

# Taking a Road Less Travelled:

## Wainwright Dunes Ecological Reserve

By Carolyn Campbell, AWA Conservation Specialist



If you get the chance, be one of those who takes the road less travelled this summer: head east to discover Alberta's Parkland Dunes country. It's a marvelous landscape of contrasts, where 'big sky' prairie is interrupted by striking hills, and where arid winds have shaped sandy dunes that shelter lovely groundwater-fed ponds and wetlands.

The Parkland Dunes is relatively poor farmland due to thin top soil, boulders, and sand. This has been its saving grace, allowing relatively intact areas of native vegetation to remain. There's a high diversity of landforms and wetlands, with aspen groves interspersed with grassland and occasional sandy dune areas. The habitat supports elk, moose, mule deer, and white-tailed deer. Beaver activity in conjunction with groundwater springs is likely responsible for the scale of some of the open water and wetlands areas that are significant for migrating waterfowl and shorebirds. As an important remaining representative area of our Central Parkland Natural Subregion, it is important for Albertans to learn about and help conserve this landscape.

I was able to experience its beauty in summer 2016, on AWA's hike in the Wainwright Dunes Ecological Reserve. The Ecological Reserve covers just over 28 square kilometres, along part of the southeast border of Canadian Forces Base (CFB) Wainwright (see map). We were fortunate to have AWA Board member Cliff Wallis lead our hike. Cliff has been involved for decades in conserving this area. He was part of a cohort of Parks

staff that were encouraged to identify candidate protected areas. Cliff's work was instrumental in creating the Ecological Reserve in 1988.

Like other Alberta Ecological Reserves (ER), the Wainwright Dunes ER aims to preserve and protect natural heritage in an undisturbed state for scientific research and education. The public can enter by foot only. Responsible cattle grazing is also a compatible land use for this protected area; such grazing mimics the important natural disturbance to grasslands and parkland regions that bison and other native grazers provided historically. Local residents of the Buffalo Park Grazing Association hold a lease for grazing rights within and adjacent to the Ecological Reserve, and they have generally practiced responsible environmental stewardship. The Alberta Government hosts a Wainwright Dunes Advisory Committee annual meeting attended by AWA, the Buffalo Park Grazing Association, and other stakeholders to discuss management issues.

For our August 2016 trip, our group approached the Reserve on foot along a sandy route used by grazing leaseholders. Cliff noted that the pasture land in this entrance area had been previously disturbed. Decades ago, range management doctrine wrongly assumed that that more productive pasture would result from tearing up native grasses and substituting 'tame pasture' species. Fortunately, diverse native grassland species had recolonized much of the land.

Once in the Ecological Reserve proper, we soon saw the largest open water body

of the Ecological Reserve, the marshy David Lake. It's a significant way station for migrating waterfowl and its transition wet meadow lands contain valuable vegetative diversity. Our hike continued to the northwest, through treed aspen patches and then skirted a large fen, or groundwater-fed wetland. We observed a family of blue-winged teals, and flushed a pair of sandhill cranes from a roosting spot. Drier ground hosted prairie flowers and grasses; on the sandier spots we found rarer colonizer sedges and grasses.

Over the last decades, there has been encroachment of aspen at the expense of prairie grasslands on drier vegetated ground. An important natural disturbance that has been missing from this landscape is fire. AWA is encouraging the Alberta



Alberta's Parkland Dunes constitute a striking wind-shaped landscape in the transition between grassland and parkland. The Wainwright Dunes Ecological Reserve is one of the few formally protected areas here.



Hikers enjoy the fragile beauty of vegetated and open sand dunes in the Wainwright Dunes Ecological Reserve. PHOTO: © C. CAMPBELL

government to explore limited prescribed burns to renew and expand the open meadows.

Towards the mid-point of our hike, we came into the higher sand dune section. The Wainwright Dunes hills, whether thinly vegetated or open sand, rise perpendicular to the prevailing northeasterly winds. Cliff noted that glacial rivers deposited sands and gravels, which the winds then formed into dunes. Most of Alberta's dunes are parabolic crescents with 'tails.'

Our lunch stop was a higher vantage point, where we watched dark clouds off to the west with some concern. Boom! 'Was

that thunder?' No – we were exploring the Ecological Reserve on a day when there were major artillery and flight exercises over Canadian Forces Base Wainwright, adjacent to the Reserve. The 'boom' was from a fighter jet in the distance that had just broken the sound barrier.

After lunch, we headed west and then south through a higher-ground portion of the large fen. It had been a rainy summer to that point, so there was no avoiding knee-high wading at several places. We walked back along the other side of the fen. Here this wetland takes on characteristics of a 'patterned' fen. The climate

is just cool enough to support peat-forming wetted areas or 'flarks', while the groundwater movement creates narrow aspen-treed ridges or 'strings' running through the low-lying 'flarks.' These elements of a patterned fen are typically associated with boreal wetlands much further north.

Near the end of our circuit we came across an open water section of the wetland complex where there was a large beaver lodge. These architects are so beneficial to keeping water on grassland and parkland landscapes, so it was fitting to see them claim prime real estate in the Ecological Reserve.

After our goodbyes, our hike participants dispersed home through central and southern Alberta. Another reason to visit this lesser known area of Alberta is the amazing landscapes you will discover enroute. In the Parkland Dunes region itself, we enjoyed the striking contrasts between the vast dry lands of the Special Areas, the austere butte formations east of Consort, and the surprising steepness of the Neutral Hills. And if you're heading back towards Calgary, there's the spectacular patterned canyon of the Red Deer River valley to explore. Wherever you call home in Alberta, do take the time to travel to experience this marvelous and fragile part of our natural heritage. 🌲



The Wainwright Dunes' precious shallow groundwater supports a mixture of aspen covered ridges and boreal forest-like peat wetlands PHOTO: © C. CAMPBELL