

Yellowstone Bird Report 2006



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*Above: a Great Blue Heron (Ardea herodias) on a nest in full nuptial plumage.
Photo: Terry McEneaney*

Front cover: a Northern Pygmy-Owl (Glacidium gnoma) looking for prey. Photo: Terry McEneaney

National Park Service emblem

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All photographs in this report are by Terry McEneaney (TM) unless otherwise indicated.

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Introduction

The Yellowstone Bird Report summarizes all bird information in Yellowstone National Park. The report originally started as a quarterly publication, then beginning in 1996 became an annual document summarizing all results and activities that occurred within the calendar year. The 2006 Yellowstone Bird Report is in essence an annual report. Information found in this publication is used in the Superintendent's Annual Report and provides valuable information for the Yellowstone historical record and interested public.

2006 Weather Patterns and Summary

The winter of 2005/2006 started off slowly, with warm temperatures and for a change average snowfall. The first major snowstorm occurred around the holidays. However, there were fits and starts of snowstorms with the more typical winter starting in March and extending well into April. Ice-out dates on Yellowstone Lake continue to show a downward trend as the lake is gradually thawing-out over time. Mountain snow pack melted relatively early, but rebounded and slowed down in May when temperatures were below average and precipitation slightly above average. Again this year the spring, particularly May, turned out to be surprisingly wet (in the rare form of rain) thus slowing down snowmelt. The months of May and June were cool and wet, allowing only a handful of wildfire starts for the entire 2006 season. Despite the welcome precipitation, the drought over the last several years continued to further dry out small ponds and lakes, especially on the Northern Range due to the lack of underground recharge. Mosquitoes were the worst in 20 years. July and August had average monsoon moisture, whereas September through mid-October was dry with slightly below average precipitation. November turned out to be dry and warm, same as last year, but snowstorms started to occur in both early and late November. December was for the first time in many years, a more typical snowy month. As the year 2006 came to a close, winter appeared to be on schedule, resulting in above average precipitation and average temperatures. A cold spell in early December led to an unusual thaw throughout the month, finally ending the year with very little snow.



Drought continues to play a role in the complexion of the Northern Range. The white dot actually is a Trumpeter Swan in one of the last remaining ponds in the area with water.

Threatened and Endangered Species

Bald Eagle

In 1995, the U.S. Fish and Wildlife Service down listed the Bald Eagle from "endangered" to "threatened" due to significant population gains made over the last three decades. Certain specific populations, however, are not completely recovered due to heavy metal contamination problems in the Great Lakes region, and habitat encroachment and development problems associated with riparian zones in the desert southwest.

However, the Bald Eagle is expected to be delisted in 2007.

In Yellowstone, a total of 10 eaglets fledged from 33 active nests during 2006 (Figure 1). This represents the lowest number of fledglings in Yellowstone National Park since the early 1990's. The large number of nest failures that did occur were primarily due to the weather, namely in the form of wet snows, rain and strong winds. The Yellowstone Bald Eagle subpopulation appears to have reached its peak for the time being, with the first small dip in nesting pairs, however territorial shifts are ongoing and pairs continue to appear in unexpected places.

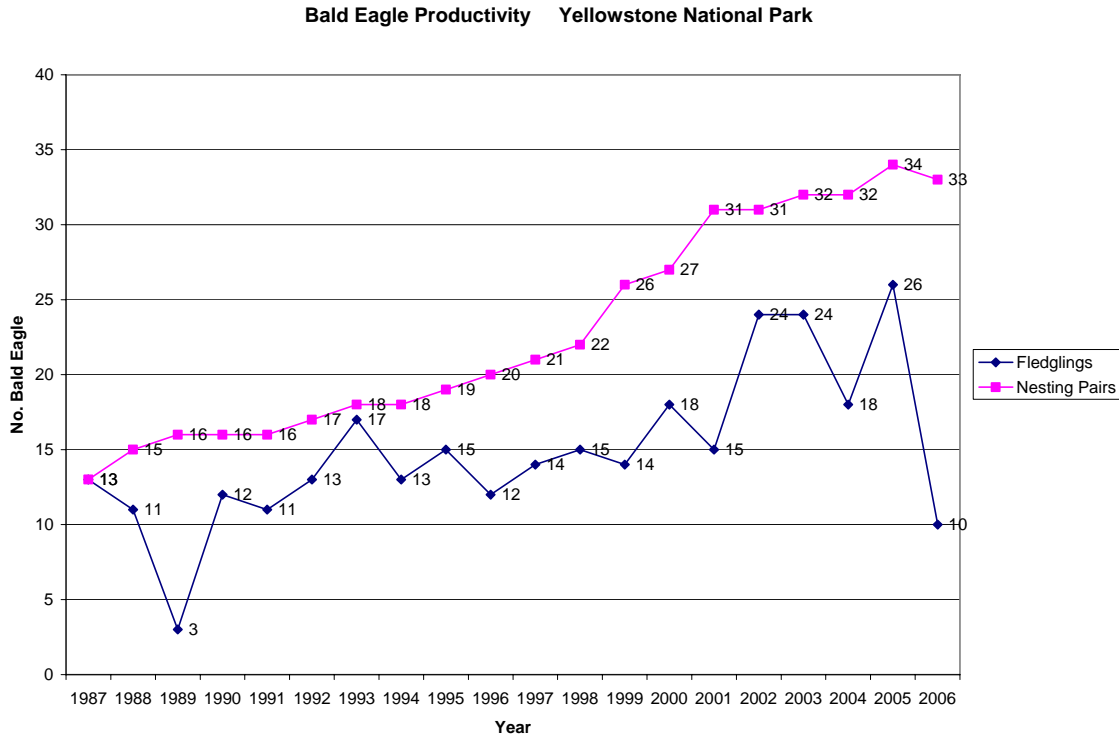


Figure 1. Bald Eagle Productivity—Yellowstone National Park.

In addition, incremental changes in Bald Eagle numbers are beginning to occur on Yellowstone Lake, one of the strongholds for nesting Bald Eagles in Yellowstone National Park (Figure 2). Most noticeable are declines in the number of fledglings, and a slight reduction in the number of nesting pairs. Although the noticeable takeover of cutthroat trout by introduced lake trout is occurring, other factors such as weather also play a significant role in fledgling success and nest site stability. Additionally, it needs to be clearly understood, Bald Eagles are not solely dependent on fish for food, and can supply young with other alternative sources of important food such as waterfowl. Rather than offer predictions as to the degree Bald Eagles will decline on Yellowstone Lake, it is important to let it play out, since there are multiple factors influencing the final outcome.

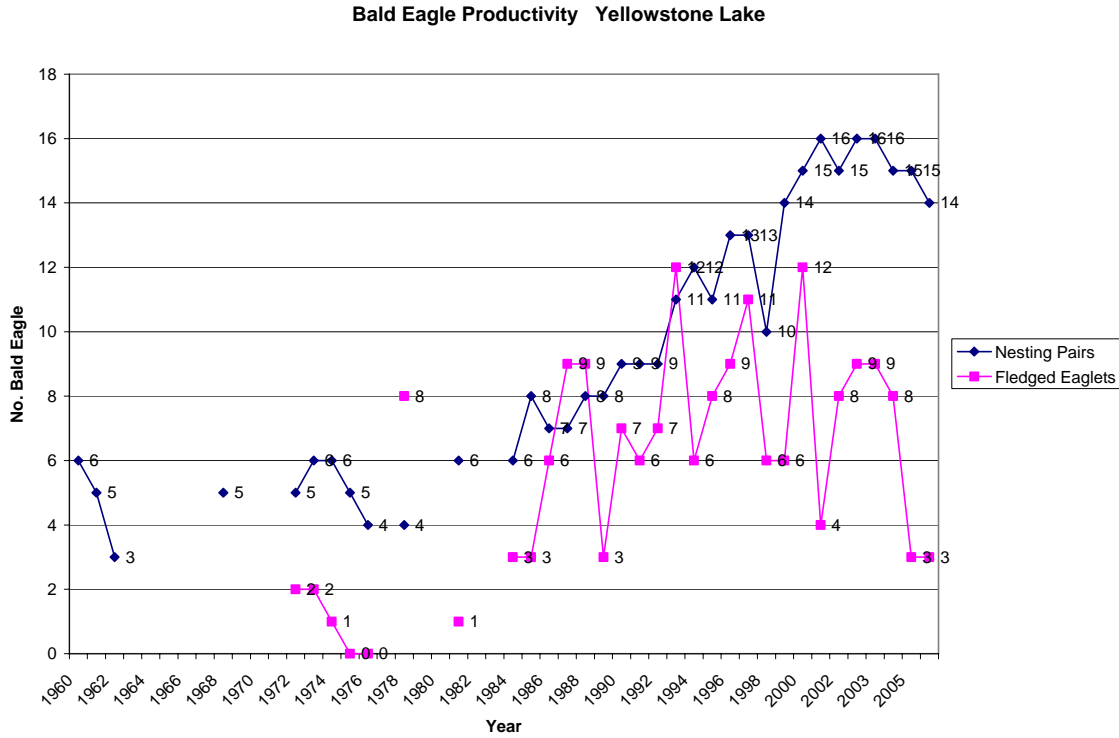


Figure 2. Yellowstone Lake Bald Eagle Productivity.

For the fourth year in a row a pair of Bald Eagles took up residence in a large tree nest, 55 meters off the Madison to West Yellowstone road in an area locally known as “6 Mile”. The 6 Mile Bald Eagle pair managed to fledge 2 eaglets in 2006. This created quite an attraction for the visitor, and kept wildlife managers and rangers on their toes with crowd control throughout the spring and summer. Interestingly as predicted, the paired adults did not abandon the site, and continued to maintain the territory throughout the year. However, tour guides have been observed stopping in the closed area causing serious concern for managers by setting a bad precedent for the public. Nest substrate instability, as a result of the 1988 Yellowstone wildfires, coupled with strong winds continue to raise havoc with nesting pairs throughout YNP. However, over the next couple of decades we expect large numbers of dead trees left standing to topple to the ground, which will undoubtedly result in further nest failure, loss of nest sites, or sudden changes in location of a nesting territory. Although Bald Eagles have occasionally been documented taking over previously occupied Osprey nests, the incidence of takeover appears to be gradually increasing due to competition for nest sites.



A female Bald Eagle (Haliaeetus leucocephalus) brooding two young during a spring snowstorm. Photo: T. McEneaney

Whooping Crane

The Whooping Crane is currently classified as an endangered species. The worldwide population consists of both wild and captive components. This endemic North American species continues to rank as the rarest and most endangered crane in the world.

Population figures as of the summer 2006 placed the wild population at **354** cranes and the captive population at 145 cranes, for a total world population numbering 499 Whooping Cranes. (Table 1, Figure 3). For a detailed description of the history of Whooping Cranes in Yellowstone, see the 2000 Yellowstone Bird Report.

Source: Stehn, T. 2005. Whooping Crane Recovery Activities Report, USFWS.

