

YELLOWSTONE BIRD REPORT 2002



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Cover and title page drawings: One of the many benefits of being married to a talented artist and a giving person is having access to original art. Special thanks go to my wife, Karen McEneaney, for permission to print her exquisite pencil drawing of a Black Rosy Finch (*Leucosticte arctoa*). Black Rosy Finches are extremely difficult to sketch. This species breeds in the alpine environments of Yellowstone National Park in summer, and winters at lower elevations with a relative, the Gray-crowned Rosy Finch (*Leucosticte tephrocotis*).

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

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American white pelicans feeding during high water on Pelican Creek.

INTRODUCTION

The Yellowstone Bird Report summarizes bird information in Yellowstone National Park. The report originally started as a quarterly publication. Then, beginning in 1996, it became an annual document summarizing results and activities that occurred within the calendar year. The 2002 Yellowstone Bird Report is, in fact, 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.

2002 WEATHER PATTERNS AND SUMMARY

The winter of 2001/2002 started off being extremely mild, with warm temperatures and very little snow. However, the late winter and early spring turned out to be cool and wet, which was a welcome surprise. Late spring and early summer, on the other hand, turned out to be hot and dry. The summer was punctuated by heat and sporadic rains, which occurred in intervals providing an adequate amount and duration of precipitation to hold off wildfires for most of the season. Yellowstone Lake continued the trend of thawing out early (Figure 1). This was the fourth year in a row for the drought in Yellowstone National Park. Interestingly enough, severe drought conditions were most noticeable on the Northern Range and in the Bechler area of the Park. The fall season was uncharacteristically dry and hot. As 2002 came to a close, winter appeared very slow in coming, and resulted in below average precipitation and temperatures.

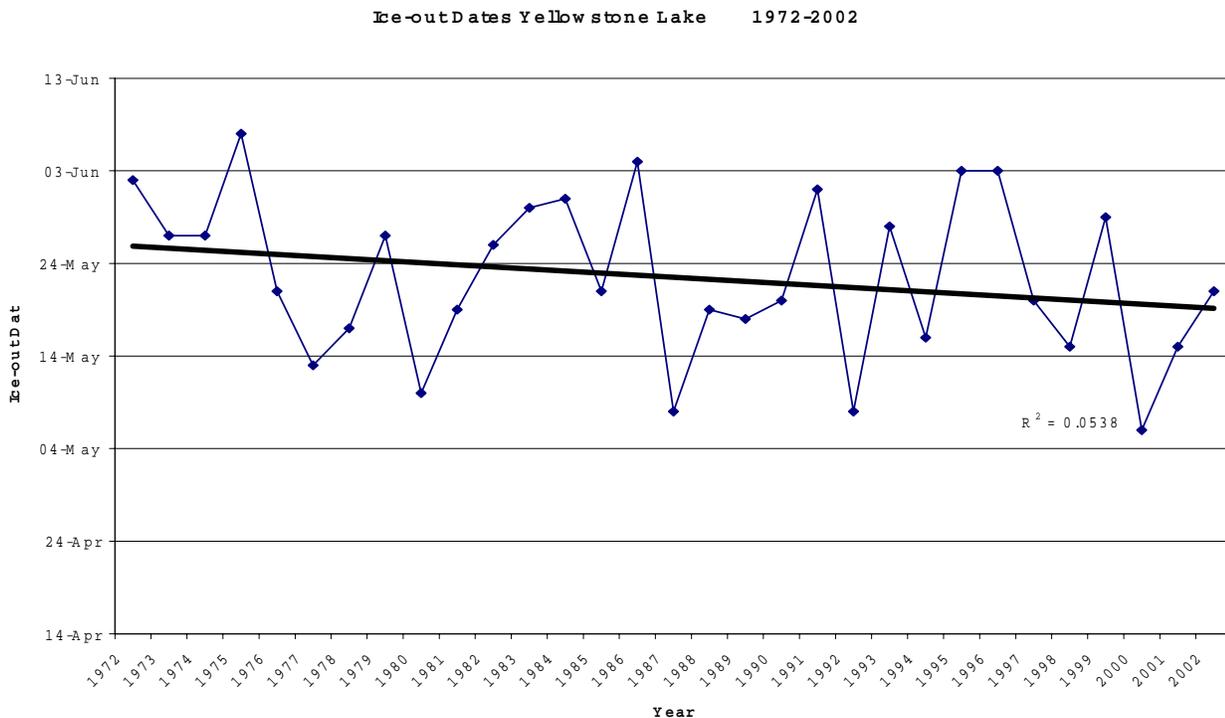


Figure 1. Data courtesy Phil Farnes.

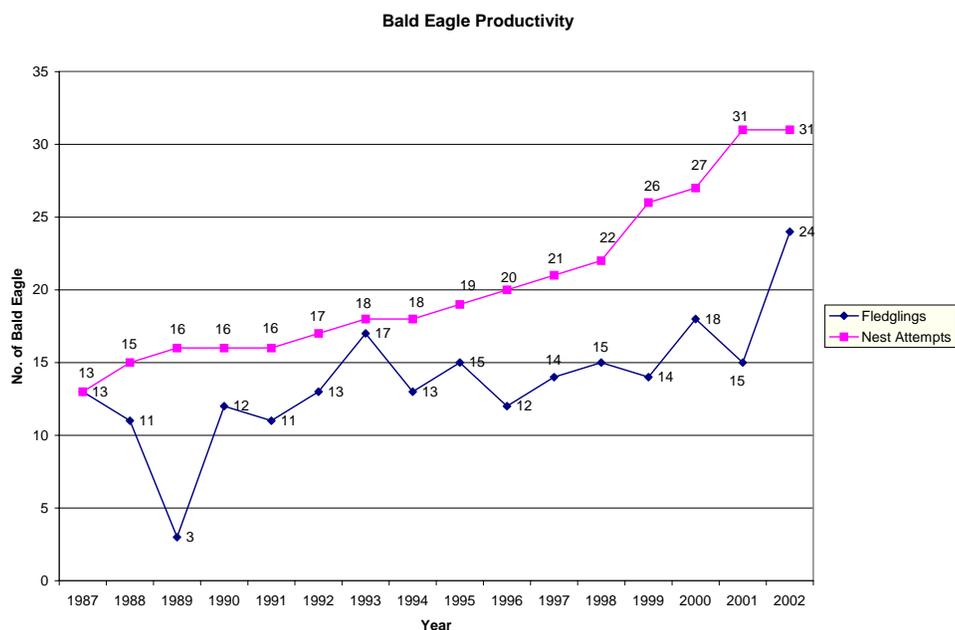
THREATENED AND ENDANGERED SPECIES

BALD EAGLE

In 1995, the U.S. Fish and Wildlife Service downlisted 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.

In Yellowstone, a total of 24 eaglets fledged from 31 active nests during 2002 (Figure 2). This marks the highest number of fledged eaglets ever recorded in the history of Yellowstone National Park. As the Yellowstone Bald Eagle population continues to incrementally increase, territorial shifts and new nests are appearing in unexpected places. **This year was no exception, with a pair of Bald Eagles building a nest 55 meters off the Madison-to-West Yellowstone road. This created quite an attraction for visitors, and kept wildlife managers and rangers busy with crowd control throughout the spring and summer.** Nest tree instability resulting from the 1988 Yellowstone wildfires caused minimal problems for nesting pairs this year. However, in the future we expect large numbers of burned trees to topple to the ground, which will undoubtedly result in nest failure, loss of nest sites, or sudden changes in location of a nesting territory. Bald Eagles have occasionally been documented taking over previously occupied Osprey nests, and the incidence of takeover appears to be gradually increasing due to competition for nest sites.

Figure 2.



WHOOPING CRANE

The Whooping Crane is currently classified as an endangered species. The worldwide population consists of both wild and captive populations. This endemic North American species continues to rank as the rarest and most endangered crane in the world. Population figures as of 2002 placed the wild population at 283 cranes and the captive population at 132 cranes, for a total world population numbering 415 Whooping Cranes (Table 1, Figure 3). For a complete history of the Whooping Crane in Greater Yellowstone, see the 2000 and 2001 Yellowstone Bird Reports.

