

321
1966

321

P & Y

1207

REPORT ON WILDLIFE SURVEY
Creston Flats - Summer 1966

by

Robert Greyell
December, 1, 1966

QL
334
.B8
G74
1966

BVAEP Vancouver. Env. Can. Lib./Bib.



36 015 487

QL
334
.B8
G74
1966

Report on wildlife survey,
Creston Flats, summer 1966.

LIBRARY
ENVIRONMENT CANADA
PACIFIC REGION

QL
334
.88
674
1966

Report on Wildlife Survey, Croston Flats

Summer 1966

by

Robert Grayell
December 1, 1966

14646

REPORT ON WILDLIFE SURVEY, CRESTON PLATS, SUMMER 1966

Nesting and Rosting Attempts

By the time of my arrival in Creston Valley on May 9, 1966, the main part of the spring migration had passed through, nesting had commenced and the Kootenay River had begun to rise.

Of great importance to the success of nesting here is the relationship between the time of nesting and the rapid rise and cresting of the Kootenay River, swollen with the spring runoff. Although nesting extends over quite a period of time, from as early as the middle of April until as late as the middle of August, judging from the location of active nests with eggs in them and the time of appearance of new broods later on, the peak of nesting is reached just after the middle of May.

The first brood I observed this year was that of 12 Goldeneye chicks accompanied by the female on May 19 at the north end of the Indian Reserve bordering the Goat River. On May 26 in the south Corn Creek Unit a female Mallard and brood of 8 or 9 young were seen. In the same area on that day a nest was found under two feet of water with two broken Mallard eggs in it.

From May 26 on more and more broods were seen each day in various places until on June 10, eleven broods were seen in the backwater of the Coat River near the present site of the garbage dump for the town of Creston and the north end of the Indian Reserve.

Prior to the peak of high-water, three active Mallard nests were located. Two of these were on the west shore of Leach Lake and the other was near the American Hunter's Club. This year the water peaked at just over 19 feet. In other years, however, from a record of water heights for over 23 years supplied by an operator of the West Creston Ferry, the crest has varied between 14 and 23 feet for an average of 19.23 feet. If the peak had been two feet higher than average this year, all three nests I located would have been washed out. The date of the crest as well as the height of it varies from year to year and has come as early as May 15 in 1947 and as late as June 27 in 1955. The later and lower the level of the crest, the greater the chances are for the eggs to hatch and young to survive.

It is reported from a West Creston farmer who runs cattle on the Corn Creek Unit that a number of ducks, and in former years geese, nested on a small wooded island in the north Corn Creek Unit.

In that area during high water the island and levees close to the old Kootenay River channel provide the only high ground for nesting that does not get flooded. Other West Creston residents have reported Mallards nesting high up on the hillside so far from water where the chances for brood survival are poor. Not only in West Creston but throughout the valley from the International border to well up Kootenay Lake ducks have been seen landing up on the sidehills. This, I am sure, shows that even though there is potential nesting area in the bottom lands the birds cannot make full use of it due to the rising flood waters at the time of nesting.

Another fact that points to the rising flood waters as a limit to nesting of ground nesting species is the apparent success of tree nesting species such as Goldeneyes, Wood Duck and sometimes Mergansers.

To my knowledge geese nesting in the valley this year were very limited. I did not see any nesting geese or broods but a brood was reported to have been seen on a sandbar on the Kootenay River just north of the Kootenay River bridge. About the same time and in the same area a goose egg was seen floating down the river. The egg could have come from the north end of the Indian Reservation where I did observe a mated pair for about two weeks before they left the area.

Duck nesting on the shores of Duck Lake and the old Goat River channel where the water level is more stable is quite successful judging from the number of broods raised in the area. Duck Lake this year fluctuated only 2.85 feet between the first of March and the end of June while the old channel fluctuated even less. Due to the good cover and the length of the channel where it is difficult to observe the birds it is quite likely that many more broods than were observed were raised there.