Table 1. 2006 Wild and Captive Whooping Crane Populations

Wild Populations

Area	Adults	Young	Total	Adult Pairs
Aransas/Wood Buffalo NP	214	inc	214	71
Rocky Mountain	0	0	0	0
Florida:Non-Migratory	50	4	54	17
Wisconsin/Florida: Migratory	61	25	86	5
Subtotal in the wild	325	29	354	93

Captive Populations

Breeding

Area	Adults	Young	Total	Pairs
Patuxent WRC, MD	57	3	60	15
International Crane Fdn., WI	32	5	37	11
Devonian WCC/Calgary, ALTA	19	3	22	6
Calgary Zoo, ALTA	2	0	2	0
San Antonio Zool. Gardens, TX	8	0	8	1
Lowery Park Zoo, Tampa, FL	2	0	2	0
Homosassa Springs WSP, FL	2	0	2	0
New Orleans Zoo, LA	2	0	2	0
Species Survival Ctr, LA	8	0	8	1
Jacksonville Zoo, FLA	0	2	2	0
Subtotal Captive	132	13	145	34
Subtotal in the wild	325	29	354	93
Total (wild and captive)	457	42	499	127

Worldwide Whooping Crane Population Chart

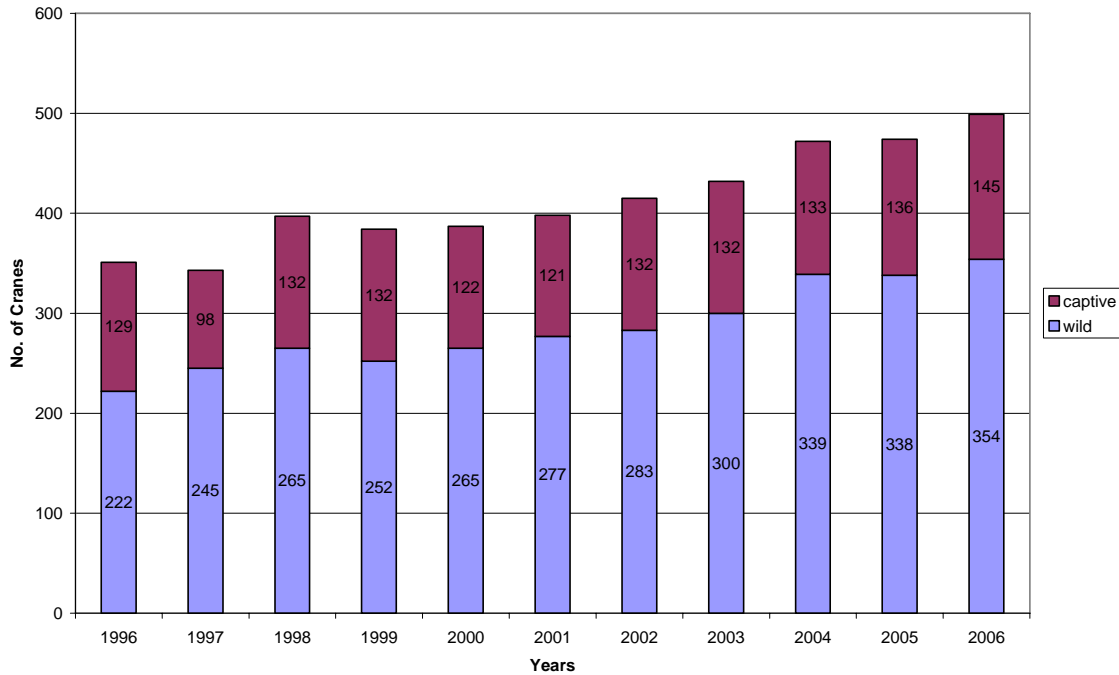


Figure 3. Population Status of the Whooping Crane.

Whooping Crane Summary courtesy Tom Stehn USFWS

HIGHLIGHTS

The number of whooping cranes in North America reached the 499/500 mark for presumably the first time in over 100 years! However, one captive juvenile died from metal ingestion in the fall to drop the total to 499. Once the cranes arrive at Aransas and are counted, total numbers were expected to be above 500.

2006 has been a record production year for all three whooping crane populations in the wild (47 in Canada, 4 in Florida and 2 in Wisconsin). In addition, the captive flocks produced 36 chicks that will be reintroduced back into the eastern migratory population (n=23) or held back in captivity for breeding because of their valuable genetics (n=11). Two captive chicks that developed leg problems were placed in captivity on display at the Jacksonville Zoo in Florida. In Wisconsin, the 2 chicks produced represent the first wild hatchlings in the mid-west in over 100 years! The eastern migratory population of whooping cranes should reach 86 wild birds in its 6th year of the reintroduction.

Dr. Jane Goodall visited Operation Migration at its camp on the Necedah National Wildlife Refuge to see the whooping cranes. Recovery Team member Dr. George Archibald received the Indianapolis Heroes of Animal Conservation award.

LOW POINTS

The threat of land development on the wintering grounds has become imminent with construction expected to start this fall on a 776-house canal lot subdivision on lands that whooping cranes occasionally used. Land development for people on the Texas coast is growing exponentially and threatens the cranes.

Budget shortfalls existed for both private and government operations in whooping crane recovery. Programs such as flying the cranes behind ultra-light aircraft on migration, shipping eggs between captive facilities for reintroduction programs, paying for genetic testing for paternities of captive chicks, and censusing and monitoring flights for the Aransas-Wood Buffalo and Eastern Migratory populations have created a financial squeeze felt by all partners. However, substantial progress continues to be made by multiple recovery partners.

Species of Special Concern

PEREGINE FALCON

On August 26, 1999, the Peregrine Falcon was delisted or "removed" from a list of threatened and endangered species. Under provisions afforded by the Endangered Species Act, even though this species is no longer officially listed as endangered, it still needs to be monitored closely to ensure its recovery.

The Peregrine Falcon has been delisted or "removed" from the list of endangered species and is now managed as a species of special concern. Yellowstone continues to be a stronghold for peregrines in the Northern Rockies. **One new eyrie was found in 2006 bringing the total number of peregrine eyries in YNP to 31. As a result of finding this additional peregrine eyries a total of 50 young fledged in 2006, making this the highest number of fledged peregrines ever recorded in history of Yellowstone National Park** (Figure 4).

Monitoring peregrines eyries is a time consuming task. The year 2006 marked the seventh year since delisting, and Yellowstone data supports the contention that peregrines are on the road to full recovery. A future sampling scheme will be developed, in which perhaps only one third of all known eyries in the park will be checked each year, thus completing a full parkwide production survey every three years. This will allow time to check cliffs for new eyries and move on to other projects.

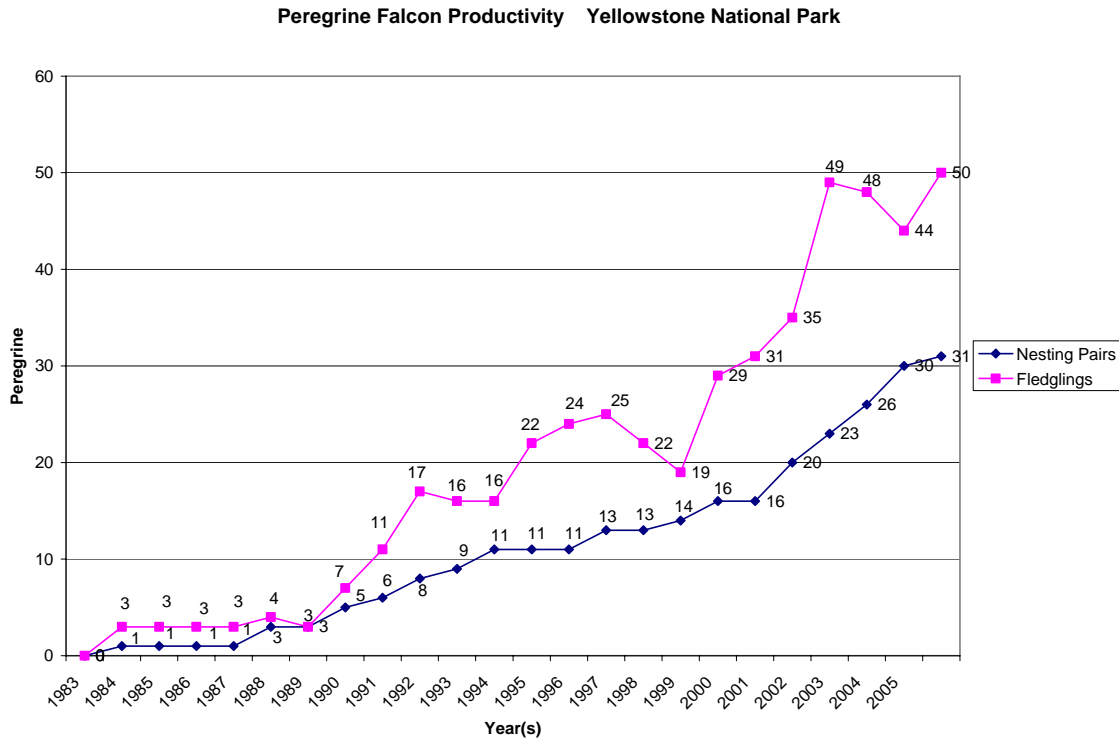


Figure 4. Peregrine Falcon Productivity Yellowstone National Park



A female Peregrine Falcon, also known as a falcon, shading her young from the sun.

TRUMPETER SWAN

The Yellowstone National Park resident Trumpeter Swan subpopulation continues to show signs of a species at risk of local imperilment. Traditionally, the Centennial Valley of Montana has been a hot spot for cygnet production in the greater Yellowstone area. Swan recruitment from outside of Yellowstone National Park is a critical factor in

maintaining the resident swan population. Historically, swans that died in the park (mainly through predation) were eventually replaced by swans from outside the park (namely the Centennial Valley). However, management events over the last two decades have led to a reduction of breeding swans particularly outside the Park, coupled with low numbers of fledged cygnets throughout the greater Yellowstone (Figure 5) are cause for serious concern.

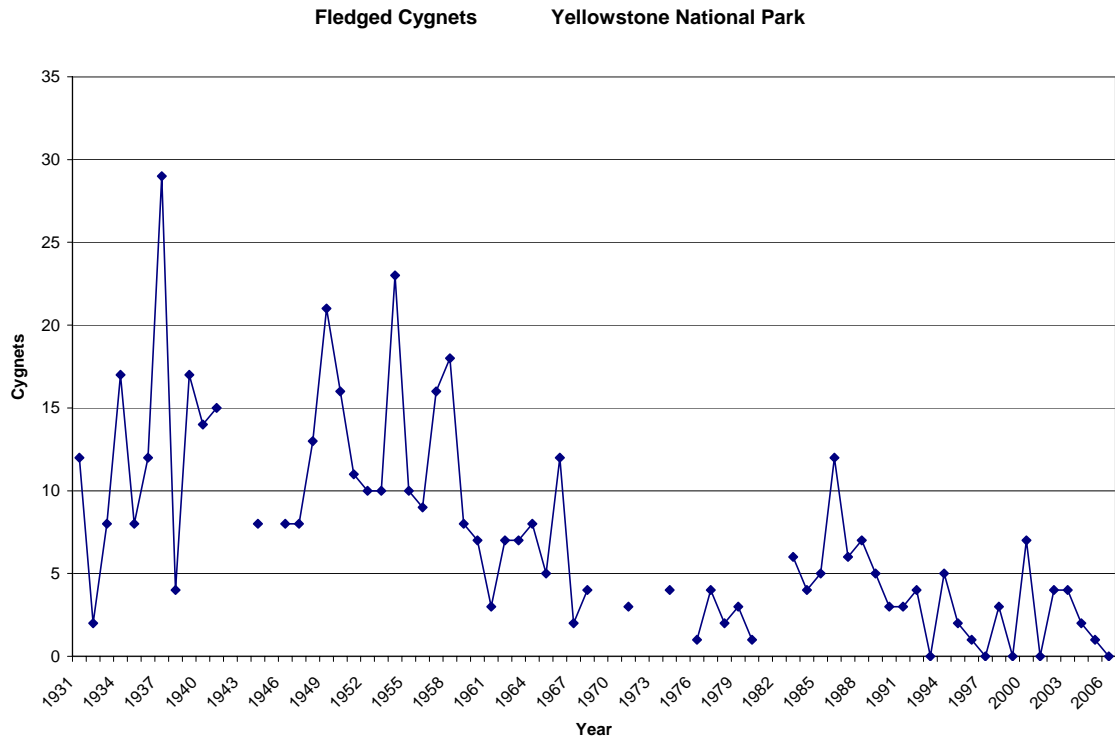


Figure 5. Cygnet Productivity Yellowstone National Park

The number of sub adult/adult resident swans in Yellowstone National Park has declined steadily since 1961 and currently stands at only 14 individuals (Figure 6). This is tied with 1931 and 1934 as being the lowest number of sub adult/adults ever recorded in the park, since we have been collecting population trend data. These adult numbers are expected to stay low due to predation and until adult swan numbers in the Centennial Valley significantly increase, which is expected to take at least a couple decades.