Table 1. 2002 Wild and Captive Whooping Crane Populations**Wild Populations**

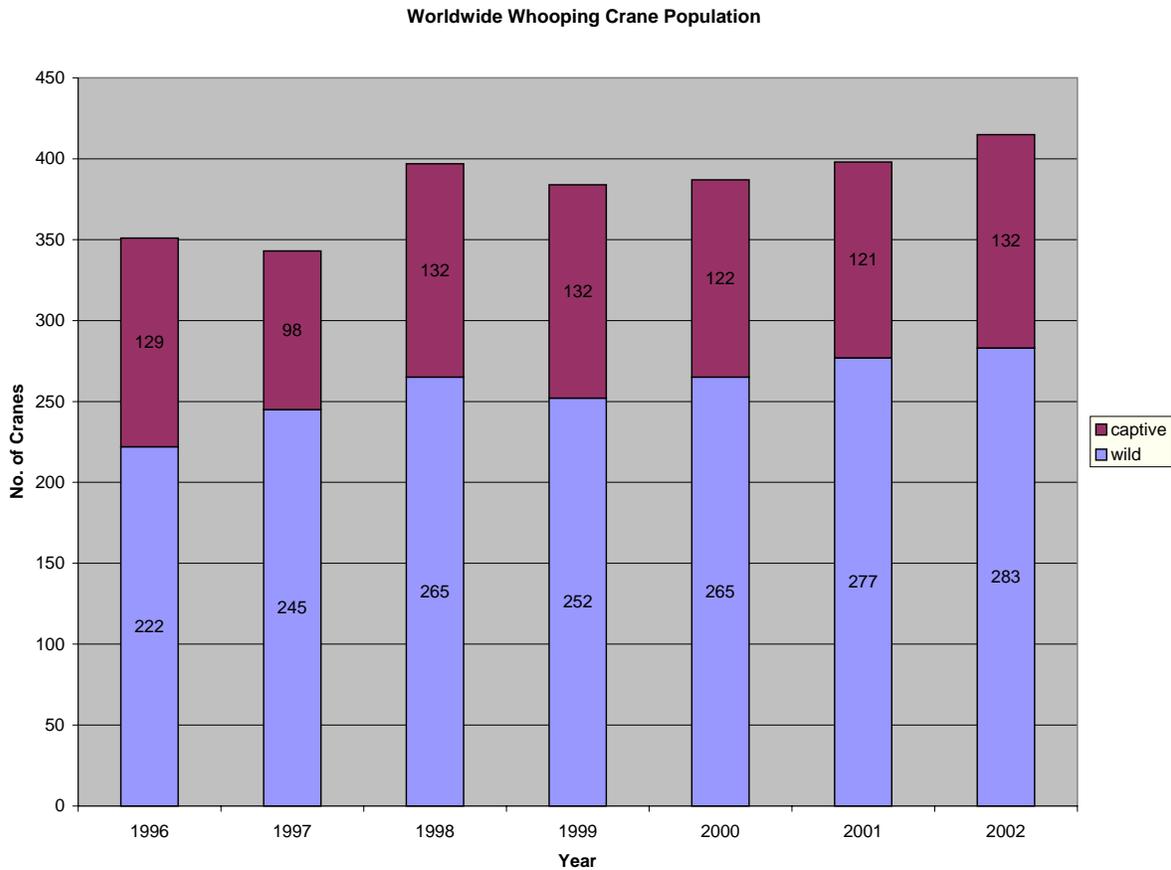
Area	Adults	Young	Total
Aransas/Wood Buffalo NP	160	16	176
Rocky Mountain	0	0	0
Florida:Non-Migratory	85	1	86
Wisconsin/Florida: Migratory	5	16	21
Subtotal in the wild	250	33	283

Captive Populations

Area	Adults	Young	Total	Breeding Pairs
Patuxent WRC, MD	50	6	56	10
International Crane Fdn., WI	27	8	35	10
Devonian WCC/Calgary, ALTA	17	2	19	6
Calgary Zoo, ALTA	0	0	0	0
San Antonio Zool. Gardens, TX	6	2	8	2
Lowery Park Zoo, Tampa, FL	4	0	4	0
ACRES, New Orleans, LA	8	0	8	0
New Orleans Zoo, LA	2	0	2	0
Subtotal in captivity	114	18	132	28

Total (wild and captive)**415**

Figure 3.



We regrettably report that in 2002, following 26 years of experimentation to establish a migratory flock of Whooping Cranes in the Rocky Mountains, no Whooping Cranes were found in the Greater Yellowstone Area. The lone surviving Whooping Crane from the Gray's Lake experiment (see 2001 Yellowstone Bird Report), born in 1983, had been residing in Montana's Centennial Valley. In fall 2000, this bird migrated south to its wintering grounds in New Mexico. Extensive searches for this crane in spring 2002 proved fruitless, and resulted in the Whooping Crane Recovery Team's declaring this bird a mortality.



Peregrine fledgling. Photo by Wayne Wolfersberger.

SPECIES OF SPECIAL CONCERN

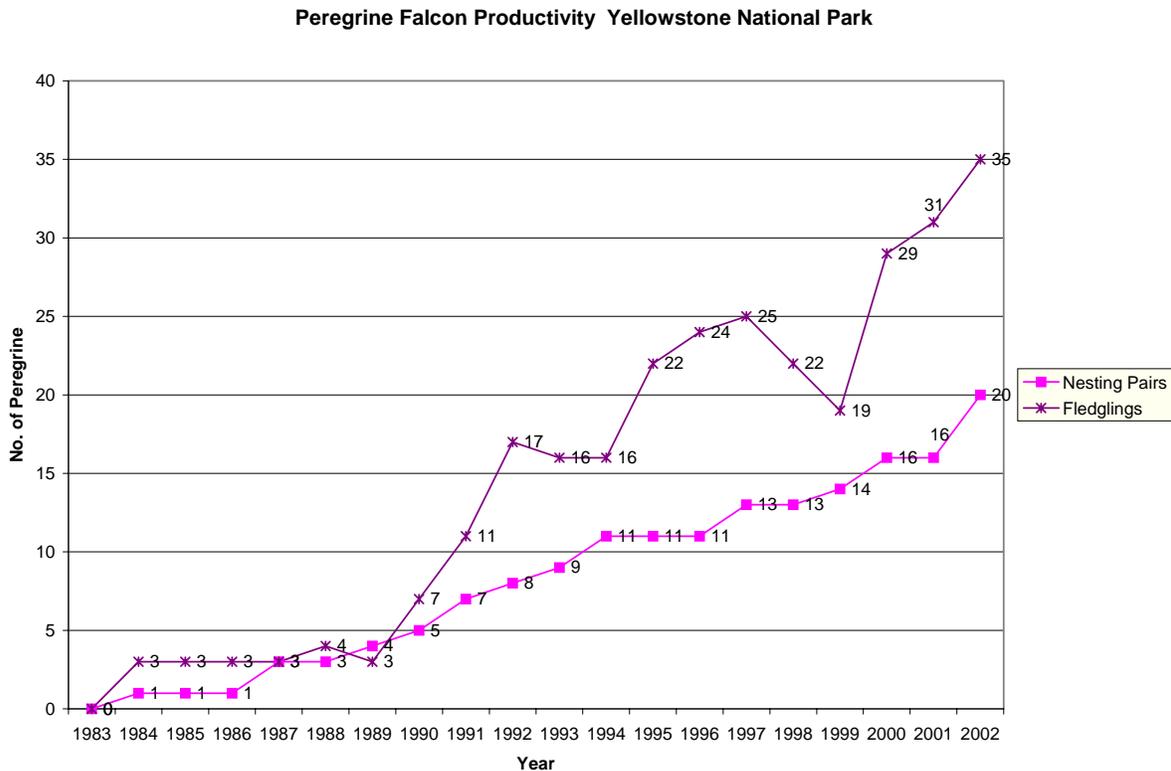
PEREGRINE FALCON

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, this species still needs to be monitored closely through 2004 to ensure its recovery, even though is no longer officially listed as endangered.

The Peregrine Falcon is now managed as a species of special concern. Yellowstone National Park continues to be a stronghold for peregrines in the Northern Rockies. Three new eyries were found in 2002, bringing the total number of peregrine eyries to 20, compared to 17 in 2001. Thirty-five young fledged in 2002; the highest number of fledged peregrines ever recorded in Yellowstone National Park.

Monitoring peregrine productivity is a time-consuming task. The year 2002 marked the fourth year since delisting, and only one more year of extensive monitoring is required to fulfill federal requirements for full recovery. After that period, a 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.

