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MIDWEST PEREGRINE FALCON RESTORATION, 2000 REPORT

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NOTICE: All peregrines banded in the U.S. Midwest in 2000 wear a bicolored band, black over green, on the left leg. Wild-produced birds have a purple anodized USFWS band on the right leg; hacked birds have a gold anodized USFWS band on the right leg. In Canada, hacked birds receive a red band and wild-produced birds get a black band, in addition to the usual silver USFWS band.

Many of the black/green and black/red bands have the upper or lower character (or both) on its side; these we show by using a star (*) to indicate the tipped-over letter or number, for example, *2/E or H/*4. It is essential to include the star because all combinations are in use (H/4, *H/4, H/*4, *H/*4 for example). It is also important to put all bands on right side up, to make them easier to read in the field.

INTRODUCTION

The first six months of 2000 were, according to weather experts, the warmest on record for North America. Warm weather clearly stimulates early nesting by Peregrine Falcons (*Falco peregrinus*), although the earliest nests this year in the Midwest were a little later than in 1999. Losses during incubation mostly resulted from nesting in locations vulnerable to flooding and to disruptions of normal activities by territorial fights. Over all, however, nesting was productive again, with 129 pairs fledging 243 young, compared with 107 pairs and 214 young in 1999. The population continues to level off in the United States part of the region, but the big jump in territorial pairs in the Lake Superior basin of Ontario, 24 pairs this year versus 13 pairs in 1999, indicates strong real growth there, not just improved monitoring. For some of us, the most exciting news of the year was the first known successful nestings by peregrines in almost half a century on the Mississippi River cliffs (details below).

Here is a nesting summary for six years by state or province (sequence here and in the main list below is north tier of states first, west to east; second tier, etc., then SE Manitoba and NW Ontario).

Number of territorial pairs/young fledged

	1995	1996	1997	1998	1999	2000
• North Dakota	--	--	--	--	--	1/0
• Minnesota	17/ 41	20/27	22/51	24/52	28/54	33/56
• Wisconsin	6/14	8/19	12/16	11/33	13/36	15/39
• Michigan	7/4	7/6	7/10	9/10	10/16	9/10
• South Dakota	--	--	--	1/0	1/0	0/0
• Nebraska	1/0	1/2	1/0	1/5	1/5	1/0
• Iowa	2/6	2/5	2/2	2/6	3/6	3/10
• Illinois	6/8	7/4	6/7	5/13	8/11	9/23
• Indiana	5/8	7/16	8/15	9/15	9/24	9/23
• Ohio	5/16	7/18	11/19	11/17	12/13	16/27
• Kansas	1/3	1/2	1/0	1/0	1/0	0/0
• Missouri	4/3	6/3	3/9	4/11	4/11	4/5
• Kentucky	1/1	1/0	1/2	1/1	2/3	3/5
• Manitoba	4/6	4/9	3/11	3/4	2/5	2/4
• Ontario	6/8	7/16	13/25	17/38	13/30	24/41
Totals	67/118	77/127	90/167	99/205	107/214	129/243

In the early years of the Midwestern restoration effort, when the whole countryside was open to peregrines searching for nest sites, one-year-olds nested more frequently. In the past few years, with many of the best territories occupied, more first-time breeders and replacement breeders have been adults.

It is easy to see that adult females might prevent juveniles from occupying territories more effectively today than in the early days of restoration, but it is not obvious to us why juvenile females that do succeed in pairing with adult males are less likely to lay eggs today than in the early days. In the past two seasons, 1999 and 2000, of the 18 juvenile females paired with males, only six (33%) laid eggs. Back in 1991 and 1992, of 13 paired juvenile females, eight (62%) laid eggs. The difference between these two small samples does not meet statistical significance ($\chi^2 = 2.4$, $df=1$, $p = 0.12$), but is suggestive. Any ideas, anyone?