Out of the 133 broods I counted in the valley this summer, 66 of these were raised on the Indian Lands. Even with the flooding, the Indian Lands raise more broods than anywhere else in the valley and even the number observed there is very conservative due to the difficulty of travel in dense stands of bulrush, even by canoe at high water.

In all cases throughout the valley, I estimate that the number of broods observed probably represent between 1/2 and 2/3 the actual nesting population.

BROOD DATA FROM BROODS OBSERVED

(excluding costs and grebes)

Place	No. of broods	No. in broods	Species-No. of broods identified					
			Merganser	Mallard	Goldeneye	Teal	Redhead	Wood Duck
Duck Lake	25	154		7	4	2	1	7
Kootenay River	10	48		3	1		1	5
Leach Lake	17	63	6	2	2		1	3
Corn Creek	15	62	3	3	2			2
Six-Mile Slough	5	19			3			
Indian Land and Goat River	44	243	4	13	10		1	11
Old Goat River Channel	17	93		2		2	1	11
TOTAL	133	672						
	<u> </u>	<u> </u>						

Possible Predators and their effects

The possible number of predator species in Creston Valley is quite considerable. However, to show what effect these have on the waterfowl population is difficult without actual evidence or observation of predation.

Perhaps the greatest indication of any predation can be seen in the presence of the Great Horned Owl (Bubo virginiana). It was not until I started trapping and banding that this bird came to my attention. Twice in my trap at the south end of Duck Lake, these owls were tangled in the netting over the top of the trap. What they had managed to do was to bite the head off two young Wood Ducks that had stuck their heads through the wire and then attempted to get the rest of the remains inside by flying over the wire. In the stomachs of both owls there were feathers of young Mallards. The Mallards had not been in the traps so must have been obtained elsewhere.

Because one does not normally see owls during the day, I had no idea of the number until one evening when I was watching for them. I counted five hunting together and another six in separate sightings plus at least three more that could be heard hooting.

Although their main diet is probably rodents and reptiles, they may take quite a number of young ducks.

Coyotes and Striped Skunks are both frequently seen on the flats. In one day I have seen up to five and six coyotes in various places on the flats. During the first part of September, several sick and dead geese were reported and recovered along the banks of the Kootenay River bordering the Indian Reserve. It is believed that coyotes disposed of a number of these sick birds.

Skunks are often seen around farm buildings and on the dikes. What I believed to be a skunk or possibly a mink or weasel, twice got into the trap on Six-Hilo Slough and dragged off three or four young Wood Ducks.

Bald Eagles are known to prey on ducks. However, only two pair were known to be down on the flats.

Hawk Hawks are very abundant in the Valley, especially in late August and September, but it is doubtful if there is any predation on waterfowl by these birds.

Crows and Ravens do bother nesting Coots quite considerably. Three times while paddling through the Indian Reserve I came across floating abandoned Coots' nests that had been raided by crows. At other times when driving past the Reserve, crows could be seen diving at and harassing the coots. Because the nests of the majority of ducks are better camouflaged than the coots', the ravens and crows probably do not get very many of their eggs.

Generally, I do not think the predators do any significant harm to the duck population in Creston Valley.

Farming Activity in Relation to the Fall Waterfowl Buildup

Early in August the fall buildup of ducks occurs in all areas of the Valley. Even as early as August 5th, tremendous numbers of ducks, chiefly Mallards and Wood Ducks, fly out from the Indian Lands in late afternoon to the adjacent grain fields where a considerable amount of damage can be done in a short time. It was at this time this year that Mr. C. Christianson reported the birds landing in barley that was still uncut.

The large buildup of birds begins up at the north end of the flats along the southern shores of Kootenay Lake but shifts to the Indian Reserve during the first part of August.

The time of harvest, of course, depends upon a number of factors governing the ripening of the grain. This year, peas were being thrashed on July 28, the first barley about August 8, and by August 25th, the harvest was well underway, and by September 14th, it was pretty well finished.