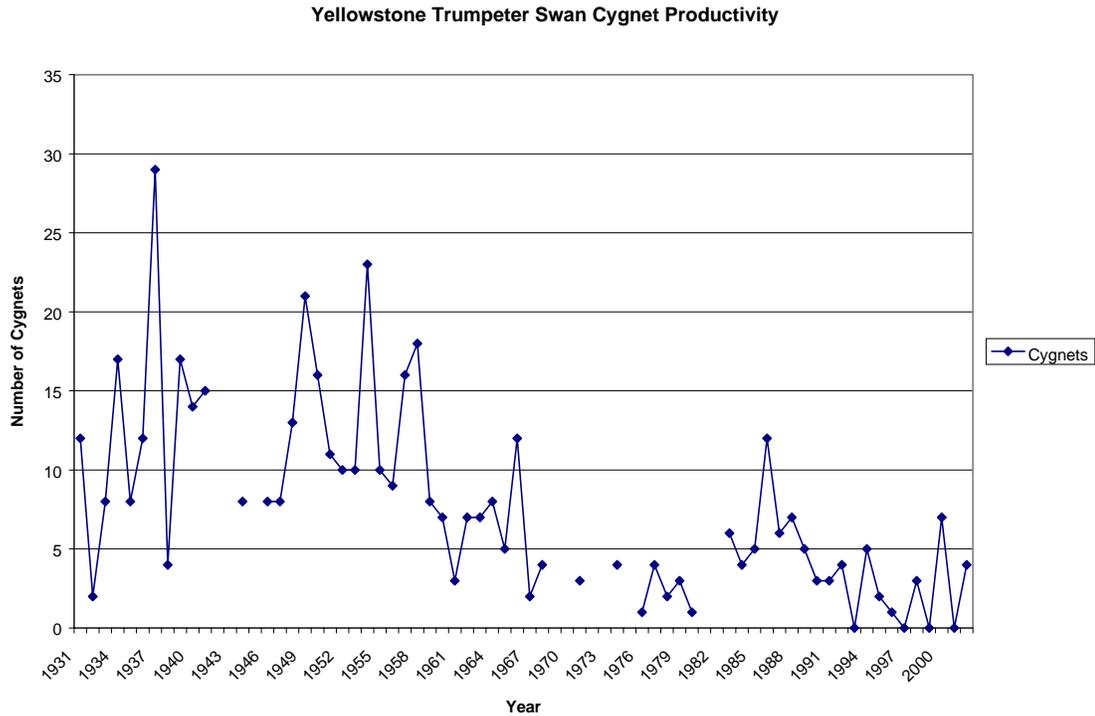
Figure 4.



TRUMPETER SWAN

The Yellowstone National Park resident Trumpeter Swan population continues to show signs of a population at risk. Traditionally, the Centennial Valley of Montana has been a hot spot for cygnet production in the Greater Yellowstone Area. Swan recruitment from outside Yellowstone National Park is critical to maintaining the park resident swan population. Historically, swans that died in the park were eventually replaced by swans from outside the park (namely the Centennial Valley). However, events over the last decade have led to a reduction of breeding swans particularly outside the park. Coupled with low numbers of fledged cygnets throughout the Greater Yellowstone Area (Figure 5), poor productivity inside the park increases concern about population viability of essentially non-migratory trumpeter swans.

Figure 5.



The number of adult swans in Yellowstone National Park has declined steadily since 1961, and currently stands at only 22 individuals (Figure 6). This is the tenth-lowest number of adults ever recorded since we have been collecting trend data, and represents numbers reminiscent of the early 1930s. Adult swan recruits from Paradise Valley appear to have helped in maintaining the Yellowstone swan population for the time being. Low levels of adult swan recruitment have been observed in the southern portion of the park, but no adult recruitment has been observed in the western portion, as evidenced by a lone adult female that has been waiting for a mate in the 7-Mile Bridge area since February 2001.

In recent years, trumpeter swan nest attempts have ranged from 2-to-10 per year (Figure 7). There were only three swan nesting pairs in 2002, compared with two in 2001, seven in 2000, six in 1999 and nine nesting pairs in 1998. In 2001, four cygnets fledged from one brood in Yellowstone National Park. This was somewhat expected, because years with drought-like conditions are usually favorable for swan production. During two other severe drought years (1988 & 2000), Yellowstone National Park fledged seven cygnets each year. However in 2002, a drought year, zero cygnets were produced. Cygnet production has been generally very low over the last 14 years, ranging from zero to five cygnets per year.

Figure 6.

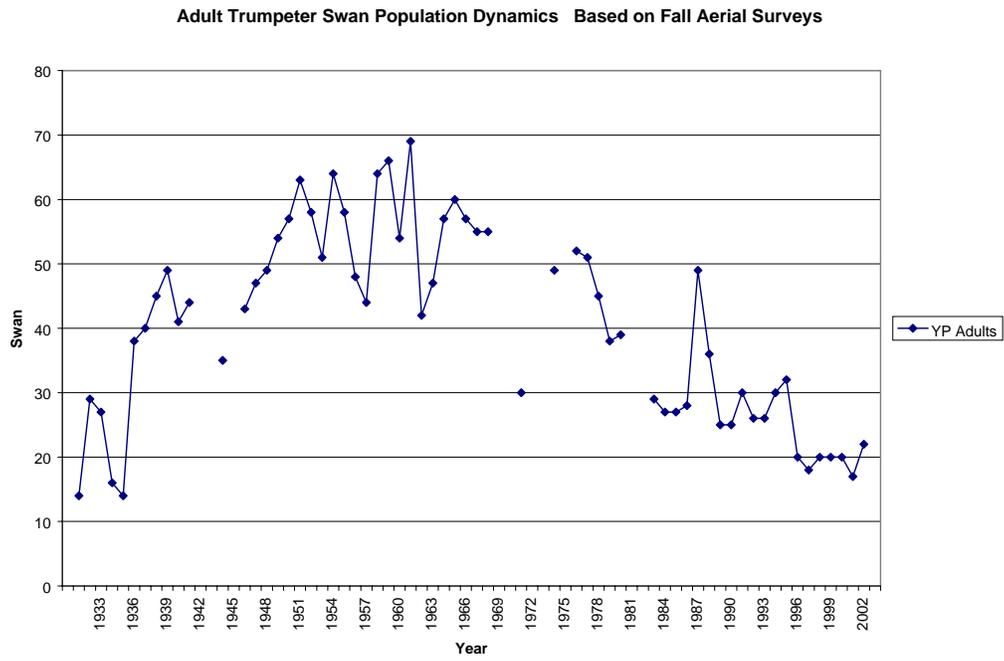
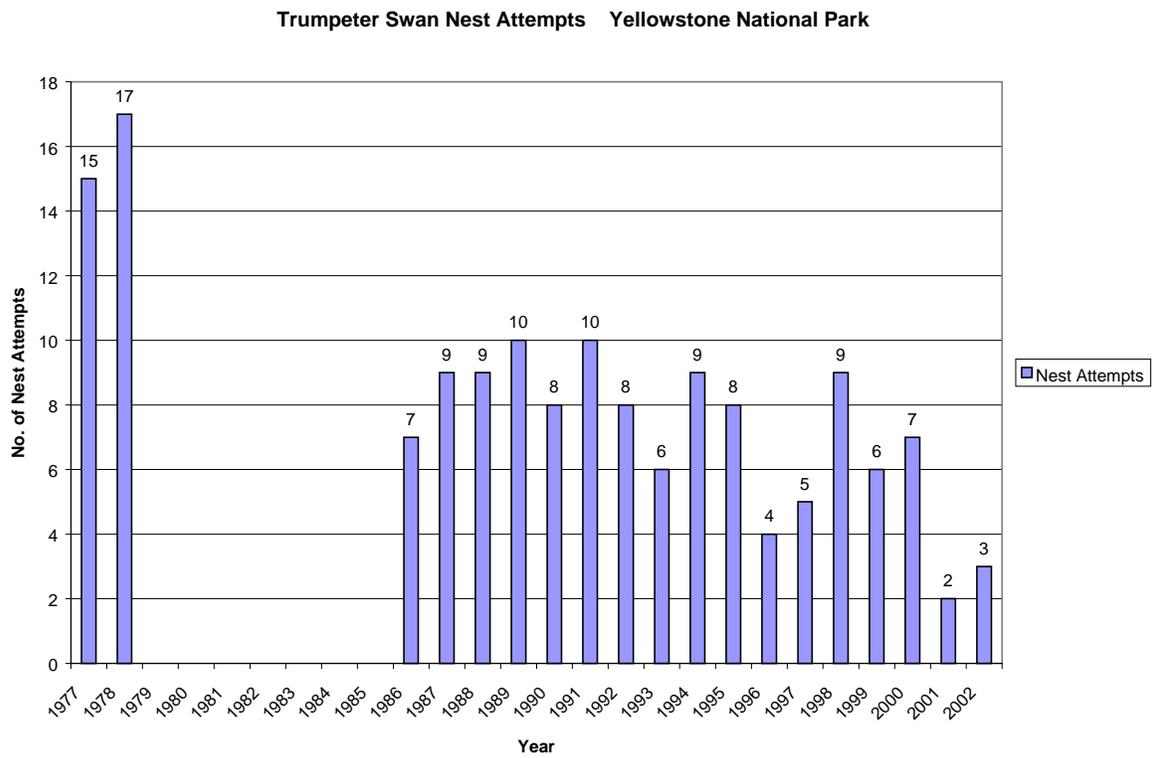


