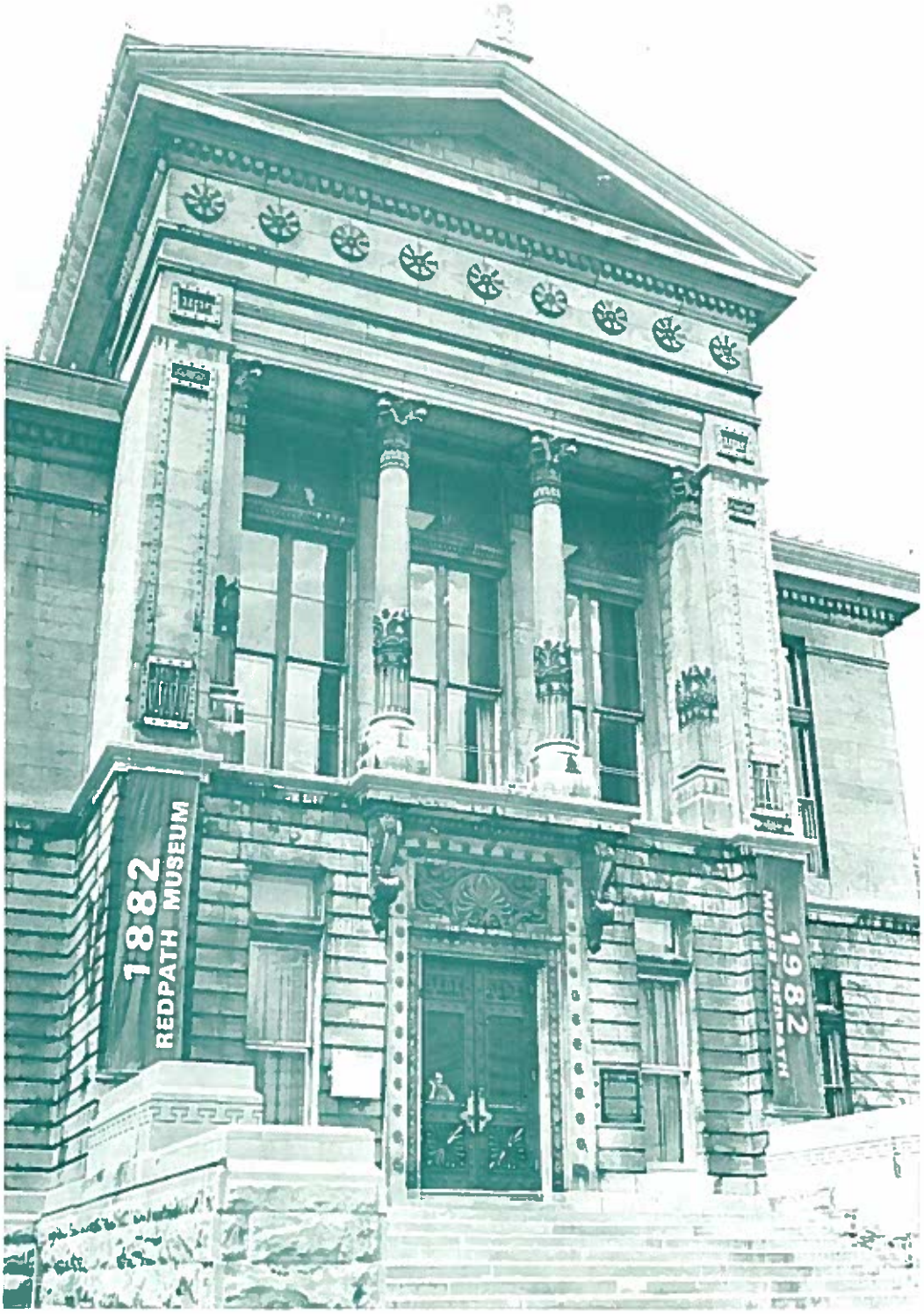
COLLECTION FORUM

Spring, 1986



INFORMATION AND INSTRUCTIONS

FOR AUTHORS

Collection Forum publishes general information articles and short articles of scientific research having to do with collecting, preserving, managing, and storing natural history collections.

Research articles are normally sent to two qualified persons for peer review. Authors are encouraged to suggest names of suitable referees but the final decision lies with the Editor. Reviewers are asked to give a general appraisal of manuscripts along with specific comments and constructive recommendations. The Editor makes the final decision on whether a manuscript is acceptable for publication.

Publication is facilitated if authors check very carefully for accuracy, consistency, and readability. Also check symbols, abbreviations, and technical terms used, and ensure, before they are submitted, that manuscripts and illustrations meet the requirements outlined below. Although due care is taken, neither the Editor nor the Society accepts responsibility for lost manuscripts or illustrations; they are submitted at the owner's risk.

MANUSCRIPT

General- All parts of the manuscript, including footnotes, tables, and captions for illustrations should be typewritten, double-spaced, on paper 8½ by 11 in. (21.6 by 27.9 cm), with margins of 1-1½ in. (2.5-3.8 cm). The original copy and two duplicates are required. Each page of the manuscript should be numbered. The first page should have only the title, byline, and author's affiliation, and any necessary footnotes. Tables, and captions for illustrations should be on separate pages and be placed after the text. The length of research articles can be no longer than 3 printed pages. *Webster's Third New International Dictionary* should be consulted for acceptable spellings. Symbols, units and nomenclature should conform to international usage and be the same in the text and figures. For all numerical data, the metric system should be used or metric equivalents given.

Abstract- An abstract of not more than 200 words is required for research articles.

References- These should be checked with the original articles and each one referred to in the text by the author and date, in parentheses. They should be listed at the end of the paper in alphabetical order. In reference to papers in periodicals, titles and inclusive page numbers are required. The names of serials are abbreviated in the form given in the *Bibliographic Guide for Editors & Authors*, Chemical Abstracts Service.

Tables- Tables should be numbered with arabic numerals, have a brief title, and be referred to in the text. Column headings and descriptive matter in tables should be brief. Vertical rules should not be used.

ILLUSTRATIONS

General- Originals should not be more than three times the size of the final reproduction. Each figure or group of them should be planned to fit, after reduction, into one column of the text, or two. The figures (including those for plates) are numbered consecutively in arabic numerals, and each one must be referred to in the text. Each illustration should be identified by the authors' names and title of paper, preferably written below the illustration, at the left.

Line Drawings- The original drawing and two sets of clear copies are required. Drawings should be made with India ink on plain or blue-lined white paper or other suitable material. Any coordinate lines to appear should be ruled in. All lines must be sufficiently thick to reproduce well, and decimal points, periods, dots, etc. must be large enough to allow for any necessary reduction. Letters and numerals should be made neatly with a printing device (not a typewriter) and be of such size that the smallest character will not be less than 1mm high when reduced.

Photographs- Three sets of all photographs are required (1) one set mounted, ready for reproduction, (2) another two sets, equally good, but mounted or unmounted. Prints must be of high quality, made on glossy paper, with strong contrasts. The copies for reproduction should be trimmed to show only essential features and mounted on white cardboard, with no space between those arranged in groups. Coloured photos cannot be accepted at this time.

COLLECTION FORUM

Volume 2, Number 1, Spring 1986

Editor
Daniel J. Faber

Administration and Advertising
Joanne Faber

Subscriptions and Memberships
Shirley Albright

Graphics and Layout
Deltacom Enterprises

Typing Services
Keyword Walkley

Printing
Peter's Printing

Collection Forum, a publication of the Society for the Preservation of Natural History Collections, is published biannually, spring and fall. During 1986 the cost of an individual membership is $15.00 (Canadian currency) or $12.00 (U.S. currency). Make check payable to: Society for the Preservation of N.H.C. Single copy: $5.00 Cdn. currency.

For Membership and Subscription information:
Shirley Albright
New Jersey State Museum
205 W State Street, CN-530
Trenton, NJ 08625 U.S.A.

For submission of manuscripts:
Daniel J. Faber
National Museum of Natural Sciences
Ottawa, ON K1A 0M8 Canada

Information and instructions for authors are printed on the inside front cover.

Information on the 1986 Annual Meeting in Washington D.C. is located on the inside back cover.

ISSN 0831-4985

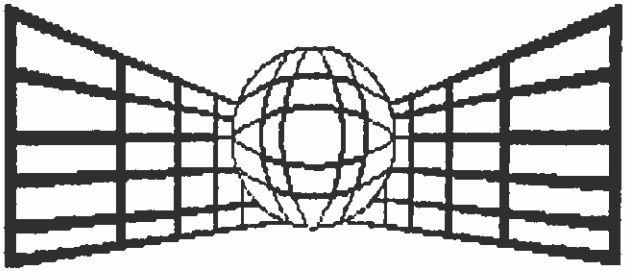


TABLE OF CONTENTS

COVER: A photo of the front of the Redpath Museum. Courtesy of Ms. Inger Birker.

What is our Science?

