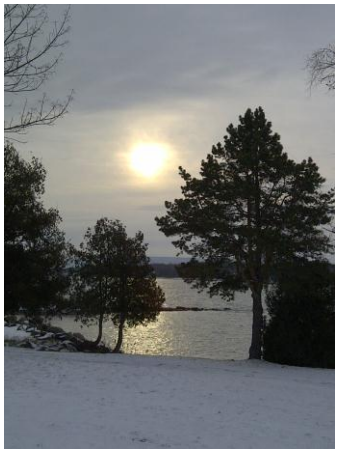
Alliance of **Natural History Museums** of Canada

Alliance des **musées d'histoire naturelle** du Canada

ANHMC Newsletter | **Le Bulletin de l'AMHNC** **February** | **février 2012**



In this issue, updates from…
Dans ce volume, mises à jour…

- **The Manitoba Museum**
  Le Musée du Manitoba
- **Royal Alberta Museum**
- **Royal British Columbia Museum**
- **Espace pour la vie**
  Montréal Space for Life

Fourth ANHMC Newsletter!
Quatrième bulletin de l'Alliance!

The fourth newsletter for the Alliance of Natural History Museums of Canada (ANHMC) is here! Thank you to those who contributed to the third issue. | Le quatrième bulletin de l'Alliance des musées d'histoire naturelle du Canada (AMHNC) est ici! Merci à ceux qui ont contribué à la troisième volume.

The 17 Members of the Alliance are |
Les 17 membres de l'Alliance sont :

- Beaty Biodiversity Museum
- Canadian Museum of Nature | Musée canadien de la nature
- Espace pour la vie | Montréal Space for Life
- New Brunswick Museum | Le Musée du Nouveau-Brunswick
- Nova Scotia Museum of Natural History
- Prince of Wales Northern Heritage Centre | Centre du patrimoine septentrional du Prince de Galles
- Redpath Museum | Musée Redpath
- Royal Alberta Museum
- Royal British Columbia Museum
- Royal Ontario Museum | Musée royal de l'Ontario
- Royal Saskatchewan Museum
- Royal Tyrrell Museum of Palaeontology
- The Manitoba Museum | Le Musée du Manitoba
- The Rooms Provincial Museum Division
- Toronto Zoo
- Vancouver Aquarium
- Yukon Beringia Interpretive Centre | Centre d'interprétation de la Béringie du Yukon

This newsletter is prepared by the Alliance of Natural History Museums of Canada (ANHMC). If you have any questions or comments please email Jessica Freeborn at jfreeborn@mus-nature.ca.

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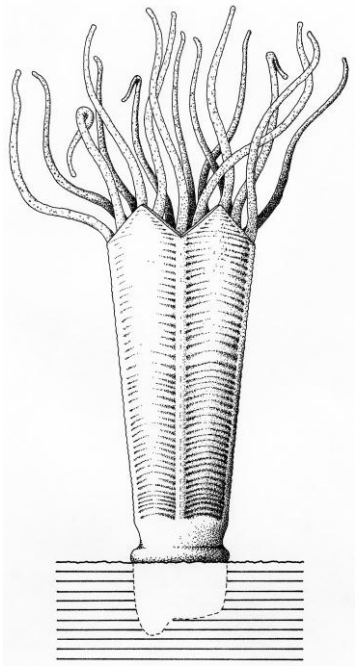
New Discovery in Palaeontology – The Manitoba Museum

Dr. Sean Robson, a volunteer in The Manitoba Museum's Paleontology section, and Dr. Graham Young, Curator of Geology and Paleontology, are putting the finishing touches on a large manuscript about fossil conulariids from Ordovician-age rocks in Manitoba. Conulariids are an unusual extinct group of invertebrates, now generally thought to have been related to jellyfish.

One remarkable find by Robson and Young was the result of collecting work that took place more than 100 years ago. The great geologist J.B. Tyrrell collected rocks and fossils from Churchill, Manitoba, in 1894. When Young and Robson broke down a piece of Tyrrell's rock in dilute acid, it yielded tiny conulariids. These have turned out to belong to a genus and species previously unknown to science, which will be named in honour of Tyrrell.