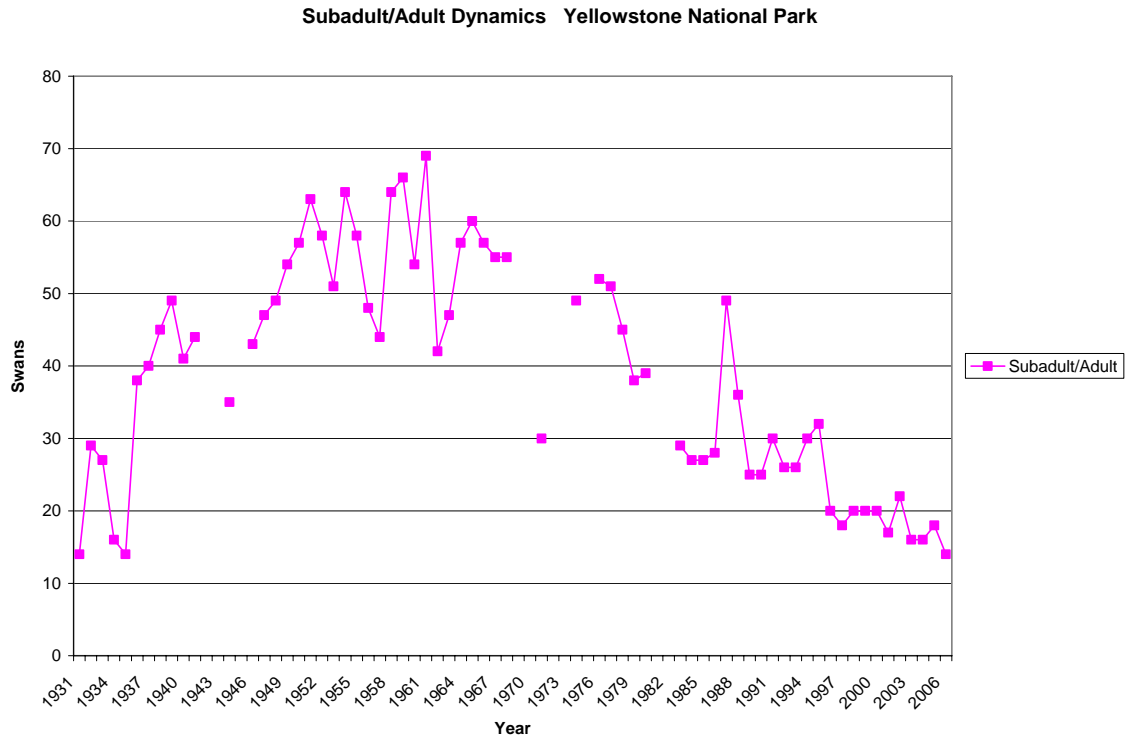


Figure 6. Sub-adult/Adult Trumpeter Swan Dynamics YNP.

Adult swan recruits from the Paradise Valley have helped in maintaining the Yellowstone swan population for the time being. However, one new recruit was observed on the Northern Range in 2006. The chances of survival for this swan is not good, due to the extreme drought conditions in this area. In the spring of 2005 three subadult and 2006 two subadult/adult floaters or non-breeders showed up on the Madison River, providing signs of small but slow incremental change in the swan recruits coming from the west of the park. In 2004 a single adult swan at 7 Mile Bridge on the Madison River, finally picked up a mate after 40 months of being alone on the territory during the month of August. But mammalian predation has all but eliminated the gains made on the west side of the park.

In recent years, trumpeter swan nest attempts have ranged from 2 to 10 per year (Figure 7). There were only three swan nest attempts in 2006, these three nest attempts have stayed steady for the last five years, with the exception of 2004 in which there were 4 nest attempts. In 2006, four cygnets hatched from one brood in Yellowstone National Park, and no cygnets reached fledgling age. And the staff ornithologist observed one newly hatched cygnet from a single swan brood of four, preyed upon by an adult Bald Eagle. Bears also played a role in swan nest failures this year, when egg clutches from two swan territories were documented as being destroyed by grizzly bears.



One of the few remaining Trumpeter Swan nests in Yellowstone.

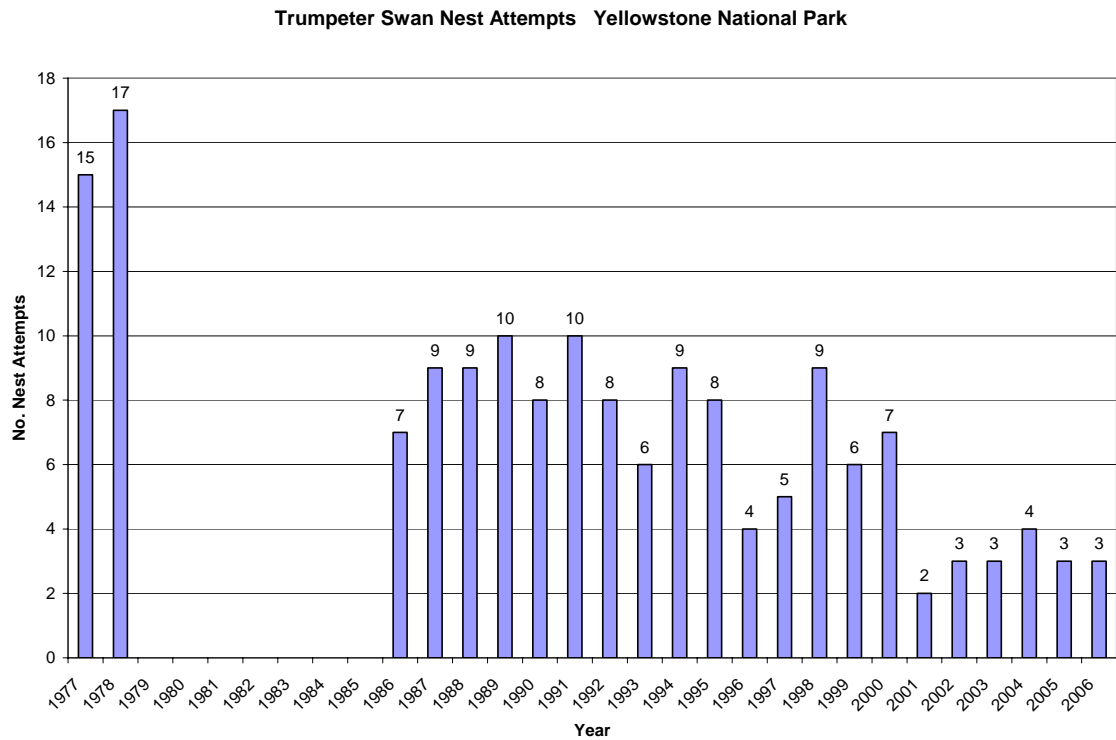


Figure 7. Yellowstone Trumpeter Swan Nest Attempts.

Paradise Valley Trumpeter Swan Flock. Yellowstone National Park began to participate in Trumpeter Swan conservation issues (north of the park) in the Paradise Valley of Montana due to the potential threat posed by exotic Mute Swans. In the 1960s, a private landowner purchased a pair of Mute Swans for aesthetic purposes. By the late 1970s, the Mute Swan population had grown to a high of 120 individuals. Fearing potential competition with native Trumpeter Swans in Yellowstone National Park, the National Park Service became involved in a program to reverse this alien threat to native swans. In 1987, a slide program was presented by the Yellowstone National Park staff to Paradise Valley landowners interested in helping resident Trumpeter Swans. After the initial presentation, an informal agreement was reached indicating the importance of eliminating Mute Swans immediately and replacing them with captive-raised Trumpeter Swans. The biggest obstacle was finding private funding to pay for the program, particularly since the purchase of captive Trumpeter Swans can be very expensive. Generous support from the Cinnabar Foundation and the Chevron Corporation, in addition to contributions from private citizens, allowed this program to proceed on schedule.

The first order of business was the elimination of Mute Swans. The staff ornithologist, through the help of landowners and park rangers, began to eliminate the first Mute Swans in the fall of 1987. By 1989, the Mute Swan population was reduced to 13 individuals, and Trumpeter Swans were introduced into Paradise Valley. In 1991, Trumpeter Swans outnumbered Mute Swans nine to two in Paradise Valley. By the mid-1990s, Mute Swans were eliminated from Paradise Valley altogether. Therefore, the threat posed by an alien species was extinguished in a relatively short period of time.

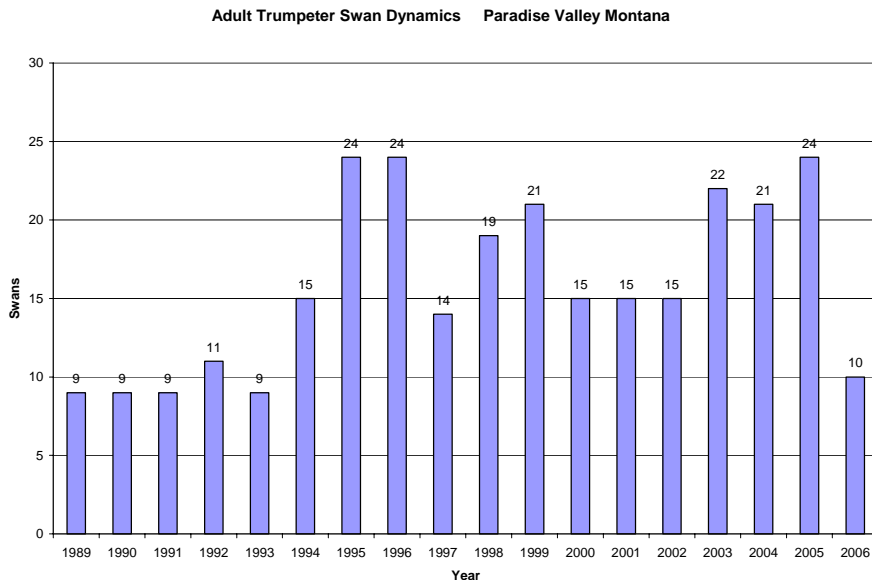


Figure 8. Adult Trumpeter Swan Dynamics-Paradise Valley, Montana.

