



Grasslands project action

Grassland Project Key Site 2005: Waterton Lakes National Park

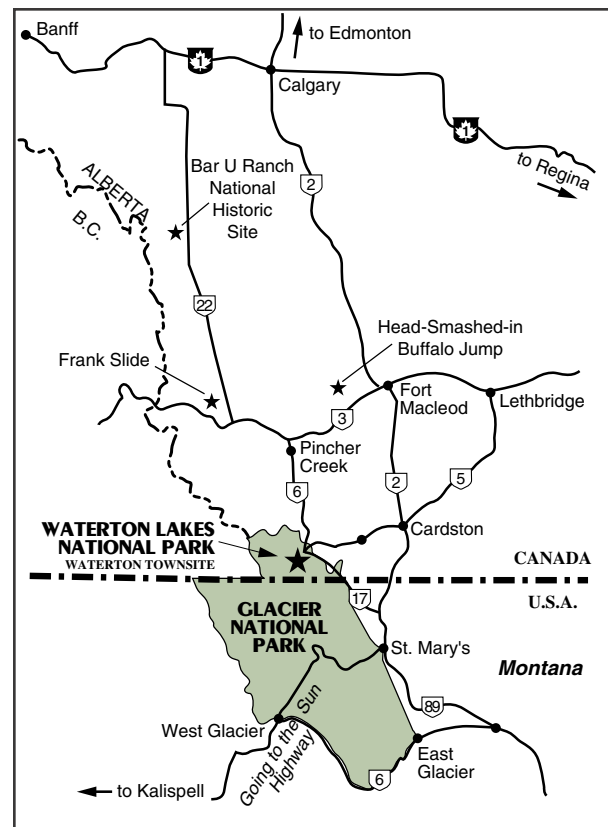
What:	BioBlitz, summer, 2005
When:	July 7–12, 2005
Where:	Waterton Lakes National Park, Alberta
How:	Contact person: David Langor, Canadian Forest Service, Northern Forestry Centre, 5320 - 122 Street, Edmonton, AB T6H 3S5; dlangor@nrcan.gc.ca

The 2005 Biological Survey of Canada BioBlitz will occur in Waterton Lakes National Park (WLNP), Alberta from 7–12 July. This BioBlitz provides an exciting opportunity to collect in one of Canada's most scenic and biologically-interesting natural areas, which is also a UNESCO Biosphere Reserve.

The park's name derives from the Waterton Lakes, a chain of lakes named in honour of a British naturalist, Squire Charles Waterton (1782–1865). The 525 km² WLNP represents the southern Rocky Mountains Natural Region, where some of the most ancient mountains in the Rockies abruptly meet the prairie. It is a landscape shaped by wind, fire, and flooding; with a rich variety of plants and wildlife. The town site sits at 1280 m above sea level and the park's highest peak, Mt. Blakiston, is 2940 m above sea level. WLNP is located in the southwest corner of Alberta. It is bordered: on the west by the province of British Columbia (Akamina-Kishinena Provincial Park and Flathead Provincial Forest); on the south by Glacier National Park, Montana; on the north and east by the Bow-Crow Forest, and private lands in the Municipal Districts of Cardston and Pincher Creek; and includes a large timber reserve belonging to the Kainaiwa (Blood Tribe).

Several different ecological regions meet in WLNP – with biota of the Great Plains, northern Rocky Mountain and Pacific Northwest all overlapping. The park's four natural subregions – foothills parkland, montane, subalpine and alpine – embrace 45 different vegetation types, including grasslands, shrublands, wetlands, lakes, spruce-fir,

pine and aspen forests, and alpine areas. Sixteen of the vegetation types are considered rare or fragile and threatened. WLNP is the only Canadian national park that preserves foothills fescue grasslands. This rich collection of vegetation types in a small geographic area means that WLNP has an unusually rich and varied number of plants for its size, with more than 970 vascular plant species,



(map courtesy Parks Canada)



Aerial view of Lower Waterton Lake and the fescue grassland / aspen parkland area of the park (photograph by Cyndi Smith, Parks Canada)

182 bryophytes and 218 lichen species (this represents more than half of Alberta's plant species, and more species than Banff and Jasper National Parks combined). About 179 of the vascular plant species in WLNP are rare in Alberta, and 22 of these are not found anywhere else in Alberta.

