

## Land of Milk and Honey – The Conservator, Spring 2003

Springtime draws near on the Milk River Ridge in southern Alberta, and life is unfolding as it should.

On the 55,680-acre McIntyre Ranch, the snow is melting fast in the warm south wind, but patches of white still dot the grassy hills along with scattered herds of mule deer and beef cattle. Run-off flows freely down hillsides and coulees, splitting off to form shallow pools or continuing in muddy torrents to empty in a willow-lined creek on the valley bottom.

Water rushes through steel culverts under dirt roads, and – in several places – backs up and overflows the frozen ground. A lone porcupine waddles en route to drier ground on a hilltop.

In a four-wheel-drive truck patrolling the northern edge of the historical McIntyre Ranch, ranch general manager Ralph Thrall III (the 3<sup>rd</sup>) and Don Watson, of Ducks Unlimited in Lethbridge, can't stop smiling.

Thrall, whose grandfather bought the ranch from W.H. (Billy) McIntyre's estate in 1948, knows the melt-water will help rejuvenate the land, creating stock-watering ponds and injecting life-giving moisture to the grassland that supports his Red Angus-Hereford cattle year-round.

As for Watson, head of conservation programs for the Alberta Prairie field office, he's enthused because the water will provide a natural welcome mat for the ducks – particularly northern pintails – that will begin returning in the next week or so.

He knows the presence of shallow wetlands in vast expanses of grassland will entice many pintails to stop and nest rather than continue their migration further north.

"Pardon me if I can't hide my excitement," Watson says, his face beaming at the sight of the runoff.

"I think we're really going to raise some ducks this year."

For almost 20 years, DU has been actively involved in the business of raising pintails on the Milk River Ridge, a 2,700 square kilometre spectacular chunk of rolling fescue grasslands, plateaus and escarpments that dominates Alberta's southern horizon south of Lethbridge.

Home of the Alberta government-protected Twin River Heritage Rangeland, the Ridge is one of six large blocks of native grassland remaining on the plains of North America.

The river from which the ridge takes its name is born in western Montana and meanders through 160 kilometres of southern Alberta before looping back into the United States.

Commonly called "The Ridge," the area is bounded by the town of Raymond to the north, and the Alberta-Montana border communities of Coutts to the southeast and Carway to the southwest.

Created by retreating glaciers more than 10,000 years ago, the pothole-pocked Ridge rises dramatically from the prairies, a geographical contrast almost as striking as the Rocky Mountains to the west. The top of the Milk River Ridge has an elevation of 1,219 metres, 274 metres higher than the city of Lethbridge.

It provides critical, pristine habitat to white-tailed and mule deer, pronghorn antelope, coyotes, ring-necked pheasants, sharp-tailed grouse and many waterfowl species, including northern pintails. Up to 20 breeding pairs of pintails have been counted in one square mile.

“It’s a little piece of pintail heaven,” Don Watson notes.

As such, the Milk River Ridge is an important linchpin in DU’s integrated plan to rejuvenate and restore pintail populations hit hard by prairie drought in the 1980’s.

Biologists shocked by plummeting pintail populations back then were even more surprised when numbers failed to recover after water returned to prairie breeding grounds in the 1990’s. Historically, pintail populations had fluctuated in tune with water conditions - an accepted biological fact of life – and they always bounced back when conditions improved.

In the 1970’s, more than 60 per cent of the pintail continental breeding population settled in the southern Canadian prairies, with the remainder in northern Canada and Alaska and the northern states in continental U.S. In the 1980’s, the proportion of pintails that settled in southern Canada had dramatically decreased – from a high of more than 4.5 million in 1974 to less than 500,000 in 1988.

Pat Kehoe, DU’s Edmonton-based manager of Prairie Region conservation programs, notes many factors are likely to blame for the decline of pintail populations. The main ones, he says, are those that have caused reductions in pintail reproductive success on key Canadian breeding grounds.

Pintails commonly nest in short grass and crop stubble, putting them directly at risk of farming operations. Since the 1970’s, there’s been a marked increase in cropped lands in Prairie Canada. Increasing production costs, lower commodity prices, and increased equipment size have resulted in more intensive agricultural use of lands already under production. More than five million acres of land within the pintail’s primary breeding range are being farmed more intensively than they were in the 1970’s.

The trend away from the formerly common practice of summer fallowing fields likely heightened the problem. Tilled land under summer fallow remains idle during much of the pintail nesting season. When those lands are continuously cropped, with tilling and seeding occurring during nesting season, nest destruction can be significant. Compounding the problem, pintails tend to not re-nest as often as mallards and other species.

