



Ducks Unlimited Canada
CANADA'S CONSERVATION COMPANY

PASQUIA PROJECT
WATERBIRD SURVEYS
PROGRESS REPORTS
2003

Pasquia Project Waterbird Spring Surveys Progress Report 2003

Brian Arquilla, Brent Friedt, Wally Price, Chris Smith and Pat Tkachuk

Spring waterbird surveys were conducted for the third consecutive year within the Pasquia Project study area during May (See attached figure). Both rotary and fixed wing surveys were conducted on individual basins and the Saskatchewan River Delta / large lakes respectively. Data on indicated breeding pairs of waterfowl, grouped waterfowl and other waterbirds were documented. Three survey crews conducted this work with two helicopter crews based out of Swan River and Hudson Bay and one fixed wing survey crew stationed in The Pas.

A total of 42 rotary wing sorties, comprising 78 hours, were flown to determine an estimate of the distribution and density of both breeding and spring staging waterbirds in the Pasquia basins. Over 7,000 kilometers of fixed wing line transect were flown, totaling 42 hours, to complete the two surveys in the Saskatchewan River Delta and other large bodies of water including portions of Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake Manitoba.

Following is a brief synopsis of these surveys.

Indicated Breeding Pair Survey I

Local conditions

In Manitoba

We found little snow cover remaining in the areas north of The Pas through to the southern extent of the Duck Mountains. In the four survey days, a single sortie was aborted due to morning snow squalls. Daily temperatures fluctuated between 6 and 15 degrees Celsius. Ice was restricted to patches on the large waters bodies including Lake Winnipegosis, Cedar Lake and Moose Lake.

Water conditions appeared lower than average in the boreal plain and adequate in the higher elevations. Water levels of the larger lakes close to The Pas were reportedly down. The influence of beaver was considerable on many wetlands. This was most notable in the Duck Mountains where several wetland boundaries were subject to change due to the effects of damming and consequent flooding. With the onset of spring, budding willow, aspen and tamarack could be readily observed during flights. Moose, caribou and elk all exhibited patchy coats as spring shedding had commenced.

In Saskatchewan

Habitat conditions on the Saskatchewan side of the Pasquia Project are considered only fair and the influence of beaver was also notable, particularly in the Porcupine and Pasquia Hills. Without substantial spring or summer rainfalls, many of the beaver pond habitats, will be low to dry this fall. However, some snow still remained in the higher elevations of the Porcupine Hills. Overall, the weather was generally cool, overcast, with light winds. This

made survey conditions ideal, reducing glare off the water, and any waterbird movements could easily be observed.

Saskatchewan River Delta

Water levels at this early point in the spring appeared to be normal to above normal in places and all wetlands were essentially ice free. Areas of willow and shrubs in the west delta were flooded. Creeks and rivers were flowing with some velocity. Survey conditions were good overall although the first day was shortened due to high winds. Clear skies only caused difficulties with high sunlight reflection off the water and two evening sorties were flown with good weather conditions. Our start time was only slightly delayed on the fourth day as the plane's battery had gone dead and we had to await a replacement. The problem did not persist.

Rotary Wing Surveys

Surveys of selected basins were flown between the dates of May 5 and May 11. Wally Price and Pat Tkachuk conducted the Saskatchewan work. Chris Smith and Brian Arquilla, with the assistance of Kent Russell, conducted the Manitoba surveys.

Dabbling ducks were frequent throughout both shallow basins and backwaters of larger systems. These included, with decreasing frequency, Mallards, Blue-winged Teal, American Green-winged teal, American Widgeon, Northern Shoveler and Gadwall. Both Blue wing and Green-wing teal groupings consisted of primarily pairs or three bird flights. This indicates these late arriving dabblers were still in the early stages of their breeding chronology. We observed frequent gatherings of male mallards at times numbering up to six birds. This may be indicative of progressed nesting as males will abandon incubating hens and congregate in staging flocks. Lone mallard males only slightly outnumbered pairs. These comparative ratios suggest the timing of survey #1 was more or less accurate in capturing early nesting waterfowl breeding chronology for this region. In Saskatchewan, the lone drake index (LDI), coupled with migration still occurring in the north portions of the study area, may be indicative of an early survey.