Juvenile peregrines in the breeding population

Years	Nesting pairs	Number of breeders	Number of juveniles	Percent
1987-92	87	174	20	11%
1993-95	123	246	13	5%
1996-97	126	252	6	>2%
1998-99	172	344	6	<2%
2000	101	202	2	1%

Productivity of adults

Here is the record of some of the most productive females.

- *Meg 12R* (North Central Life, St. Paul MN), 39 young, 13 seasons (hacked = h)
- *Sibella 20V* (Firstar, Milwaukee WI), 37 young, 12 seasons (h)
- *^Comet 11V* (Montgomery Ward, Ford Bridge, Minneapolis MN), 26 young, 9 seasons (h)
- *Zenith 23W* (Terminal Tower, Cleveland OH), 27 yg., 8 seasons (wild produced = w)
- *Mae 31V* (NSP King, Bayport MN), 26 young, 11 seasons (w)
- *blO/B* (McKenzie Seed, Brandon MB), 25 young, 7 seasons (w)
- *Suzy Q 52P* (U.S. Steel, Gary IN), 25 young, 11 seasons (h)
- *Alice U/K* (Landmark, Milwaukee WI), 23 young, 7 seasons (w)
- *^Marla 81V* (Colonnade and Multifoods, Minneapolis MN), 21 young, 6 seasons (h)
- *^Fridge 43R* (Palisade Head MN), 21 young, 9 seasons (h)
- *Scout 28W* (Market Tower, Indianapolis IN), 21 young, 6 seasons (h)
- *^Egore 57V* (Cline Avenue, East Chicago IN), 20 young, 6 seasons (h)
- *^MF-1* (Multifoods Tower, Minneapolis MN), 20 young, 8 seasons (h)
- *^36R* (NSP Sherco, Becker MN), 20 young, 8 seasons (h)
- *^Aurora red4R0* (Rhodes Tower, Columbus OH), 19 young, 6 seasons (h)
- *2/3* (Park Plaza, St. Louis MO), 19 young, 8 seasons (h)
- *52V* (Winnipeg MB), 19 young, 10 seasons (h)
- *^Harriet* (125 S. Wacker, Chicago IL), 18 young, 9 seasons (h)
- *^49R* (Firstar Bank, Cedar Rapids IA), 17 young, 7 seasons (h)
- *Baltimore 7/D* (Liberty Bank, Dayton OH), 16 young, 6 seasons (w)
- *^Nellie McClung red3C7* (Commodore Perry, Toledo OH), 16 yg., 8 seasons (h)
- *Eleanor 2/8* (5821 N. Broadway, Chicago IL), 16 young, 7 seasons (w)
- *13R* (American Republic, Des Moines IA), 16 young, 8 seasons (h)
- *Algoma 77V* (Finn Church cliff MN), 15 young, 8 seasons (h)
- *^Judy redA/D* (Detroit MI), 14 young, 7 seasons (h)
- *^redX/H* (MPL Boswell, Cohasset MN) 13 young, 5 seasons (h)
- *^Minnsoar/Ariel 75V* (Mayo Clinic, Rochester MN), 13 young, 5 seasons (w)
- *^Silverstreak 42V* (WPL Edgewater, Sheboygan WI), 12 young, 5 seasons (h)

^ = known or presumed dead

Here are the most productive males.

- *Will 04Y* (Multifoods Tower, Minneapolis MN), 31 young, 12 seasons (h)
- *Bill 74T* (Firstar, Milwaukee WI), 30 young, 10 seasons (h)
- *Kato 31T* (Colonnade, Minneapolis MN), 27 young, 9 seasons (w)
- *Spanky 04T* (Control Data, NCL and High Bridge, St. Paul MN), 27 young, 10 seasons (h)
- *red*7/3* (McKenzie Seed, Brandon MB), 25 young, 7 seasons (h)
- *Jingles* (125 S. Wacker, Chicago IL), 24 young, 12 seasons (h)

