince Edward Island and is certified to be about 200 million years old.

We certify that this stone was found in Prince Edward Island. It has been examined and found to be of the Lower Permion period which indicates it is some 200 million years old.

Lower Permion Period plant formation stone, about 200 million years old. This is a genuine part of ancient Prince Edward Island mmm .

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C. 20560

September 15, 1965

Mr. F. A. S. Jones
92 Queen Street, P. O. Box 213
Charlottetown
Prince Edward Island
Canada

Dear Mr. Jones:

Thank you for your letter. It is good to hear from you again.

Enclosed is a Xerox copy of a collector's guide book that used to be sent out when requested by interested collectors. Copies have not been printed in some years. It is hoped that we can once more assemble something of this sort and make such a booklet available. It is rather general but does give some good pointers on collecting techniques.

Thank you for your offer of specimens from your collection. Two or three specimens of the petrified wood in sizes up to 2 x 3 inches would be most welcome. I will be glad to send you some specimens in exchange.

With regard to the locality where I found Tylodendron, as I recall, most of it came from Gallas Point. However, wherever the fossil woods occur it is also possible to find Tylodendron. Good hunting! Wish I were there to join you.

Best regards,

Sincerely yours,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

Enclosure

Jan.27th 1966. P.O.B.213.

Dr.F.M.Hueber,Curator,
Division of Paleobotany,
Smithsonian Institution,
United States National Museum,
Washington, D.C. 20560.

Dear Dr.Hueber,

I must apologize for not replying to your letter of Sept.15th. However, I do not wish to burden you with my small affairs and I wished to do a little more looking for Tylodendron before writing again. Christmas then interfered and here we are.

I believe I have found a few samples of Tylo in my rambles but I am far from certain. When you refer to diamond shaped markings I do not find them but when you refer to pith-casts I think I have a few.

I have made up a small box of sample items which I trust may be interesting. I have included petrified,pith-cast,some casts and some odd findings which I hope may be identified. Each is numbered and I have duplicates here. I can also provide location if there is anything of interest. I am given to understand that none of these are of any geological interest.

I am planning to include a picture of an interesting sandstone shape which appears to be a footprint. I would appreciate your comment.

I plan to mail this package as I drive through the States to Florida. Your reply will be forwarded to me when I establish an address. If possible,I would like to stop in Washington,on our return trip, long enough to say hello.

May I again say how greatly I appreciate your interest and the letters you have sent me.

Yours faithfully,

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C. 20560

February 17, 1966

Mr. F. A. S. Jones
170 Crescent Street
Fort Myers Beach,
Florida

Dear Mr. Jones:

The specimens you sent to the Museum arrived in good order. I have only looked them over rather superficially so will not at this time give you a full list of identifications. The petrified wood specimens are interesting, particularly No. 2 in which the pith is also preserved.

I thought that I would at least let you know that the specimens had arrived and also that I would write to you again as soon as I had had a chance to sit and look at the material more closely.

When do you expect to be returning home and possibly stopping here in Washington? I would be very happy to meet you and show you our facilities and discuss the collecting of minerals and fossils. Let me know of your plans.

Best regards.

Sincerely,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

Call 381 5855

Corner of Constitution Ave & 12th St N

Phone 628 1510

Nat Hist Bldg.

SMITHSONIAN INSTITUTION
WASHINGTON, D. C. 20560

October 30, 1968

Mr. F. A. S. Jones
92 Queen Street
Charlottetwon
Prince Edward Island
Canada

Dear Mr. Jones:

I was looking over the collection of specimens you sent to the Museum and could find no note as to whether I gave you identifications for the specimens when you visited us. If I didn't, I am sorry that such did not get mailed to you. Too, may we keep some of the material for our collections? Again I did not make note of this point and I will require some sort of word from you to the effect that we may have the specimens in question.

How has your collecting progressed?

I look forward to your reply and also look forward to another visit by you should you come through Washington.

Best regards.

Sincerely yours,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

SMITHSONIAN INSTITUTION
WASHINGTON, D. C. 20560

November 18, 1968

Mr. F. A. S. Jones
92 Queen Street
Charlottetown
Prince Edward Island
Canada

Dear Mr. Jones:

Thank you for your reply to my letter of October 30. I am sorry to hear that your collecting activities have been curtailed by ill health and I hope that all is well by now.

I shall refer to the specimens by number as you had them labelled and you can then apply the identifications to the duplicates you have in your collection.

Specimens #1 and #2 are both fossil wood of a gymnospermous tree and for convenience can be referred to the genus Dadoxylon.

Specimen #3 is probably the base of the rachis of a large fern or seed-fern leaf. The grooving is a reflection of strengthening fibers in the anatomy of the axis.

Specimens #4, #5 and #6 are concretions or parts of concretions containing unidentifiable fragments of plants.

Specimen #7 shows the impression of a plant part comparable to Specimen #3.

Specimen #8 is wood replaced by hematite; a peculiar form of fossilization but not one restricted to P.E.I.

Specimen #9 is a mass of calcite crystals with salmon colored barite crystals interspersed among the calcites. There are some few fragments of fossil wood along one side of the specimen. The wood is of the hematite replacement type seen in specimen #8.

Specimens #10 and #11 are both composed of salmon colored barite. Specimen #11 shows casts of calcite scystals left in the surface of the barite after dissolution of the calcite by natural weathering processes.

I do have a copy of the photograph of the "footprint." I have shown it to our vertebrate paleontologist and he doubts that the specimen is a footprint. It probably is a concretion of some sort.

I shall add the fossil wood specimens to our collections as a gift in your name and I certainly appreciate your interest in permitting us to retain the specimens.

Best regards and good wishes. I hope you have the opportunity to stop here on your way to or from Florida this season.

Sincerely yours,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D.C. 20560

January 26, 1970

Mr. F. A. S. Jones
5700 Estero Boulevard
Fort Myers Beach, Florida 33931

Dear Mr. Jones:

It is good to hear from you. I am sorry the weather is not what it should be for you in Florida. The winter so far has been a bit mixed up. Today here in Washington the weather is very bright and Spring-like but the prospect of the cold of February keeps optimism at a minimum level.

With regard to the "footprint", I am sorry to report that the members of our staff in Vertebrate Paleontology say it is a weathering feature, not a footprint. I was fairly certain that this would be the report. Now it is official from those who should know.

Do you want me to hold the specimen for you to pick up or would you prefer that I mail it to you at your Prince Edward Island address. Please let me know what you wish done.

I shall be leaving for Australia and Fiji on February 4 and will return April 1. It has the potential of being an exciting and rewarding trip.

Give my regards to the Weeks'.

Enjoy your holiday.

Sincerely yours,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

5700 Estero Blvd., Fort Myers Beach, Fla.
April 16th 1970.

Dr. Francis M. Hueber,
Division of Paleobotany,
Smithsonian Institution,
Washington, D.C. 20560.

Dear Doctor Hueber,

I presume that you have returned from your trip to Australia and Fiji. I am sure it must have been a most enjoyable and worthwhile trip and I hope it was entirely successful.

During your absence I ran into an opportunity to have my specimen picked up by friends, who were on their way home to P.E.I. I provided them with a letter, sent a copy to your office and heard no more about it - until yesterday.

I had though my friend Frank Curtis had picked up the stone but in a letter received yesterday he advised that he called at the Institution, found it closed, and was unable to return.

Had he advised me earlier I would have written you to return it to me here. It is now late for such a plan but we do expect to visit with friends in Maine as we travel home.

Would you therefor please ship it to me care of

Alan J. Hilton, West Southport, Maine. 04576.

We expect to be there for a day or so starting April 29th.

I appreciate that me specimen has no special value and I must say I was disappointed. Could you tell me something about the age of it?

Thanks again for all your cooperation and interest. I am feeling much better this year and hope to get out rocking again.

Sincere regards,

F.A.S. Jones.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D.C. 20560

MAY -6 1970

Mr. F. A. S. Jones
221 North River Road
Charlottetown, P.E.I.
Canada

Dear Mr. Jones:

Your letter arrived late yesterday. The mail service seems impossible. On that point, I am quite certain that I could not guarantee the arrival of your specimen at your Maine address in time for you to take the specimen on home. In addition we would have a certain amount of paper work here in order to get the specimen shipped out. So in desperation I shall send the specimen to your Prince Edward Island address.

When you receive the specimen please sign, date and return the white copy of the enclosed shipping invoice for our records.

Sincerely yours,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

Enclosure

3400

$1423
1463
3960

SMITHSONIAN INSTITUTION
Washington, D. C., U.S.A. 20560
SHIPPING INVOICE

HAS, HAS NOT, BEEN WRITTEN

TIONS TO RECIPIENT:
S ARE MADE FOR TWO MONTHS UNLESS STIPULATED BELOW. WHEN RETURNING MATERIAL, EASE MENTION THE REGISTRAR FILE NUMBER. TYPES SENT ON LOAN MUST BE RETURNED Y REGISTERED MAIL.

REGISTRAR FILE NO. _____

INITIATING OFFICE INVOICE NO. Paleobotany

DATE 4-23-70

TO:

Mr. F. A. S. Jones
221 North RiverRoad
Charlottetown, P.E.I.
Canada

LOAN PERIOD _____

INITIATED BY F. M. Hueber

UNIT Paleobotany

APPROVED: _____
Chairman, Dept. Paleobiology

THIS MATERIAL IS SENT AS:
(1) AN OPEN LONG-TERM EXCHANGE
(2) A LOAN AT YOUR REQUEST
(3) IN EXCHANGE
(4) A LOAN FOR EXAMINATION AT OUR REQUEST
(5) RETURN OF MATERIAL BORROWED
(6) RETURN OF MATERIAL SENT FOR IDENTIFICATION
(7)

MATERIAL (AS APPROPRIATE, STATE LOCALITY, COLLECTOR, CATALOG NUMBERS, ETC. TOTAL EACH DISTRIBUTION CATEGORY)

1 pseudofossil — collector F.A.S. Jones — Total 1 specimen

For Customs declaration: 1 rock specimen of no commercial value

NO. OF PACKAGES 1 DATE SHIPPED _____

SHIPMENT Parcel Post (EXPRESS, PARCEL POST, ETC.) PAYMENT Prepaid (PREPAID, COLLECT ETC.)

SHIPPING NO. _____ SHIPPING CLERK'S INITIALS _____

RECEIVED IN GOOD ORDER

(NAME)

(DATE)

RETAIN THIS COPY

National Museum of Natural History · Smithsonian Institution
WASHINGTON, D.C. 20560 · TEL. 202-

June 28, 1972

Mr. F. A. S. Jones
221 North River Road
Charlottetown, P.E.I.
Canada

Dear Mr. Jones:

Your letter was a pleasant surprise and it is good to hear from you. I am sorry to hear that your collecting activities have been curtailed by poor health. I do hope your health improves soon.

Your offer of assistance to the group from the Smithsonian visiting P.E.I. next month is very thoughtful and kind. I regret to say that I know no one in the group. It is organized and coming out of the Astrophysical Laboratory at Harvard University. The Smithsonian is such a large and ever growing organization that it is difficult for the staff of one unit to be fully acquainted with another, particularly when the geographical separation is such as it is in this instance.

I would certainly like to return to P.E.I. some day perhaps, and more than likely, on a vacation trip. A trip in order to collect specimens is no longer justifiable here at the museum. So the times change.

Take care of yourself and "may the long-time sun shine upon you."