Concurrently, later nesting Ring-necked Ducks were also often observed in male bias flocks. These skewed counts are in keeping with pre-nesting behaviour including courtship and mate competition. Such observations suggest the timing of the surveys well corresponded to capturing nest initiation for most early nesting species. Pairs of cavity nesters were present on most basins. In the smaller ponds of the higher elevation regions, including the Duck Mountains, Common Goldeneye pairs gave way to Buffleheads. Other divers, including infrequent Canvasbacks, Redheads and Scaup, were found in the larger lakes. However, observations of large rafts of these open water divers were few.

Loons and / or red-necked grebes could be expected on most lakes with notable numbers in the escarpments of the Duck Mountains and Porcupine Hills. These same shallow basins usually yielded a pair of Canada geese where active nests were frequently

recorded, some with up to 8 eggs. Congregations of tundra swan pairs were observed staging in larger water bodies

Large flocks of white pelicans could be observed on both select riparian areas and the larger open waters. A Great Blue Heron rookery consisting of 23 nests and over 30 adults was present on a selected basin. Shorebirds, dominated by greater yellowlegs, were present on many of the basins. Waypoints of all significant observations, including the tundra swan and the heron rookery were recorded.

Trumpeter Swans

Of particular interest is the observation of several indicated breeding pairs of trumpeter swan in the project area, including a single pair exhibiting territoriality in the Duck Mountains of Manitoba. Although nesting and brood production have been documented in the Porcupine Hills of Saskatchewan, a confirmed breeding record of trumpeter swans in Manitoba would be a most significant find. This suspected breeding pair observation is supported by a 2002 sighting of a trumpeter pair (no brood) on this same lake.

Line Transect Surveys

Brent Friedt and Dave Atamanchuk conducted the first breeding pair fixed wing survey from May 8-12th. Areas surveyed included the Saskatchewan River Delta (SRD) and other large bodies of water including portions of Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake.

Waterbirds were observed in good quantities but in spotty locations across the delta. Mallard, buffleheads, northern shoveler and goldeneye were some of the most frequently observed waterfowl noted. Mallard and bufflehead were seen mostly in pair situations whereas the Goldeneye and late nesting species including scaup appeared primarily in groups.

Notable waterbirds include the presence of tundra swan, western grebes and Canada geese. Large numbers of tundra swan were staging throughout the lower portion of the east delta. Western grebes were again noted this year, particularly in Reddeer Lake, which appears to be regionally important to this species. Canada geese were mostly paired, often on nests with eggs and common across the SRD.

Overall the survey was completed without much of a hiccup. Conditions looked good and numbers encouraging.

Indicated Breeding Survey 2

Local Conditions

In Manitoba

Throughout the survey region, water conditions continue to lower. This was quite evident in the higher elevation Duck Mountains as adequate spring recharge has

succumbed to a recent dry period. Desiccated reed and sedge outline many of the area wetlands. Ice on the larger was no longer present and daily temperatures of over 20 C and light winds were consistent throughout the survey period.

In Saskatchewan

Survey weather conditions on the Saskatchewan side of the Pasquia Project were favourable over the four days of surveys. The sun was shining for the survey period with some broken cloud. During the first two days the winds did increase as the afternoon approached with rain falling towards the end of the second day. Around $\frac{3}{4}$ of an inch of rainfall had fallen at the Fire Station in Hudson Bay throughout the evening. The wetland conditions remained the same as last survey; ponds with no beaver influence may have been possibly a little dryer than the previous surveys. Ponds with beaver influence remained at around the same level. Overall, the weather was generally overcast with sunny breaks and light winds. This provided ideal survey conditions, making it easy to pick up movement and ID any waterbirds.

Saskatchewan River Delta

Habitat conditions were similar to the previous survey. Water levels looked favorable; if somewhat less than the first survey then only negligibly. Weather conditions were extremely complementary to completing the survey in good time. A sunny sky with bright sunlight reflection on the water was the only hindrance to clear identification of species at times.

Rotary Wing Surveys

Surveys were flown between the dates of May 28 and May 31. Wally Price was joined by Tanya Silvernagle to conduct the Saskatchewan surveys and Brian Arquilla led the Manitoba surveys with Keith Patton.

