



# Bulletin of the MPE

## Montreal : a sea of fossils

*Exhibition held this fall at the Centre Culturel Georges Vanier*



Guests listening to introductory words by our vice president during the official inauguration of the temporary exhibition "Montreal: a sea of fossils"

**A warm, shallow, clear, tropical sea, without winter, here in Montreal? And also, without sharks? You must be kidding! Well, no! Those of you who had the opportunity to visit the exhibition "Montreal: a sea of fossils" know that such a thing existed, barely a few geological periods ago. From October 3 to December 18, 2011, thanks to our own fossils and to beautiful specimens lent by friends of the MPE, 1200 people were able to relive these heavenly times: all of the Ordovician and some of the Cambrian of the Montreal area. In the context of the exhibition, we have adopted a broad definition of the "Montreal area:" it extended from Anticosti to Manitoba. This was the northern continental shelf of the former Iapetus Ocean.**

If you remember the bulletin of June 6th, 2011, the whole story began when Ms. Julie Émond, then director of the Georges Vanier Cultural Center and thus a member of the Table des Acteurs culturels du Sud-Ouest, invited us to present an exhibition on fossils in a room at the Center, for which we thank her.

Once the outline of the show had been set, we had to borrow specimens. Almost all the museums and private collectors we approached lent us, without hesitation, all the fossils that we asked for (when they had them) and even tried to loan us more. Furthermore, some specimens that were loaned were subsequently given to us. You can see the list of contributors in the box on the next page.



The design took much longer than expected, probably because we tried to do too much. Initially, we wanted to be very short with respect to the introduction and the St. Lawrence Lowlands stratigraphy, but we ended up building a series of modules on these topics, which turned out to be an occasion to show even more fossils. The texts were not completed and the choice of figures decided until mid-August. Then we had to polish.

The thousands of photos of fossils taken during the last year and a half and inserted into the Museum's computerized database were very useful for selecting specimens for exhibition. We were able to compose life-size montages of all the modules of the exhibition in the Adobe Illustrator graphic design software, which helped us plan the tables quickly and accurately.

The month of September was completely mad. We had to build and assemble all the modules prior to October 3. Several members and friends of the museum came, and under the leadership of a somewhat stressed Mario, everything was done. When the exhibition opened, on the morning of October 3, it was almost presentable, but it took another week to get everything fully set up.

- The following persons and organizations have loaned us fossils:
- At the Geological Survey of Canada:  
Paul Copper and Jean Dougherty
  - At the Musée québécois de culture populaire:  
Guy Coutu
  - At the Musée René-Bureau of Laval University:  
André Lévesque
  - At the Royal Ontario Museum:  
Janet Waddington, David Rudkin  
and Jean-Bernard Caron
  - And the following independent collectors:
    - Pierre Groulx
    - Jean-Pierre Guilbault
    - François Habets
    - Philippe Joyal
    - Mario Lacelle
    - Michel Montpetit



We wish to thank everyone who gave a helping hand for building the exhibition modules. Here are a few on these photos. Top left: Isabelle Ruiz and Sergio Mayor sanding the furniture. In the upper right: Sergio Mayor posing proudly in front of a module; bottom: Victoria Cournoyer (left) and Stéphane Perron (right) painting the cabinets.





This excludes, however, the Daveluyville whale: it was installed later, being off-topic. This was welcomed as it allowed making additional space for visitors to the official opening, which took place October 11 at 5 PM.

The official opening was in itself an epic adventure, because we had underestimated the time needed for its preparation. Finally, the event was a success by all accounts according to the participants, despite the absence of alcohol (replaced with sparkling apple juice). We had about 50 participants, more than expected. The federal MP, Mr. Tyrone Benskin and the borough mayor, Mr. Benoit Dorais, were present. The provincial MNA and Minister of Family and Seniors, Ms. Marguerite Blais, was represented by her political aide, Ms. Marie-Josée Mastromonaco. We enjoyed the visit of professors Michel Bouchard (Environment, McGill University) and Michelle Drapeau (Anthropology, U. of Montreal), of Ms. Madeleine Poulin, president of the Table des acteurs culturels du Sud-Ouest, of Mr. Georges Brossard, initiator of the Montreal Insectarium, and of Mr. Gilles Chatel of Chatel Foods. The Caisse populaire Atwater-Centre, the Archaeological Museum of Pointe-du-Buisson and the Montreal Mineralogy Club were represented. The newspaper La Voix Pop sent its photographer.