Sincerely,

Francis M. Hueber

Francis M. Hueber
Curator
Division of Paleobotany

CANADA

Department of Mines and Technical Surveys
Ministère des Mines et des Relevés techniques

601 Booth Street,
Ottawa, July 8, 1965.

Geological Survey of Canada
Commission géologique du Canada

File Number
No à rappeler

Copy for Dr. Jones

Mr. B. Graham Rogers,
2 North River Road,
Charlottetown, P.E.I.

Dear Graham:

Your letter of June 16th to the Director (Dr. Y.O. Fortier), and the parcel sent directly to me were in my office on my temporary return this morning. The specimen forwarded is neither wood nor bone but merely a concretionary 'form'. It is probable that the 'form' was occasioned by replacement of a piece of plant material long since removed, judging by the appearance of the hole in the specimen. This type of rock is common in the vicinity of Gallas Point. It is of no particular interest geologically. Its age is of course that of the sediment of which it is a part, i.e. Lower Permian, and hence about 200 million years. The specimen is being returned under separate cover as requested.

Had a most interesting and geologically thrilling trip to northwestern Quebec and adjoining Ontario. Will be in Ottawa for about three weeks, then head west for the balance of the summer.

No doubt you were pleased to learn of the appointment of Mr. MacNaught as Minister of Mines and Technical Surveys. Will have to complete my Island work next summer for sure eh? Will see you then if not before.

Sincerely,

Eric

V.K. Prest
Pleistocene Section

VKP:lm

Charlottetown, July 15th 1965.

Mr C.O.Bartlett, Manager,
The Prince Edward Island Wildlife Park,
Rustico.

Dear Charlie,

In connection with the fossilized decorations, which I have offered for sale through your gift shop, the following extracts from a letter, written by Dr.Prest, will probably be of interest....

Dept.of Mines and Technical Services,
601 Booth St., Ottawa. July 8th 1965.

' The specimen forwarded is a concretionary 'form'. It is probable that the 'form' was occasioned by replacement of a piece of plant material long since removed, judging by the hole in the specimen. Its age is, of course, that of the sediment of which it is a part, i.e. Lower Permian, and hence about 200 million years old.'

Signed, V.K.Prest, Pleistocene Section.

The specimens which I have consigned to you were all collected personally and were taken from my personal collection. So that there should be no misunderstanding about them I attach the following:

I certify that the specimen examined by Dr.Prest (referred to above) and those offered in your consignment were discovered and collected in the same immediate area and that they are, to all intents and purposes, of the same age and derivation to the best of my knowledge.

I trust that you will find them interesting and that they find favor with your customers.

Yours faithfully,

F.A.S.Jones.

CANADA

Department of Mines and Technical Surveys
Ministère des Mines et des Relevés techniques

Geological Survey of Canada
Commission géologique du Canada

File Number
No à rappeler

601 Booth Street,
Ottawa, Ontario,
July 23, 1965

Mr. Stewart Jones,
c/o 92 Queen Street,
Charlottetown,
Prince Edward Island

Dear Stewart:

Your letter caught me 'ere I depart for the balance of the summer in the 'West'. I expect I will be back to see you next summer. Your photos are indeed very interesting and though probably mere 'forms' unrelated to animal life, are enough like certain reptilian prints to warrant expert attention. I am therefore forwarding them to Dr. Langston at the Texas Memorial Museum. As he is very probably in the field we may not hear from him till the fall. I do not know of any suitable book that would help you collect but maybe in the fall I can dig out something appropriate on 'plants', and Dr. Langston may refer us to something on 'animal' tracks.

Best regards,

Sincerely,

Eric Prest

V.K. Prest,
Pleistocene Section

VKP/br

Department of Energy, Mines and Resources
Ministère de l'Énergie, des Mines et des Ressources

CANADA

Geological Survey of Canada
Commission géologique du Canada
601 Booth, Ottawa, K1A 0E8

File Number
No à rappeler

Prest.

May 15, 1973

Mr. F.A.S. Jones
North River Road
Charlottetown, P.E.I.

Dear Stewart:

My apology for the long delay in writing you but I have been very busy all winter. Only recently did I succeed in having the necessary slides made of the fossil wood specimen I borrowed from you and sent them off to the Smithsonian Institution. I find now that my friend Dr. Fran Hueber is the man with whom you had correspondence and a visit in his office. Certainly he is the expert in North America on such material. He sends you his best regards and wishes for good health. I too hope you are well and that you enjoyed your trip south as best you could under the circumstances.

Dr. Hueber reports that the wood is poorly preserved but he has been able to identify it as Tylodendron, a genus restricted to the Permian period. The Island strata around Hillsborough Bay are actually Lower Permian in age, that is, some 250 to 275 million years. The strata on Governor Island are slightly older and Upper Pennsylvanian in age. I will forward a copy of my report on Malpeque-Summerside area which you may find of general interest.

At long last, a unified map of the whole Island will be available this coming summer. It is to some extent aimed at the layman though all the scientific information on the surface deposits is included as well as some bedrock information. The map of the surface deposits (Surficial Geology) is on a scale of 1 inch to 2 miles. The reverse side of the map bears the notes on the deposits and their history, as well as Glacial Indicators Map on a scale of 1 inch to 4 miles. This latter, somewhat 'jazzed-up' map, serves to explain what has happened in terms of ice movements, sea level changes, etc. Will send you a copy as soon as it is released - around July 1st, as our contribution to the Centennial Year.

I have learned that the Island may be doing something re a Museum, perhaps with Federal help. Will you please make enquiries. Perhaps it is the Heritage House. If there is any interest in more than that, perhaps we can get the ball rolling. I have heard that the National Museum might be asked for help if some definite concept or proposal is in mind. Would like to hear from you re these matters.

Trusting this finds you well, I remain,

Yours sincerely,

V.K. Prest
Terrain Sciences Division

VKP:hd

P.S. After we cut the fossil wood for thin sections, it was obvious that it would not polish properly for a slide specimen, so abandoned this idea. Will return specimen if you want it.

Appendix 5

Cover sheet of Index of Plants contained in the University of Prince Edward Island herbarium. Contains records of total holdings as summarized in 1979.

INDEX OF PLANTS

CONTAINED IN THE HERBARIUM

OF THE

UNIVERSITY OF PRINCE EDWARD ISLAND

Prepared by:

R. Bruce MacLaren
Summer, 1979

1979 Total species - 564
sheets - 1367

Appendix 6

List of bird specimens found in freezer at the Biology Department, University of Prince Edward Island.

Bird specimens in freezer at the Biology Department, University of Prince Edward Island

1. Pied-billed Grebe (1)
2. Northern Gannet (1)
3. Double-crested Cormorant (2)
4. Great Blue Heron (1)
5. Great Egret (1)
6. Mallard (1)
7. Black Duck (2)
8. Green-winged Teal (2)
9. American Wigeon (1)
10. Bufflehead (1)
11. Oldsquaw (1)
12. White-winged Scoter (1)
13. Ruddy Duck (2)
14. Common Merganser (4)
15. Bald Eagle (1)
16. Marsh Hawk (1)
17. Ruffed Grouse (13)
18. Killdeer (1)
19. Black-bellied Plover (1)
20. Common Snipe (1)
21. Spotted Sandpiper (1)
22. Semi-palmated Sandpiper (1)
23. Hering Gull (4)
24. Ring-billed Gull (1)
25. Rock Dove (5)
26. Mourning Dove (1)
27. Snowy Owl (1)
28. Belted Kingfisher (1)
29. Common Flicker (5)
30. Black-backed three-toed Woodpecker (1)
31. Eastern Kingbird (2)
32. Alder Flycatcher (1)
33. Tree Swallow (1)
34. Bank Swallow (5)
35. Barn Swallow (4)
36. Blue Jay (1)
37. Northern Raven (2)
38. Common Crow (8)
39. Black-capped Chickadee (1)
40. Brown Creeper (1)
41. American Robin (1)
42. Swainson's Thrush (2)
43. Cedar Waxwing (3)
44. Northern Shrike (1)
45. Common Starling (4)
46. Red-eyed Vireo (1)
47. Black and White Warbler (1)
48. Northern Parula Warbler (2)
49. Yellow Warbler (6)
50. Yellow-rumped Warbler (1)
51. Ovenbird (1)
52. Northern Waterthrush (1)
53. Common Yellowthroat (2)
54. American Redstart (3)
55. House Sparrow (11)
56. Bobolink (5)
57. Red-winged Blackbird (1)
58. Common Grackle (8)
59. Evening Grosbeak (2)
60. American Goldfinch (1)
61. Savannah Sparrow (3)
62. Dark-eyed Junco (3)
63. White-throated Sparrow (1)
64. Fox Sparrow (1)
65. Lincoln's Sparrow (2)
66. Swamp Sparrow (2)
67. Song Sparrow (2)

Non-native Species:

68. Domestic Chickens
69. Guineafowl (1)
70. Indian Peafowl (1)
71. Domestic Canary (1)
72. Domestic Budgie (3)

Bird specimens contained in freezer at the Biology Department, University of Prince Edward Island Continued:

73. Domestic Ring-necked Dove (1)
74. Malaysian Zebra Dove (1)

167 specimens - not all native P.E.I. species
74 species

Compiled by Geoff Hogan
August, 1982

Appendix 7

Natural history collection, Prince Edward Island Heritage Foundation: specimens which may have originated in Prince Edward Island.

PRINCE EDWARD ISLAND HERITAGE FOUNDATION

Natural history collection — specimens which may have originated in Prince Edward Island

Accession number	Description	Location
HF.71.12.6	piece of rock, probably Indian artifact	A
HF.74.89	rock samples collected by Francis Bain	A
HF.75.8.5	stuffed bird (may be snipe) in case	GP
HF.75.9.35	piece of rock, may be stone hatchet	A
HF.75.206.1	stuffed birds in case, probably partridges	GP
HF.75.269.1	sea duck, probably Merganser, stuffed and mounted in glass fronted case	BH
HF.76.74.2E	three red squirrels, stuffed and mounted	BH
HF.76.95.11	seed exhibit (20 vials of seeds, identified)	A
HF.76.263.1	one American Eel, stuffed and mounted	BH
HF.77.99.1	black silver fox cape	IF
HF.77.146.1 A & B	two silver fox tails	IF
.2	fox stole	IF
HF.77.166.11	raccoon stole	IF
HF.77.205.105	skull, probably sea mammal	A
.250	" " " "	OC
.753	tusk, probably sea mammal	OC
HF.78.201.50	stone, probably Indian axhead	A
HF.80.152.8	raccoon and squirrel, stuffed and mounted in glass fronted case	A
HF.81.33.3	tusk, probably sea mammal	A
HF.82.23.4	stuffed mounted Herring Gull	A
.5	stuffed mounted Franklin's Gull	A
.6	three birds stuffed and mounted, probably one Lesser Yellow Legs and two Arctic or Common Terns	A
HF.82.49.1	one split silver fox skin, as stole	IF

...2

HF.82.158.1	black silver fox cape	IF
HF.82.169.1	one seagull, stuffed and mounted on driftwood	BH

The exhibits at Basin Head Fisheries Museum include whale bones, petrified clams, fern fossils, sea bottom rocks and 24 species of native shell fish.

Also displayed there are panels of sea life by Floyd Trainor, a mural of life in and around a pond by Regan Paquet and David McLellan, fish charts from Gabriel Aero Marine Instruments Ltd. and a plastic tuna tail.

Location key

A - The Artifactory
GP - Green Park Shipbuilding Museum and Yeo House
BH - Basin Head Fisheries Museum
IF - Island Furriers
OC - Orwell Corner Rural Crossroads

Appendix 8

List of algae deposited with the Department of Indian Affairs and Northern Development, National and Historic Parks Branch and the National Museum.