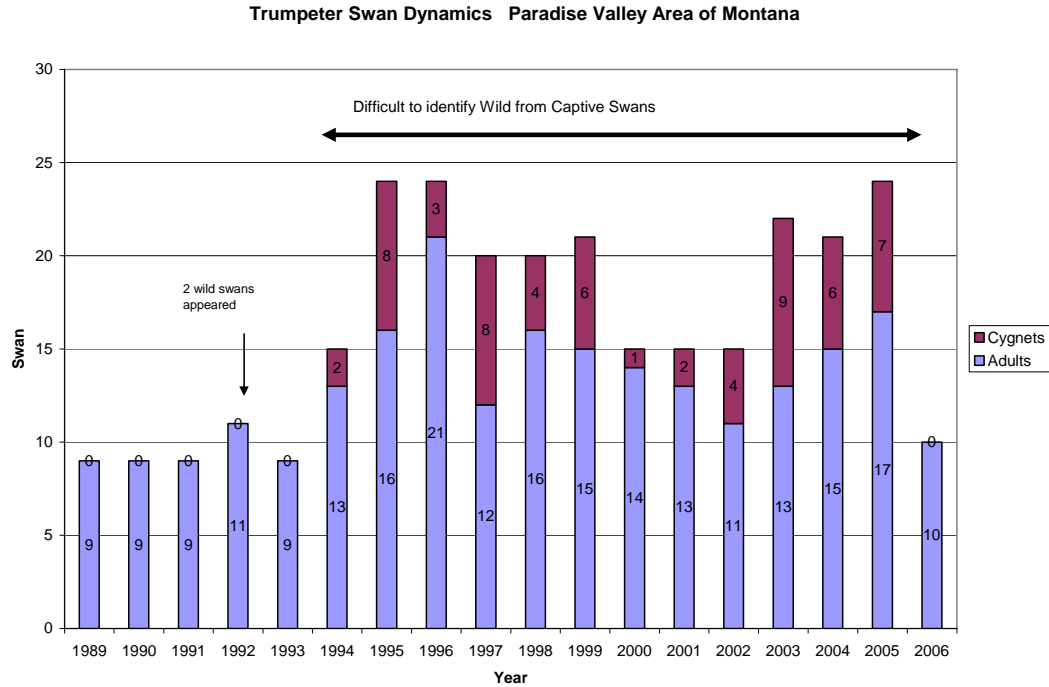


Figure 9. Paradise Valley Trumpeter Swan Dynamics.

Throughout the years, the Paradise Valley Trumpeter Swan program has experienced three major setbacks: 1) two captive swans and one wild swan were illegally shot or poached on the DePuy Ranch on December 2, 1995, 2) severe floods on the Yellowstone River during the spring and summer of 1997 and 1998 flushed many swans down river, leading to a major decline in the swan flock, and 3.) a series of adult mortalities. In 1999, one captive swan pair managed to fledge five cygnets on one ranch and a wild swan pair fledged a single cygnet. In 2001, one of the wild swans died from a wire collision leaving the nesting area vacant, however a captive pair fledged 1 young.

In 2006, in the Paradise Valley there were two nesting pairs that failed to fledge any young. No young hatched from either of the two nests. In 2006, fall survey of the Paradise Valley swans tallied 10 individuals-- 10 adults, 0 cygnets (Figures 8,9), with details on production (Table 2). The primary reason subadult/adult swans declined in numbers in the Paradise Valley was due to collision mortality with wires, predation, lead poisoning, and recruits exploring the confines of Yellowstone National Park and the Paradise Valley. Banded swans from the Paradise Valley have been seen in Yellowstone National Park on occasion. So the program continues to pay off in small increments.

Table 2.

2006 Trumpeter Swan Production Summary		
Parameters	Yellowstone National Park	Paradise Valley
Occupied Sites	3	2
Nesting Pairs	3	2
Successful Nests	0	0
Cygnets Hatched	3	0
Broods w/ Fledged Young	0	0
Cygnets Fledged	0	0
Adults	14	10
Total Swans		

MOLLY ISLANDS COLONIAL NESTING BIRDS

The Molly Islands Colonial Nesting Bird Census was conducted in mid-May, early June, early August, and mid-September 2006. The Molly Islands consist of two small islands appropriately named Rocky Island and Sandy Island, due to the nature of the substrate. The census techniques applied this year are consistent with those conducted over the last decade, however, both aerial and late season boat surveys were employed.

American White Pelicans arrived on the islands on schedule again this year. On Rocky Island, a total of 85 pelicans initiated nests (71 successful nests) on the eastern or highest part of the island (Table 3). Nests were restricted to this one aggregation as it typical of Rocky Island . Double-crested Cormorants constructed 95 nests in the same area of the pelicans, with 89 of those nests being successful. The islands were free of flooding this year and snow melt water runoff was gradual, which is usually a promising sign for colonial nesting birds. Of the 79 California Gulls that attempted to nest, only 70 were successful in hatching young, whereas there were no nest attempts by Caspian Terns this year. The following young fledged from Rocky Island: 74 American White Pelican, 229 Double-crested Cormorant, 81 California Gull, and 0 Caspian Tern. By the looks of things, predator pressure and disturbance on the island was quite minimal this year.

Table 3.

2006 Molly Islands Colonial Nesting Bird Productivity

Area	Species	Nests Initiated	Nests Successful	Young Fledged
Rocky Island	American White Pelican	85	71	74
	Double-crested Cormorant	95	89	229
	California Gull	79	70	81
	Caspian Tern	0	0	0
Sandy Island	American White Pelican	342	281	288
	Double-crested Cormorant	15	13	32
Molly Islands Totals	American White Pelican	427	352	362
	Double-crested Cormorant	110	102	261
	California Gull	79	70	81
	Caspian Tern	0	0	0

Some predation did occur on Sandy Island this year, however the impact appeared minimal. Consequently, a total of 342 American White Pelican nests were initiated, but only 281 nesting pairs were successful in rearing 288 young. Double-crested Cormorant nest attempts were low again this year with 15 nests initiated and only 13 nesting pairs were successful in fledging 32 young on Sandy Island. Pelicans nested again in four distinct aggregations, consisting of two large and two small aggregations. No Caspian Terns or California Gulls nested on Sandy Island again this year.

In summary, 2006 was an average year for colonial nesting bird production. Lake flooding was slightly above average, which still presented somewhat favorable conditions for nesting. Total production on the Molly Islands resulted in fledging 362 American White Pelicans (Figure 10), 261 Double-crested Cormorant, 81 California Gull, and 0 Caspian Tern.

As the lake trout issue continues to heat up on Yellowstone Lake, the status of the Molly Island bird colony will play an important role in the years to come. Rather than make predictions as to the future of this nesting colony, we need to let time take its course. At the moment however, lake trout do not appear to have influenced colonial nesting bird production. Climatic conditions continue to be the most important single factor affecting the Molly Islands nesting colony to date. However, the ecology of Yellowstone Lake

could change incrementally or dramatically, that is why close monitoring of the colonial birds of the Molly Islands is essential.

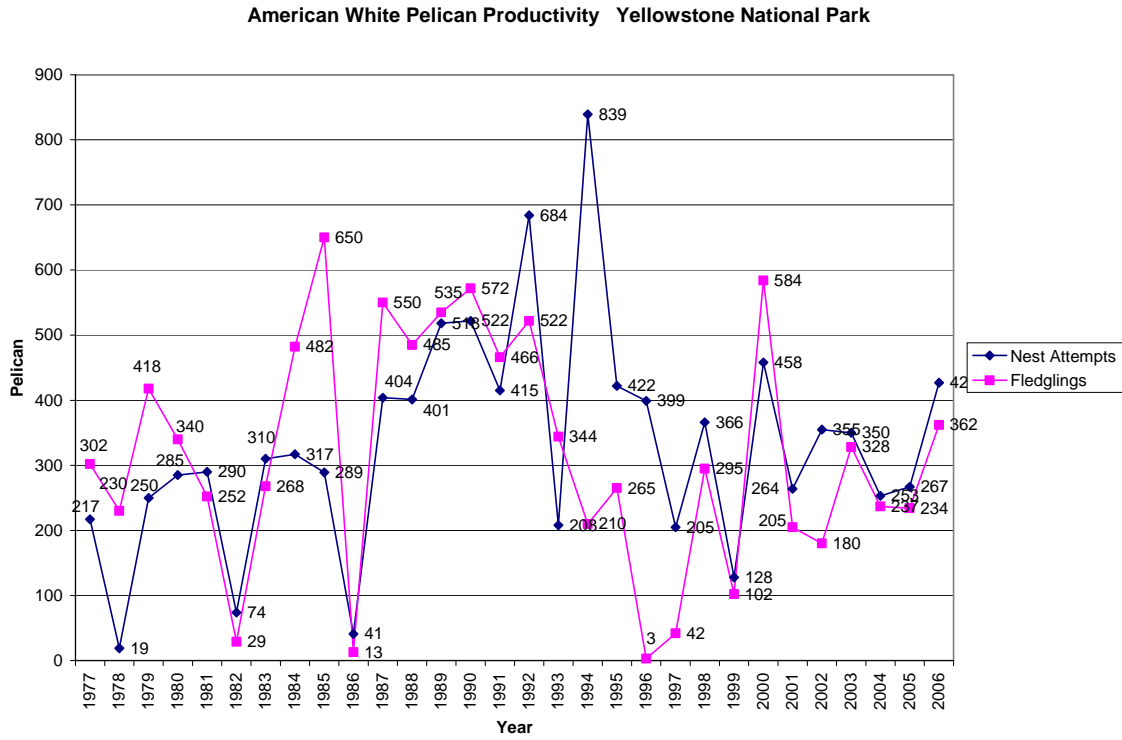


Figure 10. American White Pelican Productivity YNP.

Osprey



An Osprey with a decapitated whitefish on the Madison River.

The Yellowstone National Park Osprey population continues to show signs of a population caught in a serious downward trend over the last six years. Small age cutthroat trout , a major food source for Ospreys have severely declined on Yellowstone Lake, adding to existing weather variables that influence production. In 2006, a mere 23 young fledged from 41 nests, compared to only 15 young fledging from 48 nests in 2005, and 19 young fledging from 54 nests in 2004 (Figure 11). This represents the fourth lowest production experienced in the last 20 years of collecting detailed osprey population data. A series of strong winds and wet weather throughout the summer caused some of the nests and/or nest trees to fall to the ground resulting in high failure rates again this year (Figure 12), but territorial occupancy was documented as noticeably declining mainly on Yellowstone Lake. Tree nest site instability coupled with weather continue to play a major role in influencing Osprey productivity in the park. Although Frank Island, a major Osprey production area on Yellowstone Lake, burned in 2003 again only one pair nested on Frank Island in the last three years and fledged only one young per year. At one time (e.g. 1994) Frank Island had as many as 25 nesting Osprey pairs and fledged a high of 28 young. The incidence of Bald Eagles taking over Osprey nest sites was not noted this year, but has been observed on numerous occasions. Monitoring the population dynamics of Ospreys and other piscivorous bird species is especially important as we chart lake trout numbers over time.



Ospreys starting a new nesting season.