The park's variety of vegetation communities provides homes for many animals, including more than 60 species of mammals, over 250 species of birds, 24 species of fish, 10 species of reptiles and amphibians, and thousands of species of terrestrial arthropods. Large predators include wolf, coyote, cougar, grizzly bear, and American black bear. The grasslands are important winter range for ungulates such as elk, mule deer, and white-tailed deer. In the fall, the marsh and lake areas of the park are used extensively by migrating ducks, swans, and geese. Some animals found here are considered rare or unusual, e.g., Trumpeter Swans, Vaux's Swifts, and vagrant shrews.

Historically, collection of arthropods in WLNP has been sporadic and usually focused on a few taxonomic or functional groups. Recent collecting by Rob Longair and students (University of Calgary) has contrib-

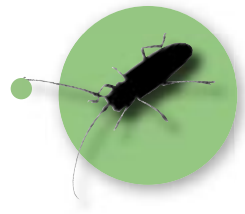
uted greatly to our knowledge of some groups. Many arthropod species found in WLNP are found nowhere else in Canada; some of these may be endemic and, for others, WLNP represents the northernmost limit of their distribution in North America. WLNP has a small collection of insects, much of which originates from the efforts of David and Margaret Larson collected during their honeymoon in WLNP. This collection, and other material (pinned and wet residuals) collected by the University of Calgary, are available for examination during Bio-Blitz 2005

Thus, Bio-Blitz 2005 offers a unique opportunity to collect in the varied habitats of one of Canada's biologically rich areas. The Parks Canada staff is enthusiastic about and highly supportive of this event. They have offered the use of their research house, which has sleeping facilities for 8 and space for sorting and examination of samples and specimens. As well, group camping facilities will be provided. For those who prefer hotels, these are in abundant supply at the Waterton town site.

If you are interested in participating in Bio-Blitz 2005, or would like more details, please contact David Langor (dlangor@nrca.gc.ca).



Middle and upper Waterton lakes looking south (photograph by Cyndi Smith, Parks Canada)



Report on Bio-Blitz 2005

Bio-Blitz 2005 in Waterton Lakes National Park (WLNP) was the fifth annual Bio-Blitz sponsored by the Biological Survey of Canada (Figure 1). The previous four Bio-Blitzes took place in predominantly grassland sites (Onefour, Alberta; Tall Grass Prairie Reserve, Manitoba; Peace River grasslands, Alberta; Aweme, Manitoba). The event in WLNP was, therefore, the first to include non-grassland ecosystems.

Several different ecological regions meet in WLNP, with biota of the Great Plains, northern Rocky Mountain, and Pacific Northwest overlapping within the park's boundaries. The park's four natural subregions—foothills parkland, montane, subalpine, and alpine—embrace 45 different vegetation types, including grasslands, shrublands, wetlands, lakes, spruce–fir, pine and aspen forests, and alpine areas. This high ecosite richness offered a wealth of arthropod-collecting opportunities that were embraced enthusiastically by 27 energetic participants, who collectively covered most of the park between 7 and 12 July.

Parks Canada personnel working in WLNP, in particular Conservation Biologist Cyndi Smith, were very supportive of this event and provided much in-kind support in the form of access to the

research house (used as Bio-Blitz headquarters), free group camp sites, free park access and research permits, maps, and copious helpful advice. Collecting efforts afforded many opportunities to educate the general public about arthropods, biodiversity, and the importance of protected lands. Many Bio-Blitzers also participated in the annual WLNP butterfly count.

Some participants have already identified their collections and have submitted the data to a common database managed by WLNP. Thus far, there are many new records for the park and Alberta and even a few new records for Canada. For example, of the approximately 305 species of macro-moth species collected, the vast majority are new records for the park, 17 are new provincial records, and 1 is a new Canadian record. All data will eventually be accessible to the public, and specimens are being deposited in publicly accessible collections. Many Bio-Blitz participants have expressed strong interest in continuing to work in WLNP, and a group of moth enthusiasts returned for a visit in August 2005. We hope that the 2005 Bio-Blitz experience may give rise to a more long-term arthropod biodiversity survey of WLNP.



Figure 1. Waterton Lakes National Park, site of Bio-Blitz 2005. Left to right: Joe Shorthouse, Felix Sperling, Rob Roughley, and David Langor holding the flag of the Biological Survey of Canada (photo by Andrea Renelli).