- *Omni 76T* (Landmark, Milwaukee WI), 23 young, 7 seasons (h)
- *64T* (Firstar Bank, Cedar Rapids IA), 22 young, 8 seasons (h)
- *Kinney 7/*3* (Market Tower, Indianapolis IN), 21 young, 6 seasons (h)
- *^Pop* (Detroit MI), 20 young, 8 seasons (w)
- *Vulcan 79T* (U.S. Steel, Gary IN), 20 young, 8 seasons (h)
- *Marty 53Z* (Cline Avenue, East Chicago IN), 19 young, 7 seasons (w)
- *Lindee 1/*A* (MWARD, Ford Bridge, Mendota Bridge MN), 19 young, 7 seasons (w)
- *Mercury 21X* (Lazarus, Dayton OH), 18 young, 7 seasons (h)
- *^Szell 67Z* (Terminal Tower, Cleveland OH), 16 young, 5 seasons (w)
- *^Maverick 05T* (NCL and Montgomery Ward, St. Paul MN), 16 young, 5 seasons (h)
- *Franklin 95T* (5821 N. Broadway, Chicago IL), 16 young, 7 seasons (h)
- *^red5P9* (Delta Winnipeg, Winnipeg MB), 15 young, 6 seasons (h)
- *^b11/X* (Winnipeg MB), 14 young, 7 seasons (w)
- *^C/U* (Commodore Perry, Toledo OH), 13 young, 4 seasons (w)
- *55X* (NSP Black Dog, Eagan MN), 13 young, 5 seasons (w)
- *74X* (MPL Boswell, Cohasset MN), 13 young, 5 seasons (w)
- *^Chase 06T* (Mayo Clinic, Rochester MN), 13 young, 6 seasons (h)

^ = known or presumed dead

As in many species of birds, a small number of especially productive individuals contribute disproportionately to the output of fledged young. A major evolutionary question is, are these productive individuals superior genetically? If so, their genotypes should soon predominate through natural selection. Although genetic quality seems likely to be involved to some degree, probably fortuitous circumstances early in life (such as finding a good, safe territory and a good mate) are equally or more important.

Cliff Nesting Peregrines

When Pat Redig wrote the original recovery plan for the Peregrine Falcon in the Midwest over 20 years ago, we expected that the restored population would live in the same places as the original birds, namely on cliffs. The subsequent success of peregrines nesting on skyscrapers and other man-made structures was gratifying but did not erase disappointment over their failure to reoccupy the cliffs along the Mississippi and its tributaries. Peregrines of the new population have nested on the cliffs around Lake Superior since 1988. This year, however, the big news is that peregrines nested successfully on cliffs along the Mississippi River for the first time since the original population was wiped out by DDT and related pesticides in the 1950s. Five pairs held territories this year. Three of these pairs nested and all succeeded, fledging eight young. The two pairs that did not nest each included a one-year-old female, probably not yet ready to nest because of immaturity, paired with an adult male.

Across their original range in the eastern United States, many peregrines nested on lowland river cliffs. Here in the Midwestern U. S., the river pairs likely made up more than half of the total population. It is easy to understand the intense interest in the delayed return of the new population to these traditional nesting cliffs, not only those along the Mississippi and its tributaries, but also the Hudson, Susquehanna, and other lowland rivers in the eastern states. What are the circumstances leading to this exciting

re-occupancy of the river cliffs? Is this year really the first year? Where did the cliff birds come from? Why this year, instead of last year or the year before? What is likely to happen in the next few years? Here let us try to sort out the facts.

We began releases of peregrines at Weaver Dunes, near Kellogg, Minnesota, in 1982 because about a dozen cliffs used by the falcons historically were within 20 miles of the hack site. Those releases of 40 young falcons resulted in eight nesting attempts on nearby cliffs in 1986, 1987, and 1988. All failed. At three cliff nests where adults or young were killed, evidence showed that Great Horned Owls were the predators. At a fourth nest, raccoons might also have been involved.