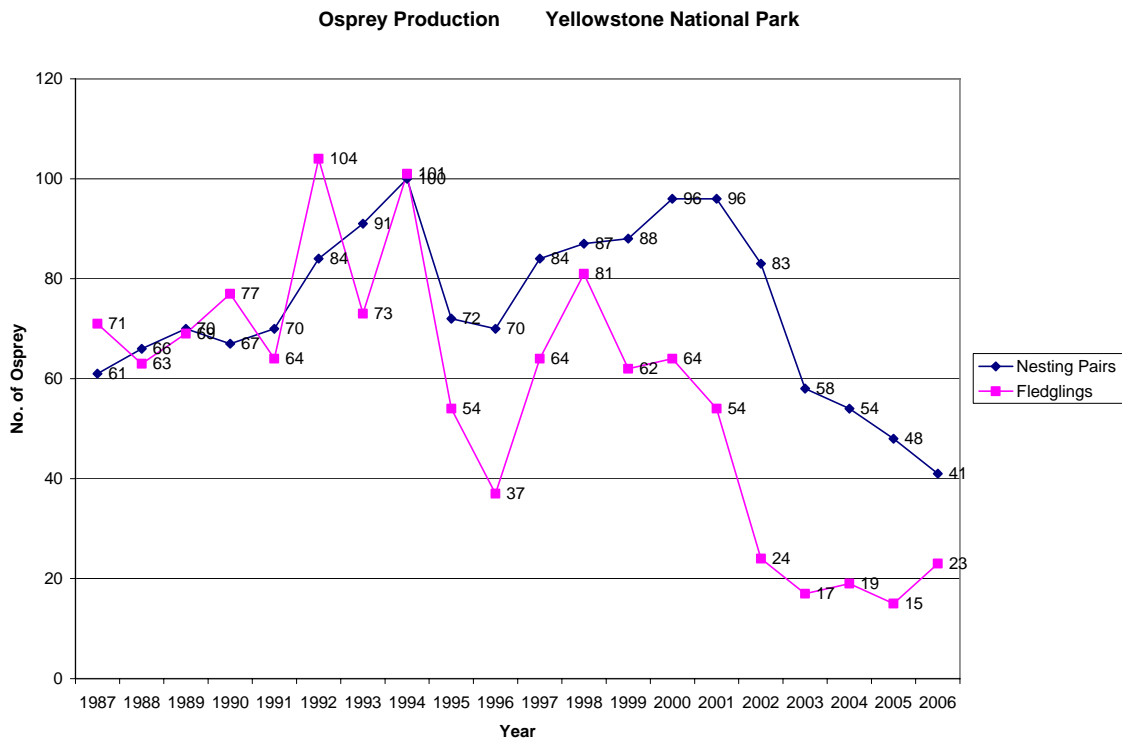


Figure 11. Osprey Productivity-Yellowstone National Park.

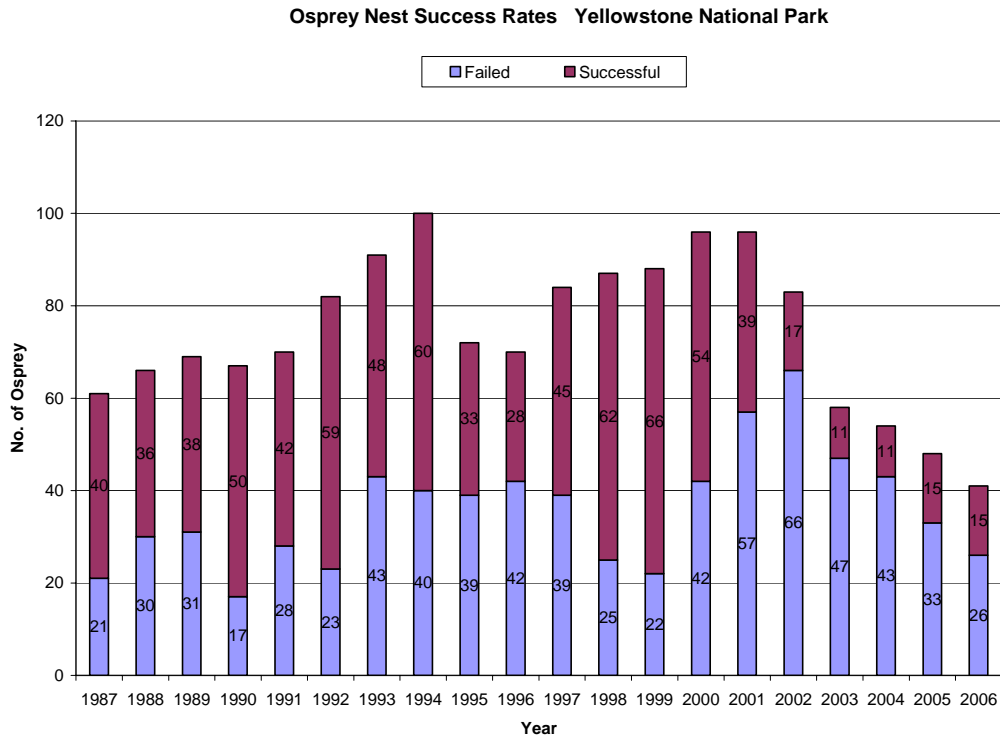


Figure12. Osprey Nest Success Rates Yellowstone National Park.

HARLEQUIN DUCK

The Harlequin Duck population in Yellowstone NP continues to maintain itself and is only mildly variable from year to year, with generally 22–26 pair residing in the park. Monitoring adults is the most effective method of keeping track of population vigor and trends. Monitoring annual productivity is not cost effective, as data collection is extremely time-consuming and difficult due to the remoteness of many of the areas in which harlequins are found. Productivity is extremely variable from year to year and is highly influenced by weather, such as flooding.



A family group of Harlequin Ducks assembled at Le Hardy Rapids.

COMMON LOON

The Common Loon population in Yellowstone NP continues to fluctuate from year to year. There were nine nest attempts in 2006, yet only six loonlets managed to reach fledgling age, compared to eight nest attempts fledging four young in 2005, and nine nest attempts fledging three young in 2004 (Figure 13). Many of the nesting loons had to deal with variable water levels and shorelines as a result of the odd weather conditions. Drought is also playing a role at some sites. A total of 39 adults were found in the park in 2006, compared to 42 adults in 2005, and 44 adults in 2004. These adult numbers have reliably ranged between 34 and 51 individuals over the last eighteen years. Yearly fluctuations in adult numbers and in the production of young are the result of variable weather conditions. The moderate loon production and the low adult numbers continue to be a reflection of weather-related conditions.

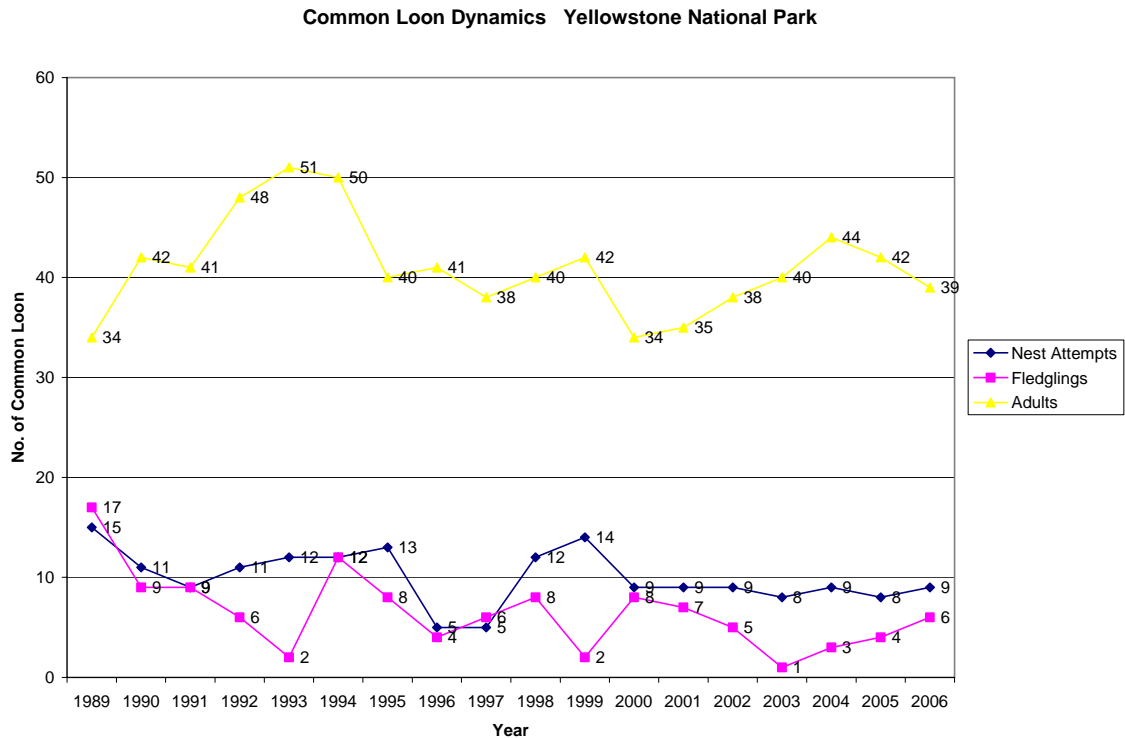


Figure 13. Common Loon Dynamics—Yellowstone National Park.

POPULATION MONITORING

NORTH AMERICAN BIRD MIGRATION COUNT

Yellowstone National Park participated in the North American Bird Migration Count for the fourteenth consecutive year in 2006. Originally designed to collect quantitative and qualitative spring bird migration information on a continental scale, the count has turned into a low-key social event. The survey is traditionally scheduled each year on the second Saturday in May. This year the count was conducted on May 13. Four observers recorded a total of 2,446 individual birds. A total of 89 species of birds were recorded during the count, including 68 species within the confines of Yellowstone NP (Table 4). A 14 year summary is enclosed (Table 5). Numbers of individual birds (mean 2,303) and total species (mean 84) tallied were above average due to the wet spring conditions. However, the drought is still in effect especially at lower elevations. The NAMB count originates on Yellowstone Lake, and ends 70 miles north of the park in the Shield's Valley of Montana. It is an excellent means of gauging the pulse of spring migration in both the mountains and the intermountain valleys.

Table 4.

International Migratory Bird Count Yellowstone National Park 13 May 2006

Species	Wy-YP	Mt-YP	PkCoMt	Totals
Canada Goose	61	2	35	98
Trumpeter Swan			9	9
Gadwall	18		40	58
American Wigeon	32		50	82
Mallard	42	12	60	114
Blue-winged Teal			2	2
Cinnamon Teal	5		4	9
Northern Shoveler	10		50	60
Northern Pintail	6		20	26
Green-winged Teal	42	2	30	74
Ring-necked Duck	4		25	29
Lesser Scaup	82		125	207
Redhead	3		4	7
Harlequin Duck	19			19
Bufflehead	42		4	46
Common Goldeneye	50			50
Barrow's Goldeneye	30			30
Common Merganser	21		22	43
Hooded Merganser			1	1
Ruddy Duck			4	4
Common Loon	1			1

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Eared Grebe	48		62	110
Western Grebe			150	150
American White Pelican	20		32	52
Great Blue Heron	8		12	20
Osprey	1	1	4	6
Bald Eagle	2		1	3
N. Harrier			1	1
Red-tailed Hawk	3	1	14	18
Cooper's Hawk	1			1
Sharp-shinned Hawk			1	1
Golden Eagle		1		1
American Kestrel	1	1		2
American Coot	12		80	92
Sandhill Crane	4		6	10
Killdeer	6	1	12	19
Willet			2	2
Wilson's Snipe	7		2	9
Wilson's Phalarope			48	48
American Avocet			1	1
Spotted Sandpiper	4		2	6
California Gull	1			1
Rock Pigeon		22	48	70
Mourning Dove		2	24	26
White-throated Swift		4		4
Calliope Hummingbird			1	1
Hairy Woodpecker	1			1
Red-naped Sapsucker	2		2	4
Northern Flicker (red-shafted)	18	2	22	42
Northern Shrike			1	1
Tree Swallow	22	6	46	74
Barn Swallow			2	2
N. Rough-winged Swallow			4	4
Violet-green Swallow	4		16	20
Bank Swallow	16		40	56
Clark's Nutcracker	1	1	14	16
Black-billed Magpie		6	24	30
Gray Jay	1			1
American Crow	4	6	6	16
Common Raven	16	4	14	34
Horned Lark	1			1
Black-capped Chickadee			2	2
Mountain Chickadee		1	4	5
Red-breasted Nuthatch	1		1	2
House Wren	1	1	1	3
American Dipper		1		1
Ruby-crowned Kinglet	23	2	18	43

2006 Yellowstone Bird Report by Terry McEneaney

Mountain Bluebird	3		12	15
American Robin	33	4	32	69
Townsend's Solitaire	1		1	2
Gray Catbird		1		1
European Starling			44	44
Yellow-rumped Warbler (Aud.)	10	4	14	28
Vesper Sparrow	6		7	13
Savannah Sparrow	60		4	64
Brewer's Sparrow			1	1
Chipping Sparrow	20		8	28
Song Sparrow			2	2
White-crowned Sparrow	25			25
Dark-eyed Junco	1			1
Red-winged Blackbird	4		24	28
Western Meadowlark	6	2	24	32
Yellow-headed Blackbird			6	6
Brewer's Blackbird	9		5	14
Common Grackle			3	3
Brown-headed Cowbird	12	2	10	24
Cassin's Finch	38	4	14	56
House Finch			2	2
Pine Siskin	2		4	6
House Sparrow			1	1
	927	96	1423	2446

89 species recorded

927 Total Individuals Yellowstone National Park-Wyoming

96 Total Individuals Yellowstone National Park -Montana

1423 Total Individuals Park County Montana

2446 Grand Total Individuals

4 Total No. of Observers

40 No. of Total Group Hours in the Field

68 Species Detected in Yellowstone National Park only

Note: (6) Y-r Warbler (Myrtle's in YNP)

Weather: Unseasonably warm, 75 F, blue sky, no wind

Note: Kayak disturbance on Cottonwood Res.