Even though the harvest was considered late, there will always be the danger of crop damage by the ducks. Ways in which this damage could be minimized would be to keep a person in the fields to scare the birds, to have automatic sounding devices, and, not to plow the stubble under at the first of the season but to wait until after the harvest. In this way, a larger feeding area could be provided and lure the ducks away from unharvested fields.

Scarecrows constructed of black plastic cut into a large triangular flag and spaced throughout the field worked very well for one farmer during the daylight hours. On the other hand, in an evening of a full moon, these flags did not deter the birds from a field of swathed oats.

All the farmers that I discussed this topic with felt the damage problem was quite serious and hoped some solution could be found.

COMMENTS ON SPECIES

Moult and Fall Buildup

Mallards

The first flocks of probably post-breeding birds were observed on May 16 on the Indian Lands when 27 birds, predominately males took flight from the cattails and bulrushes where they had been loafing. By June 14th this flock had increased to 92 birds.

There appeared to be three preferred areas where these post-breeding males congregate. These are in the backwaters of the East River and north end of the Indian Land, where Corn Creek flows out onto the Corn Creek Unit and the south end of Leach Lake.

On May 26 a flock of 45 Mallards and Pintails were seen on the Corn Creek unit and by June 16 this had increased to between 50 and 80 birds which had obviously begun to moult. The green heads of the males looked patchy and breast feathers were scattered abundantly along the shore and on the water.

The willows along Summit Creek and the South end of Leach Lake appear to be very attractive to moulting birds. Flightless Mallards always stayed close to cover and none were seen out on open water.

A considerable number moulted at the South end of Leach Lake and in the Cost River area, but the actual number is not known.

Redheads

On June 29 a mixed flock of chiefly male Redhead, Scaup and Widgeon numbering 120 birds was observed out in the centre of Duck Lake. By July 7, the number had increased to approximately 850 birds. The flock was continually added to and always remained well out from shore. On July 20 the flock numbered about 3,000 and was composed mainly of Redheads and Widgeon with minor numbers of Coots, Scaup and Kingneck Ducks.

While I had the canoe with me on August 15 I launched it and paddled out toward the large raft of ducks which had now increased to approximately 5,200 birds. As I approached the raft kept swimming away from me and as I got to within 400 feet of them, some flew up and landed a short distance away while others flapped across the water in the fashion typical of moulting birds. Body and flight feathers were scattered all over the lake and it was then obvious that the entire raft had moulted on Duck Lake. From mid-August

on, the raft grew smaller as more and more birds were able to fly and by September 1st very few Redheads remained in the Valley.

Canada Geese

During May, on five separate occasions, what appeared to be mated pairs were seen on Buck Lake, Six Mile Slough, the Indian Land and in the Boulder Creek Area at the South end of Kootenay Lake. After May 20, however, none of these pairs were seen again and no broods were seen. From May 25 on into July, larger flocks of geese were seen, and, on June 8, nine flightless geese were seen on Six Mile Slough. Again the Indian Land, Six Mile Slough and Leach Lake appeared to be the preferred moulting areas. The peak of the moult seemed to come between the first and middle of July when 195 flightless birds were counted in these three areas along. By August 9, more geese had moved into the valley and on that date, a flock was seen flying in at 6000' from the Northeast--possibly from the upper Columbia River Valley. The marshy flats at the S.E. end of Kootenay Lake appeared to be a popular loafing and feeding area between August 4 and August 15 for many of the flocks arriving in the Valley. Shortly afterwards, many of these birds moved south onto the Indian lands and adjacent to Kootenay River. By September 8, there were:

85 geese at the south end of Leach Lake
300 geese on the Indian Land and Kootenay River
50 geese at the south end of Kootenay Lake
20 geese on Six Mile Slough

By the start of the hunting season, September 23, many of the Canada Geese had left the valley, but a large number of white-fronted geese were still present.