The exhibition was open 6 days a week. There was an animator present at all times. The following acted as animator: Mario Cournoyer, Fannie Dubois, Sergio Mayor, Fanny Morland, and Emeline Raguin. Visitors came mainly on evenings and weekends. Fannie Dubois, who hosted during these periods, made a brief survey of how the visitors heard about the expo. About 80% were users of the Cultural Center that found us accidentally when entering the building. Others said to Mario that they had seen our ad on bulletin boards of academic departments.

We had a total of about 1200 visitors. This included some school groups, plus a group of seniors. There were also some very interested visitors who came more than once and took the time to read all texts. Visitors we are most proud of was an undergraduate geology class from McGill University who was sent by its teacher to make a sedimentology assignment based on the part of the exhibition dedicated to the St. Lawrence Lowlands formations.

In conclusion, although the event was not financially profitable, the number of visitors shows that there is a genuine interest in the population for this type of exhibition. It also helped to make us better known to the public, and perhaps to better define what the future museum will be. Also, the exhibition certainly proved to politicians and others that the museum struggles to exist and to offer the public content that is both scientifically sound and of good quality.



Mounting of the exhibition. Top left: our members are busy setting up the exhibition before the opening on October 3. From left to right in the photo: Isabelle Ruiz, Ha-Loan Phan, Victoria Cournoyer and Nathalie Daoust. Bottom left: Nathalie Daoust and Isabelle Ruiz install the welcome panel. Bottom right, Jacques Lachance fine tunes the installation of a display panel while Ha-Loan Phan take a well-deserved break.





From the standpoint of leaders and members of the museum, it was a rewarding experience both setting up the exhibition and discussing it with visitors. In addition, we now have an exhibition that is ready to install at

anyone's request. This should be very useful in the context of the forthcoming opening of the MPE. J.-P. G.



An overview of some sections of the exhibition. Top left, the section on trilobites designed by Mario Cournoyer and reviewed by David Rudkin (Royal Ontario Museum); top right, the section on trace fossils designed by Mario Lacelle; middle left, the section on "Giants" designed Michel Chartier; middle right, the Daveluyville whale (on loan from Musée québécois de culture populaire in Trois-Rivières); bottom, left and right, the section on the geology of the St. Lawrence Lowlands, designed by Jean-Pierre Guilbault.



## The Business plan is nearly complete

The next challenge: the assessment of the collection, library and equipment

On November 7, 2011, we received in our electronic mailboxes a long-awaited report from Desjardins Marketing: our business plan. With all our concerns, it was only gradually that we became aware of its contents. The Board met on December 4 and 11 to study the plan, and again on January 15. A meeting with the staff of Desjardins Marketing will take place to discuss the details, but already some points stand out:

- 1° The project should cost \$5.3 million, with taxes.
- 2° Operating costs are expected to be \$ 300 000 per year, but some issues remain to be discussed. The plan does not provide for the purchase of a building. It also assumes that our venue is made freely available to us, or that we give the owner a receipt for charity equivalent to the rent that we would have paid. The revenues generated by the Museum would not allow us to pay a rent.
- 3° It is expected that less than half the \$5.3 million needed to launch the museum will come from a fund-raising campaign aimed at individuals and businesses, the rest coming from government sources.
- 4° Desjardins does not provide a list of potential donors, but instead the names of fundraising firms. We will therefore have to hire one of these firms to coach us in a formal campaign.
- 5° To get maximum leverage in the fund-raising campaign, it will be necessary to obtain the best—and the highest—possible financial assessment for the MPE as a whole. This includes equipment, furniture, library and especially the collection. In the assessment provided by the plan, the collection is valued at \$1087! The rest is not mentioned. This is because we did not provide the relevant information to Desjardins, for the simple reason that we did not have it.

This leaves us with a clear target for this year: assess the Museum!