With hens continuing incubation, groups of male mallards were more frequent than in IBP #1 survey. To a lesser extent, American widgeon followed this same pattern. Of note, three mallard broods and an unknown teal brood accounted for this year's first ducklings. Late arriving Blue-winged Teal were still observed in pairs or as lone males suggesting nest building or early incubation. As expected, far more Blue winged Teal were present this survey period than in IBP #1. Several male dabblers have commenced moult as we near the end of the incubation period for most species in the Genus *anas*.

Among most divers was a noted decrease in observable pairs and corresponding increase in groups of males on larger staging waters. This was especially true for Canvasbacks and Common Goldeneyes. In contrast, Buffleheads and Hooded Mergansers continued to maintain pairs, lone male groupings or three bird flights. Sightings of Redheads were few as the Pasquia region lies at the northern extent of the breeding range for this species. Common Mergansers were less frequent than in IBP #1.

Canada Geese broods were frequent in both the Duck Mountains and the boreal plains. Pairs with broods and multiple adults with amalgamated broods yielded Class 1b and 1c

goslings.

There was a marked increase in nesting grebes compared with IBP #1 led by an abundance of Red-necked Grebes. Common Loon pairs were often associated with larger basins. Coots were well distributed through shallow, vegetated wetlands. White pelicans were common throughout the survey period on both lake and riparian areas. Gulls, primarily white-headed, proved more numerous than observed in IBP #1.

A Great Blue Heron rookery consisting of 23 nests in IBP #1 was recounted at 29 nests in IBP#2. Notable raptors included Bald Eagles, Ospreys, Red-tailed Hawks and Northern Harriers. A group of 8-10 Turkey Vultures was also observed in the Duck Mountains. Sightings of moose, especially cow-calf pairings, remained common. Black bear sightings were also common. Sows were viewed with between one to three cubs. Wolves, elk and caribou highlighted other large mammal sightings. Again waypoints were collected for significant ancillary observations.

Trumpeter Swans

Of special note, two Trumpeter Swan nests have been discovered in the Duck Mountains of Manitoba. Both nests had five eggs each. These two nests represent a most significant find in Manitoba. The first nest was opportunistically spotted during a short ferry between selected basins. The second was updated from last year's account of a suspected breeding pair. Identification of the second pair was confirmed via ground truthing. This nest lies on a large island within the breeding lake. Two confirmed nests, and a possible third were observed in the neighboring Porcupine Hills of eastern Saskatchewan. The Manitoba swans are quite possibly derived from this Saskatchewan population.

Line Transect Surveys

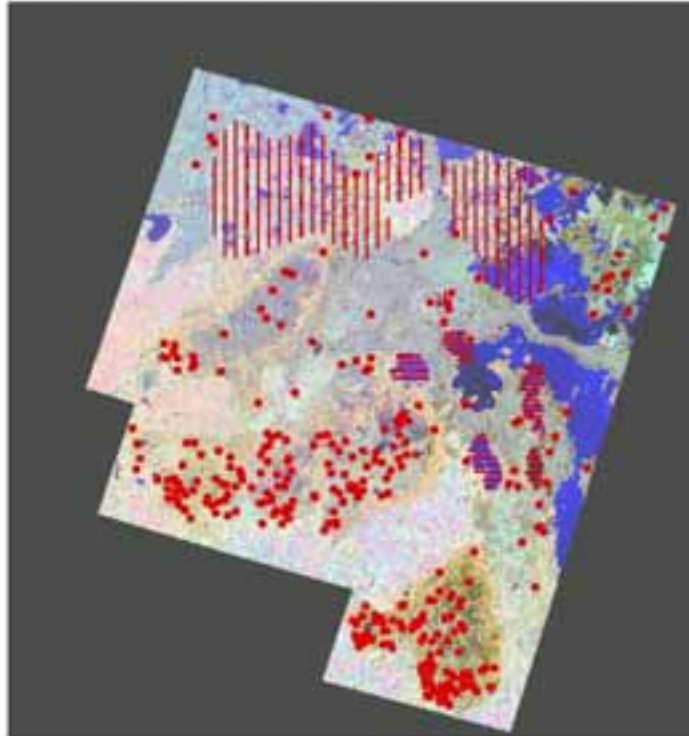
Brent Friedt and Tasha Sargent (Brian Arquilla for one sortie) conducted the second breeding pair survey on May 29 – June 1st including one evening flight on May 30th. The SRD and the other selected bodies of water were surveyed.