Baldpate (Widgeon)

My observations of Widgeon are as follows:

May 3	7 males, 6 females	South end of Kootenay Lake
20	14	Duck Lake (north end)
24	2	Duck Lake (north end)
June 16	6	Corn Creek Section
July 5	48	Duck Lake (south end)
8	32	Duck Creek area
	600	Duck Lake (north end)
14	550	Duck Lake (north end)
20	24 flightless	Duck Creek
	600 Moulting with Redheads on Duck Lake	
25	200 Moulting	Six Mile Slough
	600 Moulting	Duck Lake
August 1	150 Moulting	Leach Lake
15	1 female and brood(8)	Duck Lake
16	In addition to the moulting and flightless birds a great number of flying widgeon have been seen at the south end of Kootenay Lake.	
18	1000+	South end of Kootenay Lake
	1500-	Duck Lake

Widgeon remained in the valley, resting on Leach Lake primarily, well into the hunting season.

Common Mergansers

Mergansers were often seen in the valley throughout the summer and my observations of them are as follows:

May 24	3	North end of Duck Lake
25	8	French's Slough
26	2 females	S.W. Corn Creek Unit
June 8	16	Six Mile Slough
13	5	Six Mile Slough
	4	S.W. Kootenay Lake
16	6 adults, 2 broods (1,3)	Corn Creek Section
28	12 males, 7 females 3 broods (2,3,3)	Duck Lake Leach Lake
July 9	22 females	S.E. Leach Lake
6	3 females 1 brood (3)	Corn Creek Unit
11	13 females 1 brood (1)	Leach Lake
21	42 females flying & 29 flightless females	Leach Lake
August 19	24 males flightless 1 female & brood (8)	Duck Lake

Moulting Mergansers were also seen on Six Mile Slough and the South end of Kootenay Lake.

Cinnamon Teal

Since the J. A. Munro report of 1956 when only a single male was seen, the numbers seem to have increased. The following are my observations of the Cinnamon Teal:

May 12	7	North end of Indian Land
16	5	Section 2 of Indian Land
17	7	Tin Can Slough
20	6	Duck Lake
24	5	Duck Lake
27	2	Sec. 3 (south) Indian Land

Cont'd.

June 1	4	Section 3 (south end) Indian Land
2	6	Section 3 (south end) Indian Land
6	4	North end Loach Lake
7	18	Southeast Duck Lake
14	7	Drainage Ditch on South end of Flats
16	2	Corn Creek Unit
28	4	Duck Lake

After the last observation June 28, no more Cinnamon Teal were seen in the Valley.

Green-winged Teal

Observations of Green-winged Teal are as follows:

May 19	1 male	Tin Can Slough
26	2	South Corn Creek Unit
June 1	2	Section 2 Indian Land
7	1 pair	South east Duck Lake
July 6	9	Tin Can Slough
18	12	Tin Can Slough
19	10	Corn Creek Unit
20	female & brood (8)	Southeast Duck Lake

Green-winged teal remained in the area well past September 23.

Blue-winged Teal

Observations of the Blue-winged Teal as follows:

May 9	1 male	North end Six Mile Slough
17	4	Tin Can Slough (dumpsite)
24	4	North end Duck Lake
26	2	South Corn Creek Unit
27	2	Tin Can Slough

June 1	4	Indian Lands Sections 2, 4, 3
2	3	Indian Lands Sections 2, 4, 3
6	2	North Leach Lake
7	2 + 2	Duck Lake and Sec. 3 Indian Land
8	5	Goat River Backwater
10	12	Goat River Backwater
13	1	Six Mile Slough
28	14 & 1 juvenile	Duck Lake
July 6	5	Tin Can Slough
14	8	Duck Lake
August 31	30	Duck Green Channel at Gynadel

The total on the channel at Gynadel remained in that area until the start of hunting season, September 23.

Ring-necked Ducks

A mated pair was seen in section 18 of the Indian Land on May 16 and another pair at the south end of Section 3 on May 27.

On Leach Lake 2 males were seen June 6, and one was seen in Tin Can Slough (local name for backwater of Goat River) on June 10.