Table 5.

**North American Bird Migration Count Summary
Yellowstone National Park and Vicinity**

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of Species Recorded	72	74	61	82	93	91	85	85	91	90	78	90	96	89
Revised Number of Species	86	74	75	82	93	91	85	85	91	90	78	90	96	89

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(1996 Standards and Route)

Total Individual Birds

Yellowstone Nat. Park, WY	1,545	1,793	2,408	1,797	1,038	1,073	826	750	967	895	716	839	1,085	927
Yellowstone Nat. Park, MT	289	145	242	113	94	64	163	912	74	128	205	34	172	96
Outside Y.N.P.-Park Co., MT	139	89	248	313	949	413	1,974	936	656	609	2,709	547	1,852	1,423
Grand Totals	1,973	2,027	2,898	2,223	2,081	1,550	2,963	2,598	1,697	1,632	3,630	1,420	3,109	2,446
No. of Observers	2	5	7	4	4	4	3	5	5	5	4	4	3	4
Total Hours in the Field	16	47.5	76.5	28	42	48	36	69	44	55	44	44	35	40
Tot. Species Y.N.P. only	69	73	52	73	70	69	70	61	65	71	56	66	80	68

BREEDING BIRD SURVEYS

Three Breeding Bird Surveys were conducted in 2006. This songbird data was sent to the continental database clearing house located at the Patuxent Wildlife Research Center in Laurel, Maryland, and is included in the information available online at www.mp2-pwrc.usgs.gov/bbs. Data from these surveys are used to develop population trends for North American songbirds. Yellowstone National Park Breeding Bird Surveys date back as far as 1982.

2006 Yellowstone Christmas Bird Count

The Yellowstone Christmas Bird Count was conducted on 17 December 2006. The YCBC is conducted every year on the last Sunday before Christmas (with the exception of New Years eve). The weather this year was somewhat mild by Yellowstone standards, with clear skies and temperatures ranging from -6 to 19 F, and 0-5 inches of snow on the ground depending on the elevation. And a total of 6 people participated in the event this year. Participation in the CBC varies from year to year ranging from as low as 2 people to as many as 22 individuals. But participation usually depends on weather conditions and holiday plans.

Highlights of the 2006 Yellowstone CBC are as follows: a total of 35 species were recorded on count day, which represented slightly above average species (mean: 33 species) with 1,602 individual birds tallied (mean:1403 individuals); in addition two species were detected during count week (Table 6, Table 7). No real surprises or unusual birds occurred in 2006 due to the mild weather conditions. No abundance records were tied during the CBC. And no new species detected records, nor new abundance records took place during count week. However, new abundance records were broken such as two N. Pygmy-Owls, previous records of one over several years. Northern Flickers were also unusually numerous with 12 reported during the 2006 YCBC, previous records as 6 individuals were reported in 2002 and 2003. Cedar Waxwings were also unusually numerous as well with 72 individuals tallied in 2006, the previous record being 57 in 2002.

Table 6.

Yellowstone Christmas Bird Count
17 December 2006

Species	Yell.-Wy.	Yell.-Mt.	Outside Yell. N.P.- Mt.	Totals
Mallard	33	23	12	68
Green-winged Teal	16	8		24
Common Goldeneye		3		3
Barrow's Goldeneye			1	1
Bald Eagle	3	4	3	10
Golden Eagle			3	3
Rough-legged Hawk			2	2
Rock Pigeon	15	45	72	132
Northern Pygmy-Owl			2	2
Belted Kingfisher			1	1
Downy Woodpecker			1	1
Northern Flicker	2	2	8	12
Clark's Nutcracker	19	4	15	38
Black-billed Magpie	15	7	69	91
Common Raven	6	6	77	89
Steller's Jay			1	1
Pinyon Jay			28	28

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Horned Lark			4	4
Black-capped Chickadee	2		2	4
Mountain Chickadee	4	2	50	56
Red-breasted Nuthatch			1	1
Marsh Wren	2			2
American Dipper	22			22
Townsend's Solitaire	13	23	13	49
American Robin	1		3	4
Bohemian Waxwing		160	25	185
Cedar Waxwing			72	72
American Tree Sparrow			5	5
Song Sparrow	2		1	3
Dark-eyed Junco			4	4
Gray-crowned Rosy Finch	50		430	480
Black Rosy-Finch	10		40	50
House Finch			101	101
American Goldfinch			1	1
House Sparrow	13		40	53
Totals	228	287	1087	1602

Total Species = 35

Additional Species Count Week : 2

Bald Eagle Classification

Golden Eagle Classification
3 Adult

10 Class V

10 Total

Total = 3

Gray-crowned Rosy Finch Classification

Gray-crowned race = 320

Hepburn race = 160

Total = 480

Dark-eyed Junco Classification

Pink-sided race = 4

Additional Count Week

Species: 2

Great Horned Owl 16 Dec. 2006, Mammoth, Wyo.(1)

Hairy Woodpecker 16 Dec. 2006, Mammoth, Wyo. (1)

Observers: 5: Mark Donahue, Dave Martyn,
Terry McEneaney, Gilaine Spoto, Brian Thorpe
Feeder Watcher:1: Karen McEneaney
Total Observers:6 .

Records:

Tied Abundance Records - CBC Count

None

New Abundance Record-CBC Count

N. Pygmy-Owl 2:2006 (previous record 1:several years),
 Northern Flicker 12:2006 (6:2002-2003),
 Cedar Waxwing 72:2006 (57:2002)

New Species Detected Count Week:

None

New Abundance Record Count Week:

None

Atypical:

Gadwall X Mallard hybrid Mammoth, Wyoming. Seen by 4 people including recorder.

General Observations:

Below average winter conditions (mainly in form of cold temps.) resulted in slightly above average number of species and above average individual birds observed.

Temperatures -6- 19 F.Snow depth 0-5" deepest at higher elevations. Edge of rivers barely frozen.

Location:MT(Wy) 45 02 N 110 42 W

Hours: 45 total; Miles: 55 miles vehicle, 5 miles foot

35 species tallied count day 2005. All encompassing 98 species tallied on count day for history of count. 102 species with the YCBC and the count week combined. This represents 34 years of data.

Above average species 35 (mean 33) and above average abundance 1602 individuals (mean 1403) during this count.

Compiler:Terry McEneaney, P.O.Box 168,YNP,Wyo. 82190. Tel. (307)344-2222

Table 7.

26 Most Frequently Detected Bird Species (>48%)--- Yellowstone Christmas Bird Counts			(>50% of species detected)		
covering			1920-2006, Based on 34 Years of Data		
Species	Years Detected		Species	Years Detected	
Mallard	34	100%	Belted Kingfisher	29	85%
Clark's Nutcracker	34	100%	Red-breasted Nuthatch	26	76%
Black-billed Magpie	34	100%	Black Rosy Finch	24	70%
Common Raven	34	100%	Dark-eyed Junco	24	70%
American Dipper	34	100%	Rock Pigeon	24	70%
Townsend's Solitaire	34	100%	Northern Flicker	24	70%
Black-capped Chickadee	33	97%	Wilson's Snipe	22	65%
Mountain Chickadee	33	97%	Common Goldeneye	21	62%
Bald Eagle	32	94%	Northern Shrike	19	59%
Golden Eagle	32	94%	Hairy Woodpecker	19	59%
Gray-crowned Rosy Finch	32	94%	Downy Woodpecker	19	56%
Bohemian Waxwing	31	91%	Steller's Jay	17	50%
Green-winged Teal	31	91%	American Tree Sparrow	17	50%

Partnerships and Working Groups

For decades Yellowstone National Park staff ornithologist has been an active member in the following partnerships, committees, and working groups: Greater Yellowstone Bald Eagle Working Group, Montana Peregrine Working Group, Wyoming Peregrine Working Group, Greater Yellowstone Trumpeter Swan Working Group, Harlequin Duck Working Group, Montana Bird Records Committee, Neotropical Migrant Bird Working Group, and the Wyoming Important Bird Area Technical Committee. Due to significant budget reductions and constraints, none of these partnership or working group meetings were attended in 2006.

Projects and Programs

New AOU Changes in Bird Names for 2006

The American Ornithologists Union (AOU) formally announced the 6th supplement changes in the 7th edition of the *AOU Checklist of North American Birds* (1998). In the Forty-seventh Supplement To The American Ornithologist's Union Check-List of North American Birds by Banks, R. et. al released in July 2006 issue of *The Auk*, one change applied to Yellowstone birds. In this deliberation, the Blue Grouse (*Dendragapus obscurus*) is now officially split into two separate species: in the Rocky Mountain region it is now called the Dusky Grouse (*Dendragapus obscurus*), whereas birds in the coastal ranges of the Pacific Northwest are officially called Sooty Grouse (*Dendragapus fuliginosus*). This splitting of the former Blue Grouse into two species is based on new genetic evidence, in addition to differences in voice, behavior, and plumage.

New Bird Discoveries For Yellowstone National Park

Two new bird species were added in 2006 to the Field Checklist of Birds of Yellowstone National Park. On 14 Jan. 2006, a **Rusty Blackbird** was first observed by James Hancock and many other observers in the Mud Volcano area. And three **Least Tern** were seen on the north shore of Yellowstone Lake on May 20-21, 2006, by visitors and the staff ornithologist. The last update to the field Checklist of Birds of Yellowstone National Park was April 2004. As of the end of 2006, a total of 323 species of birds have been documented in the park since it was established in 1872. The Field Checklist of Birds of Yellowstone National Park was revised in March 2004 by the staff ornithologist

and made available to the public in April 2004. This checklist is available on the park website at www.nps.gov/yell. Updates to this checklist and the website are scheduled for the spring 2007.



Rusty Blackbird at Mud Volcano 1/27/06 Courtesy Amy Cole.