Within the SRD fewer pairs of early nesting species were recorded and small rafts of up to 15 drake ducks were documented indicating that waterfowl breeding was well on the way. Larger rafts of ducks that were observed on the larger bodies of water in the delta during IBP #1 were observed less often, indicating that these birds had either dispersed to breed locally or traveled further north. Rafts of canvasback were documented on some of the larger basins outside of the SRD (in particular) perhaps post breeding concentrations from the south. Mallard, bufflehead and common goldeneye were by far the most common species documented although blue-winged teals, ring-necked ducks and scaup were observed with regularity.

Various other bird species were also notable. Western Grebe numbers seemed to increase over IBP #1. They were once again in large numbers on Reddeer Lake but also notable on other water such as Swan Lake, Pelican Lake and Lake Winnipegosis. Young Canada Goose broods were observed across the SRD. Tundra Swans, seen in large numbers

during the first survey, were almost entirely non-existent this survey. Their migration through seemed complete. Great Blue Herons and Sandhill Cranes were observed with more regularity than usual.

Pasquia Project – Pair Survey Basins and Line Transects, 2003.



Pasquia Project Waterbird Production/Molting Surveys
Summer Progress Report 2003

Brian Arquilla, Brent Friedt, Wally Price, Chris Smith and Pat Tkachuk

Waterbird production and molting/post breeding surveys were conducted within the Pasquia Project study area during July (See attached figure). Both rotary and fixed wing surveys were conducted on individual basins and the Saskatchewan River Delta / large lakes respectively. Data on broods, molting and grouped waterfowl and other waterbirds were documented. Three survey crews conducted this work with two helicopter crews based out of Swan River and Hudson Bay and one fixed wing survey crew stationed in The Pas.

A total of 92 rotary wing hours were flown during two surveys to estimate the distribution and production of waterfowl and other waterbirds in the Pasquia basins. Over 7,000 kilometers of fixed wing line transect were flown, totaling 50 hours, to complete two molting/post breeding surveys in the Saskatchewan River Delta and other large bodies of water including portions of Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake Manitoba.

Following is a brief synopsis of these surveys.

Brood /Molting Survey I (Early July)

Local conditions

In Manitoba

Water levels remained low overall as a result of below normal amounts of precipitation. Despite this most systems have retained adequate moisture. Only a few ponds were dry or were shallow inducing eutrophication. Conditions were less dry in the northern portion of the study area and in the “lowlands” north and east of the Duck Mountains and Porcupine Hills. Water levels in Lake Winnipegosis remain low with exposed mudflats present.

In Saskatchewan

Overall, habitat conditions on the Saskatchewan side of the Pasquia Project would be considered only fair. Beaver pond habitats are in fair to poor condition, with the driest conditions noted on the west side of the study area where many beaver ponds were already dry. Larger wetlands, and wetlands closer to the Manitoba border were considered in fair condition.

Saskatchewan River Delta

Water levels were generally considered good and in some cases higher than normal as a result of significant rainfall. In fact during the survey rain fell intermittently throughout the week. Water flow down the Saskatchewan River remained good as a result of improved water conditions in Alberta and portions of Saskatchewan.

Rotary Wing Surveys

Surveys of selected basins were flown between the dates of July 03, 2003 and July 07, 2003. Brian Arquilla and Garth Ball (Manitoba Conservation) conducted the Manitoba work while Wally Price and Pat Tkachuk conducted the surveys in Saskatchewan.

Mallards were the most common broods observed. Buffleheads, Common Goldeneye, Ring Necked Ducks, American Widgeon and Blue Wing Teal accounted for most of the remaining waterfowl broods documented. Single broods of Canvasback, Wood Duck and a Northern Pintail were also noted in Manitoba and a few young green-winged teal broods were observed in Saskatchewan. Two broods, one Bufflehead and one Mallard, produced the most progressed young. Both broods were noted as age class 2C.

Canada Goose broods were common and a number of gang broods consisting of multiple parents were observed. The occasional cavity nester brood yielded amalgamations. Most Common Loon and grebe (primarily Red-Necked) pairs had young. Several Red-Necked Grebes were observed incubating.