Two ring-necked ducks were seen at the south end of Duck Lake June 28 and ten on July 5. After July 14 when sixteen Ring-necked ducks were seen on Duck Lake, no further sightings were made.

Ruddy Ducks

Ruddy ducks were only seen on three occasions during July and all were at the south end of Duck Lake and near the mouth of Duck Creek. On July 8, three males were seen and on July 20 four males were seen. The last observation was on July 25 when six males and three pair were seen.

Barrow's Golden-Eye

Even though there are a large number of Golden-eye broods brought off in Creston Valley, not one male Golden-eye was seen after my arrival May 9. Females, after raising their broods, collected into flocks for the moult. On July 11, eleven females were seen at the north end of the Indian Land and the next day, in the same place, 35 were seen. Female Golden-eyes moulted in all areas of the Valley. Forty-four were seen July 21 on Loach Lake and on July 27 a number were seen with molting Widgeon and Mallards on Six Mile Slough. Several molting females were also seen along the shores of Duck Lake. Even after the moult, and on as late as November 4, when my last observations were made, female Golden-eyes were still quite common.

ROSTENAY RIVER WATER GAUGE READINGS AT WEST CHESTER PERRY FOR

THE SUMMER 1966

To compute the river elevation, the gauge reading is added on to 1739.35 which is the zero river level.

APRIL

1. 1.88 feet
4. 2.51 feet
11. 5.20 feet
12. 5.58 feet
13. 5.68 feet
14. 5.44 feet
15. 5.16 feet
18. 5.07 feet
19. 4.90 feet
20. 4.67 feet
21. 4.61 feet
22. 4.44 feet
25. 4.10 feet
26. 4.26 feet
27. 4.47 feet
28. 4.53 feet
29. 4.44 feet

MAY

2. 4.19 feet
3. 4.37 feet
4. 4.95 feet
5. 6.29 feet
6. 8.00 feet
9. 12.81 feet
10. 13.86 feet
11. 14.52 feet
12. 15.10 feet
13. 15.44 feet
14. 15.20 feet
15. 14.67 feet
16. 14.03 feet
17. 13.43 feet
18. 12.82 feet
19. 12.21 feet
20. 11.77 feet
21. 11.58 feet
22. 11.78 feet
23. 11.98 feet
24. 11.88 feet
25. 11.72 feet
26. 11.94 feet
27. 12.77 feet
28. 14.19 feet
29. 15.58 feet
30. 16.49 feet
31. 17.46 feet

JUNE

1. 18.01 feet
2. 18.47 feet
3. 18.93 feet
4. 19.08 feet
5. 19.04 feet
6. 18.95 feet
7. 18.91 feet
8. 18.75 feet
9. 18.52 feet
10. 18.41 feet
11. 18.43 feet
12. 18.45 feet
13. 18.26 feet
14. 17.81 feet
15. 17.38 feet
16. 16.97 feet
17. 16.67 feet
18. 16.48 feet
19. 16.44 feet
20. 16.47 feet
21. 16.36 feet
22. 16.01 feet
23. 15.57 feet
24. 15.14 feet
25. 14.68 feet
26. 14.28 feet
27. 13.87 feet
28. 13.49 feet
29. 13.34 feet
30. 13.14 feet

JULY

1. 13.14 feet
4. 12.80 feet
5. 13.06 feet
6. 13.15 feet
7. 12.90 feet
8. 12.78 feet
11. 12.70 feet
12. 12.52 feet
13. 12.26 feet
14. 11.95 feet
15. 11.69 feet
18. 11.10 feet
19. 10.53 feet
20. 10.46 feet
21. 10.20 feet
22. 9.89 feet
23. 8.89 feet
26. 8.70 feet
27. 8.53 feet
28. 8.25 feet
29. 7.96 feet
30. 7.68 feet

AUGUST

1. 7.25 feet
2. 7.05 feet
3. 6.90 feet
4. 6.78 feet
5. 6.71 feet
8. 6.47 feet

9. 6.38 feet
10. 6.20 feet
11. 6.15 feet
12. 5.98 feet
15. 5.57 feet
16. 5.70 feet