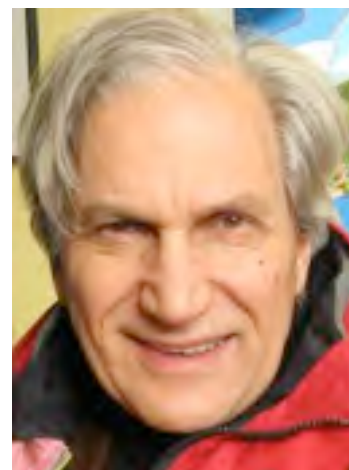
J.-P. G.

## The Allen Petryk collection

We have a little more to say about the collection of Dr. Petryk. First, we need to rectify the fact that in the bulletin of June 2011, we neglected to specify the doctoral title of Allen Petryk, which tended to diminish the importance of his work. He actually earned a doctorate in geology at the University of Saskatchewan in 1969.

Allen's brother, Edward, contacted us during the summer. He seeks to honor the memory of his brother and sent us an email as soon as he realized that the Petryk collection was in our possession. This allowed us to learn that the field notes we needed to pinpoint the origin of its samples are lost forever, unless there exists a photocopy somewhere, which is sheer wishful thinking. We will therefore have to make do with the notes we found in the drawers of the Geological Survey. On the other hand, Edward drew our attention to a film by the National Film Board (NFB), "L'Anticoste", directed by Bernard Gosselin. The first few minutes of this film feature on the geology of Anticosti Island, and are presented by Allen Petryk. It could be an excellent introduction to an exhibition of Anticosti fossils, which we periodically dream about (our friends at the Geological Survey have the same dream, but we must insist: absolutely nothing is yet planned). So we enquired with the NFB on the availability of this movie and were told that it was probably in their reserves, but that the rights to it (which belonged at the NFB since Bernard Gosselin was working for them) were now "extinct" or "off," Gosselin being dead for a number of years. Therefore, they could neither lend it nor rent it. For now, we do not know how to proceed.

J.-P. G.



Dr. Allen Petryk



## The fundraiser

### « A quickly evolving museum » approaching its target

On December 22, 2011, the MPE fundraiser reached the sum of \$ 38,555. Therefore, there is only \$ 6,445 left to raise. We sincerely thank our supporters for their contributions and congratulate them for looking far ahead and understanding the importance of paleontology. Early in the campaign, when we were receiving small gifts of \$ 100 or less, the goal of \$ 40,000 looked unattainable. Then, a few large donations came in, and the Canadian Geological Foundation funded the purchase of a microscope. As a result, the campaign came out of the dream and into reality. Then, we increased the target to \$ 45,000 in order to pay for a microsandraster. But the sum of the strategic plan and business plan ended up costing \$ 4,000 more than expected, and high-quality microsandrasters proved more expensive than the expected \$ 4,900. The new target will thus be sufficient to pay the business plan, plus a pneumatic chisel.

As for the last \$ 6,445, we appeal to all our friends who read this newsletter: if you ever thought of contributing to the campaign, now is the time to do so. We will have to make the final payment (\$ 11,600) to the firm that made the business plan. The invoice has already arrived. This is your opportunity to have your name engraved in bronze (or brass?) at the entrance to the Museum.

Here is a list of the major donations:

Dr. Richard Harington, researcher at the  
Canadian Museum of Nature - **\$ 1000**  
Professor Michel Bouchard and Ms. Francino Bouchard,  
MPE members - **\$ 1000**  
Professor Gilbert Prichonnet - **\$ 500**