APPENDIX 8

List of algae deposited with the Department of Indian Affairs and Northern Development, National and Historic Parks Branch and the National Museum.

VOUCHER SPECIMEN NO.		SPECIES NAME	1 DIND	2 NM	3 LAN
CL*	PEINP*				
228	01	Nemalion helminthoides (Vell. in With.) Batt.	✓	✓	✓
154	02	Bonnemaissonia hamifera Hariot (=Trailliella)	✓	✓	✓
15N	03	Furcellaria fastigiata (L). Lamour.	✓	–	✓
5Nb	04	Gracilaria verrucosa (Huds. Papenf.)	✓	✓	✓
107	05	Ahnfeltia plicata (Huds.) Fries	✓	✓	✓
903	06	Chondrus crispus (Stackh.)	✓	–	–
904	06A	Chondrus crispus (tetrasporic)	✓	✓	✓
905	06B	Chondrus crispus (cystocarpic)	✓	✓	✓
110	06C	Chondrus crispus (dredged-20 ft.)	✓	✓	✓
	07	Rhodophysema georgii Batt. tetrasporic (slide)	✓		✓
128	08	Corallina officinalis L.	✓	✓	✓
5N	10	Melobesia sp.	✓	✓	✓
906	11	Polyides rotundus (Huds.) Grev.	✓	✓	✓
124	12A	Rhodymenia palmata (L.) Grev. (-15 to -20 ft.)	✓	✓	–
808	12C	Rhodymenia palmata (in drift)	✓	✓	–
65	13	Ceramium rubriforme Kylin	✓	✓	✓
	14	Spermathaminion turneri (slide)	✓	✓	✓
221	15A	Polysiphonia nigrescens	✓	✓	✓

APPENDIX 8 CONTINUED

219	15B	Polysiphonia nigrescens			
907	16	Rhodomela lycopodioides (L.) C.Ag. (male)			
136	17A	Rhodomela lycopodioides (-20 ft.)			
5Nc	17B	Rhodomela lycopodicides (drift)			
804	18	Bangia fuscopurpurea (Dillw.) Lyngb.			
801	19	Giffordia. sp.			
351	20	Pilayella littoralis (L.) Kjellm.			
130	21	Elachista fucicola			
62	22	Chordaria flagelliformis (Muller)			
159	23	Punctaria latifolia Grev.			
63	24	Dictyosiphon foeniculaceus (Hudson)			
14N	25	Petalonia fascia			
119	26	Desmarestia aculeata (L.) Lamour.			
155	27	Chorda filum (L.) Lamour.			
413	28	Agarum cribrosum (Mert.) Bory			
108	29	Laminaria saccharina (L.) Lamour.			
117	30	Saccorhiza dermatodea (De la Pyl.) J. Ag.			
134	31	Sphacelaria sp.			
217	32	Fucus distichus spbsp. edentatus			
115	33A	Fucus vesiculosus (L.)			
900	34	Ulothrix flacca (Dillw.)			
807	35	Monostroma grevillei (Thur.)			
153	36	Enteromorpha linza (L.) J.Ag.			
17N	37	Enteromorpha intestinalis (L.) Link			
806	38	Acrosiphonia arcta (Dillw.) J.Ag.			

APPENDIX 8 CONTINUED

218	39	Chaetomorpha linum (Miller) Kutz.			
224	40	Chaetomorpha melagonium (Web. et Mohr) Kutz			
114	41	Cladophora sericea (Huds.) Kutz.			
102a	42	Cladophora rivularis (L.) van den Hoek			
223	43A	Ulva lactuca L.			
901	43B	Ulva lactuca L.			
805	44	Urospora wormskjoldu (Mert in Hornem) Ros.			
103	46	Oscillatoria sp.			
	45	Phaeosaccion collinsii Farlow			
161	47A	Schizonema sp.			
800	47B	Schizonema			
	47C	Schizonema			
	48	Membrandodiatoma rusticum (nov. gen., nov. sp.)			
	49	Lithothamnion sps.			
	50	Ralfsia clavata (Corm.) Croun sensu Farlow on shell of Spisula Solidissima			

* CL = Chris Lobban; PEINP = Prince Edward Island National Park
DIND = Dept. Ind. North. Dev.; NM = National Museum

Appendix 9

Index of Prince Edward Island National Park Herbarium.

P.E.I. NATIONAL PARK
Herbarium Index

Shelf No.	Family	
1.	Equisetaceae	
	Lycopodiaceae	
	Ophioglossaceae	
	Osmundaceae	
	Polypodiaceae	
	Pinaceae	
	Typhaceae	
2.		Boraginaceae
	Cyperaceae	Zosteraceae
	Juncaceae	Plumbaginaceae
3.	Liliaceae	Sparganiaceae
	Iridaceae	Araceae
	Orchidaceae	Corylaceae
	Gramineae	Oleaceae
4.	Saliaceae	
	Myricaceae	
	Juglandaceae	
	Betulaceae	
	Urticaceae	
	Polygonaceae	
	Chenopodiaceae	
	Caryophyllaceae	
	Ranunculaceae	
5.	Cruciferae	
	Droseraceae	
	Saxifragaceae	
	Rosaceae	
6.	Leguminosae	
	Oxalidaceae	
	Anacardiaceae	
	Aquifoliaceae	
	Aceraceae	
	Balsaminaceae	
	Guttiferae	
	Cistaceae	
	Violaceae	
	Onagraceae	

Shelf No.	Family
7.	Araliaceae Umbelliferae Cornaceae Pyrolaceae Ericaceae Primulaceae Convolvulaceae Labiatae Schrophulariaceae Orobanchaceae Plantaginaceae Rubiaceae Caprifoliaceae
8.	Campanulaceae Compositae
9.	Compositae
10.	Lichens
11.	Mosses

Appendix 10

Sample page of a report by Phil Michael, 1972-73, entitled Mushrooms of P.E.I. National Park.

(Sample of Report by Phil Michael - Mushrooms of P.E.I. National Park, 1972-73)

NAME: Clitocybe

Gilled Mushroom

LOCATION: Bubbling Spring Trail

DATE: July 15, 1972

HABITAT: On ground under white spruce, growing singly

SIZE: Cap 4¼" diameter

Total height 4½"

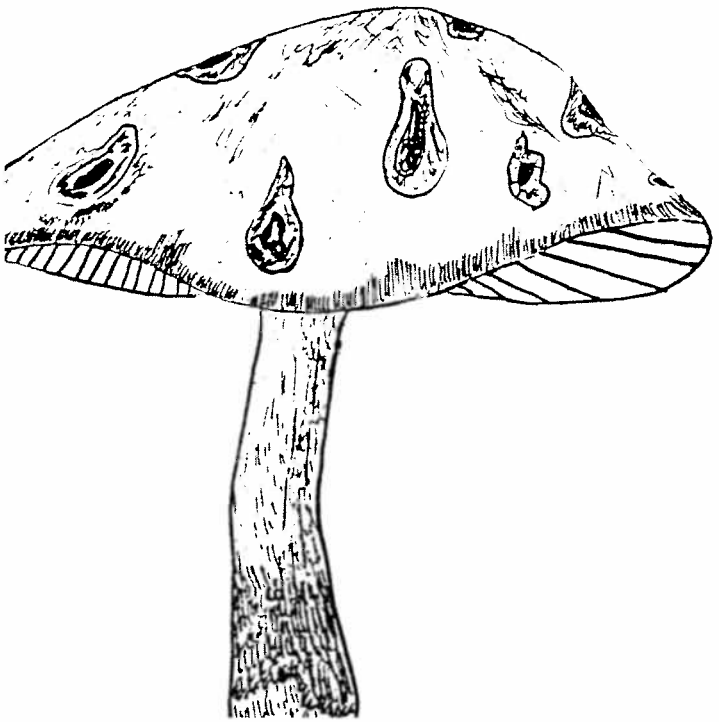
CAP: Soft flesh feeling to the touch, light brown with indented spots of darker brown, slightly convex

GILLS: White, waxy feeling to the touch, single not branched, close, attached to cap

STRIPE: Tough, red; filamentous, spongy interior, tapered towards the apex

SPORES: White, flesh continuous with the stem

NOT FATALLY POISONOUS



Appendix 11

Index to a collection of marine organisms, Part I - 1971.

Phylum	Class	Common Names	Scientific Name	Specimen Number	References Page No.
Arthropoda					
	Crustaces (Gill breathing Arthropods) (Order Decapoda)	Sand shrimp	Crago Septemspinosus	9	6
		American Lobster	Homarus Americanus	13	9
		Common Prawn	Palaemonetes Vulgaris	17	14
		Common Rock Crab (in soft shelled condition)	Cancer Irroratus	18	14
				19	15
		Hermit Crab	Pagurus Bernhardus	20	15
		Hermit Carb	P. Longicardus	21	15
		Mud Crab	Neopanopeus Texana Saxi	24	18
	(Order Amphipoda) (Sand hoppers, beach fleas)	Gammarus (Family Gammaridae)		38	30
	(Order Thoracica)	Common Rock Barnacle	Balanus Balanoides	44	34
	(Ordre Isopoda)	Isopods		45	35
Echinodermata					
	Asteroidea (Sea Stars)	Northern Starfish or Purple star	Asterias Vulgaris	22	16
	Echinoidea	Green Sea Urchin	Strongylocentrotus Draeabachiensis	23	17
		Sand Dollar	Echinorachnius Parma	25	18
Chordata					
	Pisces(Bony Fishes)	Atlantic Tomcod	Microgadus Tomcod	1+41	2+3
		Cunner	Tautogolabrus Adspersus	2-4	2
		Northern Pipefish	Syngnathus Fuscus	5	3
		Caught in Horse Mussel		29(6)	21
		Atlantic Silverside	Menidia Menioia	6	4
		Four-spined Stickleback	Apeltes Quadracus	7	5
		Three-spined Stickleback	Gasterosteus Aculeatus	8	5

INDEX TO
A COLLECTION OF MARINE ORGANISMS
PART 1 - 1971

Phylum	Class	Common Names	Scientific Name	Specimen Number	References Page No.
		Winter Flounder	Pseudopleuronectes americanus	14	11
		American Sandlance	Ammodytes americanus	15	12
		Mummichog	Fundulus Heteroclitus	16	13
		Rock Gunnel	Pholis Gunnellus	39	31
		Grubby or Little Sculpin	Myoxocephalus aenus	40	31
	Selach II (Cartilaginous Fishes)				
		Skate Egg Case or Mermaid's Purse		42	33
		(Skates - Family Rajidae)			

Appendix 12

List of Avifaunal Collection of the Prince Edward Island National Park, January, 1980.