Naturalists working in the eighteenth and nineteenth centuries contributed information about how organisms live within communities. Biogeography and ecology, two related sciences, are actively developing theoretical principles which explain why, when and where organisms live. In order to understand certain complex, changing habitats, it is necessary to apply fundamentals from other natural sciences, ie., meteorology, geochemistry, biochemistry, physics, etc. Thus, progress in one science is dependant upon available information from a number of others. Collections management encompasses the proper care and preservation of heritage collections. In order to progress in this field, it is necessary to apply fundamentals from a number of other fields, ie, accounting, business administration, data processing, conservation studies, biology, geology, etc. But where are the basic, theoretical principles which are so badly needed to make progress in our "science"?

We need to become familiar with the fundamentals from other fields that will assist us in doing our job. We cannot be experts in all fields but each of us can contribute a little towards this immense task Let your colleagues know what techniques have been successful in your "Corner of the World". Do you have some favorite bottles or vials? Where can they be purchased? Write a letter or a short research paper, for now is the time to make your successes known. D.J.F.

Teaching with Touching

If a picture is worth a thousand words, then a touch is worth a thousand pictures. This has been the experience of the volunteer interpreters in the nine-year school programme of the National Museum of Natural Sciences in Ottawa. This Museum is one of the few places where children are permitted and, in fact, encouraged to touch a caribou skin or a polar bear skull. But locating and replacing natural history artifacts, which are handled annually by 20,000 children who participate in the school programmes from October to May, remains a major problem.

Most museums have policies which develop collections, undertake research and disseminate information and knowledge. As one who is part of this last function, my favorite example of 'teaching with touching' is that of an owl's wing. We can talk to children about flight. We can show them an owl's wing. We can point out the way in which the feathers are designed for lightness and strength. We can explain the special way the feathers muffle the sound when an owl flies, so that it can easily catch its prey. When a child handles that wing, what we have explained, becomes firmly implanted in his mind. With that memory, every time he sees a bird film, a photograph or another live bird, he remembers that touch. He can recall the softness of the downy feathers against his fingers, the way the edges of the flight feathers zip together. He now knows lots about that bird.

We also use common rocks and minerals in our programme. Children are encouraged to perform two identification tests used by geologists. They record what they see and what they do and for those children it is primary research. The Streak Test records the colour made by marking the rock on a porcelain square. In the Hardness Test, children are asked to determine if they can scratch a sample with their fingernail, with a penny, with a nail, or whether the material will scratch glass. After several years, calcite and talc samples, like the owl's wing, are almost unrecognizable due to extensive use by children. These very ordinary but well-used materials need to be replaced.

Dr. Louis Lemieux, former Director of the National Museum of Natural Sciences, stated recently in *Gazette* (1980, Vol. 13 (1):4-9):

> "Museums, just like ecosystems, are entities whose main functions are so closely interrelated that they cannot be successfully developed independantly, and that the organism as a whole is affected in its overall performance if one of its functions is deficient."

To bring about this harmonious state several important questions need to be answered correctly!

Is a museum primarily a research facility, whose reputation is enhanced only by discoveries and the resulting publications produced by its professional staff?

Does the public take note of what they see and do in a museum? Do they remember the scientific publications produced by museum staff? Do good public programmes create an interest in research?

What is the shelf life of a common natural history artifact? Is there ever a time when one can be spared? Are there ever acquisitions which are not expected to remain in collections forever?

In a study collection, where there are many identical specimens, is there ever a time when old stock becomes surplus to scientific needs?

Dr. Lemieux gives equal importance to each of three functions of a museum: Collections, Education and Research. It is assumed that all museums try to do the same. However, does this equality exist in actual fact?

In school programmes, interpreters need ready access to artifacts. It is a well recognized fact that a 'hands on' experience makes the museum visit a success. We try to convey their needs to the scientific staff who usually have other priorities for their specimens. We are grateful to those scientists and staff who have listened to our pleas and have helped whenever they could. But we really question the need for these pleas. It is essential that a mechanism be provided for the supply of artifacts for educational programmes, and that there be official recognition of these needs.

Mary Parsons
Ottawa, Ontario

The Redpath Museum

McGill University's Teaching & Research Collections

By D. Alison, I. Birker, S. Gabe, J. Kaylor, and B. Larson

The Redpath Museum of McGill University is briefly described. Although it is closed to the public, it serves important teaching and research functions for the natural history communities of Montreal, Canada and the rest of the world.

The (Peter) Redpath Museum of McGill University was officially opened in August, 1882. A formal handing-over ceremony of the building to the University was performed at a reception attended by about 2000 guests, including members of the American Association for the Advancement of Science (AAAS) which were meeting in Montreal at the time. Sir William Dawson, Principal of McGill University, was President of AAAS at that time. In his Presidential speech, Dawson referred to the building as "the greatest gift ever made by a Canadian to the cause of natural science, and...the noblest building dedicated to that end in the Dominion." Dawson believed that an active natural history museum was needed if McGill University was to achieve standing as an international university.

Hutchison and Steele, well-known Montreal architects, were contracted to design the first building in Canada to actually house a museum and its collections. There were other nearby museums, for instance, the Natural History Society of Montreal, but they were housed in buildings originally constructed for other purposes. The design of the Redpath Museum building is neo-Classic, the best example of the style extant in Canada; it was built of limestone quarried near Montreal at a cost of about $140,000.

The external integrity of the building has been maintained, but many modifications have been made internally to suit the needs of a teaching and research institution. The entrance hall still leads to the lecture hall where Sir William Dawson once gave his lectures. It is somewhat smaller and now there are small laboratories along several sides. The Gallery has been retained but now holds teaching and research laboratories as well as important teaching displays. The paleontological exhibits that once lined the sides of the Main Gallery have been displaced by laboratories and offices. *Megatherium* (a giant fossil ground sloth known as "the dinosaur" during its public years) has been dismantled and delivered to the Museum of Man and Nature in Winnipeg. In its place are teaching displays. In spite of these alterations, a visitor can still develop an impression of the grandeur of the original hall.

Sir William Dawson guided the creation and development of the Redpath Museum throughout its early years. He was aided and advised by two distinguished natural history professors of the time, David Penhallow, a botanist and E.W. McBride, a zoologist. Even for Dawson the Redpath was primarily a teaching museum rather than a public one. After Dawson's retirement in 1893, Frank Dawson Adams, a geologist, became Director of the Museum. During his tenure the chief scientific interest of the staff was mineralogy. Adams was followed for a short period of time by A. Wiley, whose work on cephalopods is well-known. Wiley was followed in 1932 by Thomas H. Clark whose era was noteworthy for its emphasis on research in invertebrate paleontology. When Professor Clark resigned in 1952 to become Chairman of the Department of Geology, he was succeeded by Alice Johannsen who fostered a public educational role for the Museum, particularly among the elementary and secondary schools of Montreal. When the Museum was finally closed to the public in 1970, John B. Lewis, a marine biologist, became its Director. Professor Lewis led the Museum back to teaching and research activities. On his appointment in 1984 as Chairman of McGill's Oceanographic Institute, Professor Robert L. Carroll, a vertebrate paleontologist succeeded as Director.

Today the Redpath Museum serves as a unique interdisciplinary facility at McGill University. The collections of geological, biological and anthropological specimens serve as resources for the university departments and for displays that are available to teachers and their students. Loans are made and enquiries about these holdings are answered. Laboratory sessions are handled on a daily basis for a variety of university and community college courses, and exhibits are mounted around the campus of McGill. Close cooperation is maintained with the departments of Geology, Biology, Anatomy, Classics, Anthropology, Oceanography, Education, Continuing Education and Religious Studies. Professors and their students add to the collections while performing research on Canadian environments and the natural history heritage stored there. Since the Redpath is the only natural history museum in the city of Montreal it serves a significant educational role. During the past year a hands-on Discovery Room for the Protestant School Board of Greater Montreal was established.

THE COLLECTIONS

Ornithology and Mammalogy **Curator: D. Alison**

The ornithological collection has about 1500 specimens; it contains representatives of 25 of the 27

orders of birds. The collection possesses specimens of extinct species, ie., a mount of a juvenile male Labrador Duck, *Camptorhynchus labradorius*, a Carolina Parakeet, *Conuropsis carolinensis*, isolated bones of the Dodo, *Raphus cucullatus*, the Great Auk, *Alca impennis* ;and several endangered species, including the Eskimo Curlew, *Numenius borealis* .

The mammalian collection of skins and skulls is strong in the small mammals of Quebec, especially rodents, and it contains representatives of most every family of mammals. In the collection are the mandible, two humeri, radius and ulna, and two vertebrae of Stellar's Sea Cow, *Hydromalis gigas*, (all bones have axe marks on them). There is also a partial skull and humerus, a complete rib and scapula of a Greenland Right Whale, *Balaena mysticetus*.

Paleontology **Curator: R.L. Carroll**

The paleontological collection holds approximately 55,000 fossil specimens. Included are: the largest Canadian collection of fossil plants (15,000 specimens) and local holdings of Ordovician invertebrates (20,000 specimens).

Research in the area of vertebrate paleontology continues to be one of the most active in Canada. Work continues on anatomy, phylogeny and relationships of Paleozoic amphibians. Significant holdings in the collection include the following:

1. Early vascular plants from the Devonian of eastern Canada, 2. Sir J.W. Dawson's types and figured specimens, including the Joggins Tree stump Fauna, 3. Graptolites from Levis Shale, Quebec, 4. Mid Cambrian sponges from Matane, Quebec, 5. Precambrian trace fossils, including *Eozoon canadense*.