Ring-Neck Ducks, Scaup and Mallards comprised most of the observed pairs indicating either non-breeding birds or a late nesting. Larger groups of male Mallards and Ring-Necked Ducks were noted indicating early amalgamations of pre-molting birds. Eclipse male mallards were the most progressed of all species in regards to molt. Many mallard males had commenced body moult and several had also dropped primaries.

Waypoints of all additional significant observations, including rookeries and moose were recorded.

Trumpeter Swans

Several pairs of trumpeter swan, and some with cygnets, were documented. In Saskatchewan four pairs without young and three pairs with cygnets (1, 6 and 7) were recorded in the Porcupine Hills. In the Duck Mountains of Manitoba the two nests documented in previous surveys resulted in two broods, one with one cygnet and one with four. It was estimated that the lone cygnet was approximately 1/7 of the size of its parents. The other group of four cygnets was estimated to be 1/5 of the size of theirs. Both families remained in the general vicinity of their nest sites.

Line Transect Surveys

Brent Friedt and Tasha Sargent (Brian Arquilla for one session) flew the first molting/post breeding survey on July 2 – 8, 2003. Areas surveyed included the Saskatchewan River Delta (SRD) and other large bodies of water including portions of Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake.

Significant numbers of waterbirds were observed in throughout the SRD and in some locations large rafts were documented. Many of the same common species observed

during the spring were again observed with Mallard, Buffleheads, Ring-necked ducks and Common Goldeneye being most frequently documented.

Canvasback and ring-necked ducks were seen in large rafts on areas of Lake Winnipegosis and the other large lakes. Rafts were in numbers from 20 to several hundred. Notable non-waterfowl species were western grebes, American white pelican and double crested cormorants. Western Grebes, which have been identified as abundant on Reddeer Lake through the three years of this project, were found in significant numbers on Swan Lake where a raft of over 100 birds were seen. Pelicans were frequently observed on all large lakes flown. One interesting sight was a raft of cormorants that numbered well into 5000 on Lake Winnipegosis.

Brood /Molting Survey II (Late July)

Local Conditions

In Manitoba

Throughout the survey region, water conditions continue to lower. Specific to the southern portion of the survey area including the Duck Mountains several ponds have dried while others experience heightened eutrophication. Algae blooms are common on most shallow systems. Water conditions in the northern portion of the survey area were generally better than the south where rainfall has been significant. Specific to Lake Winnipegosis, shoreline areas that have been dry for some time (eg Pelican Bay) are now shallowly flooded as a result of recent precipitation. Recent heavy rains in the Swan River area should improve water conditions in this region.

In Saskatchewan

Water conditions remained low overall with the driest conditions being in the SW portion of the Pasquia Hills and the western Porcupine Hills where significant drawdown effects were noted on many wetlands. Water conditions gradually improved north and east of these escarpments and toward the Manitoba border. North of Cumberland House, water levels were good.

Saskatchewan River Delta

Water levels appear to be good overall and recent precipitation has reduced the drawdown effect that typically occurs this time of the year. However the smaller wetlands in the west delta generally appeared to be very low or dry.

Rotary Wing Surveys

Surveys were flown between the dates of July 21 and July 24, 2003. Chris Smith was joined by Julienne Morissette to conduct the Saskatchewan surveys and Brian Arquilla led the Manitoba surveys with Amy Leach.

Production is considered excellent across species in both Manitoba and Saskatchewan although a comparison to last year cannot be made. Mallard and Ring-necked ducks provided the most broods. Following these two species, observations of Bufflehead,

Common Goldeneye, Blue winged teal and Lesser scaup broods were also significant. Broods of Hooded merganser, Canvasback and Gadwall were also noted. Overall broods observed were mid-aged although significant numbers of older (age class 2c and 3a) mallard broods were documented. The majority of ring necked broods were mid aged (around 1c) and the youngest broods were scaup and ruddy duck with a number of 1a/1b broods seen. Most common loon and grebe (primarily Red-Necked) pairs had young. Several Red-Necked Grebes were still observed incubating and an eared grebe colony of 15 nesting pairs, still on the nest, was seen in Saskatchewan (likely re-nesting).

Moulting birds, led by numbers of mallard drakes were frequent followed by Ring-necked ducks. Progressed body moult and lack of primaries were readily observed. Groups of post molting staging ring necked ducks and mallards were also common.