This diagram shows the newly discovered conulariid, reconstructed to show how it probably lived attached to the ancient seafloor.
(Image: Deborah Thompson)

Pallas Bugseed Possibly Extirpated in Manitoba

For the last two years, the Museum's Curator of Botany has been searching for four species of rare Bugseed (*Corispermum* spp.) plants. Historically these plants were found in sand dunes and along the beaches of Lakes Winnipeg and Manitoba. Unfortunately, there were very few recently collected specimens; most had been collected over 40 years ago. Attempts to determine the rarity status of these plants were hampered due to this lack of information.

The Curator relocated fewer than half of the historical populations of Bugseeds during her field research. In some cases, dune stabilization resulted in the loss of habitat for these species, which grow in bare sand. Flooding along the Red River and on Lakes Manitoba and Winnipeg in 2010 and 2011 may have also caused the loss of habitat. Balancing out the losses was the discovery of seven new localities in the province, including a very large population of Hairy Bugseed (*Corispermum villosum*) in the sand dunes in Grand Beach Provincial Park.

Unfortunately, Pallas Bugseed (*Corispermum pallasii*) was not relocated at any of the three sites where it was historically found, although it still occurs in several other Canadian provinces. Its status should be considered as possibly extirpated.

It is possible that this species spread into Manitoba from other provinces, where it is native along railways, and then subsequently disappeared as more hardy weeds took over the habitat. As the seeds of these species are quite long-lived and tolerant of burial, Pallas Bugseed may still be here in the province, hiding in the soil and waiting for the right conditions to germinate.

Grand Beach Sand Dunes
(Image: Dr. Diana Robson)

The Legacy of a Legend

It was with great sadness that The Manitoba Museum learned of the passing of Canadian wildlife artist Clarence Tillenius (1913-2012) at the age of 98.

Tillenius created some of the Museum's most loved and well-known dioramas, including the Bison Hunt at the entrance to the galleries, and the polar bear and caribou dioramas in the Arctic-Sub Arctic Gallery. He was responsible for the "large mammal" dioramas in every gallery except Parklands/Mixed Woods, including the Boreal Forest Gallery's moose diorama.

All told, Tillenius produced nearly 20 dioramas for museums across Canada and the United States. Eight are on display at the Canadian Museum of Nature in Ottawa, with each representing specific habitats across the country.

"He was an extraordinary man and an extraordinary artist, and The Manitoba Museum is honoured to have so much of his legacy on display for future generations," says Museum CEO Claudette Leclerc. "He was a great man—so easy to talk to, and so accessible. When I last spoke to him, he was still painting every day."

During recent renovations at the Canadian Museum of Nature, Tillenius was active in consulting with staff as his decades-old dioramas were moved and refurbished.

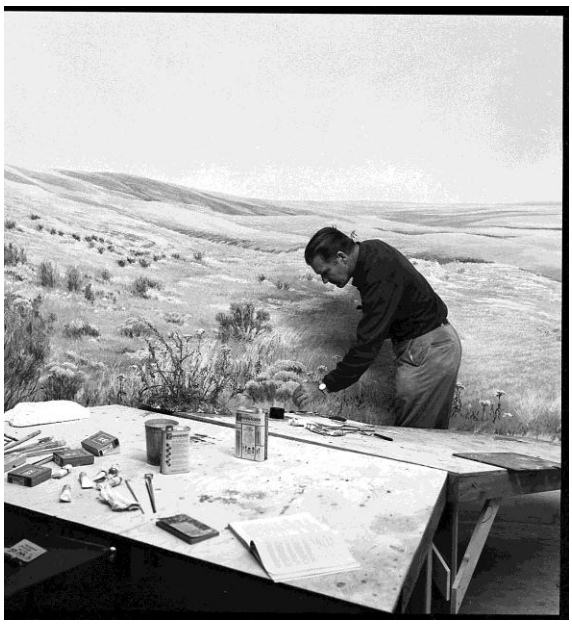
"Even into his 90s, he was very generous with his time and we are grateful that his creations will continue to inspire Canadians about our natural environments," says CMN President and CEO Meg Beckel.