Other interesting or unusual bird finds for 2006 included: a Virginia Rail that spent most of the winter 2005-2006 at Old Faithful; a **Long-tailed Duck** was first found 1/31/06 at Indian Pond and stayed at least until April; a Black-necked Stilt was seen at Blacktail Ponds on 4/16/06 along with 3 Wood Ducks on 4/21/06; three more Black-necked Stilts showed up on 4/27/06 at the Lower Store at Old Faithful; 4 Lark Buntings (2 pair) showed up at Yell. Inst. on 5/15/06; A **Blue-gray Gnatcatcher** (5/21/06) showed up east of Buffalo Ranch; on 5/24/06, a **Chestnut-sided Warbler** and Townsend's Warbler showed up north of YAC Camp and a White-faced Ibis Swan Lake; a Cordilleran Flycatcher was reported 5/29/06 at Pelican Creek Lagoon; 3 E. Kingbirds, 1 W. Kingbird, and 2 Lark Buntings showed up (6/1/06 at Slough Creek; a **Clay-colored Sparrow** Old Gardiner Road 6/2/06; 6/18/06 eight Black-necked Stilts showed up below the Wildlife Overlook in Hayden Valley; 6/23/06 an **Indigo Bunting** was found on the trail to Hellroaring; and a Horned Grebe was found on Swan Lake 6/27/06.

Other finds included: an **intergrade Northern Flicker** was found killed by an accipiter on 7/29/06 at Beaverdam Cr.; another Black-necked Stilt at Old Faithful on 8/5/06; an **Ash-throated Flycatcher** on DeLacy Cr., 8/7/06; a Long-tailed Duck reported accompanied by goldeneyes 8/25/06 in Mary Bay; 8/25/06 W. Kingbird and Loggerhead Shrike at Pelican Cr.; 300 Franklin's Gulls Mary Bay 8/27/06; Forster's Tern 8/27/06 Mary Bay; W. Kingbird and 4 Am. Goldfinches 9/6/06 Pelican Cr.; Ferruginous Hawks were visible in Hayden Valley most of fall, one was in Midway GB as well; a **Broad-winged Hawk** was observed by staff ornithologist while conducting a YI raptor workshop 9/17/06 in Hayden Valley; a **Tennessee Warbler** showed up at Reese Cr. on 9/18/06; **Band-tailed Pigeon** Hayden Valley 9/20/06; juv, Sabine's gull 9/24/06 MidWay GB; Horned Grebe 10/6+10/06 Bridge Bay; hundreds of Bohemian Waxwings showed up in Mammoth 11/4/06; **White-throated Sparrow** in Mammoth on 11/10/06; and 2 Bonaparte's Gulls (1st winter juv + adult) showed up on Mary Bay on 11/20/06.



A Long-tailed Duck on Indian Pond.

Population Estimates of Red-tailed Hawks and Swainson's Hawks

Over the past 20 years, the staff ornithologist has collected incidental field data via ground reconnaissance and aerial surveys in regard to nesting Red-tailed Hawks and Swainson's Hawks residing in Yellowstone National Park. 2003-2006 comprised a more thorough effort of mapping nesting territories to come up with these estimates. Now that the results are in, here is what was found. There are between 126 – 139 Red-tailed Hawk nesting pairs in Yellowstone in any given year, but the territories remain fairly constant. Red-tailed Hawks appear to be doing very well, despite annual productivity fluctuations as a result of weather. Interestingly enough, many of these Red-tailed Hawk sites have been occupied for a minimum of two decades.

Swainson's Hawks on the other hand are much fewer in number, mainly due to the habitat. Similar more detailed incidental field data collected via ground reconnaissance and aerial surveys were collected for Swainson's Hawks during this same 2003-2006 period. Swainson's Hawk ranged from 28-36 nesting pairs. The staff ornithologist has seen a slight reduction in Swainson's Hawk numbers over the past two decades, which he attributes primarily due to drought-like conditions or changes towards a drier weather cycle. However, an organophosphate insecticide called monocrotophos was used in 1995-1996 on the Argentinean wintering grounds for this species, in which 6-8,000 Swainson's Hawks died. Since that dark period, the insecticide monocrotophos has been banned from commercial use and replaced with a milder more environmentally friendly insecticide.

Population Estimates of Black-billed Magpies and Common Ravens

Over the past three years a more concerted effort has taken place to estimate population sizes of Black-billed Magpies and Common Ravens in Yellowstone National Park. In addition, incidental information has been collected for two decades on these species as well. There appears to be between 73-120 nesting pairs of Black-billed Magpies in Yellowstone National Park in any given year. Magpie nesting habitat appears to be declining at a slow but steady rate, which is primarily due to reduced, dying or decadent substrates for nesting as a result of drought-like conditions or changes toward a drier weather cycle. Common Ravens on the other hand are very difficult to census, particularly in the winter, and the complex interactions associated with food caching and food availability, daily flight routine and weather changes, and resident versus ravens from outlying areas. Therefore, a more simple approach to obtaining population estimates were based on data on nesting resident ravens. Information collected over a two decade period, indicates there are between 100-150 nesting pairs of Common Ravens. There do not appear to be any dramatic changes in raven numbers based on nesting pairs. However, as food resource availability changes so do nest sites, but by and large most territorial nest sites are traditional and have been occupied for decades. Since ravens are long-lived birds, there are also a number a large number of non-breeders in the population. Based on personal incidental observations and aerial surveys over the past two decades, there are an additional 100-200 floaters or non-breeders in the population in the summer. So based this information, a summer population estimate for the Yellowstone Common Raven would vary between 300-500 ravens in any given year. Common Ravens appear to be doing remarkably well in Yellowstone, not surprising since it is a very adaptable omnivore that can easily adjust to varying levels of food availability of natural or anthropogenic origin.

6 Mile Madison River Bald Eagle Nest Closure

A pair of Bald Eagles occupied a nest approximately 150 feet off the road at 6 Mile (Eagle Bend) on the Madison River. The eagles created quite an attraction from mid-February through early July (2006) for a fifth year in a row. In an effort to protect the eagles from human disturbance, park staff (bird mgmt., resource mgmt., patrol rangers and interpretation) coordinated a temporary closure in the immediate vicinity of the nest. A zone-style system was established where visitors could stop and observe or photograph the eagles from a distance, then travel by the nest without stopping. The no-stopping zone allowed the eagles to come and go freely with prey and nest material without being disturbed by people. Although there were some people who violated the closure, the compliance was exemplary. Again this year the eagles hatched two chicks of which both of them reached fledgling age. The adult eagles continued to add material to the nest throughout the year. The closure is expected to be in place as long as the eagles continue to nest there.

7 Mile Bridge Trumpeter Swan Nesting Area

The area known as 7 Mile Bridge (7 miles east of West Yellowstone) along the Madison River has been a traditional nesting area for Trumpeter Swans for at least the last 21 years. A total of 23 cygnets have fledged from this site since 1983, making it one of the more productive swan nesting areas in Yellowstone National Park in recent years. In Feb. 2001, the adult male or cob was killed by a coyote near 7 Mile Bridge leaving the adult female without a mate. Then finally in August 2004, after 42 months without a mate, the adult female swan picked up with a “floater” male yearling and remained in the vicinity of the 7 Mile Bridge site. What was most amazing about this find, was the tenacity and fidelity these long-lived birds have for a particular type of habitat. Traditionally potential adult swan recruitment in Yellowstone came from an area west of the park known as the Centennial Valley of Montana. In the past two decades, swan numbers in the area have declined substantially, resulting in swan recruits or floaters to be nearly non-existent. Although 2005 had the first positive signs of subadult recruitment on the west side of the park, that was all negated when we lost four recruits and one resident adult in 2005/2006 to predators. However it should be noted, it will take a large number of floaters to replace the swans already lost during the last two decades. The lack of or painstakingly slow recruitment of subadult/adult swans from the outside, particularly the Centennial Valley west of the park, has played a major role in the rate in which swans are replaced or new mates are found. We will continue to monitor the status of the swans of this area, but if recovery does occur it will be extremely slow, since this is a long-lived bird with low reproductive potential.

Frank Island Osprey Update

Frank Island has always been one of the major areas for nesting ospreys in Yellowstone. The island was at one time so important in fact, that in 1987 it was designated a protected area and off-limits to the public, with only the small area to the southeast point or picnic area portion open for visitor use. All that changed in 8 August 2003 when lightning struck Frank Island and an inferno developed. Approximately 570 acres of the 600 acre island burned, and engulfed nearly all of the old growth trees in a relatively short period of time. Frank Island has had a long history of fire. Looking back at the history of Frank Island, in 1956, lightning caused a .01 acre wildfire, whereas in 1975 and 1978 a one acre and a 1.5 acre fire were caused by humans.

Over a 20 year period, osprey nesting has ranged from 1-25 nesting pairs on Frank Island in any given year (Figure 15). Nesting pairs peaked 6 years following the 1988 wildfires, and in recent years a slow but steady decline has occurred primarily due to strong winds blowing down nest trees. An aerial survey revealed all the osprey nests but one succumbed to the wildfires, and only one osprey young fledged from the single nest on Frank Island in 2003. Bald Eagles failed to produce young on Frank Island in 2003 & 2004 and the old nest was destroyed by this wildfire after the fact. Surprisingly however, within 30 days after the wildfire, a newly completed Bald Eagle nest was discovered on the island. From 2004 through 2006, the one Bald Eagle nest and one Osprey nest on the

island failed to fledge young due to wet weather and severe winds. This is typical of the boom and bust trend of nesting raptors associated with Yellowstone Lake and similar environments.

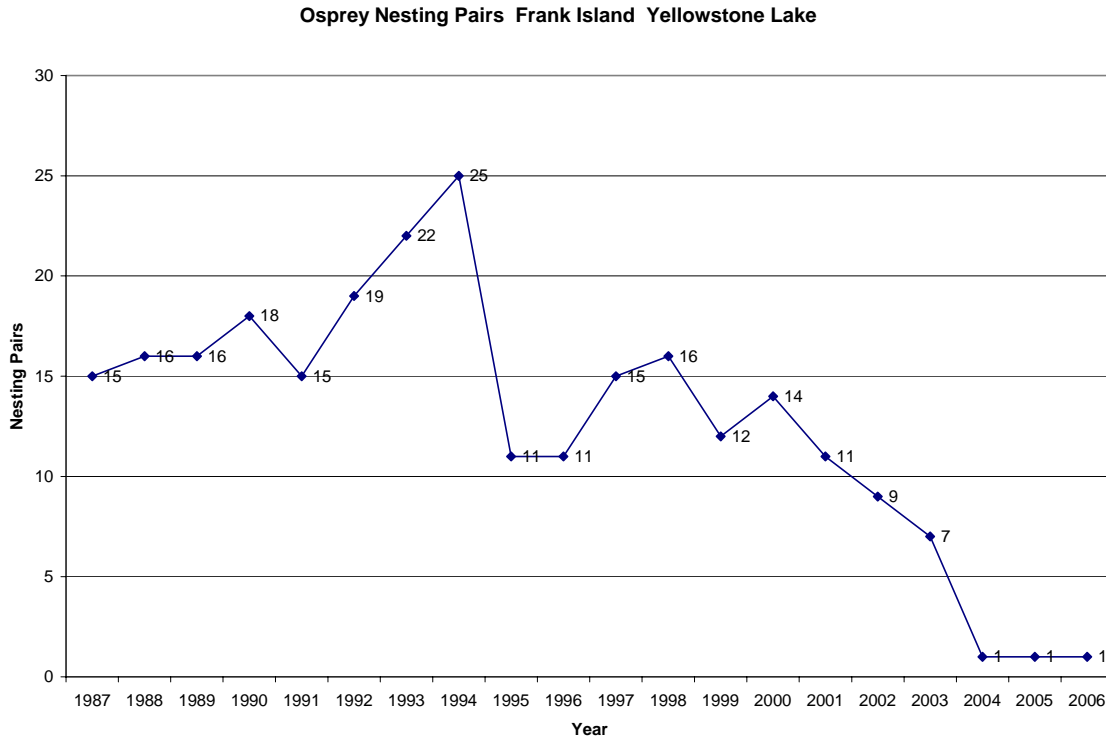


Figure 15. Osprey Nesting Pairs --Frank Island

Declining Trend of Ospreys on Yellowstone Lake

After 20 years of monitoring Osprey numbers on Yellowstone Lake, some alarming signs are beginning to surface that warrant cause for concern. A paper presented by the staff ornithologist in 2001 entitled *Piscivorous Birds of Yellowstone Lake: their History, Ecology, and Status* summarized the status of Yellowstone Lake ospreys up until 2001. An excerpt from that paper presented at the Yellowstone Lake- Hotbed of Chaos or Reservoir of Resilience, 6th Biennial Scientific Conference on the GYE is as follows:

The Osprey of Yellowstone National Park and Yellowstone Lake are doing remarkably well. Nesting pairs increased following the 1988 Yellowstone wildfires. Since food is highly abundant, the limiting factor continues to be availability of nest sites. Following the wildfires, snags increased and consequently so did the number of nesting pairs, since osprey most often select burned or dead trees for their nests. Heavy winds knocked down a large number of standing snags, and therefore contributed to the trough experienced in 1995 and 1996. DDT is no longer a threat as it was midway through the last century. Osprey production is dynamic and remains largely weather dependent. In 2001, there were 59 nesting pairs of Osprey on Yellowstone Lake, fledging a total of 26 young.