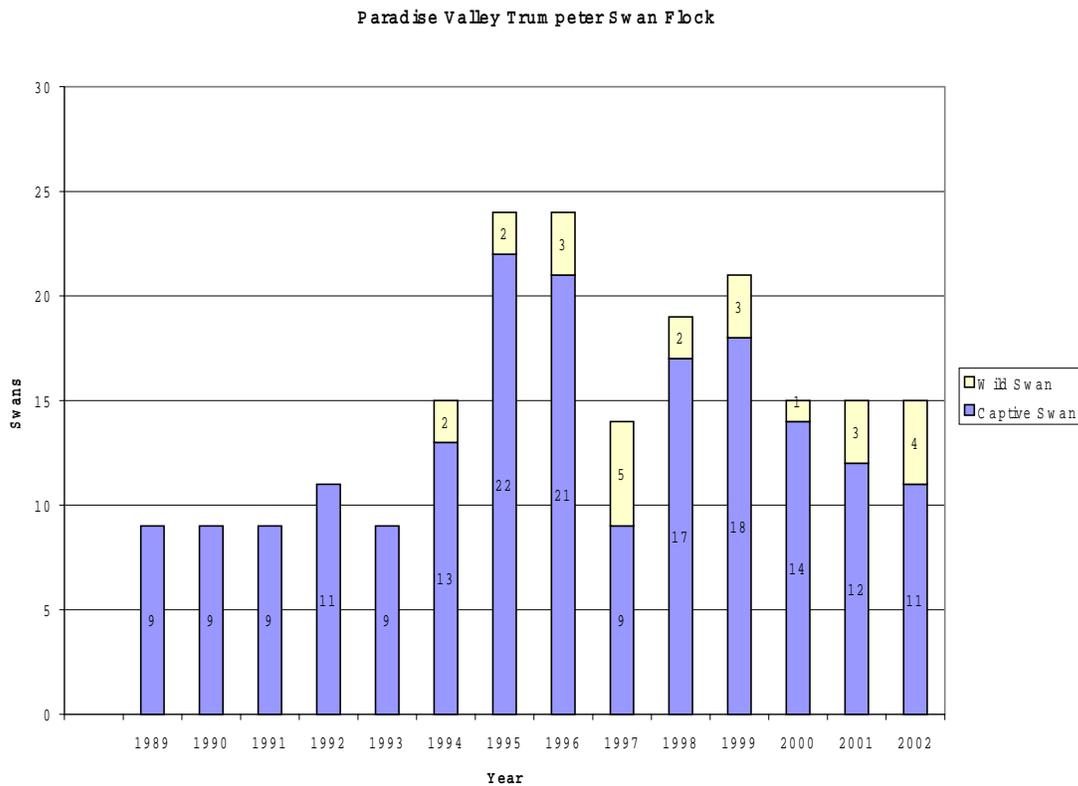
Figure 7.



Paradise Valley Trumpeter Swan Flock. Yellowstone National Park originally began to participate in Trumpeter Swan conservation issues in the Paradise Valley (north of the park) of Montana due to the potential threat posed by exotic Mute Swans, introduced in the 1960s by a private landowner. By the late 1970s, concern about 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. With the assistance of the Cinnabar Foundation and the Chevron Corporation, and led by the park ornithologist, the park has helped to support local educational efforts, Mute Swan eradication, and Trumpeter Swan introduction. For more information on this program, see the 2001 Yellowstone Bird Report.

By 1991, Trumpeter Swans outnumbered Mute Swans nine to two in Paradise Valley, and by the mid-1990s, Mute Swans were eliminated from Paradise Valley altogether. The threat posed by this alien species was mitigated in a relatively short period of time.

Figure 8.



There were three nest attempts in the Paradise Valley in 2002 which resulted in four fledged young from two broods. One pair hatched 4 young, one of which was immediately killed by an intruder subadult pair. Two other youngsters died from inattentive parents, causing the young to lag behind, and resulting in death by fatigue and exhaustion. The adult female from this pair was eventually killed while trying to attack vehicles on Highway 89 in Emigrant, Montana. The remaining male and lone cygnet traveled cross-country eventually ending up 20 miles downstream at a safehaven near the Yellowstone River. In another incident, a female died on a nest containing six eggs that were just days from hatching. In 2002, the Paradise Valley swan population totaled 15 swans (Figure 8), compared to 15 in 2001 and 2000, and 21 in 1999 (Table 2). The primary reasons adult swans declined in numbers were collision mortality with wires,

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, so the program continues to pay off in small increments.

Table 2. 2002 Trumpeter Swan Production Summary

Parameters	Yellowstone NP	Paradise Valley, MT
Occupied Sites	8	4
Nesting Pairs	3	3
Successful Nests	1	2
Cygnets Hatched	4	7
Broods w/ Fledged Young	1	2
Cygnets Fledged	4	4
Adults	22	11
Total Swans	26	15



Aerial view of pelican nursery at the Molly Islands.

MOLLY ISLANDS COLONIAL NESTING BIRDS

The Molly Islands Colonial Nesting Bird Census was conducted in mid-May, early June, early August, and mid-September, 2002. 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 several years, however, this year both aerial and boat surveys were employed.

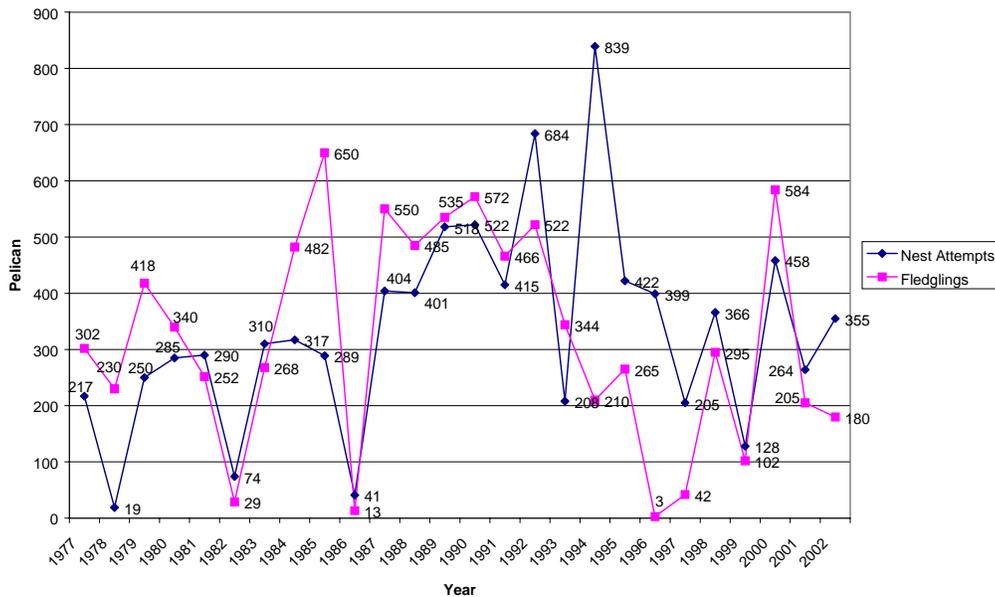
Although there seemed to be a late spring this year, American White Pelicans arrived on the islands slightly later than normal. On Rocky Island, a total of 85 pelicans initiated nests on the eastern, or highest, part of the island (Table 3). Nests were restricted to this one aggregation. Double-crested Cormorants constructed 44 nests in the same area as the pelicans. The islands were free of flooding this year, and snow meltwater runoff was gradual. What was perplexing was the total abandonment of Rocky Island by nesting pelicans and cormorants. Avian predators in the form of Bald Eagles have been observed raising havoc many times on the island, but never causing total abandonment. Egg fragments and ripped-up nests were visible from the air, indicating sudden abandonment of the site, leaving us to believe it may have been caused by some unknown mammalian predator. Later on, California Gulls and Caspian Terns did nest. Of the 110 California Gulls that attempted to nest, only 60 were successful in hatching young, whereas of the 5 nest attempts by Caspian Terns, only three were successful in hatching and rearing young.