As research for the Bison Hunt diorama, Tillenius hid behind a blind of logs in Riding Mountain Provincial Park while park wardens encouraged over a hundred bison to stampede past him. This allowed him to experience the feeling of what he would create for the Museum.

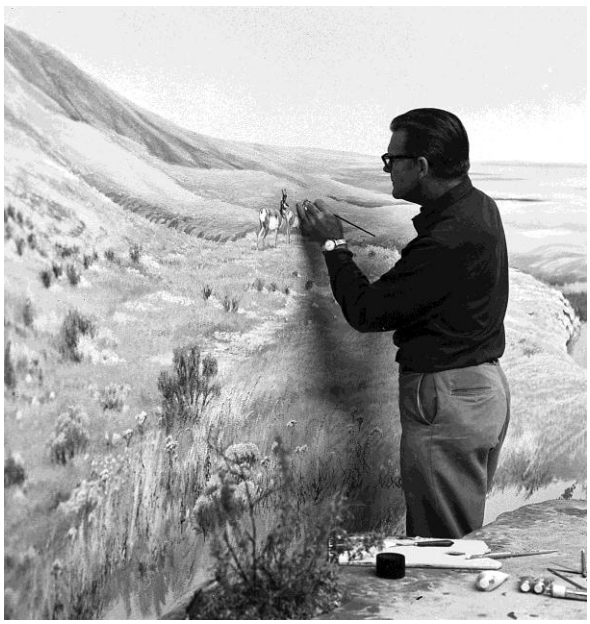
"He loved to get out in the field—he didn't work from a photo that someone else had taken. He worked from life, and I think that's why people responded to him so well," recalls Jack Dubois, the Museum's former associate curator of ornithology and mammalogy, who worked closely with Tillenius on several dioramas. "He was Manitoba's Robert Bateman, and he was always a gentleman, very affable and down-to-earth. He always had lots of great stories."

The Manitoba Museum will be presenting some of Tillenius's sketches and paintings in a memorial exhibition that will open on March 8th. The exhibit will feature artwork from the Museum's Monarch Life Collection, which was used to educate thousands of children about the wonders of the natural world.

Tillenius will be greatly missed, but his incredible artwork has left a legacy that will continue to live on.



Tillenius at work in 1969
(Image: The Manitoba Museum)



In the Pronghorn diorama, 1969
(Image: The Manitoba Museum)

Coming Soon to the Royal Alberta Museum

Bientôt au Musée Royal de l'Alberta

This spring and summer the Royal Alberta Museum will be hosting three travelling exhibitions with natural history themes. From February 18 to September 3, *Winged Tapestries: Moths at Large* will reveal the beautiful colours, patterns and shapes of moths and discuss why these nocturnal creatures sport such amazing designs. Opening March 24, *Fashioning Feathers* will explore the collection, production and consumption of the 'feather fashions' that adorn the heads of women in Europe and North America. Finally, *From Wolf to Woof: The Story of Dogs*, running June 9 until September 16, explores why humans have formed such a close and unique relationship with dogs, resulting in them becoming known as "man's best friend." For more information on these exhibitions visit our website at www.RoyalAlbertaMuseum.ca.

Image: Merle Patchett

Hat ornament made from birds-of-paradise, ca.1880.
Parure de chapeaux faites d'oiseaux-de-paradis, vers 1880.

Ce printemps et cet été le Musée Royal de l'Alberta accueillera trois expositions itinérantes qui abordent de thèmes en histoire naturelle. Du 18 février au 3 septembre, *Papillons de nuit : plus grand que nature* mettra en vedette les belles couleurs, les motifs et les formes des papillons de nuit. Elle examinera également les raisons pour lesquelles ces espèces nocturnes ont des motifs si incroyables. À partir du 24 mars, *Plumes-à-porter* explorera la collection, la production et la consommation des '' plumes pour la mode'' afin d'orner la tête des femmes en Europe et en Amérique du Nord. Finalement, *Du loup à ouah : l'histoire des chiens*, du 9 juin jusqu'au 16 septembre, examine le lien étroit et unique entre les humains et les chiens, qui aboutit en ce qu'ils deviennent le meilleur ami de l'homme. Pour de plus amples informations sur ces expositions consultez notre site web : www.RoyalAlbertaMuseum.ca.