AVIFAUNAL COLLECTION: PRINCE EDWARD ISLAND NATIONAL PARK

MIGRATORY SPECIES	MOUNTED	(23)
1. Canada Goose	(1)	
2. Great Blue Heron	(3)	
3. Gannet	(1)	
4. Eastern Willet	(1)	
5. Catbird	(1)	
6. Common Grackle	(1)	
7. Greater Yellowlegs	(1)	
8. Snow Bunting	(1)	
9. Hooded Merganser	(1)	
10. Common Flicker	(2)	
11. Rose-breasted Grosbeak	(1)	
12. Snowy Owl	(1)	
13. Sharp-shinned Hawk	(1)	
14. Black Duck	(1)	
15. Snow-Whet Owl	(1)	
16. Green-winged Teal	(1)	
17. Eastern Goshawk	(1)	
18. Common Loon	(1)	
19. Marsh Hawk	(1)	
20. Pied-Billed Grebe	(1)	

MIGRATORY SPECIES	STUDY SKINS	(18)
1. Eastern Cowbird	(4)	
2. Yellow-rumped Warbler	(1)	
3. Eastern Robin	(2)	
4. Wood Duck	(1)	
5. Common Grackle	(2)	
6. Yellow-shafted Flicker	(1)	
7. Common Tern	(1)	
8. Barn Swallow	(1)	
9. Eastern Red Crossbill	(1)	
10. Evening Grosbeak	(1)	
11. Vireo	(1)	
12. Yellow-throated Warbler	(1)	
13. Golden-crowned Kinglet	(1)	

RESIDENT SPECIES	MOUNTED	(6)
1. Northern Raven	(1)	
2. Herring Gull	(2)	
3. Ruffed Grouse	(2)	
4. Great Black-backed Gull	(1)	

RESIDENT SPECIES	STUDY SKINS	(4)
1. Rock Dove (Domestic Pigeon)	(1)	
2. Dovekie	(1)	
3. Pileated Woodpecker	(1)	
4. Slate-colored Junco	(1)	

Appendix 13

List of Mammal Collections in the Prince Edward Island National Park - January 1980.

MAMMALIAN COLLECTION: PRINCE EDWARD ISLAND NATIONAL PARK

LOCAL SPECIES	MOUNTED	(18)
1. Snowshoe Hare (Melanistic)	(1)	
2. Flying Squirrel	(1)	
3. Mink	(2)	
4. Muskrat	(2)	
5. Raccoon	(3)	
6. Meadow Vole	(1)	
7. Red Squirrel	(3)	
8. Red Fox (Immature)	(1)	
9. Snowshoe Hare (Winter Phase)	(1)	
10. Eastern Chipmunk	(1)	
11. Little Brown Bat (migratory)	(1)	
12. Weasel	(1)	

LOCAL SPECIES	STUDY SKINS	(12)
1. Red Squirrel	(1)	
2. Snowshoe Hare (Summer Phase)	(1)	
3. Masked Shrew	(1)	
4. Mole	(1)	
5. Deer Mouse	(2)	
6. Meadow Vole	(4)	
7. Jumping Mouse	(1)	
8. Red Backed Vole	(1)	

January 15, 1980

Appendix 14

Prince Edward Island National Park Inventory of preserved birds and mammals - September, 1982

PRINCE EDWARD ISLAND NATIONAL PARK

INVENTORY OF

PRESERVED BIRDS AND ANIMALS

SEPTEMBER 21, 1982

BIRDS/DUCKS

Location	Speciman	Year
Paul's Office	Great Blue Heron	1978
	Canada Goose	1978
	Green Wing Teal	1978 (July)
	Willet	1978 (June)
	Semi-Palmated Plover	
	Black Duck	
Phil's Office	Raven	
	Snowy Owl	
	Bobolink	
	Duck (?) Gadwall	
	Red-Breasted Grosbeak	1978
	Red-Breasted Grosbeak	1980
	Immature Hooded Merganser	1978
	Sharp Shinned Hawk	1978
	Cat Bird	1978
	Snow Bunting	1978
	Greater Yellow Legs	1972
	Sharp Shinned Hawk	
Interpretive Building	Great Blue Heron	1978
	Flicker	1978
	Immature Herring Gull	1978

...../2

INVENTORY OF PRESERVED BIRDS/ANIMALS (Continued)

BIRDS/DUCKS:

Location	Speciman	Year
Interpretive Building (Cont'd)	Grackle	1966
	Pigeon . Study Skin	
	Ruffed Grouse	
	Wood Duck	1966
	Robin	1976
	Cowbird	1976
	Cowbird	
	Yellow Warbler	1966
	Song Sparrow	1966
	Loon	
	Duck & Bird Wings	
	2 Bird Nests	
Interp. Bldg. Storage Box	Eastern Cowbird	1976
	Eastern Cowbird	1976
	Red Crossbill	1976
	Evening Grosbeak	
	Myrtle Warbler	1976
	Eastern Cowbird	
	Red-Eyed Vireo	1975
	Yellow Throat Warbler	1976
	Dark-Eyed Junco	1975
	Barn Swallow	1975
	Pied Billed Grebe	1976
	Purple Grackle	1976

...../3

INVENTORY OF PRESERVED BIRDS/ANIMALS (Continued)

BIRDS/DUCKS:

Location	Speciman	Year
Interp. Bldg. Storage Box	Robin	1966
	Flicker	1975
	Crow	
	Pileated Woodpecker	
	Golden Crowned Kinglet	
	Common Tern	
Roy's Office	Goshawk	
	Starling	
Warden's Office	Herring Gull	
	Gannet	1973
Gerry's Office	Short Eared Owl	
Library		
	Dovekie	
Front Office	Great Black-Backed Gull	
	Great Blue Heron	

...../4
(ANIMALS)

INVENTORY OF PRESERVED BIRDS/ANIMALS (Continued)

ANIMALS

Location	Speciman	Year
Paul's Office	2 Minks	
	Muskrat	1978
	Bird Nests	
Phil's Office	Red Fox	
	Melanistic Hare	1978
	Seal Pup	
	Chipmunk	
	Flying Squirrel	
	2 Red Squirrels	1978
Interpretive Building Storage Box	Short-Tailed Shrew	1976
	Pygmy Shrew	
	Deer Mouse	1976
	Meadow-Jumping Mouse	1976
	House Mouse	1976
	Short-Tailed Shrew	1976
	Red Backed Mouse	1976
	Meadow Vole	
	Snowshoe Hare	
	Red Squirrel	
	Baby Hare	
	Flying Squirrel	
	White Weasel	
	Brown Weasel	
	Meadow Vole	

...../5

INVENTORY OF PRESERVED BIRDS/ANIMALS (Continued)

ANIMALS:

Location	Speciman	Year
Interp. Bldg. Storage Box	Microtus Pennsylvanicus	
	Microtus Pennsylvanicus Cocoon on Branch	
	Skulls	
Roy's Office	Red Fox Pup	
Library	Microtus Fur	
	Bee Hive	
Front Office	Raccoon	
	Chipmunk	
John's Office	Snowshoe Hare (Glass Encased)	
	Muskrat "	
	Mink "	
	Weasel "	
	Raccoon "	
	Red Squirrel	1977

Appendix 15

Contents of the Provincial Herbarium Collection of the Department of Agriculture and Forestry.

PROVINCIAL HERBARIUM COLLECTION OF DEPARTMENT OF

AGRICULTURE AND FORESTRY

Contents of Herbarium

June 8/76

B.C.

1. A - B
10. Amaranthaceae
11. Anacardiaceae
12. Araliaceae
13. Apocynaceae
14. Asclepiadaceae
15. Boraginaceae

7. M - N
Malvaceae

79. MYRICACEAE

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2. C - D
20. Cannabinaceae
21. Caryophyllaceae
22. Chenopodiaceae
23. Cistaceae
24. Compositae
25. Cruciferae
26. Cucurbitaceae
27. Cyperaceae
28. Campanulaceae

8. O - P
80. Onagraceae
81. Oxalidaceae
82. Plantaginaceae
83. Polygonaceae
84. Polypodiaceae
85. Primulaceae
86. Papaveraceae
87. Orobanchaceae
88. Osmundaceae

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3. E - F
30. Equisetaceae
31. Ericaceae
32. Euphorbiaceae
33. Fumariaceae

9. Q - R
90. Ranunculaceae
91. Rosaceae
92. Rubiaceae

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4. G - H
40. Geraniaceae
41. Gramineae

10. S - T
101. Scrophulariaceae
102. Solanaceae

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5. I - J
50. Iridaceae
51. Juncaceae

11. U - V
110. Umbelliferae
111. Violaceae

---

6. K - L
60. Labiatae
61. Leguminosae
62. Lythraceae

DEPT. OF AGRICULTURE AND FORESTRY

Charlottetown, P.E.I.

Folder No.	Family	Genus	Species	Common Name	No. of Specimens
10 - 1	Amaranthaceae	Amaranthus			1
11 - 1	Anacardiaceae	Rhus	radicans	Poison ivy	3
12 - 1	Araceae	Aralia	nudicaulis	Wild Sarsaparilla	1
		Aralia			1
		Aralia			1
13 - 1	Apocynaceae	Apocynum	androsaemifolium	Spreading dogbane	2
14 - 1	Asclepiadaceae	Asclepias	syriaca	Common milkweed	2
15 - 1	Boraginaceae	Echium	vulgare	Vipers bugloss	1
	Boraginaceae	Myosotis	laxa	Small forget-me-not	1
20 - 1	Cannabinaceae	Cannabis	sativa	Marijuana	1
20 - 1	Caryophllaceae	Lychnis	alba	White cockle	1
	Caryophllaceae	Saponaria	vaccaria	Cowcockle	
	Caryophllaceae	Scleranthus	annus	Knawel	1
	Caryophllaceae	Silene	cucubalus	Bladder campion	3
	Caryophllaceae	Spergula	arvensis	Corn spurry	1
	Caryophllaceae	Spergularia	ruba	sand spurrey	1
	Caryophllaceae	Stellaria	graminea	Stitchwort	1
	Caryophllaceae	Silene	noctiflora		
22 - 1	Chenopodiaceae	Atriplex	patula	Orach	1
	Chenopodiaceae	Chenopodium	album	Lambs' quarters	1
	Chenopodiaceae	Salsola	kali	Common saltwort	1
	Chenopodiaceae	Salsola	kali var tenuifolia	Russian thistle	1
23 - 1	Cistaceae	Lechea	intermedia	Pinweed	3
24 - 1	Compositae	Ambrosia	artemisiifolia	common ragweed	1
	Compositae	Achillea	lanulosa	Yarrow	1
	Compositae	Ambrosia	trifida	Great ragweed	2
24 - 2	Compositae	Anaphalis	margaritacea	Pearly everlasting	1
	Compositae	Aster	simplex		1
		Bidens	frondosa	Common beggar-ticks	2
24-3		Chrysanthemum	leucanthemum	Ox-eye daisy	1
		Cirsium	arvense	Canada thistle	1
		Erigeron	ramosus	fleabane	1
		Erigeron	strigosus	Rough Fleabane	2
		Eupatorium	maculatum	Joe-Pye-weed	1
		Gnaphalium	uliginosum	Low cudweed	1
		Gnaphalium		Cudweed	1 (seedling)
		Galinsoga	ciliata	Quickweed	1
24-4		Hieracium	aurantiacum	Devil's Paintbrush	1
		Lactuca	scariola	Prickly lettuce	1
		Leontodon	autumnalis	Fall dandelion	1