Table 3. 2002 Molly Islands Colonial Nesting Bird Productivity

Area	Species	Nests Initiated	Successful Nests	Young Fledged
Rocky Island	American White Pelican	85	0	0
	Double-crested Cormorant	44	0	0
	California Gull	110	60	65
	Caspian Tern	5	3	3
Sandy Island	American White Pelican	270	110	180
	Double-crested Cormorant	115	92	280
Molly Islands Totals	American White Pelican	355	110	180
	Double-crested Cormorant	159	92	280
	California Gull	110	60	65
	Caspian Tern	5	3	3

Predation was not a factor on Sandy Island this year. Consequently, a total of 270 American White pelican nests were initiated, but only 110 nests were successful in rearing 180 young. Double-crested Cormorant nest attempts were surprisingly good, with 115 nests initiated and 92 nests successful in fledging 280 young. Pelicans nested in five aggregations, consisting of three large and two small aggregations. No Caspian Terns or California Gulls nested on this island again this year.

American White Pelican Productivity Yellowstone National Park



In sum, 2002 was a year of surprisingly good colonial nesting bird production, despite disturbance to one island. Lake flooding did not occur due to the drought, which presented favorable conditions. Total production on the Molly Islands resulted in fledging 180 American White Pelicans (Figure 9), 280 Double-crested Cormorant, 65 California Gulls, and 3 Caspian Terns.

As the consequences of exotic lake trout establishment in Yellowstone Lake become apparent, the status of the Molly Islands bird colony will continue to be important. 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 factor affecting the Molly Islands nesting colony, particularly in recent years.

OSPREY

The Yellowstone National Park Osprey population continues to show signs of natural annual variation. In 2002, however, only 24 young fledged from 83 nests (Figure 10). This represents the worst production ever experienced in the last 16 years of collecting detailed osprey population data. A series of strong winds throughout the summer caused many of the nests and/or nest trees to fall to the ground, resulting in high failure rates (Figure 11). Osprey nests are typically more exposed, since they nest on the apex of trees and select trees that are smaller than those used by bald eagles. This pattern has been occurring more frequently in the last four years. Tree nest site instability and weather continue to play a major role in influencing Osprey productivity in the park. The incidence of Bald Eagles taking over Osprey nest sites was noted again this year, and was documented at one site. Monitoring the population dynamics of Ospreys and other piscivorous bird species is especially important as we chart lake trout numbers over time.

Figure 10.

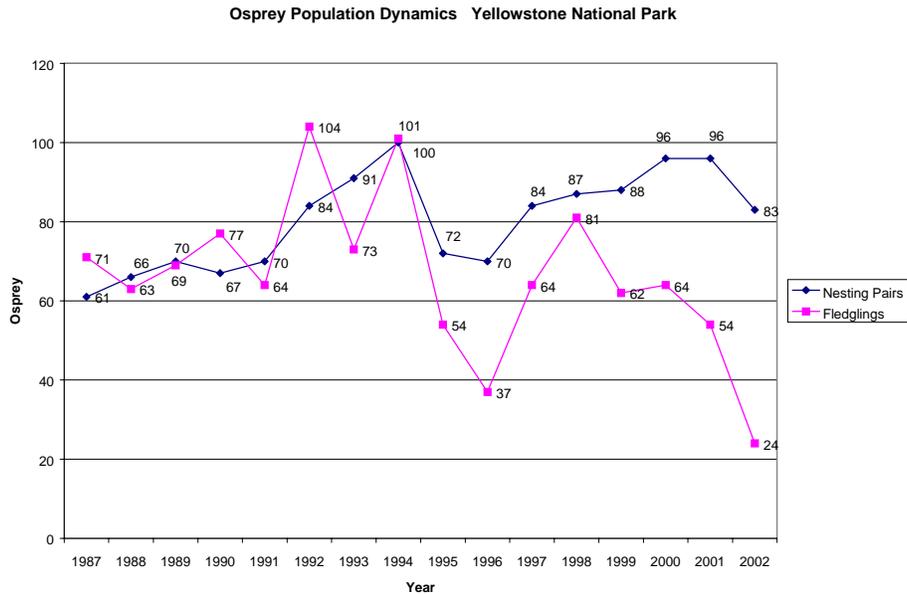
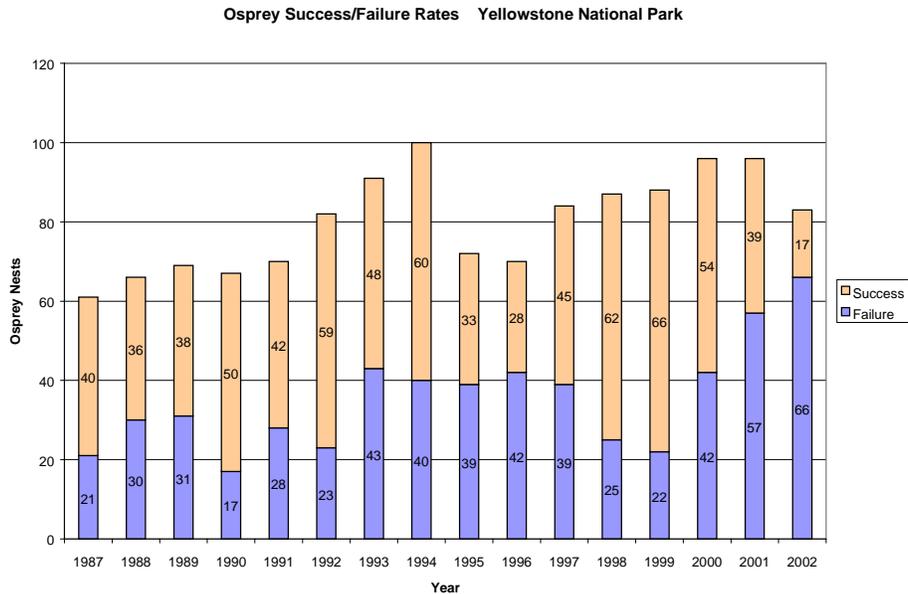


Figure 11.



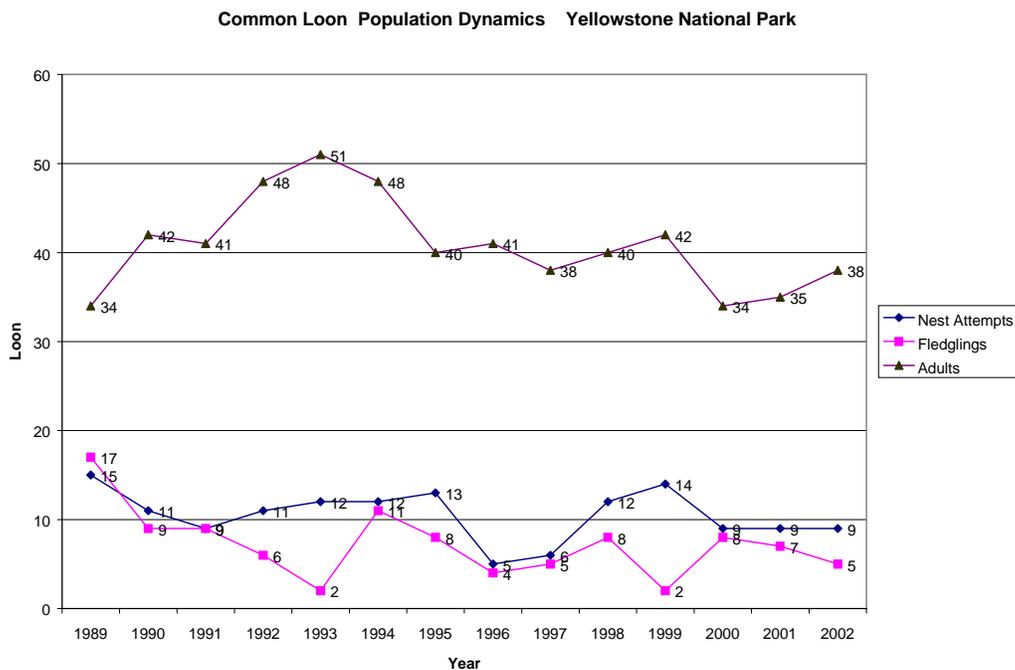
HARLEQUIN DUCK

The Harlequin Duck population in Yellowstone NP continues to maintain itself and is only mildly variable from year to year, with generally 16–22 nesting pairs 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.

COMMON LOON

The Common Loon population in Yellowstone NP continues to fluctuate from year to year. There were nine nest attempts in 2002, yet only five young managed to reach fledgling age, compared to nine nest attempts and seven fledglings in 2001, nine nest attempts and eight fledglings in 2000, and 14 nest attempts and two fledglings in 1999 (Figure 12). A total of 38 adults were found in the park in 2002, compared to 35 adults in 2001, 34 adults in 2000, and 42 adults in 1999. These adult numbers have reliably ranged between 34 and 51 individuals over the last 14 years. Yearly fluctuations in adult numbers and in the production of young are the result of variable weather conditions. The moderate loon production and low adult numbers are thought to be a reflection of recently prevailing drought conditions.