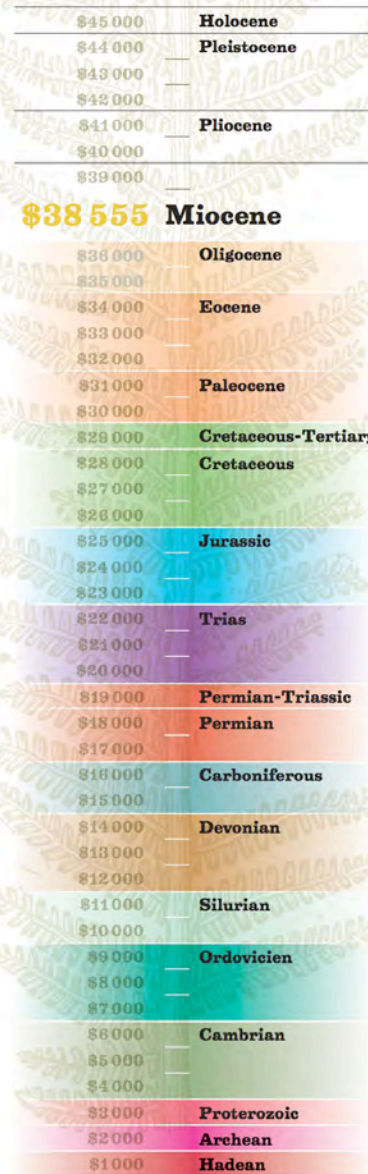
Other persons have also given:

Mr. Stéphane Clermont; Mr. Mario Lacelle;  
Mr. Raymond Auger; Mr. Yvon Savoie;  
Ms. Véronique Poirier and Mr. David Beaudriault;  
Ms. Margaret Griffin; Ms. Aurore Côté and Mr. Guy  
Gélinas; Mr. Pierre Bédard; Ms. Louise Vinette;  
and the visitors of this fall's exhibition who gave  
generously to our donation box.

## The evolution of a museum

### Fundraising Campaign

Musée de paléontologie  
et de l'évolution





## 2011 Summer students

In the summer of 2011, we were fortunate enough to hire two students, again to assist us in our conservation work and cataloging. One was Fannie Dubois, a freshly graduated Bachelor in anthropology at the University of Montreal (UofM) and the other was Fanny Morland, a Master's candidate, also at the Department of Anthropology at the UofM. Fannie Dubois was hired with financial support from Canada Summer Jobs 2011.

A colossal task awaited the students this summer: writing up all the specimen catalogue numbers with China ink. At first glance this work seems simple, but it requires a lot of precision. First, we clean the area where the number will be written and then we apply an undercoat of Acryloid. We then write a discrete but still readable number, and cover it with a protective layer of Acryloid. Finally, we number the container in which the fossil is stored. All these steps were repeated for about 3000 samples, about two-thirds (66%) of our collection.

We took advantage of the fact that we had students with knowledge of skeletons, to have them do an inventory of the bones that make up the skeleton of the Daveluyville whale fossil. In addition, Fannie Dubois spent a lot of time trying to reunite the bone fragments of the whale. The success rate was not very high because too many elements of the skeleton were missing. Fannie also repaired and glued together the bones she had managed to reassemble. The Daveluyville whale is in better state now, thanks to the efforts of our two students.

During the course of the summer, we discovered that Fanny Morland had an unquestionable talent as a graphic artist. This was a great help for us who were then preparing the content of the exhibition that would be presented at the Centre culturel Georges-Vanier in the fall of 2011. Fanny designed several images that showed the anatomy of certain invertebrates groups. In one particular case, her work was done under the supervision of David Rudkin, a researcher and expert on trilobites at the Royal Ontario Museum. She illustrated the ontogeny, the moulting process and the anatomy of trilobites using the genus *Isotelus* as a model. To our knowledge, no such diagrams have been previously published.

Finally, Fannie Dubois made an inventory and cataloged books and other documents in our library, putting order in the various donations received during the year.

After the end of her summer job, in September, Fannie Dubois began in September an MA in museology at UofM, which will be an asset to the MPE, given her level of interest and involvement in our project. Fanny Morland, meanwhile, started a degree in nutrition, a subject that fascinates her a lot.

M. C.



Fannie Dubois (left) and Fanny Morland (right) doing the inventory of the Daveluyville whale skeletal elements.



Fannie Dubois trying to reunite and repair some of the bones belonging to the Daveluyville whale.



## Work at the laboratory

During the fall of 2011, work at the laboratory suffered a fairly marked slowdown since the exhibition took all of Mario's time every day of the week, except on Friday. There was no cataloging during this period, but from time to time, on Fridays, Chuck Billo and Alexandre Guertin came to lend a hand for the photography of samples from the MPE's collection. Another huge project in itself, which began four years ago and still continues but is reaching its end.