In 1998 – 60 years after its foundation – DU established a new conservation vision for the Prairie Region, and developed conservation strategies to achieve this vision over the next 20 years. The vision, simply stated, is: *A mosaic of natural restored and managed landscapes capable of perpetually sustaining populations of waterfowl and other wildlife.*”

From that vision came a plan called Restoring the Tradition, aimed at using the vision’s guiding principles to help re-establish productive landscapes for northern pintails - a species of the mixed-grass prairie and one DU has identified as being of special concern.

Kehoe said DU plans to achieve the vision through three main strategies: direct intervention such as land purchase and restoration; policy efforts aimed at convincing governments and industry to adopt regulations and practices that conserve remaining native prairie and help convert marginal cropland back into perennial cover; and through

heightened extension programs to achieve “waterfowl friendly” economically and environmentally sustainable production practices that benefit producers.

DU’s innovative pintail restoration program is based on years of solid science.

Two years of research in Saskatchewan established that converting cropland to other agricultural uses could alleviate the dangers to pintails associated with spring-seeded croplands. Pasture and hay-lands harvested in late season are not prone to potentially catastrophic disturbance during nesting. Studies showed pintails, on average, hatched one nest for every 142 acres of hay-land, almost 10 times more than was observed in spring-seeded cropland.

In 1998, DU used information based on agriculture census, historical weather data and waterfowl and pond surveys to conduct a Prairies-wide analysis of pintail response to changing agricultural practices and environment from 1961 to 1996. The analysis highlighted regions where pintail declines have been correlated with changes in cropping practices. In conjunction with earlier analyses, the study supported the hypothesis that pintail breeding potential was being compromised by recent changes in cropping practices.

DU also compared breeding success of pintails in spring and fall-seeded crops. The research produced a compelling argument in favour of fall seeding to benefit nesting pintails. On average, pintails hatched one nest for every 72 acres in fall-seeded crops compared with one nest per 1,332 acres in spring-seeded croplands.

Kehoe noted that research provided a firm basis for promoting fall-seeded cereal crops as a “pintail-friendly” cropping alternative in areas where cropland intensification has encroached on traditional pintail breeding areas.

The research convinced DU that support by farmers and ranchers is key to the restoration of pintail populations.

“There is a bright future for Northern pintails if we aggressively pursue a habitat conservation strategy that includes agricultural producers,” Kehoe says.

“Many of the programs which benefit pintails have direct economic benefits to producers and represent sustainable ‘best’ management practices on the range and farm alike.”

Core pintail breeding areas on the Canadian prairies includes about 13 million acres of grassland that has been spared the plow due to high drought frequency and low soil fertility. Irrigation and new cropping practices, however, increase the likelihood of this land being broken in the future. Increasing demands for beef are leading to larger cattle herds and more intense grazing pressure.

DU believes that - over the next quarter century - it must ensure this land base remains intact in order to avoid further loss of functioning habitat, a loss that would negate restoration efforts. Conservation efforts aimed at maintaining that land base are focused on the Milk River Ridge and the Missouri Coteau Initiative in Saskatchewan.

Wetland restoration projects are being used in conjunction with water management to secure surrounding grassland. Although loss of upland cover has been particularly detrimental to pintails, DU knows the importance of wetlands – especially shallow, temporary and seasonal ones that are easiest to drain and are therefore impacted the hardest. More than 70 per cent of wetlands in the Canadian prairies have been drained or degraded.

DU acknowledges that cultivation will continue to be the dominant force shaping the prairie landscape. With winter cereals providing a higher benefit to waterfowl than spring-seeded cereals, DU is trying to increase the proportion of winter cereals in the region, including the Milk River Ridge. In order to accomplish that, it is focusing on ensuring the viability of winter wheat through research and extension, including the funding of an Eco-Agriculture Chair at the University of Saskatchewan.

The goal is to develop winter wheat varieties with improved cold tolerance, disease resistance and superior quality. In conjunction with this initiative, DU is actively pursuing extension-related activities with key winter wheat producers and agribusinesses to ensure yield advantages over spring wheat.

DU wants to make winter wheat the dominant cereal crop over the next 25 years in the main pintail focal area.

The Restoring the Tradition strategy's third plank involves programs aimed at converting cropland to other agricultural uses to provide relatively safe nesting habitat while promoting sustainable agricultural use. DU is aiming to restore 2.7 million acres of uplands – the same amount of land lost to cultivation since the 1970's.

Promoting harvesting of hay after June 15<sup>th</sup> – when pintail nesting is completed – is key to this program's success. Conversion programs are directed at areas of moderate perennial cover, where restoration of intervening areas of cropland within larger perennial landscapes offers the greatest benefit to pintails.