Geese were frequently observed in gang broods consisting of multiple parents. Many geese have abandoned the breeding ponds for larger waters. The occasional cavity nester brood (i.e. Bufflehead and Common Goldeneye) yielded amalgamations.

Again waypoints were collected for significant ancillary observations.

Trumpeter Swans

The two Trumpeter Swan families in the Duck Mountains of Manitoba yielded positive results. Both the lone cygnet and the group of four young are all alive and gaining in size. The five birds were estimated to be 1/3 the size of their parents. The lone cygnet family remained in the vicinity of the nest island while the second family was observed 1.6 km from their original nest. In addition one lone Trumpeter Swan was observed in the Porcupine Hills of Manitoba.

In Saskatchewan, three (possibly four) Trumpeter Swan families were confirmed with one family documented in the western portion of the Pasquia Hills which is an additional observation to those made in the first brood survey. Additional trumpeter swan pairs were seen in the Porcupine Hills totaling at least 7 pairs (tally not completed).

Line Transect Surveys

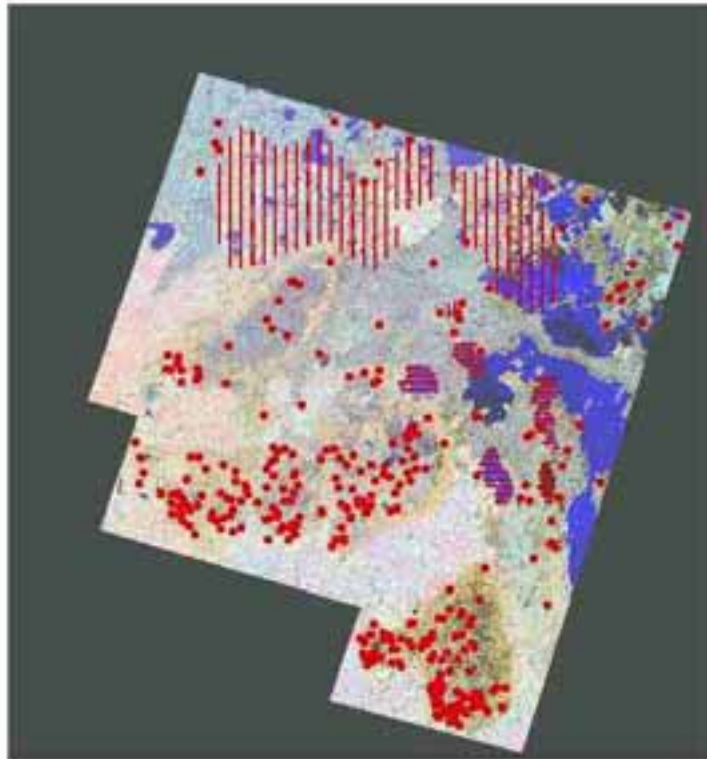
Brent Friedt and Kent Russel (Brian Arquilla for two sorties) conducted the second molting/post breeding survey on July 22–25, 2003. The Saskatchewan River Delta (SRD) and other large bodies of water including portions of Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake were once again surveyed.

Significant numbers of waterfowl and other waterbirds were observed. Mallard, Ring-necked ducks and Common Goldeneye were frequently observed throughout the SRD. In the west delta, lakes closer to The Pas were electric with ducks. South Reader Lake, as example, had thousands of molting birds on it and in many cases were associated with emergent cover as opposed to the open water. Of interest, many times during the survey, larger numbers of birds were seen on smaller wetlands, which were peripheral to bigger

open water in the delta. Notable waterfowl observations outside of the SRD included the presence of Canvasback and Ring-necked ducks on areas of Lake Winnipegosis.

Notable non-waterfowl species were Western Grebes, Double Crested Cormorants and gulls. Western Grebes continue to be seen in consistent numbers on Reddeer Lake, Swan Lake and Pelican Lake. Similar to the last survey a large raft of Double Crested Cormorants numbering upwards of 4000 was seen on Lake Winnipegosis.

Pasquia Project – Production / Molting Survey Basins and Line Transects, 2003.