Folder No.	Family	Genus	Species	Common Name	No. of Specimens
24 - 4		Matricaria	matricarioides	Pineappleweed	1
		Matricaria	maritima	Stinking mayweed	1
24 - 5		Senecio	jacobaea	Ragwort	1
		Senecio	viscosus	Clammy groundsel	1
		Senecio	vulgaris ?	Common groundsel	2
24 - 6	Compositae	Solidago	vicolor	White goldenrod	1
		Solidago	canadensis	Canada goldenrod	1
		Solidago	graminifolia	Narrow-leaved goldenrod	1
		Solidago	macrophylla		1
		Sonchus	arvensis var. glabricens	Sow thistle	1
		Sonchus	oleraceus	Annual sow thistle	1
		Tanacetum	vulgare	Tansy	1
		Taraxacum	officinale	Dandelion	1
		Tussilago	farfara	Coltsfoot	3
25 - 1	Cruciferae	Barbarea	vulgare	Yellow rocket	1
		Brassica	campestris	Wild turnip	1
25 - 2		Capsella	bursa-pastoris	Shepherd's purse	1
		Conringia	orientalis	Hare's-ear-mustard	1
		Lepidium	ruderale	Narrow-leaved peppergrass	1
		Neslia	paniculata	Ball mustard	1
25 - 3		Raphanus	raphanistrum	Wild radish	1
		Sisymbrium	altissimum	Tumble mustard	1
		Sisymbrium	officinale va leiocarpum	Hedge mustard	1
		Thlaspi	arvense	Penny cress	1
	Cruciferag (con'd)				
26 - 1	Curcurbitaceae	Echinocystis	lobata	Wild cucumber	1
27 - 1	Cyperaceae	Carex	cumulata ?		1
30 - 1	Equisetaceae	Equisetum	arvense	Horsetail	1
31 - 1	Ericaceae	Kalmia	angustifolia	Lambkill	1
		Vaccinium	macrocarpon	Large Cranberry	1
32 - 1	Euphorbiaceae	Euphorbia	cyparissias	Cypress spurge	2
		Euphorbia	esula	Leafy spurge	1
		Euphorbia	helioscopia	Sun-spurge	1
33 - 1	Fumariaceae	Dicentra	cucullaria	Dutchman's breeches	1
		Fumaria	officinalis	Common fumitory	1
		Fumaria	orientalis		1
40 - 1	Geraniaceae	Erodium	cicutarium	Stork's bill	1
		Geranium	pratense	Meadow geranium	1
41 - 1	Gramineae	Digitaria	ischaemum	crab grass	1
		Echinochloa	crusgalli	barnyard grass	1
		Hordeum	jubatum	Foxtail barley	1
		Poa	annua	Annual Bluegrass	1
		Setaria	glauca	Yellow foxtail	1
		Agrostis	scabra		

Folder No.	Family	Genus	Species	Common Name	No. of Specimens
42 - 1	Hypericaceae	Hypericum	canadense		1
		Hypericum	perforatum	St. John's wort	1
50 - 1	Iridaceae	Sisyrinchium	angustfolium	Blue-eyed grass	1
		Sisyrinchium	montatum	Blue-eyed grass	1
51 - 1	Juncaceae	Juncus	balticus ?		1
		Juncus	bufonius	Toad rush	1
		Juncus	tenuis		1
60 - 1	Labiateae	Galeopsis	tetrahit	Hemp nettle	2
		Lycopus	americanus	Water-horehound	2
		Lycopus	uniflorus	bugle weed	1
60 - 2		Mentha	arvensis	Field mint	1
		Prunella	vulgaris	Heal - all	1
		Prunella	vulgaris-var lanceolata		1
	Labiatae	Stachys	palustris	Hedge-nettle	1
		Thymus	serpyllum	Creeping wild thyne	1
61 - 1	Leguminosae	Lathyrus	japonicusvar. lanceolata	Beach pea	1
		Lotus	corniculatus	Bird's foot trefoil	1
		Medicago	lupulina	Black medick	1
		Melilotus	alba	White sweet clover	1
		Melilotus	officinalis	Yellow sweet clover	1
61 - 2	Leguminosae	Trifolium	argrarium	Hop clover	1
		Trifolium	arvense	Rabbit-foot clover	1
		Trifolium	pratense	Red clover	1
		Trifolium	repens	White clover	1
		Vicia	angustifolia	Wild vetch	3
		Vicia	cracca	Tufted vetch	1
62 - 1	Lythraceae	Lythrum	salicaria	Purple loosestrife	1
70 - 1	Malvaceae	Malva	Neglecta	Dwarf mallow	1
80 - 1	Onagraceae	Epilobium	palustre		3
80 - 2		Oenothera	bennis	Evening primrose	1
					1
81 - 2	Oxalidaceae	Oxalis	dillenii orstricta ?	Sun drops	1
82 - 1	Plantagenaceae	Plantago	lanceolata	Ribgrass	1
		Plantago	major	Broad-leaved plantain	1
83 - 1	Polygonaceae	Polygonum	aviculare	Prostrate knotweed	1
		Polygonum	convolvulis	Black bindweed	2
		Polygonum	cuspidatum	Jananese knotweed	1
		Polygonum	hydropiper	Water-pepper	1
83 - 2		Polygonum	lapathifolium		1
		Polygonum	persicaria	Lady's thumb	1
		Polygonum	sagittatum	Tear-thumb	1
83 - 3	Polygonaceae	Rumex	obtusifolius	Blunt-leaved dock	1
84 - 1	Polypodiaceae	Dennstaedtia	punctilobula	Hay-scented fern	2
84 - 2	Polypodiaceae	A number of unidentified specimens			

Folder No.	Family	Genus	Species	Common Name	No. of Specimens
85 - 1	Primulaceae	Glaux	maritima	Milkwort	1
		Lysimachia	punctata	Fringed loosestrife	1
90 - 1	Ranunculaceae	Ranunculus	gmelini		1
		Thalictrum	polygamum	Meadow rue	1
91 - 1	Rosaceae	Potentilla	norvegica	Norway cinquefoil	2
		Potentilla	simplex	Cinquefoil	1
		Geum	aleppicum		1
92 - 1	Rubiaceae	Galium	mollugo	Cleavers	1
		Galium	palustre	Marsh bedstraw	1
		Galium	triflorum	Sweet-scented bedstraw	1
100 - 1	Scrophulariaceae	Linaria	vulgaris	Toadflax	1
		Odontites	serotina	Red bartsia	2
		Rhinanthus	crista-galli	Yellow rattle	1
		Scophularia	lanceolata	Figwort	2
		Verbascum	thaspus	Common mullein	1
100 - 2	Scrophulariaceae	Veronica	persica		2
		Veronica	serpyllifolia	Thyme-leaved speedwell	1
101 - 1	Solanaceae	Nicrandra	physalodes	Apple of Peru	1
		Solanum	dulcamara	Bittersweet	1
		Solanum	nigrum	Black nightshades	2
110 - 1	Umbelliferae	Angelica	atropurpurea	Angelica	1
		Carum	carvi	Caraway	1
		Daucus	carota	Wild carlot	2
		Pastinaca	sativa	Wild parsnip	1
111 - 1	Violaceae	Viola	arvensis	Field pansy	2

TOTALS IN COLLECTION
SPECIES - 149
SHEETS - 180

Appendix 16

Conte[illegible] of insect collection held by Provincial Department of Agriculture and Forestry at Hurry Road, Charlottetown, Prince Edward Island.

CONTENTS OF INSECT COLLECTION

Held by Department of Agriculture and Forestry
Hurry Road, Charlottetown, P.E.I.

Order		Family	Genus	Species	Common Name
Lepidoptera					
1 - 1		Geometridae	Operophtera	brumata	Winter moth
1 - 2			Paleacrita	vernata	Spring cankerworm
1 - 3					
1 - 4		Aesperiidae	Thymelicus	lineola	European skipper
1 - 5		Lyantriidae	Stilpnotia	salicis	Satin moth
1 - 6	(a)	Noctuidae	Leurania	unipuncta	Armyworm
	(b)		Pseudaletia	unipuncta	Armyworm
1 - 7		Notodonitidae	Schizura	concinna	Red-humped caterpillar
1 - 8		Olethreutidae	Rhyacionia	buolinana	European pine shoot moth
1 - 9		Pyralididae	Crambus	luteolellus	Sod webworm
1 - 10		Tortricidae	Choristoneura	famiferana	Spruce budworm
1 - 11		Lasiocampidae	Malacosoma	disstria	Forest tent caterpillar
1 - 12		Arctiidae	Estigmene	acrea	Salt marsh caterpillar
Coleoptera					
2 - 1		Cerambycidae	Monochamus	sp.	Sawyer beetle
2 - 2			Callidium	violaceum	---
2 - 3		Dermestidae	Dermestes	lardarius	Larder beetle
2 - 4		Lyctidae			Powderpost beetles
2 - 5		Scarabidae	Phyllophaga	rugosa	White grubs
2 - 6		Ostomidae	Tenebroides	mauritanicus	Cadelle
2 - 7		Ptinidae	Ptinus	fur	White marked spider beetle
2 - 8		Tenebrionidae	Tenebrio	molitor	Yellow mealworm
2 - 9			Tenebrio	obscurus	Dark mealworm
2 - 10			Tenebrio	sp.	
2 - 11		Tenthredinidae	Nematus	ventralis	Willow sawfly
2 - 12			Pristiphora	geniculata	Mountain ash sawfly
2 - 13		Scolytidae	Polygraphus	rufipennis	Four-eyed (spruce bark beetle)
2 - 14		Curculionidae	Philopedon	blagiatus	- - -
2 - 15		Coccinellidae			
2 - 16		Cerambycidae	2 unidentified	specimens	Wood borers
Acmiptera					
3 - 1		Aphididae	Myzus	persicae	Green peach aphid

Order	Family	Genus	Species	Common Name
Acmiptera				
3 - 1	Aphididae	Myzus	persicae	Green peach aphid
3 - 2		Macrosiphum	euphorbiae	Potato aphid
3 - 3	Lygaeidae	Blissus	leucopterus	Chinch bugs
3 - 4				Buckthorn aphid
3 - 5	Cimicidae	Cimex	lectularius	Bed bug
Homoptera				
Orthoptera				
5 - 1	Blattidae	Blattella	germanica	German cockroach
Diptera				
6 - 1	Oestridae	Hypoderma	sp.	Calte grub
6 - 2	Agromyzidae	Fenusa	pusilla	Birch leaf miner

MISCELLANEOUS

Phyhum	Class	Order	Family	Genus	Species	Common Name
Arthropoda	Diplopoda	10 - 1				Millipede
		10 - 2				False scorpion
Hymenoptera						
7 - 1	Xylocopidae			Xylocopa	sp.	Carpenter Bees
7 - 2	Formicidae					
Corrodentia						
8 - 1	Atropidae					Book lice
Dermaptera						
	Earwig					

Hurry Road
Totals 38 species
Specimens - Dry - 227
Wet - 48

In Weed & Pest Control Office
At Research Station
Specimens - Dry - 172

Appendix 17

List of bird and mammal specimens owned by the Fish and Wildlife Division, Department of Community Affairs, Charlottetown.

PRINCE EDWARD ISLAND

DEPARTMENT of COMMUNITY AFFAIRS

P.O. Box 2000 3 Queen St.
Charlottetown C1A 7N8

M E M O R A N D U M

TO: Ms. Cathy Martin

FROM: Nelson G. Hurry

DATE: September 7, 1982

SUBJECT: Mounted Specimens

The following is a list of specimens owned by this Division and retained in our office at 3 Queen St., Charlottetown.

Bald Eagle (Immature)
Old Squaw Duck (Male)
Speckled Trout
Canada Goose
Beaver (Baby)
Eider Duck (Male)
Skunk
Long-eared Owl
Ring-neck Pheasant (Male & Female)
Osprey (Immature)
Snowy Owl
Snowshoe Hare (Black)
Korean Pheasant (Male)
Great Horned Owl
Japanese Green Pheasant
Little Brown Bat
Brant

NELSON G. HURRY
CHIEF CONSERVATION OFFICER
FISH & WILDLIFE DIVISION

NGH/bg

Appendix 18

Inventory of natural history specimens owned by the Provincial Parks Division, Department of Highways and Public Works, Charlottetown, Prince Edward Island.

Natural history specimens owned by Provincial Parks Division, Department of Highways and Public Works, Charlottetown, Prince Edward Island.