At Weaver Dunes, predation by owls on the released falcons was low (contrary to an error-filled article by Anderson and Ries, *Minnesota Birding*, July-August 2000), one peregrine was killed in 1982 and one in 1983. None of the 23 released in 1984 and 1985 was lost to owls. The Weaver Dunes hack site was abandoned because an adult peregrine from an earlier release returned and attacked the young falcons on their first flights from the hack towers.

We were probably too impressed with the potential of owl predation. The loss of one of the first five peregrines released at Weaver Dunes in 1982, seemed a disaster at the time. Earlier, two of three falcons were killed by owls in an experimental hack by the Peregrine Fund at Maassen Bluff, south of Nelson, Wisconsin, in 1977. When the first eight cliff nesting attempts failed, owls seemed like a formidable problem, indeed. We now speculate that the owls, unchallenged by peregrines on the river cliffs for 25 years, needed re-education to the proper state of humility required for co-existence with peregrines. This surely has been happening over the past decade, as owls along the river have encountered peregrines with increasing frequency. The cliff nest at Lansing, Iowa, this year fledged four peregrines in sight of a nesting pair of owls on a neighboring cliff, according to Robert Anderson. At the hack site in Dubuque, Iowa, this year, Lowell Washburn reports (*Iowa Conservationist*, 59, No. 5, pp. 42-49) no predation by owls on peregrines at a hack site where 17 young falcons were released on a cliff shared by nesting Great Horned Owls. On one occasion, the adult male owl flew to the hack box, walked around a young peregrine, grabbed a dead quail, and flew off with it. After the young falcons were flying well, they harassed the adult owls relentlessly. No one expects owls and peregrines to live together in complete harmony. There is abundant evidence throughout North America that owls will continue to prey on peregrines and that peregrines will continue to harass and occasionally kill owls, but events this year show that they can once more co-exist, as they did in the past.

The return of nesting peregrines to the river cliffs this year appears to be the result of several factors. Although peregrines are strongly territorial, they seem to like neighbors. They attract each other. Peregrine activity along the river caused by pairs nesting on smokestacks has been increased the past few years by the hacking of 77 young falcons from river cliffs in Iowa. Wild peregrines nesting elsewhere in the region have produced many young birds seeking nest sites. Because the best sites on buildings, smokestacks, and bridges are already occupied, these birds must look elsewhere. The river bluffs, with their many good nest sites and a fine food supply, became irresistible.

Why this year, instead of earlier? Growing population pressure, fewer unoccupied suitable breeding locations, and an increasing peregrine river presence -- these all came together this year.

Might peregrines have been nesting on these cliffs undetected for several years? One wouldn't expect that the first step back to the river cliffs would involve five pairs. Why not first one or two, then a gradual buildup over the years? There are convincing reasons to conclude that this year was really the first. For starters, the best (for peregrines, best usually means biggest) cliffs seem to be used first. If peregrines nested along the river north of Iowa in recent years, they would probably have been at Maiden Rock in Wisconsin, or at Queens Bluff or John Latsch State Park in Minnesota, the biggest cliffs in that stretch of the river, and probably would have been detected by the many good birders in the area. Further, nine of the ten individuals on river cliffs this year have a known history; the tenth is not banded. Two are only one year old. Four are just two years old, the most frequent age of first breeding. The other three are older birds that last year were known to be nesting on smokestacks along the river. To argue seriously for other cliff nesters last year, for example, requires either that they all nested on secondary cliffs and vanished or were again not found this year, or, after nesting on the best cliffs, all either died over winter or were evicted by the current residents; none of these possibilities seems plausible.