Figure 12.



OTHER STUDIES AND POPULATION MONITORING

NORTH AMERICAN BIRD MIGRATION COUNT

Yellowstone National Park participated in the North American Bird Migration Count for the tenth consecutive year in 2002. 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 11. Five observers recorded a total of 1,632 individual birds. A total of 90 species of birds were recorded during the count, including 71 species within the confines of Yellowstone NP (Table 4). A 10-year summary is enclosed (Table 5). The count originates on Yellowstone Lake, and ends 70 miles north of the park, in the Shields Valley of Montana. It is a suitable means of gauging the pulse of migration in both the mountains and valleys.



Surveying Yellowstone's backcountry for birds.

**Table 4. International Migratory Bird Count
Yellowstone National Park, May 11, 2002**

Species	YNP-WY	YNP-MT	Park Co., MT	Totals
Common Loon	3			3
Eared Grebe	5	12	40	57
Western Grebe	11	1	12	24
American White Pelican	5		30	35
Great Blue Heron	9	2	11	22
Trumpeter Swan	2			2
Canada Goose	70		80	150
Green-winged Teal	82	1	35	118
Mallard	131	4	40	175
Northern Pintail	4		4	8
Blue-winged Teal			1	1
Cinnamon Teal	5		3	8
Northern Shoveler	1		3	4
Gadwall	8		10	18
American Wigeon	55		20	75
Lesser Scaup	30	2	20	52
Ring-necked Duck	5		4	9
Common Goldeneye	18			18
Barrow's Goldeneye	67	8		75
Bufflehead	67			67
Harlequin Duck	3			3
Common Merganser	11		8	19
Osprey	2		4	6
Bald Eagle	2		2	4
Northern Harrier			1	1
Swainson's Hawk	2			2
Red-tailed Hawk	1	1	4	6
Ferruginous Hawk			1	1
Golden Eagle			1	1
American Kestrel	2			2
Prairie Falcon			1	1
American Coot		4		4
Sandhill Crane	5	1	2	8
Killdeer	4		2	6
Willet			4	4
American Avocet			2	2
Black-necked Stilt			2	2
Spotted Sandpiper			2	2
Common Snipe	4		1	5
Wilson's Phalarope			1	1
Red-necked Phalarope	1			1
Franklin's Gull			15	15
Rock Dove	17		4	21
Mourning Dove			1	1
White-throated Swift		3		3

Belted Kingfisher	1			1
Red-naped Sapsucker			1	1
Lewis's Woodpecker		1		1
Hairy Woodpecker	3			3
Three-toed Woodpecker	1			1
Northern Flicker (red-shafted)	1			1
Horned Lark			1	1
Tree Swallow	4	34	14	52
Northern				
Rough-winged Swallow			6	6
Bank Swallow			3	3
Barn Swallow			1	1
Clark's Nutcracker	4			4
Black-billed Magpie	18		15	33
American Crow	23		2	25
Common Raven	6	32	3	41
Black-capped Chickadee	1			1
Mountain Chickadee	5			5
Red-breasted Nuthatch	2			2
White-breasted Nuthatch	1			1
Rock Wren	1			1
American Dipper	2			2
Ruby-crowned Kinglet	6	2	8	16
Mountain Bluebird	3		6	9
Townsend's Solitaire	4			4
American Robin	39	14	53	106
American Pipit	1			1
European Starling	10		22	32
Yellow-rumped Warbler	4		6	10
Vesper Sparrow		4	10	14
Song Sparrow			5	5
Lincoln's Sparrow			1	1
Chipping Sparrow	2			2
White-crowned Sparrow	3		6	9
Dark-eyed Junco	7			7
Red-winged Blackbird	2		14	16
Western Meadowlark	4	2	6	12
Yellow-headed Blackbird	2			2
Brewer's Blackbird	15		7	22
Common Grackle	6			6
Brown-headed Cowbird	29		3	32
Cassin's Finch	2			2
House Finch	4		20	24
Red Crossbill	16			16
Pine Siskin	23			23
House Sparrow	8		25	33
Totals	895	128	609	1,632

Weather: unseasonably cold and drought in progress

90 species recorded
 895 Total Individuals Yellowstone National Park-Wyoming
 128 Total Individuals Yellowstone National Park-Montana
 609 Total Individuals Park County, Montana
 1,632 Grand Total Individuals
 5 Total Number of Observers
 55 Number of Total Group Hours in the Field
 71 Species Detected in Yellowstone National Park only

Recorder: Terry McEneaney

**Table 5. North American Bird Migration Count Summary
 Yellowstone National Park and Vicinity**

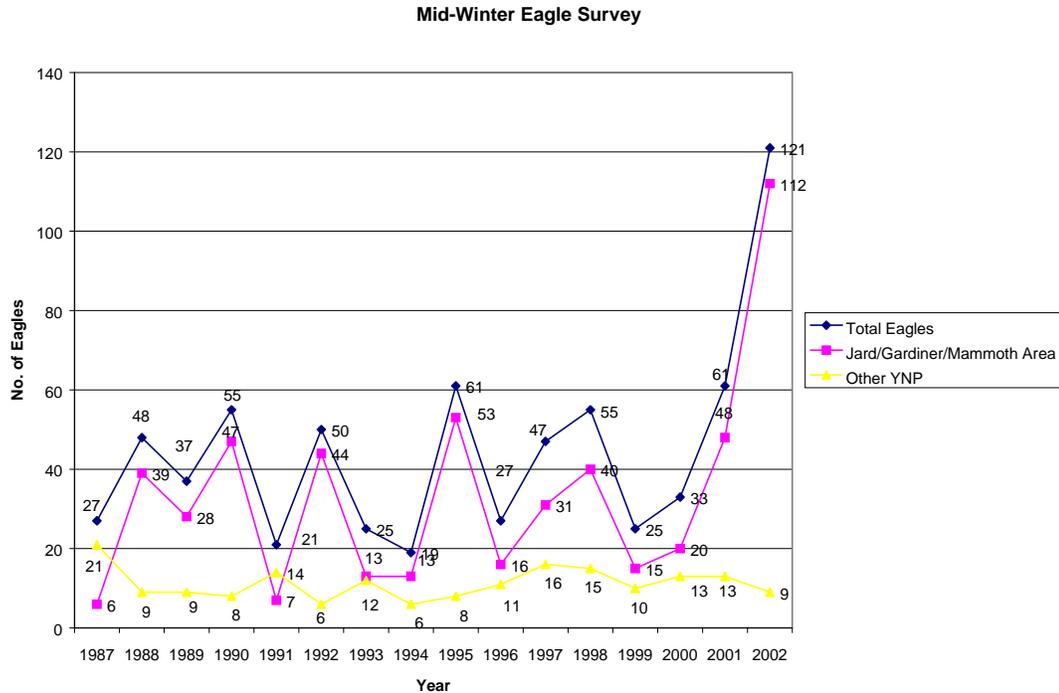
Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of Species Recorded	72	74	61	82	93	91	85	85	91	90
Revised Number of Species (1996 Standards and Route)	86	74	75	82	93	91	85	85	91	90
Total Individual Birds										
Yellowstone NP, WY	1,545	1,793	2,408	1,797	1,038	1,073	826	750	967	895
Yellowstone NP, MT	289	145	242	113	94	64	163	912	74	128
Outside YNP-Park Co., MT	139	89	248	313	949	413	1,974	936	656	609
Grand Totals	1,973	2,027	2,898	2,223	2,081	1,550	2,963	2,598	1,697	1,632
Number of Observers	2	5	7	4	4	4	3	5	5	5
Total Hours in the Field	16	47.5	76.5	28	42	48	36	69	44	55
Total Species YNP only	69	73	52	73	70	69	70	61	65	71

MID-WINTER EAGLE SURVEY

The annual mid-winter Bald Eagle/Golden Eagle survey was conducted for the 16th consecutive year in Yellowstone National Park and on portions of the northern range outside the park. A total of 121 eagles were counted on January 11, 2002 (Figure 13). Of the total, 116 were identified as Bald Eagles, and five were identified as Golden Eagles. The northern range outside of Yellowstone National Park continues to be the hotspot for wintering eagles, a situation thought to be related to carrion availability from the regular- and late-season elk reduction hunts.

Weather continues to play a major role in eagle distribution, as does prey and carrion availability.

Figure 13.



BREEDING BIRD SURVEYS

Three Breeding Bird Surveys were conducted in 2002. 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 to 1982.