Mammals (Mounts and Skins)

Red Fox (2)
Silver Fox (1)
Snowshoe Hare (2)
Melanistic Hare (1)
Chipmunk (1)
Red Squirrel (2)
Flying Squirrel (1)
Striped Skunk (1)
Mink (2)
Raccoon (1)
Beaver (1)
Muskrat
Jumping Mouse (4)
Vales (3)

Birds (Mounts)

Loon
Bittern
White-winged scoter
Goshawk
Sharp-shinned Hawk
Snowy Owl
Northern Shrike

Butterflies (Mounts)

Bumble Bee
Grasshopper
June Bug
Polyphemus Moth
Tiger Moth
Dragon Fly
Cabbage Butterfly
Ultronia Underwing
Sleeping Underwing
Galium Sphinx
Yellow Headed Cutworm
Army Worm
Metaxaglaea Inulta
Engargia
Eurois Occulta
Euphyia Uangulata
Sabulaodes
Amphipoes Americana
Agrotis Venerabilis
Papaimera Marginidens
Peltia Herilis
Agoperina Dubitans
Hydroecia Micacea
Phlogophora Periculosa
Amphipura Pyramidoides
Nephlodes Minians
Monarch Butterfly
Silvery Blue Butterfly

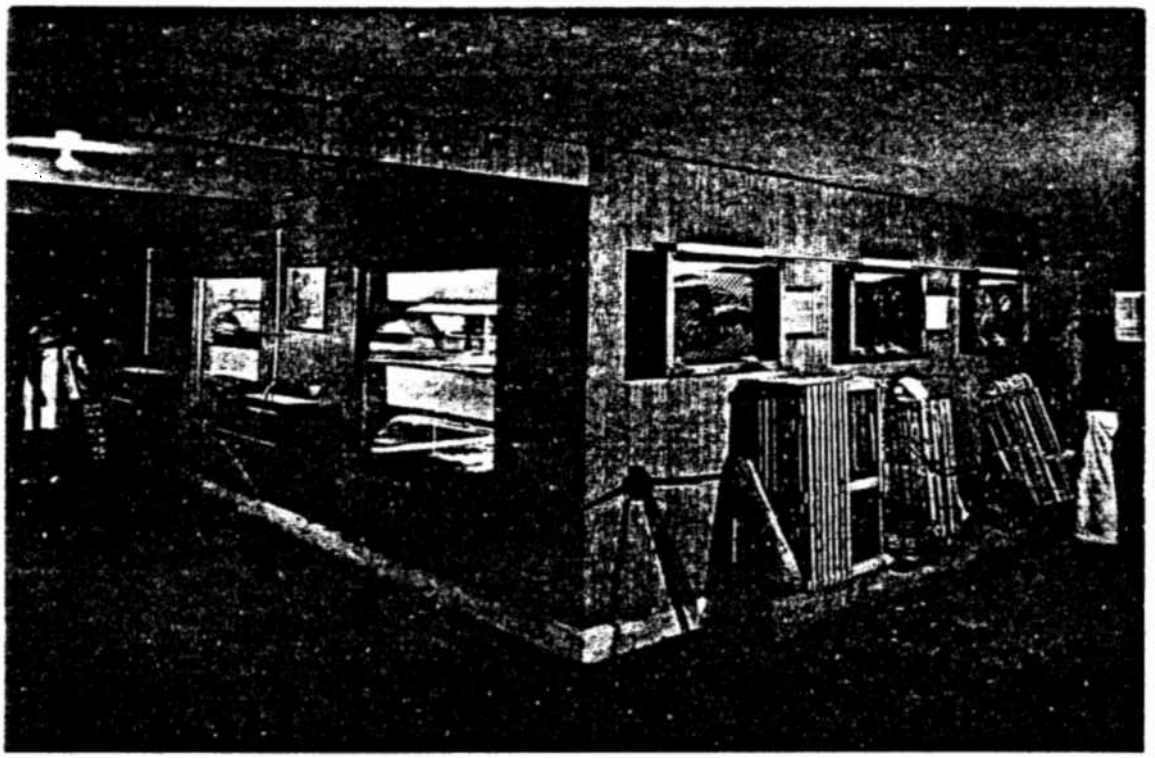
Appendix 19

Postcard depicting contents of the P.E.I. Marine Aquarium and Manor of Birds, Stanley Bridge, Prince Edward Island.


PEI Marine Aquarium
WORLD OF BUTTERFLIES

Appendix 20

Postcard of Lobster Culture Display, New Glasgow, Prince Edward Island.



Lobster culture display and Pound, New Glasgow, P. E. I., Canada Photo: W. Schumer

Appendix 21

Abstract of the report written on the collecting and survey activities of the Northumberland Strait Project, 1975.

ABSTRACT

Caddy, J. F., T. Amaratunga, M. J. Dadswell, T. Edelstein, L. E. Linkletter, B. R. McMullin, A. B. Stasko, and H. W. van de Poll. 1977. 1975 Northumberland Strait Project, Part I: Benthic fauna, flora, demersal fish, and sedimentary data. Fish. Mar. Serv. MS Rep. 1431, 46 p.

The purpose of the 1975 Northumberland Strait Project was to provide a baseline description of the physical and biological environment of the Strait in relation to the commercial shellfish resources. The resulting physical and biological data are presented in this, the first of two data-repository reports.

In the 8 1/2-wk survey, 96 stations were sampled for fauna and flora with a van Veen grab and a beam trawl or scallop dredge. Species lists show distribution and empirical estimates of abundance of polychaetes, amphipods and the other invertebrate taxa, demersal fish, and algae. The depth and bottom temperature recordings describe the physical conditions during the survey. Depth and bottom temperature were criteria used to summarize the biomass listings of the major taxonomic groups. A description of sediments and their distribution was made from samples obtained with a van Veen grab, piston cores (Alpine corer), and dredges. The core samples were analyzed for heavy metal content.

Key words: Northumberland Strait, baseline survey, shellfish, benthos, demersal fish, sediments, fauna, substrate, lobsters

RÉSUMÉ

Caddy, J. F., T. Amaratunga, M. J. Dadswell, T. Edelstein, L. E. Linkletter, B. R. McMullin, A. B. Stasko, and H. W. van de Poll. 1977. 1975 Northumberland Strait Project, Part I: Benthic fauna, flora, demersal fish, and sedimentary data. Fish. Mar. Serv. MS Rep. 1431, 46 p.

L'expérience menée dans le détroit de Northumberland, en 1975, avait pour objet de ecueillir des données de base sur le milieu physique et biologique, qui seraient utiles pour la êche commerciale des mollusques et des crustacés. Le présent rapport, qui sera suivi d'un deuxième, n présente les résultats.

Au cours des huit semaines et demie qu'a duré l'expérience, des échantillons de la faune et e la flore ont été prélevés à 96 endroits, à l'aide d'une benne van Veen, d'un chalut à perche ou 'une drague. La distribution et l'estimation empirique des effectifs de polychètes, d'amphipodes, 'autres taxa d'invertébrés, de poissons démersaux et d'algues sont indiquées dans les listes des spèces recensées. Les observations de la profondeur et de la température du fond servent à décrire es conditions physiques qui existaient durant l'étude. La profondeur et la température du fond ont ervi à résumer les énumérations des effectifs (biomasse) des principaux groupes taxonomiques. La ature et la distribution des sédiments ont été décrites à la suite de l'examen des échantillons rélevés au moyen d'une benne van Veen, de carottiers à piston Alpine et de dragues. Les métaux ourds dans les carottes ont été dosés.

Appendix 22

Index of Prince Edward Island Natural History specimens contained in the museum of the Identification Centre, Fisheries and Oceans Biological Station, St. Andrews, New Brunswick.

Compiled by - Leslie Linkletter, Curator
October 1982

Index of Prince Edward Island natural history specimens contained in the museum of the Identification Centre at the Biological Station, St. Andrews, New Brunswick. Compiled October 1982.

PRINCE EDWARD ISLAND — CARD I

Porifera		Cnidaria		Cnidaria
Isodictya palmata	440	Gersemia rubifermis	435	
Pellina sitiens (Eumastia)	1923			
Polymastia mammitaris	1921			
Polymastic rebusta	441			
Suberites ficcis	44.3			
Trichostemma hemisphericum	1922			

PRINCE EDWARD ISLAND — CARD II

Platyhelminthes	Nemertea	Aschelminthes (Nemotoda)
		Hysterothylocium sp. 2335

PRINCE EDWARD ISLAND — CARD III

Entoprocta	Bryozoa	Bryozoa
Tardigrada		
Chaetognatha, brachiopoda		
Hemithiris psittacec 482		

Index of Prince Edward Island natural history specimens contained in the museum of the Identification Centre at the Biological Station, St. Andrews, New Brunswick. Compiled October 1982.

Card IV

Mollusca		Mollusca		Mollusca	
Lacuse vincta	125	Crepidule fornicata	159	Sollarielle varicosa	1222
Littorina littorea	131	Crepidule plane	195	Ptychatraitus ligatus	1224
Lunatia triseriata	123	Punctunelle noachine	196	Oeropota bicarinata	927
Neptunce deccemostate	141	Fessame obtuse	1924	Propebela concinnule	1225
Crassostrea virginice	205	Ilyanesse obsoleta	185	Oenopota clegans	484
Tonicella rubra	135	Nassarius tmuittatus	160	Oenopota cleccussate	1893
Lepidopleurus concellatus	171	Morgantes green londicus	126	Oenopota larpolone	195
Acmoce testudinalis	127	Natica cleusa	194	Oeropota incisula	189
Apporrhois occidentalis	192	Lunatia heros	159	Oeropotapyramidalis	1793
Buccinum eletius	177	Lunatic immoculatus	191	Oeropota truuicula	187
Buccinum totteni	505	Physagynna lidlrthiena	1666	Prepebela cencellata	1841
Buccinum undatum	155	Gyrauluis parvus	1670	Propebela turriccula	1759
Colus pygmaeus	183	Helisome trivolvis	1669	Propebela gouldii	1872
Colus stimpsoni	182	Alvenia castanec	676	Tachyrhynchus erose	198
Admete couthougi	1228	Cingrla aculeus	152	Acteocina ecnaliculate	487
Bittium alternatum	677	Trichotropis barcalis	179	Coryphella verrucose	1125
Midrella lunatie	144	Margargamtes costalis	186	Eubranchus tricolows	1126
Facelina hestoniensis	1127	Hiatella aratica	219	Portlandis iris	1898
Philine lima	1223	Mysella moelleri	1907	Yoldie limatula	502
Philine quodrata	1772	Mysella planulate	1545	Yoldie sepotille	215
Adostomia bisuturelis	167	Lyonsia arenesa	485	Nucula delphinodonte	1213
Adostomia semioude	1874	Spisula polynyma	462	Neccla tenuis	223
Turbanille creclata	1429	Spisule solidissima	170	Pondora gouldiona	137
Turbonilla interrupta	1896	Mesodesma arctatum	206	Pondora incrnata	812
Retusa ebtusa	1403	Myaarenaria	142	Chlemys islandice	200
Anomia aculeata	149	Crenelle decussate	1899	Placeopecten magellanicus	158
Arctica islandica	169	Crencelle faba	1764	Periploma fragile	250
Asterta bareolis	1907	Crenella glandula	256	Petricola pholodiformis	226
Astarte crenate	211	Geukensia demissus	204	Cumingie tellinoides	541
Astarte montague	1908	Modiolus modiolus	133	Succinca	1672
Astarte undata	217	Musculus corrugetus	1783	Mocoma calcame	216
Cerustoderma pinnulatum	212	Musculus discors	218	Telline agilis	213
Clinecardium ciliatum	202	Musculus niger	254	Thyasira gouldii	251
Serripes greentordius	220	Mytilus edulis	154	Gemme gomme	221
A'tar merrhuends	207				