17. 5.93 feet
18. 6.15 feet
19. 6.31 feet
22. 6.60 feet
23. 6.67 feet
24. 6.71 feet

25. 6.75 feet
26. 6.69 feet
29. 7.10 feet
30. 7.24 feet
31. 7.41 feet

This year the Kootenay River peaked on June 4 at a height of 19.08 or elevation of 1758.43 feet. This is just .15 feet off the 25 year average. Even at this level, however, flood waters back up and flow through breaks in the natural levees along the river bank and inundate thousands of acres of potential nesting area while the muddy waters make feeding areas less attractive.

FISH: AS A DETRIMENT TO WATERFOWL PRODUCTION

Of course the biggest danger in fish being detrimental to waterfowl production lies in the possibility of carp (Cyprinus carpio) obtaining access to the Kootenay River System. At present the closest report of carp is in the Columbia River at Trail and in the Arrow Lakes. The hydro-electric dams on the Kootenay River between Nelson and Castlegar appear to be effective barriers to the spread of carp into the Kootenay system from this source.

So far, carp have not been reported from the upper Columbia around Windermere or Columbia Lake where there would be the danger of getting into the headwaters of the Kootenay via the Boillie-Grohman canal at Canal Flats in the East Kootenay. If carp have not reached the waters of the Columbia north of Revelstoke, in the future the Kim Creek dam will act as a check to the spread in that direction.

Neither Largemouth Bass nor any of the other fish species in the Kootenay system appear to be of any detrimental value as far as predation upon young ducklings or the destruction of aquatic plant life.

FISH: FROM A RECREATIONAL POINT OF VIEW

A variety of fish species are present in Creston Valley and provide the angler with a wide choice of methods of catching them. For the more adventuresome and energetic, numerous mountain lakes and streams offer a good catch of cutthroat trout (Salmo clarki) and rainbow trout (Salmo gairdneri). In many of these small mountain lakes the fish population is too large to be supported with an adequate food supply with the consequences that the fish have large heads and a thin tapered body. Fly fishing or spin casting appear to be the best methods of fishing these spots.

In the small streams which flow into Kootenay River and Lake the fish generally are not large but are often numerous. Even the smallest creeks on the west side of Kootenay Lake offer good fishing if one is prepared to do a little hiking and accept smaller fish. Bait fishing and flies with a small hook are the best ways of catching fish in these streams.

The Goat River throughout its length offers reasonable fishing at certain times of the year. Trout fishing is most successful in the upper parts of the River (above Kitchener) in the evening when fly fishing is good.

At the confluence of the Goat and Kootenay Rivers (locally called the diversion because here the Goat River was diverted from its old channel into the Kootenay River) fishing is excellent for a period of time in the spring or early summer when the Goat River is dropping and is much clearer than the Kootenay which is still high with the spring flood. This year, between July 10 and July 13, fishing was good for Rock bass (land-locked Sockeye Salmon) and Rainbow Trout at the diversion.

Kootenay River offers quite a variety of fish ranging in size from tiny little Yellow Perch (Perca flavescens) to nine foot White Sturgeon (Acipenser transmontanus). Largemouth Bass (Micropterus salmoides) Rocky Mountain Whitefish (Prosopium williamsi), two species of chub (Mylocheilus castrinum and Couesius plumbeus), Northern Squawfish (Ptychocheilus oregonense) and largescale Sucker (Catostomus macrochilus) are also found quite abundantly, however, of these, only the Largemouth Bass is really sought after here as a sport fish.

Garbot or ling (Lota lota), a member of the codfish family are also found in the Kootenay River and some of its tributary streams in late January and February when they go up to spawn.

In former years spear fishing for ling at night by lantern used to be a great sport in the Creston-Duck Creek area but in recent years ling have not been as numerous and a daily limit has been placed on them. Ling are caught by jigging and one of the better places for this is in the Queens Bay-Salfour area just at the start of the West Arm of Kootenay Lake.