GLACIER BOULDER ROUTE SURVEY

The Glacier Boulder route survey documents birdlife found exclusively in lodgepole pine habitats in Yellowstone National Park. Due to time constraints, the survey was not conducted in 2002, but a concerted effort will be made in 2003 to ensure this survey continues. This was the first time out of seven years that this survey was not conducted. However, we know the importance of establishing additional baseline data for neotropical migrant landbird monitoring. The transect begins at the Glacier Boulder trailhead near Inspiration Point. The point count census consists of 30 stations, and is conducted entirely on foot. Census protocol for this survey is similar to that of a Breeding Bird Survey. Traffic noise during the summer is beginning to affect Breeding Bird Survey routes, and it is for this reason that we are developing census routes away from established roads.

CHRISTMAS BIRD COUNT

On December 22, 2002, the Yellowstone Christmas Bird Count (YCBC) was conducted in the Gardiner, Montana, and Mammoth, Wyoming, areas. This YCBC marks the 30th year for this traditional winter bird survey.

The 2002 YCBC tallied a total of 36 bird species and 1,624 individual birds. The exceptionally mild winter weather conditions believed to be associated with the Pacific Ocean El Niño weather system, coupled with drought conditions, resulted in a slightly above-average number of species and individual birds observed. Temperatures during the 2002 YCBC ranged from 20-32°F, with 0-3" of snow, depending on the elevation. River edges were not even frozen.

Wintering birds. Two new species of wintering birds were detected during the YCBC. A Green-tailed Towhee was found on count day along the Gardner River near Mammoth, Wyoming. A Brewer's Sparrow was found during count week (December 21) at the confluence of the Yellowstone and Gardner Rivers near Gardiner, Montana.

Records. Several bird records were tied or broken during the 2002 YCBC. One American Wigeon and one Prairie Falcon were detected during the count, which tied previous records set in 1984 and 1996; and 1988, 1997, and 2000, respectively. Records were broken for four species on count day. A total of eight Downy Woodpeckers were found, doubling the previous record of four set in 1980. Thirty-two Black-capped Chickadees were tallied, with the previous record having been 31 individuals in 1994. The previous record of four Northern Flickers (set in 1987 and 2001) was broken this year, when six were found during count day. And lastly, 57 Cedar Waxwings were found this year, compared to the old record of 53 set in 1998. A record for count week was broken when 14 Gray Partridge were observed. The previous record had been one individual, found in 1997.

Unusual sightings. The mild winter, coupled with extended drought conditions, had obvious effects on Yellowstone's plants, mammals, and birds. Most noticeable was the heavy juniper berry crop. However, many of the berries were dehydrated due to the low fruit moisture content caused by the drought, which forced Bohemian Waxwings to be selective and more spread out than normal. Only 514 of these birds were detected on count day.

The most significant mammal find during the 2002 YCBC was an active Uinta ground squirrel detected on December 22 near the Mammoth Hotel. Only 69 Common Ravens were detected during the 2002 YCBC, marking the lowest number of ravens detected in at least 30 years of conducting YCBCs. Reduced hunter harvest during the regular elk hunting season in the Gardiner area played a major role in raven distribution; these corvids were not concentrated near traditional food sources such as gut piles discarded by hunters. They were also seen feeding on an abundance of foods not normally available this time of year.

Another surprise was the paucity of Black Rosy Finches. Typically, they are mixed in with Gray-crowned Rosy Finches, but zero Black Rosy Finches were found among the 180 Gray-crowned Rosy Finches tallied this year. This marks only the sixth time in the 30-year history of the YCBC, that a Black Rosy Finch has not been detected. The last time this occurred was in 1988.

Summary. In conclusion, a total of 96 species have been recorded on the YCBC (98 species with the YCBC and count week combined) during the 30 years the count has taken place. This year, excessively mild winter weather conditions resulted in slightly above average numbers of bird species detected, and slightly above average numbers of individuals observed (Tables 6 and 7). However, experience continues to show that colder temperatures and above average snow depths are the optimum conditions for finding the greatest bird richness and abundance during the YCBC. Participants are reminded of these factors when deciding on attending future YCBCs.

Some people enjoy searching for rare birds. Others just learning the basics of bird identification is a thrill in itself, while many look forward to the exercise and/or social aspects of this festive event. Whatever the calling, the Yellowstone Christmas Bird Count tradition, and the fun associated with it, continue.

**Table 6. Yellowstone Christmas Bird Count
December 22, 2002**

Species	YNP-WY	YNP-MT	Outside YNP-MT	Totals
Canada Goose			11	11
Green-winged Teal	21			21
Mallard	16	45	2	63
Common Goldeneye			8	8
Barrow's Goldeneye	2			2
Bald Eagle	2	2	7	11
Golden Eagle	2	3	5	10
Prairie Falcon		1		1
Rock Dove	45	90	40	175
Great Horned Owl			1	1
Belted Kingfisher	1			1
Downy Woodpecker	3		5	8
Northern Flicker			6	6
Steller's Jay			3	3
Pinyon Jay			32	32
Clark's Nutcracker	2		15	17
Black-billed Magpie	56	20	25	101
Common Raven	15	6	48	69
Black-capped Chickadee	12	3	17	32
Mountain Chickadee	28	3	11	42
Red-breasted Nuthatch	1		3	4
Brown Creeper			1	1
American Dipper	31	11	5	47
Townsend's Solitaire	38	5	30	73
Bohemian Waxwing	267	130	117	514
Cedar Waxwing			57	57
European Starling		13		13
Green-tailed Towhee	1			1
Dark-eyed Junco	1		3	4
Song Sparrow	2		1	3
Gray-crowned Rosy Finch			180	180
Cassin's Finch			1	1
House Finch			3	3
Pine Siskin			1	1
Evening Grosbeak			1	1
House Sparrow	12	13	82	107
Totals	558	345	721	1624

36 Species Recorded

Additional Species Count Week: 4

Bald Eagle Classification

1 Class I
3 Class II
1 Class III
6 Class V
11 Total

Golden Eagle Classification

9 Adult
1 Subadult
10 Total

Gray-crowned Rosy Finch Classification

Gray-crowned race = 153
Hepburn race = 27
Total = 180

Dark-eyed Junco breakdown: 4 (3 pink-sided, 1 slate-colored)

Count Week Species

Brewer's Sparrow: December 21, 2002, YNP/Gardiner, Montana

Gray Partridge: December 20, 2002, Gardiner, Montana

Hairy Woodpecker: December 24, 2002, Mammoth, Wyoming

American Wigeon (1): December 21, 2002, Gardiner River, YNP, Montana

**Table 7. 12 Most Abundant Species
Yellowstone Christmas Bird Counts, 1920-2002
Based on 30 years of Data**

Species	Number of Individuals	Number of Years Detected	Average Number of Birds Per Year
Bohemian Waxwing	11,129	27	412.2
Gray-crowned Rosy Finch	5,742	28	205.1
Common Raven	4,220	30	140.7
Mallard	2,462	30	82.1
Black-billed Magpie	2,462	30	82.1
Mountain Chickadee	1,704	29	58.8
American Dipper	1,561	30	52
Rock Dove	1,609	20	80.6
Townsend's Solitaire	1,403	30	46.8
Clark's Nutcracker	807	30	26.9
Black Rosy Finch	715	23	31.1
Black-capped Chickadee	391	29	13.5

MISCELLANEOUS PROJECTS AND PROGRAMS

NEW BIRD DISCOVERIES FOR YELLOWSTONE NATIONAL PARK

One new bird species was added to the Field Checklist of Birds of Yellowstone National Park in 2002. On August 9, 2002, a Laughing Gull (*Larus atricilla*) in first summer-second winter plumage was observed on Yellowstone Lake by Terry McEaney. This marks the first Laughing Gull record for Yellowstone National Park. Laughing Gulls are typically found east of the Mississippi River, but primarily occur along the East Coast and the Gulf of Mexico, with a population segment that ventures into the Gulf of California. Photographs were taken of this misplaced bird to accompany the detailed written documentation.

As of 2002, 316 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 last revised in April 2000. A newly-revised bird checklist was made available to the public in March 2001. This checklist is available on the park website at www.nps.gov/yell. Updates to this checklist are scheduled for March 2003 or 2004.

Other interesting and/or unusual birds reported in Yellowstone National Park include: a single Double-crested Cormorant that spent winter 2001-2002 on the Madison River; a remarkable irruption of Common Redpolls throughout winter 2001-2002; two Band-tailed Pigeons on Swan Lake Flat on June 24; a Sabine's Gull at Bridge Bay in October; a Great Egret that spent some time on Pelican Creek in May 2002; a large influx of Surf Scoters on Yellowstone Lake in October; a juvenile Mew Gull and a dark-morph juvenile Broad-winged Hawk on the shores of Yellowstone Lake in November; a large movement of Snow Geese and Ross's Geese over the North Entrance station on November 24, 2002; and first evidence of nesting for Hooded Merganser and Winter Wren.



