Royal BC Museum scientists race against the clock to collect from ecosystems at risk by climate change

VICTORIA, BC–As global temperatures rise, British Columbians are enduring increasingly hot summers and some destructive consequences, **such as 2017's** violent wildfire season.

Royal BC Museum biologists foresee another, longer-term threat: as temperatures rise, the flora and fauna adapted to cold, high-elevation alpine ecosystems are literally losing ground to rising treelines.

So, for the sixteenth summer in a row, Royal BC Museum scientists have conducted extensive fieldwork in BC's remote mountains, collecting specimens that document biodiversity and build a crucial scientific baseline.

BC's vast and varied alpine ecosystems have, until recently, been an underdocumented zone because they are often remote; getting access is challenging. What Royal BC Museum staff have collected from the alpine over these years is a biological snapshot of ecosystems that climate change inevitably threatens.

"Fieldwork connects the Royal BC Museum to our provincially-focused mission, collecting for the benefit of understanding our province better," says Royal BC Museum CEO Prof. Jack Lohman. "All our biodiversity data is freely shared and accessible to institutions and researchers around the world."

This June and July, Royal BC Museum botanists, earth scientists and entomologists visited Kluane National Park and Reserve in Yukon and three high elevation sites in the Atlin area, in north-western BC.

The Kluane visit was part of a bioblitz (a short-term, intense biological survey) led by Parks Canada and the Government of Yukon. The visit to the Atlin region was a Royal BC Museum field study.

It is too early to announce specific findings, but museum scientists note that they are "filling in the geographic gaps" by collecting from these remote, generally inaccessible areas. Because BC is such a diverse land, researchers—particularly the entomologists—are optimistic that their collections from this summer's fieldwork will contain species previously unrecorded in BC.

Royal BC Museum Research Associate Robb Bennett estimates that an astounding 20-30 additional species of spider are recorded in BC each year as a result of expeditions to previously unexplored regions. This marks the eighth year of entomology collection efforts in the BC alpine.

For Royal BC Museum Botany Curators Ken Marr and Richard Hebda, and Botany Collections Manager Erica Wheeler, the cumulative result of 16 years of



alpine collecting is the development of a globally-significant collection, digitized and published online for anyone in the world to study.

To learn more about research at the Royal BC Museum, please visit the Research Portal (royalbcmuseum.bc.ca/about/research/research-portal).

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. We are a hub of community connections in BC-onsite, offsite and online-taking pride in our collective histories.

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