Image: Jim des Rivières

A male Io moth, *Automeris io*
Un papillon de nuit male Io, Automeris io

Royal Alberta Museum researchers discover first social parasite in the paper wasp genus *Polistes* for the New World

Les chercheurs au Musée Royal de l'Alberta découvrent le premier parasite social de guêpes du genre Polistes du nouveau monde.

Paper wasps (*Polistes* spp.) have attracted much attention as model organisms for the evolution of eusocial behaviour in insects. The group is well represented in North America with over 20 described species. Despite the great interest in these wasps, it has remained very difficult to distinguish between many of the species, which are extremely similar in their morphology. Entomologists at the RAM have studied *Polistes* wasps for several years, analyzing both morphology and DNA sequences. They came to the surprising conclusion that the genus includes several previously overlooked species. Some of these species are of great interest because they appear to be social parasites (i.e., they take over a nest of a host species, whose workers will then rear the brood of the parasite). This is a remarkable finding because social parasitism was previously only known in a few species of paper wasps from the Old World.

Les guêpes polistes (Polistes spp.) attirent beaucoup d'attention comme organismes modèles pour étudier l'évolution de la socialité chez les insectes. Le groupe est très bien représenté en Amérique du Nord avec plus de 20 espèces. Malgré le grand intérêt évoqué par ces guêpes, il est toujours très difficile de distinguer entre les différentes espèces qui ont des morphologies semblables. Les entomologistes au Musée Royal de l'Alberta étudient les guêpes polistes depuis plusieurs années y compris leurs morphologies et leurs séquences d'ADN. Ils sont arrivés à la conclusion étonnante que le genre comprend plusieurs espèces qui ont été manquées jusqu'à maintenant. Certaines espèces sont très intéressantes puisqu'elles agissent comme des parasites sociaux (e.x. elles empiètent le nid d'une espèce hôte, dont les travailleurs élèveront le couvain du parasite). Ce résultat est remarquable puisque le parasitisme social était seulement connu parmi certaines espèces de guêpes poliste de l'ancien monde.

Image: Dave Cheung and Matthias Buck

The head of a female *Polistes.*
La tête d'une femelle Polistes

Preserving Pollen from the Past

La préservation du pollen d'autrefois

In November 2011, Alwynne Beaudoin, Curator of Quaternary Environments, travelled to Indianapolis, USA, to visit the Friesner Herbarium at Butler University. Alwynne was invited by the Herbarium's Director, Dr. Rebecca Dolan, to evaluate and give advice on the preservation of an historic pollen slide and sample collection. The collection represents the career assemblage of Dr. John E. Potzger (1886 – 1955), a former faculty member at Butler. Between the early 1930s and early 1950s, he sampled many peatlands and wetlands in the Midwest (and several in Canada) and published some of the earliest accounts of pollen-derived postglacial vegetation history for the North American interior.

En novembre 2011, Alwynne Beaudoin, conservatrice des Environnements Quaternaires, a voyagé à Indianapolis, États-Unis, afin de visiter l'Herbier de Friesner à l'Université Butler. Alwynne a été invitée par la directrice de l'Herbier, Dr. Rebecca Dolan, pour évaluer et donner son avis sur la préservation d'une collection historique de pollen sur la lame de microscope et d'échantillons. La collection représente toute la carrière de Dr. John E. Potzger (1886 – 1955), ancien membre de la faculté de Butler. Au début des années 1930 et 1950, il a prélevé plusieurs échantillons de tourbières et de zones humides du Midwest (et plusieurs au Canada). Il a aussi publié les premiers récits de l'histoire de la végétation postglaciaire à partir des pollens pour l'intérieur de l'Amérique du Nord.