Invertebrates and Ichthyology **Curator: H. Reiswig**

All groups except the chelicerates and insects are represented in the invertebrate collection. The Carpenter Collection of molluscs, presented to the University in 1867, is probably the most important; it has, over the years, been added to by other donors so that shells now number in the thousands. Over 2,000 lots of sponges are catalogued, mainly from the Caribbean, and from local marine and fresh waters. The coral collection includes specimens from all over the world, but is particularly strong in species from the Caribbean, especially near Barbados Island.

The fish collection consists of adult and larval fishes, which are catalogued separately. The salt water fishes are chiefly from the Caribbean, the Indo-Pacific and the Gulf of St. Lawrence; the fresh water species come largely from the Great Lakes and nearby Lake Memphremagog. The larval fishes are from Barbados and the Gulf and estuary of the St. Lawrence River.

Mineralogy and Geology **Curator: J. Kaylor**

The mineralogical collection of the Museum contains approximately 10,000 specimens, in addition there is a rock collection consisting of some 200-300 rock specimens. The early collection was compiled by Walter Ferrier in the late 1800's and early 1900's and is rich in specimens from localities in Germany, England, and New Jersey. The collection was installed in its present wooden display cases by Dr. Ferrier and Professor R.P.D. Graham during 1913 and 1914. At that time his collection numbered just over 7,000 specimens. The collection is displayed so that numerous varieties of the same mineral can be viewed at the same time. This was done so that mineral collectors could come and identify their specimens. Recent acquisitions to the collection have included phosphates from the Yukon, as well as other minerals from Mt. St. Hilaire and the Francon Quarry, Montreal. Nearby Francon Quarry is the only known locality of several minerals, including Weloganite, Dresserite, Hydrodresserite and Strontiodresserite. The Redpath Museum has duplicates of Francon material, some of which are available for trade.

Anthropology **Curator: B. Lawson**

The anthropological collection of the Redpath Museum numbers over 10,000 artifacts but are all non-Canadian. Archaeological collections account for close to one half and include material from Europe, the Near East, and the Classical World. Significantly represented in the ethnological collection, which number over 5,000 artifacts, are African holdings, which include material from Angola, Zaire, and South Africa. Other important collections include those from Oceania and South America, as well as smaller collections from the Middle East, the Far East, and North America (excluding Canada). Research is currently being carried on in cooperation with the Departments of Anthropology and Classics at McGill, as well as by scholars from other outside institutions.

The authors are staff working with the various natural history collections held by the Redpath Museum. They drew this information together at short notice hoping it would be useful to our readers.

The Northern Michigan University Insect Collection

This Orphan Needs to be Adopted

By Gordon D. Gill

A significant insect collection which has been assembled over a period of almost 40 years is about to become orphaned. What can be done about it?

The insect collection at Northern Michigan University may be typical of many university collections in North America in that the collection: 1) owes its origin, growth and refinement to the voluntary efforts of a few individuals; 2) has a value such that its loss through fire, water damage, or neglect would be tragic; and 3) faces "orphan" status and an uncertain future.

This insect collection is not outstanding in size or composition, yet it is not unusual for visiting entomologists to find things of special interest. The specimens are mainly from the Upper Peninsula of Michigan, and this gives the collection special significance, for the Upper Peninsula is somewhat geographically isolated and is probably poorly represented in collections elsewhere.

Development of the Collection

The NMU collection had its beginning in the years immediately following World War II. Dr. Luther S. West, who began the collection, joined the staff of the Department of Biology in 1938, but was on leave to serve in the U.S. Army throughout the war years. After the war he began teaching general entomology on a regular basis and urged his students to contribute specimens to the Department, mainly to build a collection for teaching purposes. During 1946 to 1962 emphasis was on acquiring specimens and sorting them to order and family level. The institution at that time had not yet gained university status, it offered only an elementary entomology course, it had no graduate program in biology, and there was only limited opportunity for students to enroll for credit in projects that involved work with this collection. Thus, it was difficult to get much done beyond the family level, except in a few groups of which Dr. West had a personal interest.

When Dr. West became Dean of Arts and Science in 1962, I assumed responsibility for entomology courses and the insect collection. By then there was a backlog of thousands of specimens. However, at about this time changes were taking place which had a positive impact on improving the collection. The institution gained university status, a master's program in biology was started which allowed the opportunity to offer advanced entomology courses, and finally the institution allowed students to earn credit through independent projects. Over the years, however, almost no staff time has ever been officially allocated to the collection.

From 1962 to 1984 the mere accumulation of specimens (storage facilities have always been very limited) was deemphasized. My students and I shifted our efforts toward collecting groups missed and identifying the genera and species represented in the collection. Some groups have been worked over by specialists, but for the most part, specimen identifications have been made by students and me. Of course, there is still much to be done.

Management of the Collection

In comparison with insect collections at many universities, the collection at NMU is small. It is housed in approximately 150 Cornell drawers, in about 2000 vials, and on about 400 microscope slides. Specimens are arranged according to their systematic position, except the Waldo Pond collection of aquatic insects. There is no card file or other cross-reference system. It would be very difficult to answer the question, "What species do you have from (a particular locality)?" On the other hand, a particular family or genus can be located quickly.

Because of limited storage facilities, the number of specimens of species of very large size, was restricted, although generally all specimens that have come to us have been retained. Most specimens were collected by undergraduate students, and neither specimens nor labels are as well prepared as they should be. Labels usually give locality, date, and collector. Rarely is any additional information included, such as host plant or method of collection.

The pinned collection utilizes standard unit pinning trays and wooden label blocks. Edges of blocks are colored according to the taxonomic level represented. Blocks for superfamilies are dark green, families medium green, subfamilies light green, tribes yellow, genera red and subgenera pink. The color-code system makes it easy to scan drawers for the unit being sought.

Composition of the Collection

It is estimated that about 260 families and 1100 genera have so far been identified. Some groups are rather poorly represented-for example, apterygotes, most of the parasites (except Siphonaptera) of vertebrates, and other small forms that are likely to escape general collectors. Conversely, best represented are those groups likely to be encountered by general collectors. There are exceptions, however, because

occasionally a student developed a personal interest in a particular family and collected extensively from that family.

It is not feasible to give more detailed information about the composition of the collection here. Anyone interested in a particular group can contact the Department of Biology to find out what exists in that group.

Concern for the Future

It is not certain what lies ahead for the NMU collection! At the department level at NMU both understanding and appreciation exist for the role of entomology in the education of biologists and for the value of the insect collection. Members of the Department, even those most distant from the field of entomology, understand that this value relates not only to teaching, but that such a reference collection facilitates the service function of identifying specimens for individuals and/or agencies within the community. They also understand how the collection has contributed not only to research on our campus, but also to those institutions to which we have sent specimens on loan. However, the situation may be quite different at administrative levels beyond department. In discussions with administrators immediately prior to my retirement I was appalled by an apparent lack of concern for entomology in the Department's programs and the insect collection which will soon become an orphan. The Department of Biology was not allowed to hire an entomologist when I retired, despite the fact that four entomology courses were developed to support curricula in zoology, biology, and water science; no other entomologist was on staff. For the past two years entomology has not been offered.

Rather than see the NMU insect collection become a true orphan, I have, since my retirement, looked after the collection and worked to improve it. I have cooperated with others who have wished to make use of NMU material. However, I am away from the University for several months of the year, and persons have sometimes had to wait a long time for an answer.

Because I no longer have an official connection with Northern Michigan University, other than Emeritus Professor status, it may be inappropriate for me to speculate about the future of the collection. However, it seems important to note that in the absence of any hope that a replacement entomologist will be authorized, a senior faculty member of the Department of Biology, Dr. Donald A. Snitgen, plans to reinstate two entomology courses in 1986. Although I expect to continue to work with the collection in an unofficial capacity, my irregular work schedule and extensive periods of absence from campus make it imperative that any inquiries that require a prompt reply be addressed directly to Dr. Snitgen.

Gordon Gill joined the Department of Biology at Northern Michigan University in 1957. He taught entomology there until 1984. He is retired and living in Marquette, Michigan.