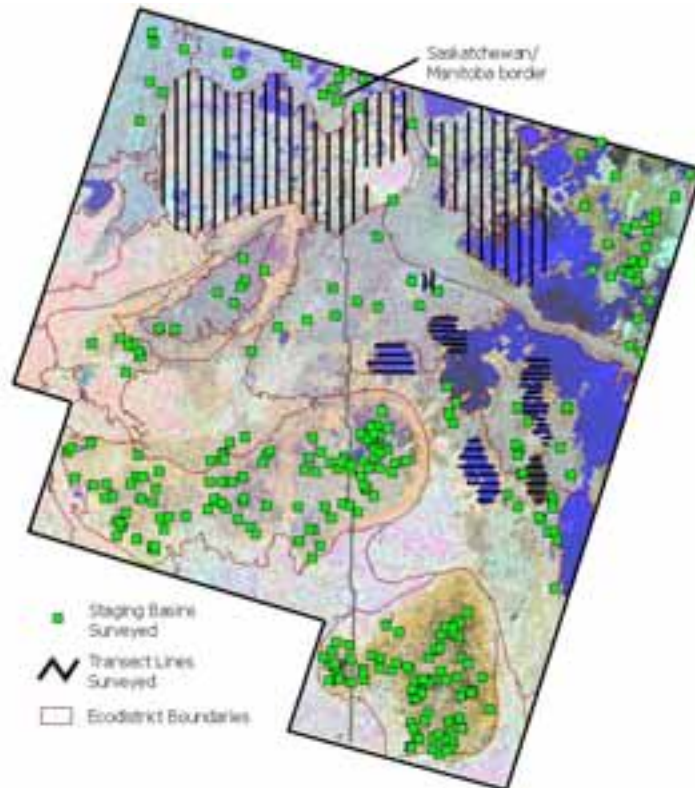


Pasquia Project Waterbird Staging Surveys Progress Report 2003

Brent Friedt, Brian Arquilla, Chris Smith

Staging waterbird surveys were conducted for the third consecutive year within the Pasquia Project study area during August, September and October 2003. The purpose of these surveys is to document post breeding/post molting waterbird use of representative wetlands and lakes. Surveys consisted of a combination of total counts on smaller basins and line transects (strip surveys) for selected larger bodies of water and the Saskatchewan River Delta (SRD).

This year the number of basins selected totaled 289 and over 2000 km of transect line per survey were flown. Two survey crews conducted this work with one crew based out of Kamsack, Hudson Bay and Dauphin utilizing a Cessna 206 on wheels. The second crew, stationed in The Pas utilized a 185 Cessna on floats. A total of 157 hours were flown.



In the southern portion of the survey area water conditions were generally low with mudflats being exposed along the edges of many wetlands. Conditions improved marginally as the fall advanced with drier conditions persisting in the western extent of the project area. By survey three, several smaller basins had succumbed to early ice.

Water levels in the northern portion of the survey area including the SRD lowered progressively throughout the open water season. In many instances, beaver runs were exposed through low water levels. Mudflats appeared as rings around many of the larger water bodies, including along the bays of Lake Winnipegosis. In addition, several large ponds were completely dry and showing cracks in the west SRD. Water conditions improved somewhat during mid September when during the second staging survey rain fell almost every day and evening in some amount. During the course of staging survey three, the first sign of snowfall was beginning to exhibit itself. We flew through and around several small snow squalls and in early morning, light snow was sometimes evident on the ground in places.

Following is a brief synopsis of the individual surveys.

Staging Survey 1 (August 26-30)

Kamsack Crew – Brian Arquilla/Chris Smith (Total flight time 24 hrs)

The Pas Crew – Brent Friedt and Cory Lindgren (Total Flight time 31 hrs)

The Kamsack Crew documented the abandonment of smaller breeding basins by waterbirds in favor of larger water bodies. Typically all waterfowl species appeared in larger gatherings most evident by larger concentrations of mallards and ring-necked ducks. Shorebirds, Sandhill cranes and American coot were also observed in staging concentrations.

The Pas crew surveyed the SRD and other large bodies of water including portions of Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake. In addition 50 basins surrounding the SRD were surveyed. Large numbers of ducks were observed, although most were scattered as opposed to rafts although a few small rafts were documented. Concentrations of Canada geese were seen and mallard was the most common duck observed. Tundra swan were starting to appear. Non-waterfowl species of note include the presence of western grebes on Reddeer Lake and in particular on Swan Lake. Concentrations of birds were starting to appear on Lake Winnipegosis including large rafts of double crested cormorants (rafts of 1000 – 2000 birds).