Indeed, 3182 samples were photographed during 43 sessions of photography, out of a total of 4894 cataloged samples. Of this total, approximately 900 samples will not be photographed because they are lesser quality specimens. These photos inserted in the collections database will soon be online. The database will initially be available for the people who work on the cataloging of the collections, but eventually will be made available to the general public.

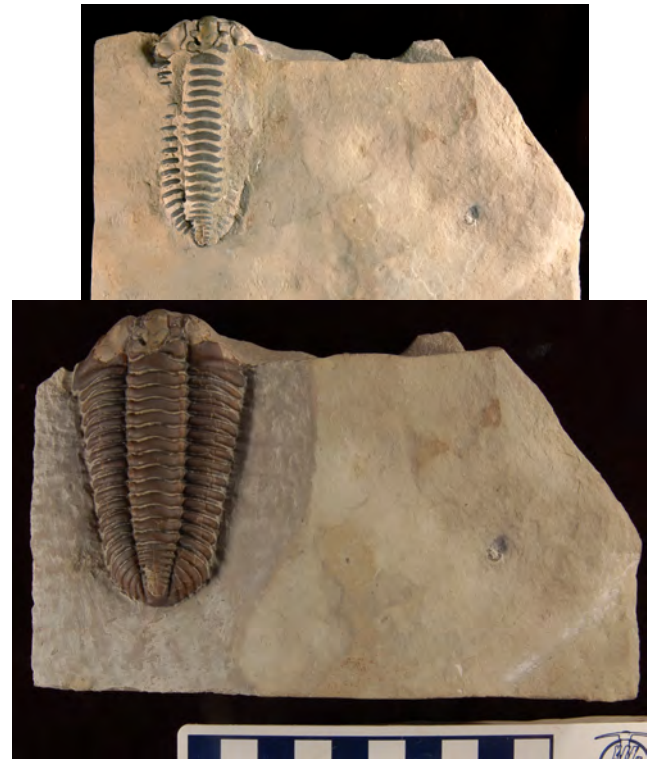
Photographs of smaller specimens (less than 2 cm) were taken using our Leica stereomicroscope, equipped with a digital camera, while the larger specimens were photographed using a Nikon D50 digital camera with a macro wide-angle lens.

Another important job that could take place in the laboratory is the preparation of specimens, that is to say, freeing from matrix and cleaning with a pneumatic chisel or a micro-sandblaster. The Museum currently owns neither of these tools, which are fundamental to the study of fossils. By taking away the sediment that covers the fossils, we make them easier to study, and also much more attractive and clear for exhibitions. Since late summer 2011, a friend of the museum lends us a hand by cleaning, free of charge, some of our fossils. Without question, this work increases the quality of our specimens, and the value of our collections. See the result for yourself: at the bottom of this page, you can see two specimens, both before and after preparation.

M. C.



The Ordovician crinoid, *Iocrinus* sp. (MPEP228.2) from the Quebec City area. Top photo: specimen unprepared, bottom photo: specimen prepared with a micro-sandblaster. Donated by Norman Viger.



The Silurian trilobite, *Diacalymene* sp., from Anticosti Island. Top photo: specimen unprepared, bottom photo: specimen prepared with a pneumatic chisel and a micro-sandblaster. Allen Petryk Collection, donated by the Geological Survey of Canada.





## Visitors from the States

During June 13, 14 and 15, 2011, we received a lovely visit at the laboratory. Heyo Van Iten and his wife, Tatiana, came to look over some of our fossils for a future publication. Heyo teaches at the Department of Geology, Hanover College in Hanover, Indiana and is interested in a "strange" group of fossils called conularids. The conularids, a group possibly related to the jellyfish, had a pyramid-shaped phosphatic shell. They disappeared during the Permian and left no descendants. During a trip to Georgian Bay, Ontario in 2005, Mario Cournoyer and his family found many conularids showing an unusual arrangement on the rocks. The conularids, grouped by two or three, seemed to point their apex towards a brachiopod shell, as if they were attached to it. Heyo was very excited by these fossils, suggesting that they should be included in a scientific publication he is preparing with other colleagues. We will keep you informed on further developments.

