

October 14, 2015 - Celebrating National Fossil Day in North America

## Royal BC Museum's paleontology team publishes five articles and award-winning research

VICTORIA, BC – Hikers along BC's West Coast are used to seeing sea lions offshore, Black-tailed deer threading through the forest and the odd black bear lumbering past. But 25-30 million years ago, when climate and landscapes were very different from today, one might've seen large mammals named *Behemotops proteus* munching sea grasses along the coastal shorelines.

Thanks to the work of staff and research associates at the Royal BC Museum, discoveries and analyses of specimens like *Behemotops* are helping advance our understanding of what BC looked like millions of years ago. Dr Tom Cockburn, a Research Associate at the Royal BC Museum, recently published an [article](#) in the Journal of Vertebrate Paleontology with Dr Brian Beatty (NYIT College of Osteopathic Medicine), that explored the details of the ancient *Behemotops* animal and its coastal distributions. The BC specimen is important because of the rarity of intact vertebrate fossils and the novelty of the animal itself.

"With such strong collections, the fossils at the Royal BC Museum form an integral part of research into our ancient past," said Royal BC Museum CEO Prof Jack Lohman. "What we are finding is that the study of fossils is opening up important clues to understanding climate change, extinction and providing context for the changes we are making to our own environment."

Some of the most ground breaking research from the fossils collection has been generating national interest and accolades. Marji Johns, Paleontology Collection Manager at the Royal BC Museum, was lead author of a recent [article](#) that the Canadian Journal of Earth Sciences lauded as an Editor's Choice paper. Johns' paper took a multidisciplinary approach, resulting in refined geological ages based on microscopic fossils and revelations about how Queen Charlotte Sound, Hecate Strait, and offshore Vancouver Island were formed.

The Royal BC Museum has also been recognized in paleontological circles because of its professional support. A recent [article](#) in Contributions in Science (Natural History Museum of Los Angeles County) focuses on two new species, *Tessarolax bullardi* and *Tessarolax grahami*. These were named after Royal BC Museum Research Associate Timon Bullard and Research Volunteer Raymond Graham, who found and prepared the (approximately) 85 million-year-old specimens and encouraged the initial research. *Tessarolax* is an ornate gastropod (snail) with very long spine-like projections.

Just this summer a *Heptodon* (tapir) specimen, referred to in a recent [article](#) in the Journal of Vertebrate Paleontology, arrived at the Royal BC Museum collections. The tapir lived near a lake shoreline in the BC interior about 50–55 million years ago when climate was much hotter than today. This is a very rare specimen – a first for BC. It has



not yet been confirmed as a new species, as additional specimens are needed for a species designation.

Earlier this summer, Carl Jonsson (Royal BC Museum student researcher, University of Victoria M.Sc. program) and Dr Richard Hebda (Curator, Botany & Earth History) published [new results](#) on Late Cretaceous floras in the Canadian Journal of Earth Sciences. They demonstrated that distinct and unique plants lived in floodplains and wetlands of the southern Vancouver Island region when climate was warmer and wetter than today.

The breadth and depth of the Royal BC Museum's natural and human history collections are matched by the ambition of researchers looking for new specimens or making new discoveries. Members of the public can learn more about fossils through our behind-the-scenes tours (offered free to members or with admission) or through our paleontology webpage: <http://royalbcmuseum.bc.ca/nh-collections/fossils-palaeontology/>.

### **About the Royal BC Museum**

The Royal BC Museum explores the province's human history and natural history, advances new knowledge and understanding of BC, and provides a dynamic forum for discussion and a place for reflection. The museum and archives celebrate culture and history, telling the stories of BC in ways that enlighten, stimulate and inspire. Looking to the future, the Royal BC Museum will be a refreshed, modern museum, extending its reach far beyond Victoria as a world-class cultural venue and repository of digital treasures.

- 30 -

### **Media contact:**

Royal BC Museum Media Inquiries

250-387-5051

[news@royalbcmuseum.bc.ca](mailto:news@royalbcmuseum.bc.ca)

 [@RoyalBCMuseum](https://twitter.com/RoyalBCMuseum)

### **Article references and links**

Beatty, B.L. and Cockburn, T.C. 2015. New insights on the most primitive desmostylian from a partial skeleton of *Behemotops* (Desmotylia, Mammalia) from Vancouver Island, British Columbia. *Journal of Vertebrate Paleontology*. 35(5), On Line August 27; 2015. DOI:10.1080/02724634.2015.979939

Johns, M.J., Trotter, J.A., Bonnett, C.J.M., and Barnes, C.R. 2015. Neogene strontium isotope stratigraphy, foraminifer biostratigraphy, and lithostratigraphy from offshore wells, Queen Charlotte Basin, British Columbia, Canada. *Canadian Journal of Earth Sciences*, 52: 795–822. [dx.doi.org/10.1139/cjes-2014-0159](https://doi.org/10.1139/cjes-2014-0159)

Press Release: UVic Research Reveals New Insights Into the Geological Evolution of Canada's West Coast:

<http://communications.uvic.ca/releases/release.php?display=release&id=1486>

Saul, L.R. and Squires, R.L. 2015. Pacific Slope of North America Record of the Cretaceous Aporrhaid Gastropod *Tessarolax*: Evolutionary Trends, Mode of Life, and Paleobiogeography of the Genus. Natural History Museum of Los Angeles County, Contributions in Science, 523:37–65

Eberle, J.J., Brybczynski, N., and Greenwood, D.R. 2014. Early Eocene mammals from the Driftwood Creek beds, Driftwood Canyon Provincial Park, Northern British Columbia. Journal of Vertebrate Paleontology, 34(4):739–746.  
DOI:10.1080/02724634.2014.838175

Press Release: New fossil discoveries: Ancient hedgehog and tapir once inhabited British Columbia: <http://nature.ca/en/about-us/museum-news/news/press-releases/new-fossil-discoveries-ancient-hedgehog-tapir-once-inhabite>

Jonsson, C.H.W., and Hebda, R. J. 2015. Macroflora, paleogeography, and paleoecology of the Upper Cretaceous (Turonian?–Santonian) Saanich Member of the Comox Formation, Saanich Peninsula, British Columbia, Canada. Canadian Journal of Earth Sciences, 52:519–536. dx.doi.org/10.1139/cjes-2014-0180