

# A Park Where the Buffalo Roam

By Bethann G. Merkle & Jerod A. Merkle

Picture spending months in the wild, on the hunt for insights about bison, one of North America's most iconic animals. Curiosity triggered, you might wonder, "Do bison 'follow the leader'?" "Do they have favourite lunch spots?" "Can we identify individuals by appearance?"

Such questions are at the root of more than a decade of ecological research efforts focused on one unique Canadian bison herd. The Sturgeon River Plains Bison (*Bison bison bison*) is Canada's only Plains Bison herd found within their historic range. Located in Saskatchewan's Prince Albert National Park (PANP), they belong to one of three fully wild (i.e. free-ranging) herds in the country.

The Sturgeon River herd is an unplanned continuation of a restoration saga still playing out across North America. In 1969, 50 bison were released in the Thunder Hills (60 kilometres northeast of the park) to provide an additional natural food source for First Nations hunters. The bison dispersed, and a dozen or so eventually established a herd in the park's southwest corner. Initially, they were unanticipated visitors, but over time these bison became what the park now heartily promotes as "unexpected, unfenced, unforgettable."

The bison settled in an area of the park characterized by aspen parkland punctuated by glacier-carved meadows. In these soggy clearings, their preferred forage, slough or Wheat Sedge (*Carex atherodes*), grows abundantly. To the north, boreal forest provides winter habitat. To the west, the Sturgeon River forms a sinuous park boundary. Beyond it lie agricultural fields which the bison increasingly frequent in late summer, after harvested hay fields sprout back. This fresh juicy regrowth poses a great temptation when compared to the senesced native grasses and sedges found within the park.

Understandably, not all their agrarian neighbours are enthusiastic about these massive visitors. Consider that bison weigh between 318-1,000 kilograms, can run 56-64 kilometres per hour, and have been known to jump Two-meter tall fences. Whether it is crop loss, damaged fences, or nervousness about personal safety, local land owners have a legitimate list of concerns. Since 2006, PANP, pro-



Photo: B.G. Merkle & J. A. Merkle

*Mature male bison, known as bulls, are the iconic "buffalo" of the North American West.*

vincial wildlife managers, researchers, and a grassroots community organization called the Sturgeon River Plains Bison Stewards have collaborated to develop a conservation and management plan that addresses these issues.

Professor Daniel Fortin from Université Laval has been following this herd since 1996. He and his team investigate various aspects of bison ecology, human-wildlife conflicts, and the myriad other complexities involved with managing this isolated population. The current researchers concede that bison conservation involves the predictable data wrangling, number crunching, and meetings with stakeholders. But they also emphasize that it is not all paperwork and strategic documents.

Slogging through sloughs and bushwhacking up to the edge of meadows in search of skittish bison requires both skill and gusto. Just imagine trying to move quietly through thick aspen forests and dense hazelnut undergrowth without spooking your quarry. In addition to bison, the meadows often boast Sandhill Cranes (*Grus canadensis*) and Boreal Chorus Frogs (*Pseudacris maculata*), along with profusely-blooming swaths of wildflowers.

When bison are spotted, the objective is to take lots of pictures, record behavioural observations, and collect age and gender ratio data. Collected for years, these data contribute to a long-term understanding of the herd's ecological role. For example, using a combination of aerial surveys and photo identification, the team has recently been able to estimate the number of bison in PANP. Peaking in the mid-2000 at nearly 500 individuals, the present herd includes 200-250 bison. Related data analysis aims to determine whether the population is increasing or decreasing.

Another effort seeks to predict whether the herd will use more of the park if the population increases. Of course, an associated consideration is the bison's continued presence on private property outside the park. Right now, one researcher is focusing on what attracts the bison outside the park and how ecological knowledge can help the province and local farmers deal with this challenge.

Data collected from this remote region also have international ecological significance. According to the Committee on the Status of Endangered Wildlife in Canada and the Interna-

*Continued P. 19*



Photo: B.G. Merkle & J. A. Merkle

*The GPS collar on this female bison enables researchers to track her and her calf.*

# My participation in a Fall Migration Field Camp

By Annie Kapps

In the summer edition of BCnature, I came across an advertisement for the September 3-7 *Fall Migration Field Camp* at Bamfield. Though it was touch-and-go until the last week (minimum 10 participants), I cannot stress emphatically enough how very lucky I was to have been one of those in attendance at the field camp.

From what I understand, field camp "Migration Programmes" is a new venture. They have held a family field camp during the 2013 school spring break (Spring Migration) and this (Fall Migration) was a venture attempting to reach adults. They cater to school groups and do a two-day course for them.

Their small advertisement in the magazine did not do justice to the venture! Our day began with a hearty breakfast, and the morning field trip was on the go by 8:30, after a debrief we were served lunch. Then off again on the afternoon field trip.

After dinner, we were busy with an evening field trip or lab.

- There were four boat trips.
  - (1) On the *Barkley Star* we saw Stellar Sea Lions, the furthest known southern resident sea otter and a Humpback Whale breach; however, bird identification was too difficult at the boat speed;
  - (2) On the *Alta*, we saw California Sea Lions;
  - (3) On the open vessel, we recorded physical oceanography data, collected sea samples for lab studies;
  - (4) Again on the open vessel, we were ferried across to the other side of Bamfield to walk the boardwalk, which is an anomaly, being part of B.C.'s highway system.
- Lab studies were on plankton. We were amazed what showed up under the power of the microscopes.
- We were privileged to use instruments recording ocean salinity, temperature, torpidity.
- We explored kelp beds, tidal pools, an open beach. This beach was near the trail-head of the West Coast Trail. As we walked to the first ladder on the trail, we observed flora and fauna.
- Dr. Hana Kucera (also our mushroom prof) told us of the wonderful world of weeds, as in seaweeds, and about their fledgling commercial harvesting.
- We spent a morning foraging for mushrooms and laying them out for the next day's examination of spore prints. Between collections, we identified plants and visited a culturally modified cedar.
- We arrived at the lecture room to find at the desks small aquariums showcasing various B.C. Coast denizens. Science Educator, Phil Lavoie identified them for us and we held many in our hands.
- One lecture was on birds and wing shapes. Species were laid out on tables. We were advised of species' counting techniques used by scientists.
- Dr. Dave Riddell walked us through fish forms and structures.
- We visited an on-campus commercial Geoduck clam hatchery and were instructed in how sea divers "planted" and then harvested



Photo: B.Davison



Photo: B.Davison

the beds.

- One night, we studied bioluminescence at the Science Centre docks.
- We attended "happy hour" at the resident, Director Brad Anholt's and were introduced to visiting scientists from Ireland, professors and the students attending the

fall university sessions.

If you have the opportunity to attend one of Bamfield Fall Migration programmes, I highly recommend it! What a wonderful way for a regional naturalists' group to access our B.C. coast.

Gather a group (minimum 10; maximum 24) and give them a call. Bamfield Science Centre - [public\\_ed@bms.bc.ca](mailto:public_ed@bms.bc.ca) or 250-728-3301 ext 226 ♦

## A park where the buffalo roam Continued

tional Union for Conservation of Nature, bison are listed as "threatened" and "near threatened," respectively. This status has significant implications for scientists, park visitors, and bison ranchers alike. Continued bison population monitoring allows researchers to answer ecological questions and provides information necessary for successful management. Ultimately, the long-term viability of Canadian bison depends on the success of wild populations like the PANP bison.

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