Annelida

Nereis diversicolor	926
Glycere capitata	303
Nereis pelagica	058
Phyllodoce maculata	074
Harmothoe imbricata	042
Ampharete acutifions	788
Anobathrus grecilis	980
Bobellides octocirrata	1092
Apisthobranchus tullbergi	1097
Cepitella cepitata	232
Heteromestus filiformis	233
Chaetozone	1209
Greniadella gracilis	1014
Glycera dibranchiate	049
Nereimyra punctere	1015

Annelida

Lumbrineris acute	1016
Lumbrinens fragilis	050
Ninoe nigripes	039
Axiothella catenate	1040
Clymenella torquata	052
Clymonella zenalis	086
Moldane Sarsi	1039
Proxillelle grecilis	846
Proxillelle praetermissa	837
Ophelina acuminata	045
Antinoella sarsi	1120
Arcteobia anticostiensis	1019
Harmothoe oerstedi	065
Minusculepis hughese	2290
Potamilla neglecta	310

Annelida

Potamilla reniformis	239
Polyhpsis crassa	491
Scalibregma inflatum	809
Spirorbis borealis	083
Pholse minuta	068
Sphaerodoropsis minuta	714
Autolytus alexandn	079
Exogone elispat	1152
Exogone verugera	709
Syllis hyalina	2171
Lohassa venusta	1145
Family terobellidae	816

Arthropoda

Anchelia spinosa	268
Aymphon grossipes	647
Aymphon longitarse	202
Byenogonum litterale	259
Myocheres major	530
Balanus balanus	361
Brachydiastylis vegima	1836
Diastylis polite	1155
Diastylis quadrispinosa	658
Diastylis sculpta	661
Leptognathia gracilis	947
Tanaissus psammophilus	942
Ptilanthura tenius	1837
Adotea metallica	318
Adotea phosphorea	110
Acanthonetozoma serratum	293
Ampelisca eschrichti	1024

Arthropoda

Haploops fundiensis	2049
Haploops Setosa	693
Ampithee longimara	1060
Calliopes laeviuscutus	121
Carophium bonelli	933
Carophium crassicome	278
Corophium insidiosum	273
Erichtonius rebneotnis	730
Dexamine thea	275
Rachotropis lobata	1067
Ischyrocerus anguipes	291
Ischyrocerus commensalis	1057
Ischrocerus minutes	1049
Jassa falcata	1129
Anonyx liljeborgi	929
Centromedon pumilus	1053
Onesimus simus	1788

Arthropoda

Orchomonella minuts	281
Melitapalmate	1037
Monocudodes sp.	1071
Monocudades longirestris	1068
Monocudades harvegicus	1061
Monoculodes tuberculatus	476
Parediceros lynceus	943
Westwoodilla carcula	475
Photis macrocoxe	225
Photis reinhardi	272
Padoceropsis inacquistylis	105
Protomedia fascialate	329
Protomedia stephenseu	941
Harpinia propinqua	928
Phoxocephalus helbolli	844
Pleusymtes glaber	1048
Pleustes penoplus	349

Arthropoda (cont'd)

Stenopleustes inermus	931	Axius serratus	1178
Dyopedos arcticus	314	Pagorus arcuatus	021
Dyopedos monacanthus	1130	Pongarus longicarpus	352
Bradulichia typica	1187	Nyas coarctatus	356
Mitopella carinata	1066	Neopanope sayi	358
Mitopella angusta	1035	Crangon septemspinosa	109
Proboloides mordmanni	1047	Dulichia monacdntha	1130
Stenothoe brevicornis	1070	Homarus Americanus	568
Syrrhoe crenulata	292	Archolopandelus leptocerus	539
Aeginina longicornis	115	Arqis dentata	537
Caprella septentrionals	289		

Echinodermata

Psolus fabricii	008	Hemichordata	
Henricia sanguinolenta	003	Sipuncula	
Ophiopholis aculeata	009	Echiurida	
Ophiura robusta	501	Phoscolion strombi	955

Chordata

Boltenia echinate	965
Globiocephale melacna	1581

Chordata - Fishes

Prionaea glaaca	921-5	Cryptaconthodes maculatus	616-61-A
Cetorhinus maximus	635-A-P	Uluaria subbifurcata	687-61-A
Salmo gairdneri	998-9-A-5	Cumperus lumpretae formis	640-61-A
Coryphaena hippurus	1553-42	Lumpenus maculatus	897-61-A
Artediellus urcinates	961-55-A	Enchelyopus ambrius	636-62-A
Hemitripterus americaus		Microgadus tomcod	612-62-A-F
Myoxocephalus aeneus	966-55-A	Utrophyeis tenius	420-62-A
Myoxocephlus octa decemspinosus	913-55-A	Hippoglossoides platessoides	592-64-A
Myoxocephalus scorpus	970-55-A	Laphius americanus	595-65-A
Jriglops murrayi	984-55-A	Ammodytes americanus	608-61-A
Aspidophoroides monopterygius	969-56-A	Apeltes quadracus	419-57-A-F
Liparus atlanticus	985-56-A		
Lipans inquitinus	1617-56		

Appendix 23

Publications by Philip Cox, a noted New Brunswick ichthyologist and herpetologist, which contain information on Prince Edward Island fish and herptiles around the turn of the century.

BIBLIOGRAPHY

ALLEN, G.M.
(1899). Notes on the reptiles and amphibians of Intervale, New Hampshire. Proc. Bost. Soc. Nat. Hist. 29: 63–75.

BAIN, F.
(1890). Natural history of Prince Edward Island. G. H. Haszard, Charlottetown. 123 p.

BISHOP, SHERMAN C.
(1941). The salamanders of New York. New York State Mus. Bull. 324: 1–365.

(1947). Handbook of salamanders. Comstock Publishing Company, Ithaca, N.Y. 555 p.

BLAIR, ALBERT P.
(1943). Geographical variation of ventral markings in toads. Am. Midl. Nat. 29 (3): 615–620.

BLEAKNEY, J. SHERMAN
(1952). The amphibians and reptiles of Nova Scotia. Can. Field-Nat. 66 (5): 125–129.

(1954). Range extensions of amphibians in eastern Canada. Can. Field-Nat. 68 (4): 165–171.

(1957). The egg-laying habits of the salamander *Ambystoma jeffersonianum*. Copeia 1957 (2): 141–142.

(1958). A zoogeographical study of the amphibians and reptiles of eastern Canada. Nat. Mus. Canada Bull. 155: 1–119.

(1959). *Thamnophis sirtalis sirtalis* (Linnaeus) in Eastern Canada, redescription of *T. s. pallidula* Allen. Copeia 1959 (1): 52–56.

CAMERON, AUSTIN W.
(1958). Mammals of the islands in the Gulf of St. Lawrence. Nat. Mus. Canada Bull. 154: 1–165.

CONANT, ROGER
(1958). A field guide to the reptiles and amphibians of the United States and Canada east of the 100th meridian. Houghton Miffin Co., Boston. 366 p.

COOK, FRANCIS R., and
J. SHERMAN BLEAKNEY
(1960). Additional records of stream salamanders in New Brunswick. Copeia 1960 (4): 362–363.

COOK, FRANCIS R., and
ANNE MEACHEM RICK
(1963). First record of the Blue-spotted Salamander from Cape Breton Island, Nova Scotia. Can. Field-Nat. 77 (3): 175–176.

COX, PHILLIP
(1899*a*). The anoura of New Brunswick. Proc. of the Miramichi Nat. Hist. Assoc. (1): 9–19.

(1899*b*). Freshwater fishes and batrachia of the peninsula of Gaspé, P.Q. and their distribution in the Maritime Provinces. Proc. and Trans. Roy. Soc. Canada 5 (4): 151–154.

(1899*c*). A preliminary list of the batrachia of the Gaspé Peninsula and the Maritime Provinces. Ottawa Nat. 13: 194–195.

(1903). The snakes of the Maritime Provinces of Canada. Proc. of the Miramichi Nat. Hist. Assoc. (3): 11 – 20.

(1907). Lizards and salamanders of Canada. Proc. of the Miramichi Nat. Hist. Assoc. (5): 46–55.

DOWLING, HERNDON G.
(1951*a*). A proposed standard system of counting ventrals in snakes. British J. or Herpetology 1 (5): 97–99.

(1951*b*). A proposed method of expressing scale reductions in snakes. Copeia 1951 (2): 131–134.

ERSKINE, DAVID S.
(1961). The plants of Prince Edward Island. Canada, Dept. of Agriculture, Plant Res. Inst., Res. Branch, Pub. 1088: 1–270.

also
Cox, Philip - 1901. Cyprinidae of Eastern Canada. Proc. of the Miramichi Nat. Hist Assoc (2): 36–45.

Appendix 24

Catalogue of rock specimens collected on Prince Edward Island and deposited in the library of the Provincial Legislature by Abraham Gesner.

C. Birch Bagster, The Progress and Prospects of Prince Edward Island, written during the Leisure of a visit in 1861. Charlottetown, 1861

Catalogue of rock &c collected on Prince Edward Island and deposited in the library of the legislature by Abraham Gesner.

sulphate of barytes from Gallows Point
copper ore from Governor's Island
cupreous rock - Governor's Island
black oxide of manganese - Murray Harbour and other places
hydrous peroxide of iron ore or bog iron ore - several localities
red marl - Governor's Island
white marl - Governor's Island
gray sandstone - Gallows Point
chocolate coloured sandstone - Gallows Point
mixed micaceous sandstone (common)
portion of fossil tree - Gallows Point
common red sandstone
sandstone changed by trap dyke at Hog Island
common compact clay
limestone - Orwell Bay
limestone - Gallows Point
limestone - Hillsborough Bay
limestone - common on west shore
red conglomerate limestone - common
limestone - Mills Point, Indian River
corallerei limestone - Mills Point, Indian River
limestone - Governor's Island
limestone - Bedeque
limestone - Grand River

Judith Tulloch
Historic Resources Research
March 1980

Appendix 25

Abstract and details of a paper by R.W. Coleman and A.C. Skorepa entitled "Lichens from Islands of the Gulf of St. Lawrence, Canada". Presented to the 94th session of the Iowa Academy of Science.

ABSTRACTS OF CONTRIBUTED PAPERS

94TH SESSION

IOWA ACADEMY OF SCIENCE

FORT DODGE
APRIL 16-17, 1982

Iowa Central Community College

Continued on back cover.

climacteric. In addition, symptoms commonly held to be specific to the climacteric in middle-aged women were also found to be characteristic of women in the older, post-climacteric age groups regardless of ethnic affiliation. Special emphasis is given to methodological problems involved in correlating particularistic, folk cognitions of health and illness to relevant quantitative, medical symptom categories.

Botany

24. Lichens from islands of the Gulf of St. Lawrence, Canada.

R. W. COLEMAN AND A. C. SKOREPA

Upper IA. Univ., Fayette, IA 52142 and Towson State Univ., Towson, MD 21204.