M. C.



Heyo Van Iten, paleontologist at the Department of Geology in Hanover College, Indiana, stands next to fossils algal colonies called "stromatolites" of Early Ordovician age, found on Ile Bizard, near Montreal.

## Interclub Day at the Musée québécois d'archéologie Pointe-du-Buisson

A club meeting was held, October 23, 2011, at the Musée québécois d'archéologie Pointe-du-Buisson. This activity brought together members of the Quebec Society of Paleontology, the Montreal Mineralogy Club, the Astronomical Society of the Montreal Planetarium, the Biological Society of Montreal and some of our members. Throughout the day (and evening) different activities allowed participants to learn more about archeology (a visit of the Museum and excavation sites), observe the flora and fauna on surrounding grounds, become familiar with the local geology and paleontology (fossils exhibit on traces fossils designed by Pierre Groulx and Mario Lacelle) and finally, if the weather had permitted, make astronomical observations. Fortunately, the Astronomical Society people were prepared as they had a Powerpoint presentation of the evening's night sky!

All participants expressed their willingness to turn this day into an annual event open to the public.

M. C.



Pierre Groulx (background), leads participants through the trace fossils geological garden, outside the Musée québécois d'archéologie Pointe-du-Buisson.



## Newly acquired fossils for the Museum

Since our last newsletter, the MPE has received several donations increasing the diversity of our fossil collections and filling less common taxonomical groups, such as trilobites and echinoderms (crinoids, carroids). These fossils are mostly from Quebec and Ontario, which is in line with our mandate of preserving the fossil heritage of Quebec. We also received a few donations of fossils from around the world, which will help us illustrate certain topics or concepts. We say no more, and we invite you to look at the pictures (and also, read the captions!).

M. C.



A crinoid of the genus *Cupulocrinus*. Brechin (Ontario). Donated by Doug McAvoy



A cystoid of the genus *Homocystites*. Quebec City area. Donated by Nathalie Daoust



A crinoid (left) of the genus *Ectenocrinus*, and a carpoide (right) of the genus *Syringocrinus*. Quebec City area. Donated by Nathalie Daoust



A crinoid of the genus *Iocrinus* showing the anal tube (the tube projecting upward from the center of the calyx). Quebec City area. Donated by Nathalie Daoust



Two cystoid of the genus *Amecystis* (top) and a crinoid of the genus *Cupulocrinus*, (bottom right). Brechin (Ontario). Donated by Nathalie Daoust



A slab of limestone full of crinoid stems from Manitoulin Island (Ontario). Donated by Doug McAvoy



## Newly acquired fossils for the Museum (cont.)



A limestone slab preserving a trilobite of the genus *Gabriceraurus*, including another one showing ventral parts (bottom left), as well as some crinoids. Desoronto (Ontario).



An enrolled trilobite of the genus *Isotelus* (measuring approx. 8 cm in diameter) from Ontario. Donated by Nathalie Daoust



A trilobite of the genus *Bufoceraurus* from Brechin (Ontario).  
Donated by Frank Habets



Two trilobites of the genus *Isotelus* on a slab of limestone. We see on the left, the imprint of a third individual. It is very rare to find several individuals of the trilobite *Isotelus* on such a small stone. Ottawa (Ontario). Donated by Frank Habets.



## Additions to the MPE library

We received during the fall of 2011 some important book donations. The bookstore at Geological Survey of Canada's (GSC) Vancouver office was closing and, knowing this, we informed them we were interested in recovering some of the GSC publications, so useful in our research library. Without hesitation, they sent four boxes of Bulletins, Memoirs and Special Papers on various Canadian paleontology subjects, especially from Western Canada but also from our part of the country. We wish to thank Ms. Bev Vanlier, manager of the bookstore and Mr. Jim Haggart (GSC Vancouver), who gave us Ms. Vanlier's contact info and finally, Mr. Michael Cuggy (University of Saskatchewan), who informed us of the closing of the bookstore.

We also received a donation of books from one of our members, Mr. Michel Montpetit. Those are reference books, manuals, etc., about paleontology, biology and evolution. M.C.



Our students, Fannie Dubois (back) and Fanny Morland (in front), looking for fossils at a site located in Bécancour, Québec.