Image: Royal Alberta Museum

Alwynne in one of the Botany workrooms at Butler University. The boxes stacked by the wall contain part of the Potzger collection.
Alwynne dans un atelier de botanie de l'Université Butler. Les boîtes empilées près du mur contiennent une partie de la collection Potzger.

2011 Wildlife Photographer of the Year – Royal British Columbia Museum

The best 108 images from ***Wildlife Photographer of the Year*** – an international competition that had more than 41,000 entries from 95 countries – are on display until April 9, 2012. The Royal BC Museum is currently the only North American venue.

"This is like the Oscars of wildlife photography," said Martin Cooper, the lone Canadian winner, from Burnaby, BC. "It's important that we have special contests and museum exhibitions like this, to remind us of the rich wildlife in our urban areas as well as out in the wilds."

Now in its 47th year, the annual Wildlife Photographer of the Year competition is run by London's Natural History Museum and BBC Wildlife Magazine. The competition uniquely combines the work of gifted amateurs, professionals and young photographers in more than 17 categories.

Winner – 2011 10 Years and Under
Hui Yu Kim (Malaysia)

"Alien" - Hui Yu photographed this tropical flat-faced longhorn beetle at Gunung Jerai in Malaysia. 'It had a strange look, like an alien,' she says. 'I want people to know that all creatures, even small ones, count. So don't destroy the forest.'

Image: Hui Yu Kim (Malaysia)

Searching for the Ancient Great Tundra

From the Royal BC Museum to far eastern Russia

Five flat tires is apparently a low score for the rough 2,400 km round trip from Magadan to Ust Nera, Yakutia. The scenery alternates between wild taiga and tundra and views of the mining of placer gold deposits across valley bottoms.

But Richard Hebda and Ken Marr, natural history curators at the Royal BC Museum, were seeking another type of treasure – plant samples of the region and the travel journal held in their DNA. Their analysis should help determine if British Columbia played a key role as source of tundra plants in the northern hemisphere, potentially reversing the idea that BC received most of its post ice-age flora and fauna from elsewhere.

The 10-day trip in July-August 2011 was their second to Russia, and they had excellent Russian companions. The target this time was part of eastern Beringia, a known ice-free region during the last glacial advance, roughly 17,000 to 14,000 years ago. Meals were cooked on open fires and included canned meat and the unique taste of Iris brand "Chardonnay-flavoured Beer." The air was smoky-brown from widespread forest fires, but huge mosquitoes still found and feasted on Ken's foot as he washed in an icy stream.

On this field trip, Ken and Richard collected roughly 300 tissue samples and 98 botanical vouchers of their target species as well as other species for researchers in Ireland, Alaska, Colorado and Washington. DNA analyses have been completed for samples of mountain sorrel collected from both North America and Russia. To their great surprise, their hunch was correct. The geographic distribution of its genetic types is consistent with a last glaciation refugium in northern BC. DNA analysis is now underway for the Russian samples of alpine bistort, sibbaldia, Altai fescue and White Mountain heather.

The original innovation grant provided critical research material, which led to more international collaboration and an additional source of funding. This investment allowed Richard and Ken to see that their Great Tundra idea has merit and that this ground-breaking research at the Royal BC Museum should continue.

Richard Hebda is Curator of Botany and Earth History; Ken Marr is Curator of Botany.
This work would not be possible without funding from the John and Joan Walton Innovation Fund and the October Hill Foundation for travel to Russia, and funding from the Royal BC Museum and NSERC (Natural Sciences and Engineering Research Council of Canada) for travel within North America and the cost of laboratory analysis at the University of Victoria.

Valleys and hills of the Tundra
(Image: Royal BC Museum)

Campfire cooking
(Image: Royal BC Museum)

Curator Ken Marr and the mosquitos
(Image: Royal BC Museum)

The blue-flowered "mountain harebell" and "mountain sagewart" were among the 25 species sought on the trip.
(Image: Royal BC Museum)

Spring is just around the corner at the Montréal Space for Life!

Ça sent le printemps à l'Espace pour la vie!