Since that time much has changed. **In 2006, only 9 nesting pairs of Ospreys could be located on Yellowstone Lake, fledging a total of 3 young. The Ospreys on Yellowstone Lake appear to be declining at a staggering rate.** So what has dramatically changed since this 2001 paper and presentation? It appears to be multi-causal. Two major events have changed on Yellowstone Lake for Ospreys that are believed to be directly responsible for the decline in nesting ospreys (Figure 16). In 2004, a major wildfire occurred on Frank Island burning 570 acres of the 600 acre island. A severe windstorm occurred in 2005, blowing down most of the potential Osprey nest sites. In addition to that, the YNP fisheries division (Koel, et. al 2005) report a severe reduction in the sheer abundance of cutthroat trout on Yellowstone Lake, particularly small age class fishes. This is especially evident in dramatic declines in spawning cutthroat trout at Clear Creek and Bridge Creek. Since ospreys take smaller sized (aged) cutthroats than Bald Eagles, this also has played a primary role. However, although small aged cutthroats appear to be cycling back into the lacustrine system, the sheer abundance or biomass of adfluvial (i.e. live primarily in lakes, but spawn in rivers/streams) cutthroat trout on Yellowstone Lake appears to have significantly declined.

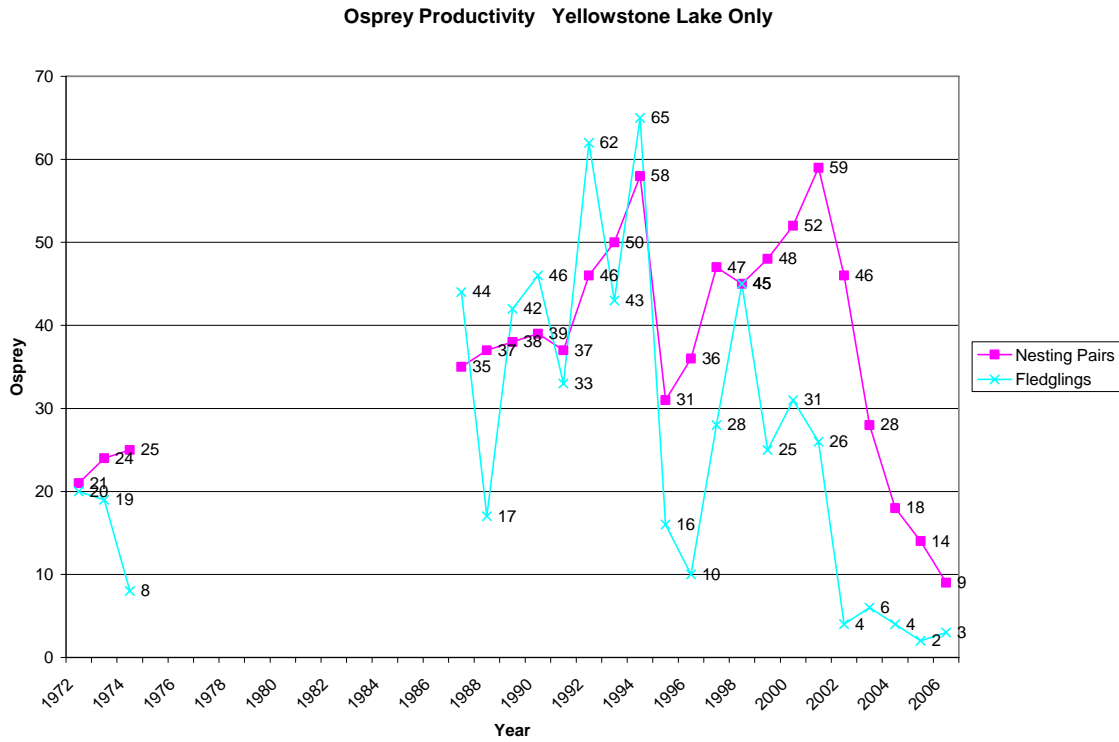


Figure 16. Yellowstone Lake Osprey Productivity.

Status of the Sandhill Cranes and Trumpeter Swan on Floating Island Lake

Due to the drought and the constant presence of predators, a pair of Sandhill Cranes nested on the actual small floating island not much bigger in size than the two adults and were very visible to the public again in 2006. The female crane laid two eggs and both of them hatched. The pair left that site and were successful in fledging the two cranelets or colts.

A lone adult Trumpeter in desperate need of open water and a place to molt, took up residence on the same lake and hung out on the same floating island for the third year in a row. Because of the sensitivity of Floating Island Lake to birdlife, this area has been closed to the public for many years with wildlife viewing restricted to the road and pullout. The lack of water in ponds and lakes of the Northern Range due to the drought, continues to play a role in bird production and survival.

Unusual Sightings and Occurrences

Partial Albino Birdlife

Although this was reported in West Yellowstone, just outside of Yellowstone National Park, it still is worth noting. Rich Jehle, West District Interpreter, noticed an unusual bird on his bird feeder at his home 11 January 2006. The bird turned out to be partial albino **Red Crossbill**. It appeared to be a juvenile or female with patches of white particularly on its breast.

On 28 June 2006, a partial albino **Red-tailed Hawk** was reported by West District Rangers in the vicinity of Gneiss/Maple Creeks on the west side of the park. Partial-albino Red-tailed Hawks are only found once every 15-20 years. So it is quite unusual.

A “mottled morph” of the Common Raven was reported in the Hayden Valley. The bird turned out to be a partial albino Common Raven. On 25 May 2006 the staff ornithologist saw the bird in detail. It was a partial albino Common Raven with a gray beak, black head, and black and white feathers on the breast belly and back. When the bird flew, it resembled the coloration of a juvenile Bald Eagle with white primaries, secondaries, and white tail with a black terminal band. A second partial-albino raven was seen accompanying this individual, although its markings were not as vivid.



Two partial-albino Common Ravens.

Bobcat Attacks Ducks, Geese, and Swan

Throughout the months of January and February 2006, a single bobcat was observed on numerous occasions hunting along the snowy banks of the Madison River in Yellowstone National Park. The bobcat was seen by a multitude of visitors killing and eating a male or drake Mallard, two Canada Geese, and a juvenile or cygnet Trumpeter Swan.

Observations of Wolves Chasing and Killing Small Prey

In 2006, wolves were again observed chasing and killing small birds and mammals. On 11 January 2006, a single gray wolf was observed carrying a snowshoe hare in its mouth near Mud Volcano. Then again on 22 February 2006, a group of three wolves were observed chasing and killing a snowshoe hare in the vicinity of Roaring Mountain. An observation on 28 April 2006, involved a lone wolf eating several eggs from a Canada Goose nest near Slough Creek. On 30 June 2006, watched a black wolf carrying a large rusty Sandhill Crane colt in its mouth, with 2 adult cranes chasing the wolf (Riddle Lake). Also examined the remains of an adult male Golden Eagle and a Wilson's Snipe in the vicinity of a wolf den in close proximity to Mammoth.

Mallards Expire in Hot Spring

In 2006, we had two records of Mallards dying in hot springs. A drake Mallard landed in the hot steam pool in West Thumb Geyser Basin and died immediately. And a hen Mallard died in a hot spring on Fountain Flat. Both of these sightings occurred in the fall.

Tree Swallows Die in Exhaust Pipe

On 23 May 2006, four Tree Swallows tried to escape a storm by hiding in the warm twin stacks of a truck parked in the concessions parking lot in Gardiner inside the park. When the truck was started, the engine blew out four sooty bird carcasses that were difficult to ID. They turned out to be Tree Swallows covered in a thick, black, oily soot.

Trumpeter Swans Killed By Wolves

Three Trumpeter Swans, two from the 7 Mile Bridge area and one from Riddle Lake were killed by wolves in 2005 (McEneaney 2005). On 30 April 2006, two additional Trumpeter Swans were also preyed upon by three wolves in Gibbon Meadow area, forcing the birds to soft snow where they were easily captured and killed. Then on 6 May 2006, a pair of swans was caught sleeping in the Gibbon Meadow area, when a lone wolf caught and killed one of the adults in the water. This marks 5 swans killed within a 12 month period, and represents Yellowstone resident birds all believed to be the most recent recruits from the 7 Mile Bridge area. Although there is a lone swan remaining in

the general area of the geyser basins, none have been observed in the 7 Mile Bridge area since the winter/spring of 2005/2006.

Black-billed Magpies Feeding on a Virginia Rail

On 26 October 2006, Mark Donahue observed two Black-billed Magpies eating a strange object that was later identified as a juvenile Virginia Rail. What was unusual about this sighting was that the rail was found out in the open and on a manicured lawn next to an employee's residence in Lower Mammoth. Normally, rails are very secretive and rarely stray away from aquatic vegetation. This bird could have been migrating.

Tundra Swan Found on Road After Storm

Tundra Swans are usually very adept at finding water, and can easily distinguish open water from frozen water. On the evening of November 5 and the morning of November 6, a Trumpeter Swan landed on a wet road near Undine Falls and was hit and killed by a motorist. Swans are not usually vulnerable to landing on wet roads, and suggests the crash landing was probably due to the storm.

Bird Migration Incident

On 28 May 2006, a severe rain/snow storm hit the high country forcing thousands of songbirds to escape to lower elevations again in 2006. This was especially evident in the lower elevations of the Northern Range and the Gardiner and Paradise Valleys. Species in exceptionally large numbers included: Eastern Kingbird (137), Western Kingbird (31), Western Tanager (5), and one Lark Bunting and hundreds of Mountain Bluebirds and American Pipits. Spring storms can cause havoc with bird migration and can be devastating especially to insectivores.

Exceptional Clark's Nutcracker and Common Raven Year in the High Country

Clark Nutcracker's and Common Ravens are typically found in the fall in the high country in search for food such as Whitebark Pine. But 2006 was an exceptional year, because of the incredible back-to-back Whitebark Pine nut production in both 2005 and 2006. It is very unusual to get high Whitebark Pine production two years in a row. Because of this amazing amount of biomass, Clark's Nutcrackers and Common Ravens were seen in above average numbers taking advantage of these food resources. Most apparent was the Mount Washburn area, where black bears and grizzlies were seen in close association with one another in addition to large congregations of Clark's Nutcrackers and Common Ravens.

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The aftermath of an accipiter attack—interesting feathers of an intergrade (Yellow-shafted/Red-shafted intergrade) Northern Flicker.