Laughing Gull.

ENVIRONMENTAL ASSESSMENTS, STATUS REVIEWS, TECHNICAL DOCUMENTS

Yellowstone National Park environmental assessments in 2002 that utilized bird data included: East Entrance Road, Canyon Contractors Camp, Old Faithful Sewage Treatment Upgrade, and the Madison Sewage Treatment Upgrade to name a few. The U.S. Fish and Wildlife Service also contacted the staff ornithologist regarding status reviews for the Caspian Tern. Because of the large number of bird species found in North America, more status reviews of this nature are expected in the future.

GREATER YELLOWSTONE BALD EAGLE WORKING GROUP

Established in 1982, the Greater Yellowstone Bald Eagle Working Group is still in existence. Bald Eagle productivity and other management information are communicated to the group via either e-mail or an annual meeting, but a meeting has not been held in the last three years. The Bald Eagle is doing remarkably well, and is thought to be ecologically recovered in the Greater Yellowstone Area. The group is unified in its belief that the Bald Eagle can be delisted in this area.

GREATER YELLOWSTONE PEREGRINE FALCON WORKING GROUP

Peregrine Falcon working groups are primarily organized by state. The park participates in two Peregrine Falcon working groups (Montana and Wyoming), and has been an active participant ever since peregrines have been found in the Greater Yellowstone Area. Wyoming has an informal working group, and most of the coordination is done over the telephone. Montana has a more formalized working group. Yellowstone National Park coordinates closely with both state agencies and the Peregrine Fund. Working as a team is one of the main reasons the peregrine has made such a remarkable recovery. The Peregrine Falcon was officially delisted on August 26, 1999. The staff ornithologist attended the PFWG meeting in January 2002.

GREATER YELLOWSTONE TRUMPETER SWAN WORKING GROUP

The Greater Yellowstone Trumpeter Swan Working Group was organized in 1997. The staff ornithologist was the first chairman of this working group. Yellowstone National Park and Wyoming Game and Fish have been taking the lead to ensure that the greater Yellowstone area Trumpeter Swans are conserved. Annual population and production data for greater Yellowstone area Trumpeter Swans are collected by the group, and management activities are communicated between agencies at these meetings. Yellowstone participated in the fall 2002 meeting held in Jackson, Wyoming.

MONTANA BIRD RECORDS COMMITTEE

The Montana Bird Records Committee meets once or twice a year, depending on the volume of information, to review new bird records. This is a very high-profile committee that keeps the park up-to-date on the latest advances in ornithology. The staff ornithologist was chairman of this committee for several years, until he resigned this post to devote more time to writing projects, but still remains a member of the MBRC.

HARLEQUIN DUCK WORKING GROUP

Yellowstone National Park is a member of the Harlequin Duck Working Group. Although unable to attend a formal meeting in recent years due to financial reasons, the staff ornithologist is planning on attending future HDWG meetings.

NEOTROPICAL MIGRANT WORKING GROUPS

Yellowstone National Park typically participates in three neotropical migrant working groups. The two state working groups are the Montana Partners in Flight and the Wyoming Partners in Flight. The third group, an international working group, is called the Western Working Group Partners in Flight. Ornithologists from all over the West are in this group, including colleagues from Canada and Mexico. They are currently focused on prioritizing species and developing conservation plans. Meetings occur twice a year, usually in different areas of the West. The staff ornithologist attended the International Partners in Flight meeting in Monterey, California in spring 2002.

PARTNERS IN FLIGHT MANAGEMENT STEERING COMMITTEE

In September 2002, Yellowstone National Park hosted the Partners in Flight Management Steering Committee meeting. Approximately 50 biologists from all over the country attended this meeting, held in Gardiner, Montana. Besides the meetings, attendees were treated to a Yellowstone field trip and social gathering.

WYOMING IMPORTANT BIRD AREA TECHNICAL REVIEW COMMITTEE

In 2002, the staff ornithologist participated as a member of the Wyoming Important Bird Area Technical Review Committee (WIBATRC). The WIBATRC is responsible for reviewing, designating and implementing important land tracts in Wyoming for bird conservation. The WIBATRC is sponsored by Wyoming Audubon.

MUSEUM SCIENTIFIC BIRD COLLECTION

No specimens were added to the Albright Visitor Center museum collection in 2002 due to the lack of road-killed birds.

SWALLOW, WOODPECKER, AND RAVEN MANAGEMENT AND MITIGATION

Swallows, Northern Flickers, and Ravens continue to pose obstacles for the people responsible for the care and management of buildings in the park. In addition, there are some health risks associated with some of these bird species. These birds are protected by law under the Migratory Bird Treaty Act and, as such, mitigation options are very limited. With proper installation, plastic netting can be used to discourage nesting in selected areas of high public use.

SPEAKING ENGAGEMENTS AND PUBLIC CONTACTS

Public contacts are increasing each year. The park concessioners annually request bird lectures from professional biologists to train summer and winter guides. Also, the Bird Management staff lectured at the Yellowstone Teachers Workshop and the annual Naturalists Training Workshop held in Mammoth. In addition, there are hundreds of letters of inquiry/e-mails about bird information. Speaking engagements were also popular again in 2002.

INJURED AND ROAD-KILLED BIRDLIFE

As long as we have roads, we will have road-injured/road-killed birdlife. A protocol for handling injured and road-killed birds has been in place for the last few years, and appears to be working well. Procedures were followed very well in recent years, and there have been no problems with associated with this protocol. The only professional bird rehabilitator we are involved with is Big Sky Wild Care of Bozeman, Montana. All road-killed birds are to be salvaged, if possible, for future placement in the Albright museum collection. In 2002, a revised protocol for injured Yellowstone birds was completed. Copies of this protocol can be obtained by contacting the Yellowstone Center For Resources.

TRUMPETER SWAN DATA ANALYSIS AND MONOGRAPH

For the last year, the staff ornithologist has been actively entering and analyzing Trumpeter Swan data for an upcoming scientific monograph on the Yellowstone Trumpeter Swan. This peer-reviewed publication is scheduled to be completed within two years.

YELLOWSTONE WINTER USE WILDLIFE STUDY

Much controversy surrounds the Yellowstone winter use issue. A multi-disciplinary team was established in fall 2002 to better understand winter use impacts (snowmobiles, snowcoaches, skiers) on wildlife populations. The bird management program is assisting in the design, field training, collection and analysis of winter use data in an effort to better understand these recreational impacts, particularly on Trumpeter Swans and Bald Eagles.

WOLF PREDATION OF CANADA GEESE

On July 7, 2001, while conducting an aerial survey, the staff ornithologist, along with pilot Roger Stradley, witnessed a pack of wolves swimming after molting Canada Geese in the South Arm of Yellowstone Lake. Since that first event, two other observations confirm that wolves are taking Canada Geese on occasion. On February 8, 2002, while conducting ground surveys by snowmobile, a lone wolf was observed chasing and killing a Canada Goose in Gibbon Meadow. The goose was up on dry ground, grazing on grasses, when the wolf chased it into deep snow, leading to its demise. Lastly on July 8, 2002, during an aerial survey, a pack of eight wolves were seen preying on molting Canada Geese at Turbid Lake. There were several piles of feathers on the ground 200-300 feet from shore, each representing individual kill sites, while one of the wolves was running with a Canada Goose in its mouth. A grizzly walked through the kill site and was hardly noticed by the wolves.

6-MILE MADISON RIVER BALD EAGLE NEST CLOSURE

A pair of Bald Eagles occupied a nest only 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. In an effort to protect the eagles from human disturbance, park staff (bird management, resource management, 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. The eagles hatched two chicks, one of which managed to fledge

from the nest. A similar closure is expected to be in place as long as the eagles continue to nest there.



6-mile Bald Eagle nest closure area.

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 20 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. The adult male, or cob, was killed by a coyote near 7-Mile Bridge in February 2001, leaving the adult female without a mate. As of fall 2002, the female has remained on or near this site without a mate. Traditionally, adult swan recruitment in Yellowstone came from an area west of the park known as the Centennial Valley. In recent years, swan numbers in the area have declined substantially, resulting in swan recruits or floaters to be nearly non-existent. The lack of adult recruitment of swans from the outside, particularly the Centennial Valley west of the park, has played a major role in the rate at which swans are replaced or new mates are found. We will continue to monitor the status of the swans of this area.

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NOTES