Collecting Diatoms in Inlets off Vancouver Island

An Adventure in Paradise

By Richard L. Colby

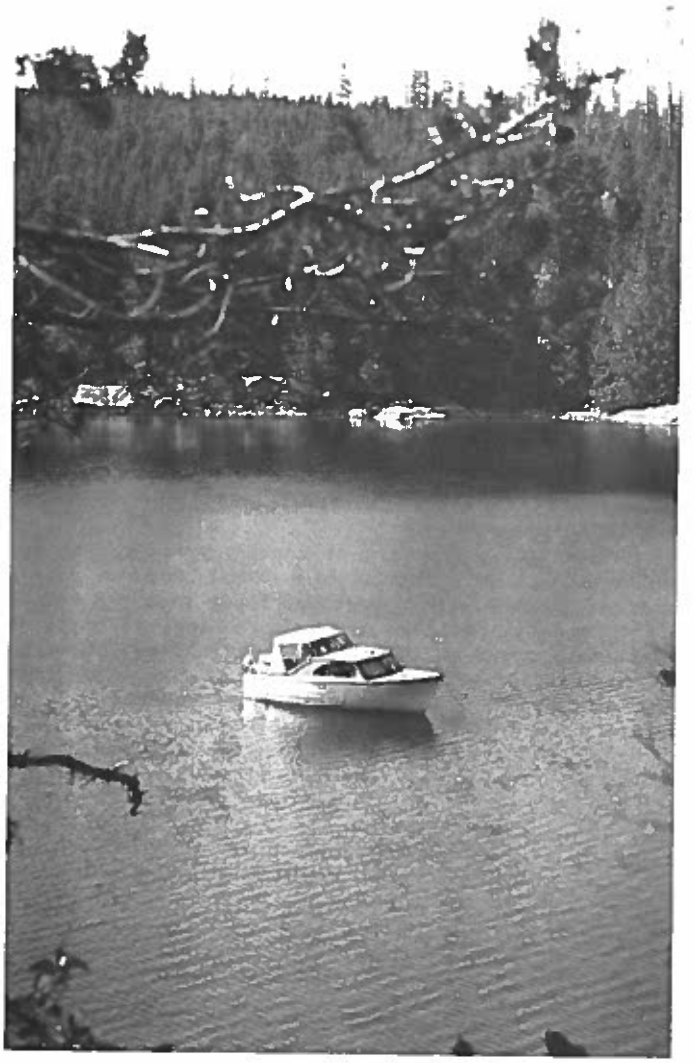
An amateur collector writes about his collecting and preserving activities in British Columbia while crying out for professional assistance. Can any readers help him?

For some years now collecting marine diatoms has been an absorbing avocation of mine. My wife and I have been able to combine the pleasures of cruising the beautiful waters off the northeastern coast of Vancouver Island with the excitement of towing a plankton net to see what we find.

Vancouver Island Inlets

My sojourn should begin by briefly describing the nearby coast, which is quite different from coasts in the eastern part of Canada. Vancouver Island itself is the largest island on the Pacific Coast of either of the Americas, something over 300 miles long, as I recall. It has a fair mountain range running down the central portion, with peaks up to about 8,000 feet. To the east lies the mainland of British Columbia and the Coast Mountains are very evident, reaching up in all their majesty with some peaks exceeding the heights of the Rockies. Do not forget that the Coast Mountains start practically from tidewater, whereas the Rockies have a head start of several thousand feet! The coast along the mainland has numerous large fiords (which we call inlets) running into the foothills. The scenery in many of these fiords is awe-inspiring and unforgettable.

The waters that we have been concerned with during the last few years are: Johnstone Strait, Discovery Passage, and the northern part of the Strait of Georgia. There are many islands splashed along the way. The tidal currents can be very strong and extreme care must be used to navigate the worst of them. For instance, the currents in Seymour Rapids can hit fourteen knots and generate whirlpools and under-currents that have capsized large seiners. There are many other currents where care must be used, such as Whirlpool Rapids, The Hole-In-The-Wall, Surge Narrows, The Okisollo, and the triple threat of the Yulcuta Rapids. One story about the latter- years ago, Indian crews carrying missionaries through these rapids in canoes could never understand why priests got out and prayed after they had successfully run the rapids. The Indians always prayed *before* they went through. We never cruise these waters without our trusty tide and current tables. By watching them carefully there are no problems.



The WEESIX resting in an inlet after a long haul from Campbell River.

Methods of Collecting

Our boat was a custom built lap-strake outboard cruiser, very seaworthy, and speedy if it had to be. It was fitted out so that we could be away for up to three weeks. Our collecting methods are very simple. We use a fine-mesh plankton net with a 12" opening, about 4 feet long, and weighted to take it down to 15 or 20 feet at a very slow trolling speed. A collecting bottle is tied to the end. I have found that used spice bottles serve very well. After the sample is

hauled in, a homemade preservative fluid is added and the bottle labelled with place, time, light, and condition of the tide. Each bottle is numbered serially.

Another method of collecting may sound queer, but it has had great results. After having anchored for a while in some snug out-of-the-way cove (we abhor regular anchorages), we noticed that when the anchor was pulled in there was usually a collection of mud and/or sand on the flukes, so we collect the mud in large bottles for later washing and examination. After the detritus is washed away, living diatoms and other denizens of the plankton are found, and a large number of dead diatoms that do not need much cleaning. These are also kept in preservative, the recipe of which I found in a book. It is made up as follows:

Isopropyl Alcohol	50 cc
Acetic Acid, Glacial	5 cc
Formalin	10 cc
Water	35 cc

The phytoplankters are preserved simply. They are boiled in hydrochloric acid for some time to clean them. This is fine for most types of diatoms but the delicate ones such as *Chaetoceros* are usually destroyed by this treatment. There must be another way! Any hints to improve it will be welcome.

Scrutiny and Organization of Collected Diatoms

The diatoms are examined with a Wild phase-contrast microscope fitted with fluorite lenses (10, 20, 40, 100x). At times the microscope is fitted with a camera for work in both 2 1/4" x 2 1/4" and 35mm sizes. I use b/w and colour in both sizes. I prefer Ilford™ Pan F Film for b/w, and Ektachrome™ 50 for colour.

Cataloguing consists of contact-proofing the results of each roll of film on a single sheet of paper, and facing that with a page detailing each photograph as to genus, species, size, tow number, or anything else that occurs at the time. This is fine but it is extremely time-consuming if I need to find a particular diatom. To overcome this I am entering all my data into a data file program on a computer.

My present collection consists of three sections:

1. Over sixty sample bottles, labelled and catalogued according to time, place and meteorological conditions under which the tow was made.

2. Permanent micro-slides. These are also catalogued, with stage settings noted for noteworthy examples, so they may be found again if needed. These are also cross-indexed with photographic records.

3. Photographic record and index as noted above. The majority of photos are 2 1/4" x 2 1/4" b/w, followed by 35mm colour slides. I also have a fair number of 2 1/4" x 2 1/4"colour transparencies.

These activities have been very gratifying to me, of course, but there are areas that I would like to fill with more knowledge. For instance, I have never been able to make a successful permanent mount of delicate diatoms, such as *Chaetoceros*. They seem to be destroyed using my method, but I do not know of a better method.

I could use more help in the taxonomy of diatoms. I have discovered many genera/species that I cannot identify, and some that are one genus in one reference and a different genus in another. I am also of the opinion that most of the reference books are written for people that already know the answers, and that is really not much help. If I had enough years left, and I became an expert in identification, I would produce a book that would enable interested persons to find their way through all the different genera and species without too much trouble! The references I have at present are:

1. Cupp. *Marine Plankton Diatoms of the West Coast of North America.*

2. Gran and Angst. *Plankton Diatoms of Puget Sound.*

3. Brunel. *Le Phytoplancton de la Baie des Chaleurs.*

4. Rao and Lewin. *Benthic Marine Diatoms of False Bay, San Juan Island, Wash.*

5. Hyung Shim. *Distribution and Taxonomy in the Strait of Georgia, B.C.*

These have certainly proved useful, but just do not take me far enough... HELP, PLEASE!!!

I took one semester on marine biology with Dr. Littlepage, University of Victoria, but there were no details on diatoms. This seems to be the case with marine labs along the coast. Whenever I talk to professionals, they are not interested in the qualitative analyses of the plankton, only the total amount of chlorophyll available. When I ask about diatoms, the usual answer to me is, "Well, you know more about them than I do." Ah, woe is me!

What Should Happen to this Collection?

One thing that really concerns me is what should happen to this collection? Is it worth keeping? Should it go to a museum? I would appreciate any advice that readers would give me about this perplexing problem. The latest use of this collection has been supplying the provincial museum in Victoria with photographs of diatoms to serve as guides for model makers with reference to a new marine diorama that the museum is producing.

The use made of all this activity is mostly for my own pleasure and interest. I have, however, been asked on many occasions to give illustrated talks to various community groups, such as Rotary clubs, nature groups, and twice I appeared on public television. I am continually amazed at the interest shown by audiences. If you have ever given talks to a Rotary club, you know that if you are not finished by 1:25 p.m. you have lost the audience, for everyone leaves. On two occasions I have been kept up to twenty minutes overtime to answer questions. Once after a TV show, the Premier of British Columbia congratulated me!

Mr. Colby is retired from the B.C. Public Service where he was involved with the tourist business. He has written about this subject for Beautiful British Columbia. *In winter he lives in Victoria and in summer he lives in Campbell River, B.C.*

Cleaning a Mammalian Heart for Display Purposes

C. Romero-Sierra, J.K. Desmarteau, & K.C. Carlson

Department of Anatomy , Queen's University , Kingston , Ontario , K7L 3N6

C. Romero-Sierra, J.K. Desmarteau and K.C. Carlson. 1986. Cleaning a mammalian heart for display purposes. *Collection Forum*. 2(1):10-11.

Some steps in the preparation of biological specimens for museum display are very time-consuming and damaging, for example, the elimination of fatty tissue from visceral organs by curettage. A method of chemical degreasing has been explored and results indicate it is useful in shortening the time of cleaning beef hearts of their fat. Chloroform had a harsher effect on the fat than did acetone.