During March Break, from March 3 to 11, the Biodôme is unlocking the doors and inviting young people and their families to venture behind the scenes to explore some spaces normally off limits to the public. The ***Behind-the-Scenes Rally*** is a trek to 15 different stations to see and learn how we take care of the health of the ecosystems and their inhabitants. The veterinary clinic, the animal kitchen and the laboratories will open their doors to reveal all kinds of secrets.

Image:Michel Tremblay

From February 16 to April 29, at the Botanical Garden, the fabulous ***Butterflies Go Free*** event on the theme of butterflies and moths features not one, but two greenhouses full of more than 2,000 winged wonders. Nature interpreters from the Insectarium will be there to explain everything.

Image: Michel Tremblay

Pendant la semaine de relâche, du 3 au 11 mars, le Biodôme invite les jeunes et leurs familles à s'aventurer dans des lieux d'habitude inaccessibles. Le ***Rallye des coulisses,*** un parcours en quinze stations, conduira les curieux à la découverte des activités indispensables aux écosystèmes et à leurs habitants! Clinique vétérinaire, cuisine des animaux, laboratoires ouvriront leurs portes pour livrer tous leurs secrets.

Depuis le 16 février et jusqu'au 29 avril, l'extraordinaire événement ***Papillons en liberté,*** propose la thématique *Papillons de jour, papillons de nuit*. Une incursion non pas dans une, mais deux serres du Jardin botanique où virevolteront plus de 2 000 papillons et où les animateurs scientifiques de l'Insectarium seront sur place pour fournir tout plein d'informations!

Image: René Limoges

Inauguration of the Begoniaceae and Gesneriads Greenhouse

Inauguration de la serre des bégoniacées et des gesnériacées au Jardin botanique

In March 2012, visitors will be able to once again explore the fascinating world of Begoniaceae and Gesneriads, now in their newly renovated home. The original greenhouse, built in 1956, needed updating to allow us to better showcase the species and cultivars in these two families, optimize our exhibition spaces and install the latest technology for recreating tropical undergrowth growing conditions.

The work included rearranging the planting beds, incorporating trees near the entrance to provide shade for Begoniaceae species, creating plant walls for epiphytes, adding a wet rock face and installing hanging baskets and decorative containers for the hybrids and cultivars in these two collections.

The Montréal Botanical Garden is considered to have one of the largest Begoniaceae collections in North America. The two genera, Hillebrandia and Begonia, are well represented, as are the 140 species and 24 cultivars in our Gesneriad collection. From ground covers to towering specimens, these rich and varied collections are superbly displayed in their new home.

Enjoy this visual feast!

En mars 2012, les visiteurs pourront redécouvrir le monde fascinant des bégoniacées et de gesnériacées dans la serre nouvellement restaurée. Construite en 1956, celle-ci avait besoin d'une cure de jeunesse pour mettre en valeur les espèces et les cultivars de ces deux familles, optimiser les espaces d'exposition et se doter de technologies de pointe favorisant les conditions de croissance d'un sous-bois tropical.

Les nouveaux aménagements incluent des espaces de plantation, l'intégration d'une strate arborescente à l'entrée sous laquelle les espèces de bégoniacées s'y déploieront, la création de murs végétalisés pour les spécimens épiphytes, l'aménagement d'une paroi rocheuse d'où émergera un ruissellement d'eau, l'installation de paniers suspendus et pots décoratifs réservés aux hybrides et cultivars de ces deux collections.

La collection des bégoniacées du Jardin botanique de Montréal est considérée comme l'une des plus importantes en Amérique du Nord. Les deux genres, Hillebrandia et Begonia, seront dignement représentés tout comme une grande partie des 140 espèces et 24 cultivars de la collection de gesnériacée. Du couvre-sol aux plantes géantes, la richesse et la diversité de ces collections seront mises de l'avant dans une ambiance exceptionnelle.

À vous de les découvrir !

Image : Espace pour la vie

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The next issue of the ANHMC Newsletter will be in April, 2012 so stay tuned!

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Le prochain numéro du Bulletin de l'AMHNC sera en Avril 2012, alors restez branchés!

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