Lichens were collected in certain transects from Prince Edward Island and from Île Du Cap Aux Meules. Baeomyces rufus, Bryoria furcellata, Cetraria pinastri, Cladonia cf.chlorophaea, C. cristatella, C.cylindrica, C.rangiferina, Cladonia sp., Evernia mesomorpha, Hypogymnia physodes, Lecanora cadubriae, Lecanora sp., Parmelia sulcata, Ramalina farinacea, Toninia sp., Usnea angulata, U.subfloridana, Usnea sp., and Xanthoria polycarpa were collected from these transects. B.furcellata, C.pinastri, C. cristatella, E.mesomorpha, H. physodes, Lecanora sp., R.farinacea, U.angulata, U.subfloridana, Usnea sp., and Xanthoria polycarpa were primarily associated with tree wood. B.rufus, C.cf.chlorophaea, C.rangiferina, and Toninia sp. were especially seen from soil transects that were acidic with a pH from 4.4-5.0 in loamy soils. In the soil analysis tests for active aluminum, ammonia nitrogen, available phosphorus, chlorides, iron, magnesium, manganese, nitrate nitrogen, nitrite nitrogen, organic content, potassium, replaceable calcium, and sulfate were also made.

25. Isozyme variation and generic classification of the Polyporaceae

R. J. PINETTE

Department of Botany, Iowa State University, Ames, IA 50011

Modern monographers of the Polyporaceae have been describing an increasing number of small or monotypic genera in their treatments of this family. Based almost entirely on morphological data, over 80 genera are presently recognized in the north temperate zone.

In this study over 300 basidiocarp specimens were collected from various sites in Iowa and preserved (by freezing) for starch gel electrophoresis. Crude extractions of water soluble enzymes were made with a 0.2 M KH_2PO_4 pH 7 buffer. Various gel and tray buffer combinations were used to maximize the activity and resolution of a dozen enzymes. Each individual basidiocarp was scored on a presence or absence basis of each allele compared to the overall allelic variation observed for each enzyme.

The banding patterns for all individuals and all 12 enzymes assayed were evaluated by means of a computerized cluster analysis. Selected portions of the resulting dendrograph will be discussed with respect to modern generic classifications.

26. A preliminary report of some Tuberales of Iowa.

L. H. Tiffany and J. F. Shearer

The Tuberales, or truffles, are a group of hypogeous Ascomycetes, many of which are mycorrhizal. In Europe, where certain species are prized for their culinary properties, the existence of truffles has been known for centuries, whereas in North America, significant collection data have been accumulated only since the turn of the century.

The Tuberales are known to occur in greatest abundance in the Pacific Northwest, with limited field information from other regions of the United States. Reports of this group in Iowa are few, beginning in 1927 with a collection of Elaphomyces ascocarps parasitized by Cordyceps capitata. Gilkey (1939) in a monograph of the Tuberales of North America, reported Tuber gardneri from Iowa Falls, Iowa.

During the past two summers, collecting forays in central Iowa have yielded additional specimens of Tuber, and ascocarps of Hydnobolites and Pachyphloeus. These recent collections have prompted our interest in this fascinating and unusual group of fungi.

27. The rusts of Iowa

G. KNAPHUS and L. H. TIFFANY

Department of Botany, Iowa State University, Ames, Iowa 50011

As we have attempted the past several years to monitor Iowa fungi, we have realized that available information concerned with Iowa rusts and their hosts is out of date and incomplete. The first account of Iowa Uredinales and their hosts was compiled by Arthur in 1884. Later summary listings were completed in 1924 by Arthur and in 1929 by Gilman and Archer as a part of their report on parasitic fungi of Iowa. Supplementary information was compiled by Gilman in 1932 and in 1949. These accounts all involved nomenclatorial interpretations of the rusts based on the American Code. All valid fungal taxa now are interpreted under the International Code of Botanical Nomenclature.

A corrected and updated treatment of the Iowa rusts and their hosts is now being completed. In

LICHENS FROM ISLANDS OF THE GULF OF ST. LAWRENCE, CANADA

Transect Sites and Species

As to the 16 transects of lichens studied in this present investigation, the following presentation is illustrated by a series of kodachrome slides of selected transects, stressing primarily the substrate terrain. The tables have shown our basic selected uniform analyses, some of the data being noted in the conclusions. Other tests previously cited were done in a random fashion.

Collection #6: Lichens on decaying log, Transect #D, near House of Excellence Interiors Inc., between edge of North River and edge of Highway #1, West Royalty area, Prince Edward Island, Canada. June 7, 1975. coll. R. W. Coleman. Rolls A&B (#15,16,and 17):

a. Cladonia cristatella Tuck.

Collection #9: Lichens from Transect #F near the edge of DeSable River, DeSable area, near House of Dolls, near edge of Highway #1, Prince Edward Island, Canada. June 9, 1975. coll. R. W. Coleman. Rolls C&D (#9, 10, and 11). Soil from lichen collection analysed and data noted in Table 1 and in the conclusions:

a. Toninia sp. (Sterile crust)

Collection #12: Lichens from soil in Transect #I, at top of cliff overlooking lobster trap shack and boat slip, Rice Point, Queens County, Prince Edward Island, Canada. June 10, 1975. coll. R. W. Coleman. Rolls C&D (#16, 17, and 18). Soil sample with occasional small rocks was analyzed with data in Table I and in the conclusions:

a. Cladonia sp.

LICHENS FROM ISLANDS OF THE GULF OF ST. LAWRENCE, CANADA

Collection #13: Lichens from soil in Transect #J, near side of public wharf, Rocky Point, Queens County, Prince Edward Island, Canada. June 10, 1975. ,oll. R. W. Coleman. Rolls E&F (#6, 7, and 8). Soil sample mixed with small rocks was analyzed with data in Table I and in the conclusions:

a. Cladonia of. clorophaea (Flk.) Spreng

Collection #23: Lichens and bryophytes associated together on a stump of a tree, Transect #A, at edge of road to New London Harbour, opposite Eldon Foster's Farm, French River area, Queens County, Prince Edward Island, Canada. June 14, 1975. coll. R. W. Coleman. Rolls G&H (#15, 16, and 17):

a. Cladonia cristatella Tuck.

b. Cladonia cylindrica (Evans) Evans

Collection #27: Transect #V, Millview area, near edge of Highway #213, near where Highway #213 joins Highway #3, Queens County, Prince Edward Island, Canada. June 15, 1975. coll. R. W. Coleman:

a. Lichens from branches of bush and trees (Rolls I&J#4, 5, and 6):

(1) Hypogymnia physodes (L.) W. Wats.

b. Lichens from soil with small stones and gravel with the analyses of the soil noted in Table I and in the conclusions (Rolls I&J#7, 8, and 9):

(1) Bosomyces rufus (Huds.) Rabent.

(2) Cladonia rangiferina (L.) Wigg.

LICHENS FROM ISLANDS OF THE GULF OF ST. LAWRENCE, CANADA

Collection #86: Lichens on dead conifer branches, near edge of Ch. J. Aucoin near Edmond H. Poirier Store and near junction of Ch. J. Aucoin to Ch. Vers la Plage, Fatima area, Ile Du Cap Aux Meules, Iles De La Madeleine, Quebec, Canada. July 11, 1975. coll. R. W. Coleman. Rolls U&V (#14, 15, and 16):

a. Hypogymnia cf. physodes (L.) W. Wats.

b. Lecanora sp.

c. Xanthoria polycarpa (Ehrh.) Oliv.

Collection #89: Lichens associated with bryophytes on bark on a westerly exposure of a dead stump at the edge of a conifer forest near edge of Ch. J. Aucoin near Edmond H. Poirier Store and near junction of Ch. J. Aucoin to Ch. Vers La Plage, Fatima area, Ile Du Cap Aux Meules, Iles De La Madeleine, Quebec, Canada. July 11, 1975. coll. R. W. Coleman. Rolls W&X (#4, 5, and 6):

a. Cladonia cylindrica (Evans) Evans

Collection #120: Lichens from trunk of a spruce tree, Mt. Stewart Provincial Park, Mt. Stewart area, Queens County, Prince Edward Island, Canada. July 25, 1973. coll. R. W. Coleman, Rolls EE&FF (#5, 4, and 5):

a. Hypogymnia physodes (L.) W. Wats.

b. Ramalina farinacea (L.) Ach.

Collection #121: Lichens from branches of spruce tree, Mt. Stewart Provincial Park, Mt. Stewart area, Queens County, Prince Edward Island, Canada. July 23, 1975. coll. R. W. Coleman. Rolls EE&FF (#6, 7, and 8):

a. Evernia mosomorpha Nyl.

b. Hypogymnia physodes (L.) W. Wats.

c. Parmelia sulcata Tayl.

LICHENS FROM ISLANDS OF THE GULF OF ST. LAWRENCE, CANADA

Collection #122: Lichens and bryophytes at base of trunk of spruce tree, Mt. Stewart Provincial Park, Mt. Stewart area, Queens County, Prince Edward Island, Canada. July 23, 1975. coll. R. W. Coleman. Rolls EE&FF(#9, 10, and 11):

a. Cetraria pinastri (Scop.) S. Gray

b. Cladonia sp.

Collection #142: Lichens and bryophytes on conifer forest floor of Bonshaw Provincial Park between picnic grounds and edge of Elliot (West) River, Bonshaw area, Queens County, Prince Edward Island, Canada. July 31, 1975. coll. R. W. Coleman. Rolls II&JJ (#12, 13, and 14):

a. Lecanora cadubriae (Mass.) Hedl.

b. Parmelia sulcata Tayl.

Collection #143: Lichens and bryophytes on conifer branches, Bonshaw Provincial Park, between picnic ground and Elliot (West) River, Bonshaw area, Queens County, Prince Edward Island, Canada. July 31, 1975. coll. R. W. Coleman. Rolls II&JJ (#15, 16, and 17):

a. Hypogymnia physodes (L.) W. Wats.

b. Parmelia sulcata Tayl.

c. Ramalina farinacea (L.) Ach.

d. Usnea sp.

Collection #149: Lichens and bryophytes on rock over scant soil near____creak of collection #148, near where creek crosses under Highway #24 and near where railroad tracks cross Highway #24, Uigg area, Queens County, Prince Edward Island, Canada. August 5, 1975. coll. R. W. Coleman. Rolls KK&LL (#17, 18, 19 and 20):

a. Cladonia cylindrica (Evans) Evans

LICHENS FROM ISLANDS OF THE GULF OF ST. LAWRENCE, CANADA

Collection #151: Lichens from branch of tree near edge of Highway #315 near where Belle River crosses Highway #315, Queens County, Prince Edward Island, Canada. August 5, 1975. coll. R. W. Coleman. Rolls MM&NN (#7):

a. Bryoria furcellata Norrl. B. fuocillatri

b. Hypogymnia physodes (L.) W. Wats.

c. Usnea angulata Ach.

d. Usnea subfloridana Stirt.

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The data contained in this paper are preliminary findings since comparable data for many of the species listed are not available. Only a few recent articles refer to several of the species which are reported here. Addison and Packett (1980) report on deposition of atmospheric pollutants as measured by lichen element content in the Athabasca oil sands area. The aluminum, potassium, sulfur, titanium, and vanadium contents of the lichens Cladine arbuscula (Wallr.) Hale & W. Culb., Evernia mesomorpha Nyl. and Hypogymnia physodes (L.) Nyl. were determined for up to 69 sites in the Athabasca oil sands in northern Alberta. The element accumulation by these lichens was related to both gaseous and particulate emissions from industrial sources and to a localized windblown dust component. Visible changes in the thallus condition appeared to be related to the element concentrations. Ahmadjian and Jacobs (1981) describe the relationship between the fungus and alga in the lichen Cladonia cristatella Tuck. They suggest that the relationship is one of controlled parasitism.