Kootenay Lake itself is renowned for its Rainbow Trout fishing. Many large Rainbows are caught in the lake during the fall and early spring. Dolly Varden (Salvelinus malma) also reach a good size in Kootenay Lake but do not put up the fight the Rainbow can offer and therefore are not sought after as much by fishermen.

Within the last few year Kobanee of good size have been taken from the lake and they provide a good fight for the size of the fish and are very tasty to eat.

Duck Lake and Duck Creek Chanel provide unusually good Largemouth Bass fishing at certain times of the year. Fish have been caught from one to six pounds or more. Local fishermen congregate at the Sirdar rocks, the south end of Duck Lake, and the pump house at the north end of Duck Lake.

The effect of diking, draining and manoging the south end of Duck Lake for waterfowl on the bass fishing is uncertain. Other fish in Duck Lake are Sunfish or Pumpkinseed fish (Lepomis gibbosus), Yellow Perch and Squawfish.

OSPREY REPRODUCTION IN THE VALLEY

The large expanse of open, shallow water of Leach Lake, Six Mile Slough, Duck Lake and Kootenay River provide a vast feeding area for an exceptionally large Osprey (Pandion haliaetus) population. Throughout the summer in my travels up and down the Kootenay River and around the south end of Kootenay Lake, Osprey were observed flying back and forth between the feeding areas and their nests in the large Black Cottonwoods along the riverbank. In all, 28 nests were counted, the majority of which were in the north end of the valley along both the east and west channel of the Kootenay River, however, nests were seen high up on the hillsides, generally in a large Ponderosa Pine tree.

By May 11 nest nest building and reconstruction had concluded and nesting was well under way.

The first young Osprey observed was when I climbed up an old cottonwood on the west branch of the river and looked into a nest (June 20). In it were two young birds probably not more than three days old and one unhatched egg which remained there for at least thirty days before it disappeared.

On July 7 at a nest on the east branch of the river, a young Osprey, large enough to lift himself up and peer over the edge of the nest, was seen. By July 13, the two young Osprey from the nest on the west branch of the river were quite well-feathered. When the nest was approached, they crouched down and lay very still.

The first flight of a young Osprey was observed and recorded from this nest on the west branch. On July 28 when I climbed up to take some photographs, one of the two young birds left the nest. The first flight, then, occurs when the young Osprey is approximately forty days old.

Of all the nests that young were observed in, the number varied from one to three young birds per nest, and judging from the activity about the nests, all of them, along the river at least, brought off some young successfully.

During the time there are young in the nest, the adult osprey are very protective and will attack any large bird near their nest. In one instance, when several Great Blue Herons were scared up from the river bank and flew near an osprey nest, the Ospreys attacked the slower flying Herons ferociously and forced them into the trees and down

...into the brush on the river banks. Two Herring were seen hanging helplessly upside-down being dived and clawed at by the Osprey.

When I approached close to any Osprey nest, the adult birds circled and screamed overhead, but rarely dove at me.

Osprey appear to be strictly fish eaters and no instance was seen where an Osprey took any waterfowl for food.

Squawfish, Bass, and Perch probably constitute the main part of the diet while Trout are only a small part of their food source.

PHOTOGRAPHS

1.)
2.) Great Blue Heron
3.)
4. Adult Osprey in Nest
5. Young Osprey in Nest
6. Young Osprey in Nest
7. Juvenile and Adult Bald Eagles
8. Canada Goose showing swollen and stretched neck
9. Esophagus of Canada Goose jammed with Equisetum
10. Brood of six young Redheads
11. Mallards taking off from the Indian Lands
12. Canada Goose
13. Canada Goose on Six Mile Slough
14. Canada Goose at South End of Kootenay Lake
15. Creston Valley showing Buck Lake, Six Mile Slough,
Leach Lake, Corn Creek Unit, and French's Slough.
July 12, 1966
16. Indian Nick Francis and wife with Kootenay Canoe on
the Indian Reserve

Robert Greyell
1 December, 1966