Staging Survey 2 (September 15 – 21)

Hudson Bay Crew - Brian Arquilla/Mike Ranger (Total flight time 24 hrs)

The Pas Crew - Brent Friedt and Garth Ball; Brian Arquilla for one sortie (Total flight time 25 hrs)

Concentrations of migrating waterbirds peaked in this, the second fall survey by the Hudson Bay crew. Mallards could be found in both small and large groupings throughout a variety of wetland types. Large concentrations of divers were restricted to the larger basins. Scaup, ring-necked ducks, redheads and canvasbacks were observed in sizable numbers. For the most part, teal had already passed on to more southerly climes. Rafts of American coots and an increasing numbers of staging tundra swan were also evident.

The Pas Crew encountered difficulty conducting the surveys due to inclement weather. Rain fell on most days and some evenings. In the early mornings we often had heavy fog and in some places small snow squalls. As a result surveys on Lake Winnipegosis, Reddeer Lake, Swan Lake and Pelican Lake were not completed.

Throughout the area, including in the SRD, a few large rafts of waterfowl were noted, however, overall birds just seemed to be scattered in smaller groups. A few notable basins in the vicinity of The Pas including Reader Lake, Watchi Bay and Kelsey Lake held large concentrations of ducks and American coots. Significant numbers of tundra swan were observed as they passed through in migration.

Staging Survey 3 (September 29 – October 4)

Dauphin Crew - Brian Arquilla/Alicia Korpach (Total flight time 21 hrs)

The Pas Crew - Brent Friedt and Mark Kornder; Chris Smith and Brian Arquilla for two and one sortie respectively (Total flight time 31.7 hrs)

In the southern survey area many of the smaller basins in the escarpment yielded no birds. Large rafts of waterfowl were confined to the project's larger basins. Scaup and ring-necked ducks provided the largest number of observable waterfowl with mallards, gadwall, Canada geese and American widgeon completing the numbers. Teal and shorebirds were infrequent while American coots continued to remain in large staging rafts. Migrating tundra swan remained present throughout this late survey period. By this, time one of trumpeter swan family in the Duck Mountains had a single cygnet approximately 90% the size of its parents.

The Pas crew saw improved weather conditions for this survey. Within the SRD, observations were similar to staging 2 surveys – few large rafts of waterfowl, mostly scattered birds and a few key lakes holding large concentrations. Notable duck species include canvasback, scaup and ringed-neck ducks. Mallard was the most common overall. As expected, several large rafts of redhead (1000-3000) were observed on

Pelican Lake and Pelican Bay in Lake Winnipegosis. Other waterbirds of note included western grebes, and American coots. American coots were very common and showed up in numbers in the thousands in some larger wetlands near The Pas. Some of the larger basins east of the SRD held significant numbers of staging ring-necked ducks.

General Comments and Summary

Overall in the northern survey area, larger rafts of staging ducks seemed less common than the past two years. Ducks seemed to be more scattered with perhaps a greater number of smaller rafts than before. Duck numbers appeared in greatest in the large wetlands in the mid SRD in the historically known fall staging lakes. This generally reflected observations made by the hunting community in The Pas who reported only mediocre concentrations of ducks this fall. Waterfowl seemed to prefer wetlands with beds of floating vegetation as opposed to just open water. In many instances, large rafts of birds were observed in weedy bays of the larger lakes. Concentrations of American coots were very common in the SRD. The more open water in the east SRD (Cedar Lake) appears better suited for other waterbird species such as gulls, shorebirds, cormorants, pelicans and swans. Tundra swans use this area extensively as they migrate through twice per year. With the exception of basins located close to the SRD wetland basins surveyed outside of the delta were not heavily used although ring-necked ducks were common east of the SRD in late fall.

In the southern survey area, smaller basins are increasingly abandoned for larger waters throughout the fall staging period. Perhaps the proximity of Manitoba's great lakes may encourage early departure from the smaller basins. Diving ducks were typically observed in large concentrations sometimes numbering upwards of 3,000 birds. Mallards are the only dabbling duck that appears in similarly significant concentrations. Wetland basins located in the Mid-Boreal Lowland Ecoregion east of the Duck Mountains and Porcupine Hills appear to offer an important refuge to migrating Tundra Swans.