## New members

Like every year, January is renewal time for the membership card and normally this is done in the months following the start of the year. Last year, the MPE had a record enrolment with respect to the membership: we ended 2011 with 54 members. Since its foundation in 1995, the MPE never had so many members and the year 2012 promises to be another record breaker: already, since early December, twenty-one members have renewed their membership. We would like to introduce our new members: Ms. Andrée Beaudry, Mr. François Bonneau, Miss Kellyann Cournoyer, Ms. Anik Demers-Pelletier, Ms. Judith Gagne, Mrs. Edeline Gagnon, Ms. Margaret Griffin, Family Guiot Claire and Pierre Pagé, Ms. Marie-Reine Vézina, Mr. Javier Luque, Mr. Michel Montpetit, Mr. François Quintal and finally, the Jardin des glaciers (Baie-Comeau) who becomes our second institutional member. We also want to thank the members who have renewed: the Musée québécois d'archéologie Pointe-du-buisson, Ms. Ginette Amyot, Ms. Chantal Claude, Ms. Ginette Cournoyer, Miss Victoria Cournoyer, Ms. Nathalie Daoust, Ms. Suzanne Nantel, Mr. Pierre J.H. Richard, Ms. Isabelle Ruiz, Mr. Mario Cournoyer and finally a founding member and past president of the MPE, Mr. Albert M. Cornu. M.C.



Several participants, young and old, doing field work in the sand-pits at St. Nicolas (Québec City area) during the summer of 2011.

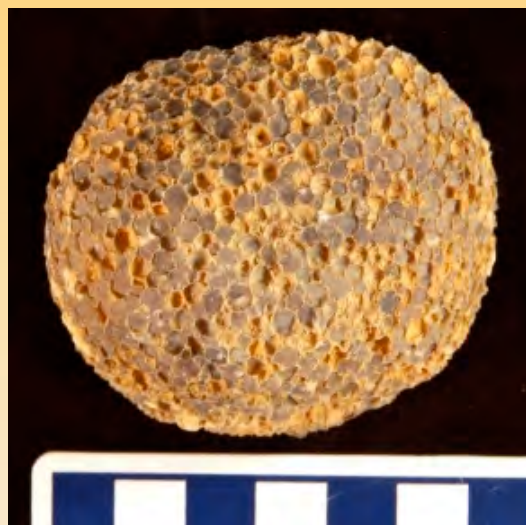


### Descriptive card of the specimen

Specimen number: MPEP318.6  
Identification: Nearly complete colony  
Genus and species: *Favosites* sp.  
Age: Middle Silurian  
Geologic formation: Jupiter  
Locality: Eastern part of Anticosti Island (Québec)  
Finder: Nathalie Daoust and Mario Cournoyer  
Date: August 24, 1997

Modern shallow tropical seas are full of colonial corals that live cemented to each other and form large reefs. They belong to the scleractinian group, which appeared during the Triassic. In the Paleozoic, there were also colonial coral reefs that attached to one another to form reefs: it was the tabulate corals or Tabulata, who lived from the Middle Ordovician to the end of the Permian.

In North America, their appearance coincides with the Chazy geological Group. The coral reefs found in the local Chazy rocks of Montreal and in rocks of similar age on the Lower North Shore of Quebec are amongst the oldest known. The tabulate coral reefs reached their maximum extension during the Silurian. The specimen shown here is a *Favosites* from the Lower Silurian of Anticosti Island. This is a simple, very common form, known from the Ordovician to the Permian. In Quebec, in addition to Anticosti Island, *Favosites* is found in the Silurian-Devonian rocks of the Gaspé Peninsula and also in the Appalachians. According to the sedimentary environment, their overall shape may vary from flat, like a pancake, to more or less spherical, as in this specimen.



## Membership Cards

Just as at the beginning of every year, we wish to inform you that your membership must be renewed. Attached to this newsletter, you will find a copy of the renewal of membership card. Remember, you can also make a donation; the Museum is a charitable organization duly registered with the Canada Revenue Agency (No. 890282445RR0001) and therefore authorized to issue receipts for tax purposes.

## Editorial team

Mario Cournoyer (M. C.)  
Jean-Pierre Guilbault (J.-P. G.)

Sally McQueen (proofreading)

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