DU also is working toward the creation of government-led programs that financially reward producers who plant and retain vegetative cover, and who conserve or restore native pastures, riparian and field margin buffers and wetlands. This initiative is designed to counter unsustainable land-use activities on farmland, including tillage of marginal or erosion-prone soils, wetlands drainage, overgrazing natural pastures, removal of vegetative buffer zones along waterways and field margins, and excessive reliance on fertilizers and pesticides.

Although the pintail conservation strategy is complex and multi-faceted, DU believes it's the best approach to restoring pintail populations to 1970's levels.

"One tool in the tool box isn't enough," says Karla Guyn, the Prairie region conservation ecologist who has studied pintails since 1994.

She said the Milk River Ridge is an important – and intact – habitat for pintails.

"We know that we need to add additional productive habitat to help turn this problem around, but if we continue to lose 'good' habitat at the same time we are adding habitat, we simply aren't making the same gains," says Guyn, who works out of DU's headquarters at Oak Hammock Marsh north of Winnipeg.

"We need to ensure that the Ridge remains intact for maximum gains to be attained."

Since 1985, DU has worked with landowners on the Milk River Ridge to protect through agreements and outright land purchase a total of 17,044 acres of uplands habitat and 2,479 acres of wetlands.

DU's relationship with McIntyre Ranch began in 1987, when waterfowl surveys revealed healthy numbers of several duck species, pintails in particular. A plan was initiated to maintain those population levels.

After calving season is complete, the ranch has up to 8,000 cattle within its fences. DU negotiated an agreement with Ralph Thrall II – the son of the ranch’s founder – to ensure that grazing cattle didn’t impact on nesting pintails.

DU offered expert advice on agricultural and environmental sustainability, and provided dugouts and money for fencing and future maintenance costs. In exchange, the ranch modified its spring grazing regime to keep cattle out of fields and wetlands used by nesting pintails.

Since 1991, DU and McIntyre Ranching Co. Ltd. have finalized 30-year agreements protecting a total of 13,154 acres.

“We felt it was a win-win situation,” says 39-year-old Ralph Thrall III, whose vehicle licence plate reads R III.

“It goes way beyond ducks. It’s quite fitting with our family’s own attitude toward wildlife and sustainability.”

Don Watson says having a positive partnership with the McIntyre Ranch gives DU more credibility with other area landowners.

That credibility is enhanced through the involvement of long-time farmers like Gary Stanford, whose family has farmed near Magrath since 1950.

Stanford works with DU’s Core Grower program, aimed at promoting increased production of winter wheat to decrease disturbance to nesting pintails. Winter wheat is planted in early fall and generally harvested in summer, after nesting is complete.

To encourage more winter wheat, DU offers producers extensive agronomic technical support, successful demonstration sites and an interest-free operating loan of up to \$18 per seeded acre. A total of 5,000 acres on the Ridge have been brought into the program since last year.

Stanford is an enthusiastic advocate of winter wheat on the basis of higher yields, lower fertilizer and pesticide bills and the ability to spread out his year’s work schedule.

“Ducks Unlimited is kind of on the same page as I am,” says Stanford.

“We each have our own agendas. I want to help farmers make more money and DU wants better nesting for the ducks.”

Morley Barrett, DU’s Prairie Region director of operations, notes the importance of ongoing positive working relationships between landowners and DU – on the Milk River Ridge and anywhere else - can’t be stressed enough.

“It’s absolutely critical to the ability of DU to function on the landscape,” Barrett says.

“In addition to enjoying the environmental benefits of our programs, landowners also appreciate the contributions many of our programs make to the sustainability of their farming practices and to their way of life.

“Without the understanding and cooperation of landowners much of what we do on the landscape would be impossible.”

On the north end of the Milk River Ridge, DU works with the Milford Hutterite Colony to protect critical grasslands surrounding the Milford Marsh, an important pintail breeding and staging area.

Since 1998, the colony of 112 people has agreed to keep cattle off 124 acres of uplands and allows DU to keep the marsh flooded. In exchange, the Hutterites cut about 400 acres of hay on nearby land that DU leases from the St. Mary’s Irrigation District.

Colony secretary Ben Wipf calls it “a good arrangement” – especially in years of good moisture and high yields.

“We’re getting a good benefit out of it,” he says. “I feel they’ve been fair with us.”

Being straight up with landowners has long been a DUC trademark. With the Milk River Ridge as the focal point of the most aggressive effort to address declining pintail populations, DUC’s commitment to good will, good relations, solid conservation programs and sound science will be essential in maintaining the Ridge as a little piece of pintail heaven. The alternative, as far as DUC is involved, is simply not acceptable.