The potentials for improving the methods of preservation of museum specimens are great (Romero-Sierra and Webb 1983). Traditional methods of removing the peripheral endogenous lipid during the preparation of anatomical specimens for display and teaching involves a considerable amount of time-consuming, manual dissection. Other workers have described the efficiency of chemical solvents in degreasing insects and bones of vertebrates (Wagstaffe and Fidler 1955, 1968, Anderson 1965, McKillop and Preston 1983). This study investigates the feasibility of chemical dissection using organic solvents; it attempts to simplify the method of degreasing visceral specimens as well as avoiding inherent errors in manual dissection.

Materials and Methods

Beef hearts were chosen as specimens for experimentation. Their coronary arteries and veins were first injected with red and blue latex, respectively. The visceral epicardium was first removed by manual dissection. Each heart was placed in a 4-litre beaker placed over a standard steam bath and covered with 2 to 3 litres of solvent (Fig. 1). A plastic seal was placed on the lip of the beaker over which a large glass funnel was inverted and clamped tight. A large water-cooled reflux condenser was attached to the funnel outlet. The temperature of the steam bath was adjusted so that the solvent was kept just at the boiling point.

Acetone and chloroform were tested as organic solvents. All experimentation with these solvents was conducted within a fume cabinet. Several hearts were boiled in acetone for 4 hours. Four changes of acetone were made to insure satisfactory chemical reaction. The used solvent was distilled for reuse.

Other hearts were treated in the same manner except that chloroform was used as the solvent.

Results and Conclusions

In the acetone treatment most of the peripheral endogenous lipid was removed from the heart in 4 hours. The remainder could be dissected away readily and quickly. The injected latex was not damaged. The beef hearts took on a rubbery texture and lost all red colouration, leaving them a light brown colour.

Chloroform had a harsher effect on the lipid than did acetone but produced a better specimen in less than 4 hours. The same rubbery texture was obtained as with the acetone. The injected latex, however, was appreciably damaged.

Treatment with acetone took longer than with chloroform and produced an inferior specimen in a comparison between the two. However, acetone left the injected latex intact. Of these two chemicals, chloroform seems to constitute the superior choice. The remaining problem rests in finding an appropriate injection substance in replacement of latex.

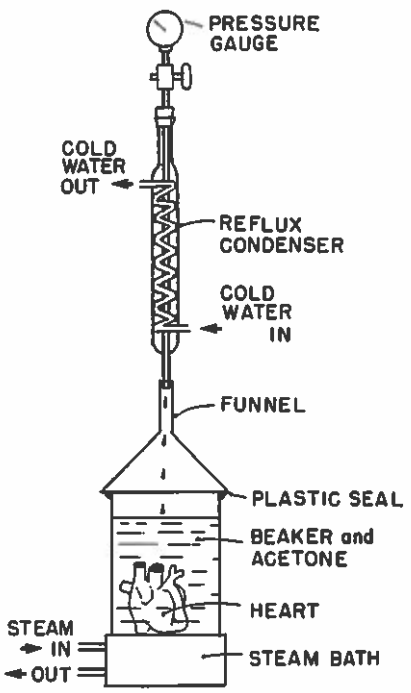


Fig. 1. Apparatus used to chemically dissect a mammalian heart with acetone and chloroform.

1. formerly affiliated with Department of Anatomy, Queen's University.

Both chemical methods offer better results in terms of time saving and quality of product than ordinary manual dissection methods. The greatest advantage offered by chemical dissection is by far the saving in time. A proficient manual dissector can produce a treated heart specimen in approximately 14 hours, whereas chemical dissection takes about 4 hours. Of significance is the fact that the most careful of manual dissection cannot avoid small curettage marks near the major vessels. Chemical dissection avoids all such blemishes.

The usefulness of other solvents for these techniques should be explored as well as the possibility of using a lipase. The use of a closed cycle process should also be investigated.

Acknowledgement

This program has been supported by the National Research Council of Canada.

References

Anderson, R. M. 1965. Methods of collecting and preserving vertebrate animals. Fourth Edition. National Museum of Canada, Bulletin No. 69, Biological Series No. 18.

McKillop, W. B., and W. B. Preston, 1983. Vapour degreasing. A new technique for degreasing and cleaning entomological specimens. *In* Proceedings of 1981 Workshop on Care and Maintenance of Natural History Collections, edited by D. J. Faber, *Syllogeus* No. 44:43.

Romero-Sierra, C. and J. C. Webb, 1983. The potentials of diatirology. *In* Proceedings of 1981 Workshop on Care and Maintenance of Natural History Collections, edited by D. J. Faber, *Syllogeus* No. 44:21-28.

Wagstaffe, R. and J. H. Fidler, Eds., 1955. The preservation of natural history specimens, Vol. 1. H. F. & G. Witherby Ltd., London, England.

Wagstaffe, R. and J. H. Fidler, Eds., 1968. The preservation of natural history specimens, Vol. 11. H. F. & G. Witherby Ltd., London, England.

News and Reviews

Meetings

Theriological Congresses

The last two meetings of the International Theriological Congress have produced a series of papers concerning mammal collections. Several papers are applicable to other natural history disciplines. The first workshop on mammalogical museum collections was held in 1982 at the Third International Theriological Congress in Helsinki, Finland. The proceedings of this workshop were recently published, *Acta Zoologica Fennica* No. 170 (1985). Titles and authors for the 20 papers published include:

H.H. Genoways and D.A. Schlitter. Survey of the Recent Mammal Collections of the World.

R.M. Wetzel. Geographic areas of the Neotropics poorly represented in mammal research collections.

D.A. Schlitter and M.J. Delany. Geographic areas of Africa poorly represented in mammal research collections.

J.M. Dixon. Geographic areas of Australia poorly represented in mammal research collections.

O.L. Rossolimo. Mammal collections of the USSR and geographic areas of the country poorly represented in mammal research collections.

B.L. Lim. Geographic areas of Southeast Asia poorly represented in mammal research collections.

C.M. Yang and L.M. Chou. The mammal collection of the Zoological Reference Collection, National University of Singapore.

M.A. Mares. Mammal and museum literature: an international survey.

S. Anderson. Developments in information retrieval systems.

G.L. Kirkland and J.W. Koeppl. Status of information retrieval in mammalogical collections.

C.G. Coetzee. The influence of preservatives on coat color of small mammals.

L. Contoli and Assoc. Ter. Romana. Romana: The problems of a collection of owl pellet skulls.

S.L. Williams, H.H. Genoways and D.A. Schlitter. Control of insect pests in Recent mammal collections.

M.L. Johnson and E. Kritzman. Vapona for pest control in a museum, 1964-1982.

E.M. Jones. Mammal collection in the National Museum, Bulawayo, Zimbabwe, and its storage.

T.L. Yates. The role of voucher specimens in mammal collections: characterization and funding responsibilities.

C.A. Woods. Mammal collections for the study of osteology and myology.

C.J. Phillips. Field fixation and storage of museum tissue collections suitable for electron microscopy.

R.J. Baker and M. Haiduk. Collections of tissue cultured cells lines suspended by freezing.

O.L. Rossolimo. International exchange of scientific specimens of Recent mammals.

Steve Williams
Carnegie Museum of Natural History

Meeting of Canadian Atlantic Region Curators

The Atlantic Society of Fish and Wildlife Biologists (ASFWB) held their 1985 annual meeting and conference at Fundy National Park, New Brunswick, 23-25 September. A variety of papers were presented in the areas of salmon and wildlife management and forestry practices and for the first year a session was devoted entirely to natural history museums and museum research. While most of the ASFWB memberships is concerned largely with game species of fish and wildlife, the gathering provided an excellent opportunity for some of the few collection managers and curators in the Atlantic region to meet with others and to interact with other members of the scientific community. The ASFWB meeting has also proven a fruitful opportunity for securing committments from field workers to provide specimens for collections. Below are abstracts of the three papers presented in the museum session.

Introduced Moths and Butterflies in the Maritimes

Barry Wright, Nova Scotia Museum, Halifax

A wide selection of introduced moths and butterflies will be illustrated and discussed. Being introduced, most are pests or potential pests. Many species reaching North America for the first time have been recorded from the Maritime Provinces. The role of parasites, predators and diseases will be touched upon with reference to the species becoming established on this continent. Some introduced species are beneficial, the Cinnabar Moth in controlling Ragwort (Stinking Willie) and the Sweet Clover Casebearer on Sweet Clover.

A Flexible Computer System for Management of Small Natural History Collections

Fred W. Scott, Nova Scotia Museum, Halifax

The Natural History Section of the Nova Scotia Museum presently uses an Apple III computer and the integrated software package called III E-Z Pieces™ for a variety of information management tasks. The identical version of this programme for the Apple IIe and IIc is called AppleWorks™. The database permits 30 data fields per record and more than 80 characters per field. Numeric fields can be totalled or calculated. All fields are variable length, so no empty spaces are stored. Screen and printer output is completely flexible. Files are manipulated in RAM; thus file length is limited to a maximum of 55K, but sorting and searching is extremely fast (a 48K file of 1000 mailing label-sized records sorted alphabetically in 12 seconds). Searching is possible on up to three criteria simultaneously. The spreadsheet is well suited to storage of largely numeric data, particularly if it is to be manipulated mathematically. Both functions can exchange data with each other as well as with the word processor function. The entire system is menu-driven and extremely easy to learn. Examples are given of specific applications in various Nova Scotia Museum natural history collections or files.

