



NEWS RELEASE

News Release - [target date Feb. 2002]
For Immediate Release
[Feb. 2002]

Dazzling dragonflies *Species discovered in Upper Fraser Basin for first time*

WILLIAMS LAKE – Four species of dragonflies have been discovered in British Columbia for the first time, three in the Columbia Basin and one in the Upper Fraser Basin, near McBride and Fort St. James. The Upper Fraser Basin species (*Quebec Emerald*) had never been seen west of Quebec. One of the Columbia Basin discoveries (*River Jewelwing*) represents a new dragonfly family for BC.

“The discovery is significant,” says Rob Cannings, Curator of Entomology at the Royal British Columbia Museum. “Although we estimate that only about half the insect species living in BC are recorded, we know the dragonflies pretty well, and it’s rare and exciting to find new ones for the province.”

Cannings is studying these ancient insects as part of the Royal BC Museum’s Living Landscapes initiative, a province-wide research and public education program. The resulting study will be the first comprehensive survey of dragonflies to be undertaken across central and northern British Columbia.

“This inventory will cover more than 60 species that live north of 52 degrees latitude (about Williams Lake),” says Cannings. When complete, it will represent the most thorough examination of any insect order in BC.”

Cannings will be in Williams Lake May 2-4, 2002 to lecture and exhibit these large insects noted for their bright colours and amazing flight. Numerous other scientists and researchers will complement Cannings in the free Living Landscapes events.

Since 1995, in partnership with the BC Conservation Data Centre (Ministry of Sustainable Resource Management), the RBCM has organized dragonfly surveys of various regions in BC. With the initiation of the Living Landscapes project, surveys have expanded to include the entire province. Since 2000, they have focused on the Upper Fraser Basin.

In 2000 Cannings and his project team surveyed the regions around Williams Lake, Quesnel, Prince George, and areas to the south and east. In 2001, the area around Vanderhoof, Fort St. James and Mackenzie was studied. This year fieldwork focuses on the large region that includes Burns Lake, Houston and Smithers. Sampling will be completed for the entire BC north by 2005.

Freshwater ecosystems, such as peatlands, marshes, small lakes and ponds are alive with invertebrates (animals without backbones). Dragonflies are often the dominant invertebrates in these watery habitats, where they are important predators, both as underwater larvae and flying adults.

“Dragonflies are fascinating to study and watch,” says Cannings. “They’re strong, fast and chase after their prey, catching them in the air. The larvae of some species will even eat small fish. Some northern species may spend four or five years in the larval stage yet an adult lives only a month or two. With research these communities can be described and their health gauged for the long term.”

Dragonfly larvae are sensitive to the ecological degradation that often comes with poor logging practices, the damming of streams, shoreline development, recreational activity, chemical pollution and other changes to the natural world.

“The destruction of aquatic habitats is the worst enemy of dragonflies” insists Cannings. It reduces dragonfly numbers and species diversity. Healthy dragonfly populations are an important indicator of an ecosystem’s health. Development in northern BC is concentrated in a few population centres. But the pace of development is increasing and will continue to do so dramatically. For that reason alone it is crucial that we establish baseline information on the distribution and habitat requirements of aquatic invertebrates.”

The study will improve the scope and utility of the RBCM’s dragonfly collections. As well, management guidelines for 14 rare species will be developed and public interest and knowledge of these ancient insects promoted via slide show programs for schools, parks and other educational agencies. The Living Landscapes web page will include the final project report, distribution maps, colour photos and other useful information. A revised provincial handbook on dragonflies is also planned.

Living Landscapes is a province-wide research and public education program of the Royal BC Museum that explores human and natural influences on regional environments. It offers British Columbians opportunities to learn about their cultural and natural heritage through its website: <http://livinglandscapes.bc.ca>.

The Royal British Columbia Museum is a publicly owned cultural, educational and historic institution that was founded in 1886. The museum is responsible for collecting, displaying and researching the human and natural history of British Columbia.

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This news release is online at: www.royalbcmuseum.bc.ca/newsreleases/index.html

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DRAGONFLY FACTS:

For additional information, see the Dragonfly Society of the Americas at <http://www.dragonfly.org>.

- Dragonflies are not flies; flies are a different group of insects that include mosquitoes, black flies and house flies. But dragonflies ate real dragons to other insects of the air – flying dragons, magnificent predators.
- Dragonflies are harmless to people – they do not sting or bite. And although they sometimes are called “darning needles”, they cannot sew anything!
- In the Carboniferous period, 300 million years ago, long before dinosaurs roamed the earth, dragonflies were common. The oldest dragonfly specimens are fossilized wings found in European coal fields. The largest known dragonfly was from this period and had a huge wingspan -- about 64 centimetres (2.5 feet) from tip to tip!. These first dragonflies were among the largest insects ever known and were some of the first insects to fly. Today, there are over 5,000 named dragonfly species, 450 in North America and 87 in BC..
- Today the largest dragonfly in North American measures about 10 or 11 cm across the wings. The greatest wingspans, about 17 cm, belong to the giant damselflies of the American tropics.

- Dragonflies have evolved as specialized hunters of other insects, including mosquitoes and other flies, and even other dragonflies. They greatly depend on their huge compound eyes for finding their prey and some can focus on objects 5 or 6 metres away. The eyes are enormous; in the larger species each eye may contain 30,000 tiny lenses, each gathering light to form a mosaic image. They catch their prey in flight, trapping it in a basket formed by their spiny legs. The captured insect is then devoured in the strong jaws. A dragonfly may eat hundreds of insects a day.
- Dragonflies seldom walk. Legs are used for catching and holding prey and for perching on the ground or on plants.
- Dragonfly larvae live in the water and moult 8-17 times as they grow. They are voracious predators, usually eating small invertebrates. The larger species sometimes eat tadpoles and even small fish.
- Dragonflies are studied by ecologists to determine changes in the environment because they are at important components of both aquatic and terrestrial animal communities.
- The US Air Force has spent thousands of dollars of research money trying to understand their amazing flight -- their 50 km/hr speeds, their hovering, their lightning-fast stops and starts and instant right-angle turns.