The Atlantic Reference Centre of the Huntsman Marine Lab, St. Andrews, NB

L. Van Guelpen and D.F. Markle, Huntsman Marine Laboratory, St. Andrews

The Atlantic Reference Centre (ARC) resulted from a union of the Identification (ID) Centre of the St. Andrews Biological Station (Department of Fisheries and Oceans - DFO) and the Huntsman Marine Laboratory (HML) Ichthyoplankton Laboratory. The ID Centre was established in 1972 to consolidate scattered collections and taxonomic expertise at the Biological Station. Beginning in 1976 the HML negotiated a series of DFO contracts to sort, identify, and curate collections of its massive Scotian Shelf Ichthyoplankton Program. Also, under these contracts, research programs were developed at the HML in fish taxonomy and curatorial practices. The ID Centre and the HML Ichthyoplankton Laboratory consolidated in 1984 to form the ARC. The curatorial staff are HML employees and the facilities are at the St. Andrews Biological Station. The diverse ARC collections (over 108,000 catalogued species lots) contain a high proportion of the known fauna of the Bay of Fundy and Scotian Shelf. The ichthyoplankton collection is the largest in Canada. All specimens are available on loan to interested scientists. Facilities are available for visitors which are encouraged to come and utilize the collections. In the future the collection will continue to represent the North Atlantic fauna and is available as a repository both for taxonomic and habitat or ecological studies. A major role of ARC staff involves identification and training services to DFO staff and contracted consulting firms throughout the Atlantic provinces, as well as requests by universities and the public for identifications or information. Staff research is centered on the collections and concerns curatorial methodology, taxonomy, systematics and zoogeography.

The above information provided by:

Don McAlpine
New Brunswick Museum

Miscellany

Reorganization of Paleontology Collection

In 1983, the Department of Geology of the University of Iowa was awarded a National Science Foundation grant for three years to reorganize and renovate the invertebrate paleontology collection. The fossil collection which includes invertebrates, vertebrates and plants, dates from the Iowa natural history and geological surveys of the mid-1850's. Invertebrates make-up approximately 80% of the total fossil collection. The aims of the project are: (1) to catalogue and verify the type collection, (2) to reorganize and catalogue the general collection and, (3) to create a data base of specimen information for collections management and research.

We are in the beginning of the third year of the grant. The type collection, over 10,000 specimens, (except the conodonts, approximately 3,500 specimens) has been verified. About one-half of the specimen records have been entered, the others are awaiting entry. New metal dust-proof cabinets have been installed and the general collection has been completely reorganized. The stratigraphic collection will be reorganized during this final year.

The most significant parts of the invertebrate paleontology collection are Paleozoic ammonoids, echinoderms, conodonts and fusulinids. The cephalopod collection has more than 61,000 catalogued specimens. Paleozoic echinoderms, the second most extensive collection, contains specimens collected by Calvin, Thomas, Laudon, Springer and Strimple. The conodont collection was started in the 1930's and over 1 million specimens are maintained on faunal slides. In 1973, the M.L. Thompson collection of fusulinids was donated to the University. The collection of thin sections numbers over 15,000 glass slides, more than half of which are type specimens. Other collections include: Paleozoic (Ordovician - Devonian) brachiopods, Paleozoic (Silurian and Devonian) corals, and extensive Paleozoic invertebrates from Iowa collected by Calvin, Belanski, Ladd, Thomas, Kay, Laudon, Stainbrook, Strimple and Springer.

A program of visiting specialists has been initiated. During 1986, several researchers, including Ph.D. candidates, may spend several days up to two weeks at the University to help us to evaluate and identify parts of the general collection. This type of coordinated activity is beneficial to both the specialist and the University. Visitors benefit by being provided an opportunity to examine the collection for specimens to supplement their research; the University benefits by having a well-identified collection. A modest consultant fee and transportation expenses will be provided. Anyone interested in participating in this program, please contact me.

Julia Golden
University of Iowa

Survey of Natural History Collections in New Brunswick

Since 1982 The New Brunswick Museum has been upgrading its storage facilities and improving the curation of its natural history collections. With this programme as the impetus, a survey of natural history collections in New Brunswick was undertaken in 1984-85. This survey was intended to provide an assessment of the size and scope of the New Brunswick Museum collections in relation to other natural history collections within the province. It was also anticipated that the information would prove useful to any researcher concerned with locating collections of specific taxa or selecting a suitable institution for the deposition of significant collections. The goal was to identify all significant natural history collections in New Brunswick. Significant natural history collections were defined as those collections composed of 1000 specimens (or lots), or smaller collections considered significant because they contained important distributional records, type materials, or specimens of historical importance. The survey was concerned with collections that were assembled for research purposes. Small collections assembled strictly for teaching purposes have been excluded, unless they fulfilled one or more of the criteria, as noted above.

The survey revealed twelve institutions or agencies and eight private individuals in New Brunswick maintaining what are considered 42 discreet collections of approximately 407,000 natural history specimens (lots counted as single specimens). Most of the material is of New Brunswick origin, but 76% (32) of the collections were reported to contain some material from outside the province, usually from adjacent provinces or states. As well, 21% (9) of the collections reported holdings from outside North America with five (5) of these collections being housed at The New Brunswick Museum. Collections ranged in number of specimens or lots from 50-106,000. 24.8% (101,000)

and 22.6% (92,000) of the material were in the areas of geology/paleontology and entomology, respectively. Few of the agencies which hold these collections have staff positions designated within collections management. In spite of the fact that nearly one quarter of the natural history specimens in the collections are geological, no institution or agency in New Brunswick has a geological curator on staff.

Those who would like to receive a copy of the survey report, when published, should write to the Editor of the *New Brunswick Museum Publications in Natural Science*.

Don McAlpine
New Brunswick Museum

Survey of Avian Remains

I am building a data base of the archaeological literature reporting avian osteological remains found in sites of the Midwest and Plains. The data base will be computerized and the sources keyed by family, genus and species of the birds identified, in addition to location, dates and cultural affiliation of the sites. I am interested in knowing if anyone is currently working on a similar project. I am also interested in suggestions for imporving the project. Correspondence will be welcomed and appreciated. Contact: John Cordell, Office of the State Archaeologist, Eastlawn Building, University of Iowa, Iowa City, Iowa 52242.

Survey of Collections Being Moved

The Smithsonian Institution's Museum Support Center is compiling information about museums and universities that have moved their collections, as information for other institutions facing the same nightmare. Write Ms. Andrews at the Center or telephone (202) 287-3673, if you would like to participate in the survey or if you would like to receive the finished compendium.

The above two notices were provided by:

Julia Golden
University of Iowa

Financial Assistance Programmes for Canadian Institutions

The Museum Assistance Programmes are part of the National Museums of Canada. They provide financial and technical assistance to qualified museums, art galleries, exhibition centres, related associations and other non-profit institutions. These objectives are geared to increase access to our natural, cultural and technological heritage as represented in collections across Canada, and to ensure that these collections are preserved for the benefit of future generations. Financial assistance is available to qualified Canadian institutions under nine programmes:

1. Associate Museums
2. National Exhibition Centres
3. Specialized Museums
4. Conservation Assistance
5. Exhibitions Assistance
6. Registration Assistance
7. Special Activities Assistance
8. Training Assistance
9. Upgrading and Equipment Assistance

For information about the various Programmes or application dates, please write or call and direct your request to (613) 996-8504, the Regional Coordinator for your province.

Museum Assistance Programmes
National Museums of Canada
219 Argyle Ave.
Ottawa, Ontario K1A 0M8

Susan Murdock
Museums Assistance Programmes

75th Anniversary of the Victoria Memorial Museum Building

1986 is the 75th Anniversary of the Victoria Memorial Museum building in Ottawa, Ontario. The building was named in honour of Queen Victoria, who chose Ottawa as the Capital of Canada.

On 30 June, 1798, lot "F" in Concession C of Nepean Township was granted to William Fraser, son of Captain Thomas Fraser, an Empire Loyalist from the United States. In 1834 William Stewart, who immigrated to Canada in 1816 from the Isle of Skye, Scotland, purchased this lot from William Fraser. He paid 300 £ for the lot and 10 £ to have it surveyed. In 1868 Catherine Stewart, William's widow, built a large house on the lot and named it "Appin Place" after her Scottish ancestry homestead. Stewarton, the small rural village of 400 people in which "Appin Place" was located, was annexed to Ottawa in January, 1889. "Appin Place" and the surrounding land was sold in 1902 for $73,000; it was torn down in 1905 to make way for the Victoria Memorial Museum building. Mr. David Ewert, an Ottawa architect, designed the building to be structurally compatible with the Royal Canadian Mint building which he had previously designed. The cost of construction was $1,250,000. The Museum building was designed to house the collections and staff of the Geological Survey of Canada started by Sir William Logan.

The Victoria Memorial Museum building was officially opened in 1911. Since then this castle-like structure has been an Ottawa landmark and national focus for three generations of museum visitors.

When the Parliament Buildings were destroyed by fire in 1916, the members of Parliament met daily in the Museum building for four years. Over the years many changes have occurred- one was the moving of the large boulder which rested outside the building for many years; it had been placed there in 1913 to commemorate the 100th anniversary of the Geological Survey. The original building had a striking turreted tower, but unfortunately it was erected on soil having poor support qualities. The front section began to sink and by 1915 it was leaning over far enough to cause concern that the tower might collapse; it was subsequently removed.

From 1920 to 1960 the building housed the Geological Survey of Canada, the National Gallery and the developing and growing Natural History Museum. The National Museums Act of 1968 created four National Museums and two were to be housed there. The Victoria Memorial Museum building was closed to the public from 1971-75 while extensive internal alterations were made. Today the National Museum of Natural Sciences is housed in the east half of the building and the National Museum of Man in the west half. (John and Judy Burns, personal communications).

Joanne Faber
Ottawa, Ontario

Reviews

Recent Publications in Natural History

A bibliographical publication which should be of interest to all of us was first published in 1983. It is named *Recent Publications in Natural History*. Volume 4 will be published in 1986. The Editor, Bryan R. Johnson, stated in Vol. 3, No. 3, September 1985, that *"Recent Publications in Natural History* (RPINH), published quarterly, is a bibliography of scholarly and general works, recently published in the United States and abroad by commercial publishers, universities and scientific institutions. The listings are arranged alphabetically by main entry within broad subject categories, with cross-references for those which deal with multiple subjects. In addition, RPINH includes full-length reviews of books of particular interest."

RPINH is published by Department of Library Services, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024. Subscriptions are $10.00 (U.S.) and $3.00 extra outside the U.S.A. and Canada. The broad categories that were included in Volume 3 include the following: Anatomy and Ultrastructure, Anthropology and Archaeology, Astronomy, Botany, Classification and Systematics, Earth Sciences, Ecology and Conservation, Embryology and Genetics, Entomology and Arachnology, Ethology, Evolution, General Works, Herpetology, History and Philosophy of Science, Ichthyology, Invertebrate Zoology, Mammology, Marine Science, Mathematics and Statistics, Museology, Ornithology, Paleontology, Physiology and Biochemistry, and Reference.

It is nice to see several cultural agencies working together to produce this useful publication. D.J.F.

Supplies and Equipment

How Compactors Help to Give Collections Managers Control

High-density mobile storage systems (compactors) are a matter of space economics. They can store twice as much material in a given space- or require only half the floor space of stationary shelving, racks or cabinets. Compactors enable museums to expand their collections without additional construction, or they can lead to substantial savings in floor space and costs for new construction.

But for collections managers or curators there are even greater benefits. Anyone who has to manage a collection in scattered locations stored on a variety of shelves, racks and cabinets knows the problems of security, control, protection, organization and work efficiency. Mobile storage systems, by enabling collections to be consolidated in one place, provide greater security and control, enhance preservation and conservation, and enable individual curators to organize and work with all of their collections. To cite one example: The University of Alaska Museum in Fairbanks was actually designed around an environmentally controlled Spacesaver high-density mobile system with six modules. Modules are independently fitted with housings and storage containers appropriate to the specific needs of the archaeology, paleontology, herbarium, aquatic biology, ornithology, mammalogy, and ethnology collections. For ease of access the offices of the curators are located immediately opposite the modules. In addition, each module locks individually, giving curators independent access and control of their collections.

Formerly the collections were situated at eleven scattered locations without environmental controls. The Spacesaver system enabled the building construction budget to be cut from $8 million to $6 million and still provide for all the current collections along with an anticipated five-year growth.

Case studies on this and other installations are presented in a full-color illustrated report entitled "A Guide to Spacesaver High-Density Mobile Storage Systems for Museums & Archival Collections." For report copies and other information contact:

G. Brooke Ferris or
Spacesaver Mobile Systems
7027 Fir Tree Drive
Mississauga, ON L5S 1J7
Tel. (416) 671-0391

David Fenner
Spacesaver Corp.
1450 Janesville Avenue
Fort Atkinson, WI 53538
Tel. (414) 635-6362

Society Business

Letters

Message From Pro Temp Chairperson

Progress in creating this Society has been slow but sure. The first issue of *Collection Forum* (Vol. 1, No. 1) was produced and distributed in October 1985. The Organizing Committee met together at the Buffalo Museum of Science in November 1985. A nomination form was distributed in November, but a ballot was *not* prepared. Comments to me indicated that Charter Members did not know one another well enough and probably there were not enough qualified members to do the job. Consequently, a meeting has been organized in Washington D.C. where a directory of members will be distributed and where we can meet one another socially. A ballot will be distributed in July, 1986, to vote-in the first Executive Committee.

I invite everyone interested in this field of endeavour to come to our first Annual Meeting on 10 June, 1986, at the Smithsonian Institution. We will spend the afternoon freely discussing various aspects of this Society, ie., publications, annual meetings, officers, membership, bylaws, etc. Any institution, which would like to host our Annual Meeting in 1987, should present at that time a ten-minute slide presentation of their institute and surrounding environs. We can vote for a site during the mail ballot in July. This Society is member-driven so our activities will be created and carried out by members.

Several interested persons have come forward already to offer their time and abilities. Shirley Albright has agreed to chair the Membership and Directory Committee so questions or comments about this subject should be directed to Trenton. Fred Collier has agreed to chair the Meeting and Conference Committee for this year; he will host our 1986 annual meeting at the Smithsonian, so any questions about that should be directed to Washington DC. Cesar Romero-Sierra has agreed to chair the Bylaws Committee so we can continue to develop our Society. Send any queries about bylaws to Kingston. I have volunteered to chair the Publications Committee and take on editorship of *Collection Forum*, so any questions or contributions in that area should be directed to Ottawa. Joanne Faber has temporarily accepted the responsibilities of Treasurer.

Daniel J. Faber
National Museum of Natural Sciences

Problems in Creating an International Society

Last May I was one of those who had envisioned the Society, in its early stages at least, as a relatively small group which would communicate regularly through a newsletter and which would meet formally only every couple of years. It seemed at the time, to me, to be the easiest way to get the new organization on its feet. The Organizing Committee, as I have judged from the latest mailing, apparently prefers to think big and is working towards an international membership, eventual publication of a journal, and annual meetings. I'm glad to see this; my initial reaction, I now believe, was too conservative! If we want an organization to represent us, an organization which will provide help and useful information, we should strive for one that is professional and broad-in-scope.

I believe it is very important that those of us at the Toronto workshop (May, 1985) and others who supported this new Society's founding continue to show our support by providing feedback. The Organizing Committee cannot be expected to make decisions on the direction of the Society without input from other potential members. By the same token, the Organizing Committee, and eventually the executive, must keep Society members informed.

What has the Organizing Committee accomplished to date? An election-by-mail of Society officers was scheduled for December. Was this postponed or did the Committee instead make selections from the nominations which were mailed in? How was the site of this year's SPNHC meeting chosen? I would like to know what problems have been encountered and where committee members have disagreed? Perhaps Society members could give these problems or points of disagreement some thought and provide feedback. I hope any remaining organizational issues can be resolved at the June SPNHC meeting.

I was aware that two institutions, the Redpath Museum and Simon Fraser University, had offered to host the SPNHC meeting this year. I was ready to give my vote to the latter when it was announced that the Smithsonian Institution was to be the site of the 1986 meeting. I was a little surprised and disappointed that the Society was again meeting "down east"; however, since the Society had its beginnings in the east and since the desire is to make it an international organization, the choice of the Smithsonian is a logical one. May I suggest, then, that next year we meet somewhere "out west."

As a relative newcomer to natural history collections management, I assumed all the difficulties that I encountered, ie., obtaining information on procedures, suppliers, new products, etc., were the result of my lack of experience. Comments from those attending the Toronto workshop and letters published in the first *Collection Forum* have shown me that others share my frustrations. Information simply is not easily available. This situation, I hope, will soon be remedied now that SPNHC has been established.

I appreciate having the opportunity to express my opinions and I will close by encouraging others to get involved in the Society.

Margaret Ballantyne
Provincial Museum of Alberta

The Organizing Committee decided on the name of the Society and the cost to join the Society. They also gave moral support to continue to carry on. The election has been delayed because of apathy and because Charter Members did not know one another well enough. A membership directory will be available at Washington, DC in June 1986, which will allow us to learn more about each other. An election will take place a few weeks after the meeting. The Smithsonian was selected for this year's SPNHC annual meeting because Fred Collier was the only person who gave us a firm offer of rooms and a date on which to hold it. Anyone who wishes to host our 1987 Annual meeting should give a 10-minute slide presentation at the Washington meeting.

Information about suppliers, etc. will not easily be solved. There are country and continental differences and we urgently need a committee to bring these problems to the surface. Will you volunteer to put together a "catalogue" of suppliers"?

Computers, Computers, Computers

The new Society for the Preservation of Natural History Collections has been formed, in part, to determine the extent of natural history collections, the requirements for collections management, and to exchange this information through publications and meetings. Among the proposed committees to carry out these objectives is one for Computers. This creates a small conundrum because any computer is a tool. As the technology has become available, the use of the computer has expanded to impact every aspect of collecting institutions. Thus every committee on the proposed list may be able to contribute information on particular uses of computers in their specialized area of interest.

Computers have proved useful for word processing, statistical analyses, plotting of maps, exhibit planning, quarterly and annual reports, research, bibliographic listings, gift shops, and even for interactive exhibits in galleries. The Canadian Heritage Information Network (CHIN), has found that the computer, used as a tool for collections management, can increase efficiency and accuracy in cataloguing, updating information, and retrieving data.

CHIN is developing a national inventory to serve as an index of museum collections across Canada. A series of reference data bases are also being developed at CHIN. However, many collections belonging to institutions and regional networks outside of CHIN's network are also being automated. In the interest of promoting the exchange of automated data, it would be advantageous for each institution to create systems compatible with others, and yet to maintain their individual goals.

If someone within our Society could collect information on what computer systems are in use and how successful users rate them, it would allow members to judge which system will best suit their needs. Solutions to the perennial problems of funding, lack of staff, data-entry backlogs, and apathetic administrators may be found through discussion with colleagues. Ideas about hardware, software and data communications could be exchanged for the benefit of all. It might be useful to members to exchange information on existing data bases and software applications.

Members of the Society for the Preservation of Natural History Collections may be able to assist with these projects by submitting their ideas to a Computer Committee of the Society.

Merridy Cox
Canadian Heritage Inform. Network

Will you chair our Computer Committee and begin the survey that you have suggested? Other members that are interested in assisting Ms. Cox, please write directly to her. She needs help with letter writing and creating a survey-form. Good luck and report your progress at the Annual Meeting in Washington D.C. in June, 1986.

Membership Categories

I have a question about memberships. Will there be an institutional category so that a museum or university may join and perhaps choose one delegate? I think such a system might work and the SPNHC would gain members.

Julia Golden
University of Iowa

The activities of our Society will be determined by its members. An institutional membership will be more expensive than an individual membership.

Things To Get Involved In

One of the things our Society should be interested in is "orphaned" collections. A problem Canadian institutions may not have as much as U.S. institutions. In the August newsletter of the Association of Systematic Collections, Dr. R. West, Director of the Carnegie Museum of Natural History, proposed a conference on the topic and asked for interested people to contact him.

I think a newsletter or magazine is a great idea - a place for short articles, presentations of new or unusual techniques, announcements, etc. How about a "Help" column? A place where one can ask "Is there anyone out there doing this or using that?"

Julia Golden
University of Iowa

See the article by Gordon Gill on an orphan collection of insects. Let's hear about others! How can anything be done unless they are documented? Anyone want to manage a "Help" column?

Support for our Society

Currently there is no single organization addressing the needs of natural science collections on an interdisciplinary and international level. This is a decided problem when the sciences must compete against the well-organized arts community for public attention and funding. Natural history collections must present concerted proposals concerning their future needs in order to survive.

Aside from the ability to present a united front in bringing the problems of natural science collections to the public, an organization of this type would permit an internal dialogue among the natural sciences. There are common problems, perhaps by acting together and sharing information, we could find solutions beneficial to all of us.

The specific problems of one particular science can be handled through a committee within the organization. However, I strongly favor publications that reach all members of the Society and a newsletter would be excellent for keeping everyone informed of the activities of each group. In addition, the organization should aim towards the creation and publication of a journal. The lack of a single forum for the special interests of natural history collections means that it is now difficult to publish on topics pertinent to the needs of these collections. A journal carrying reviewed analyses on subjects such as ethics, preservation, storage design, etc., would fill a real void in the literature of the natural sciences.

Catherine A. Hawks
Washington, DC

Organizing Committee Meeting

On the 6th of November, 1985 THE SEVEN met at the Buffalo Museum of Science. They were: Dan Faber, Ottawa, Ontario (Chairperson); Shirley Albright, Trenton, New Jersey; Dick Laub, Buffalo, New York; Cesar Romero-Sierra, Kingston, Ontario; Carolyn Rose, Washington DC; Wynn Watson, Waterloo, Ontario; and Steve Williams, Pittsburgh, Pennsylvania. We arrived at 9 AM and immediately sat down to work at a large table. We agreed that the name should be the Society for the Preservation of Natural History Collections. We also agreed that the cost to join should be $15. Canadian currency. We did not agree on the structure of the Society. Some wanted a member-driven society while others wanted a Board of Directors (or Advisors) to decide in which directions to direct our efforts. Everyone agreed that there was a need for a natural history collection organization and that efforts should be made to "set it in motion".

We thank Dick Laub for hosting our meeting and providing us an opportunity to tour through the Museum. D.J.F.

Lunch-break at the Buffalo Museum of Science with the Museum's Director. Clockwise: Steve Williams, Dan Faber, Cesar Romero-Sierra (hidden), Dick Laub, Wynn Watson, Shirley Albright, Carolyn Rose, and C.E. Roth (on right).

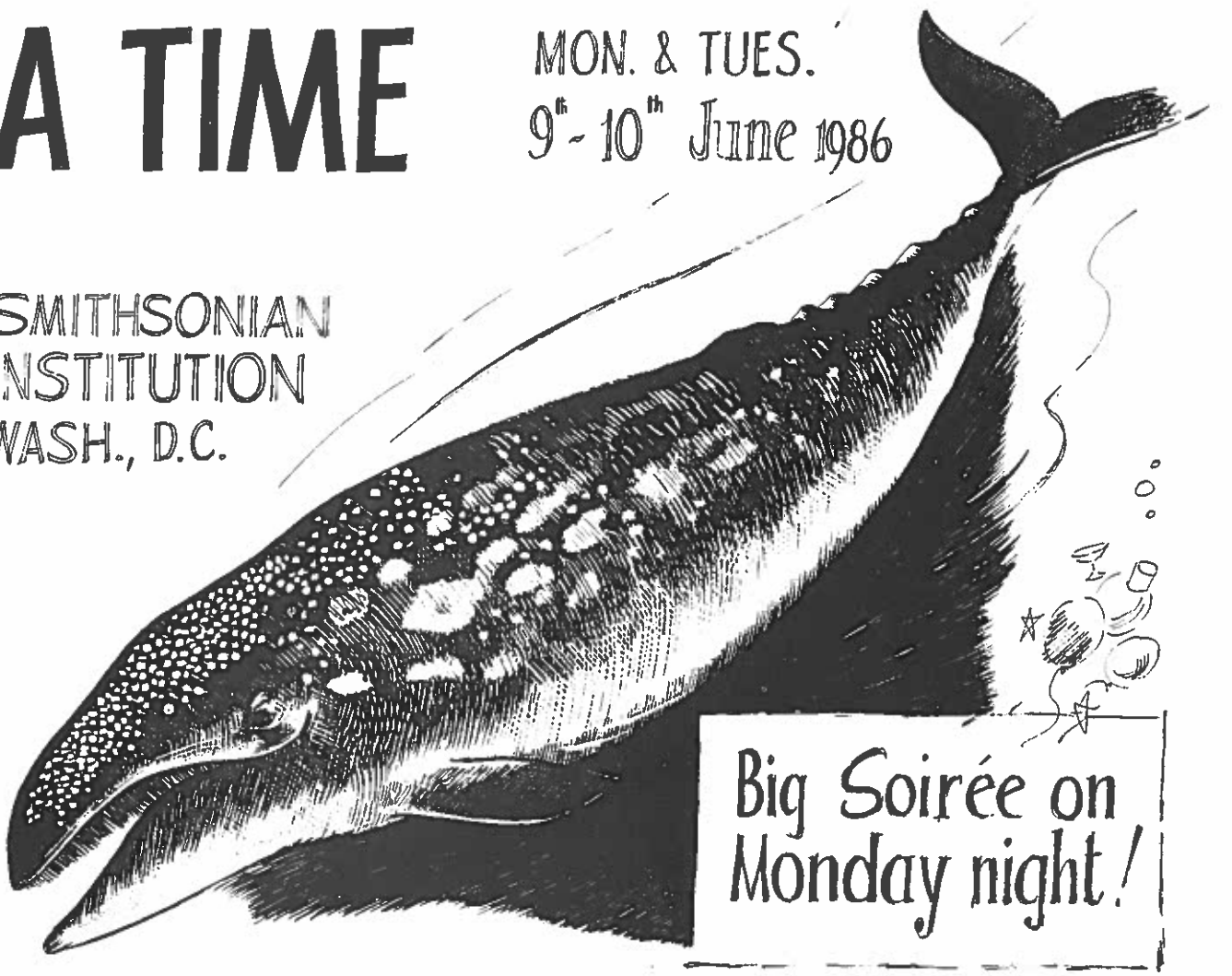
Annual Meeting in Washington D.C.

The first Annual Meeting of the Society for the Preservation of Natural History Collections will be held at the Smithsonian in Washington DC. On Sunday evening an "ice breaker" will be held. Monday morning, Monday afternoon and Tuesday morning will be devoted to formal presentations and small workshops. On Monday evening there will be an informal Soiree-hopefully with some entertainment and dancing. The Annual Business Meeting, which will be open to non-members, will be held on Tuesday afternoon. An open discussion on the pro's and con's of such gatherings will take place, along with lots of Society business. Fred Collier will be hosting our first Annual Meeting. See inside back cover for information. See you there! D.J.F.

COME AND HAVE A WHALE OF A TIME

MON. & TUES.
9th - 10th June 1986

SMITHSONIAN
INSTITUTION
WASH., D.C.



Big Soirée on Monday night!