One of the three older cliff nesters this year nested last year on the smokestack at Alma, Wisconsin (pair 47). In early spring this year, he was injured in a fight with another falcon, treated in a rehabilitation clinic, and released at La Crosse, Wisconsin. He then took up residence at Maassen Bluff, about as close as he could get to his former site, just four miles downstream at Alma. His one-year-old mate fledged in 1999 at the Colonnade, in Minneapolis. The two adults at Lansing, Iowa, nested in 1999 on a smokestack just yards from the cliff used this year. A nest box placed on the cliff enticed them to move. At Queens Bluff, both birds were hacked in 1998, one from a cliff at Effigy Mounds National Monument, Iowa, and the other from a building in Mason City, Iowa. The pair at John Latsch State Park included an adult male, not banded and therefore wild-produced, and a two-year-old female from the Ford Parkway Bridge in Minneapolis. At Maiden Rock, the male is two years old, fledged in 1998 from the containment building at NSP Prairie Island, Minnesota, and the female fledged last year from the Firststar Bank in Cedar Rapids, Iowa. An interesting mixed bag of birds, crossovers from various types of fledge sites to nesting on cliffs.

So, we can regard the river pairs with the satisfaction that comes from seeing the last of the objectives of the original recovery plans finally met, after years of frustration and argument about solutions. Robert Anderson, Raptor Resource Project, and Dan Orr, NSP biologist, deserve credit for leading the establishment of a peregrine presence along the river through the very successful power plant smokestack program. Anderson also joined Lowell Washburn, Irene Berry, and Pat Schlarbaum, of the Iowa DNR, and James Haack, MidAmerica Energy, in hacking young peregrines from river cliffs and nearby buildings in Iowa. Two sharp-eyed birders first located the new pairs in Minnesota, Dedrick Benz at Queens Bluff in Great River Bluffs State Park and Dr. Ray Faber at John Latsch State Park. Ray and Dedrick faithfully reported nesting events leading to the fledging of four young, three at John Latsch State Park, one at Queens Bluff. At Maassen

Bluff between Nelson and Alma, Wisconsin, Gary Grunwald, retired from the Minnesota DNR, discovered the pair, watched them for a few weeks, and reported them to Dave Linderud, Wisconsin DNR, in Alma. The pair at Maiden Rock, Wisconsin, was first reported at the Cargill elevator in Lake City, Minnesota, where Matt Solensky read their leg bands. Later the same day, this pair was seen across Lake Pepin at Maiden Rock, Wisconsin, by Matt, Mark Martell, and Bud Tordoff. Matt also read the bands on the birds at the two Minnesota cliffs and at Maassen Bluff.

. SPECIAL NOTES

--John Castrale points out that three of the eight Indiana nesting pairs had five-egg clutches this year (Inland Steel, NIPSCO Bailly, NIPSCO Michigan City).

--At the Colonnade building, Minneapolis, peregrines nested in a box on a 15th floor ledge over some slanted skylights below. The nest box was viewed at arm's length through a lightly-tinted window wall by the office workers inside. Over seven years, panels in the skylight were cracked, apparently by pea gravel kicked off the nest ledge. Replacement of three damaged panels cost \$21,000. We moved the nest box around the corner in summer, 1999, where falling gravel would cause no harm, but the building management by then had decided that the birds were a nuisance and must go. We pointed out that removing the box would not guarantee the immediate departure of the birds, but this changed no minds. The box came down in late March, 2000. Predictably, the adults continued to scrape on the bare granite ledge where the box had been. In time, an egg was laid, rolled off, and was pursued to the ground by the diving male, all in sight of the horrified loyal peregrine fans inside. A tense confrontation between upset building tenants and adamant building management ensued, finally resulting in an article and photos in the local newspaper. Angry citizens thereupon complained by letters to the editor, phone calls to the local chapter of the National Audubon Society, and even by anonymous phone calls to the home of the building manager. Someone finally realized that the building was owned by TIAA-CREF, holders of retirement accounts for groups in education and research, including, happily, the National Audubon Society. Quickly the situation was resolved in high-level talks in New York City. A nest tray was placed where the box had been. Meanwhile, four eggs had been laid, rolled off, and smashed. Before the window-washing bucket used to put the tray in place had reached the roof on May 1, the female peregrine was scraping in the new tray. She laid an egg the next day, followed by two more. All three hatched and fledged. Clearly it will not always be easy to make peregrines give up a nest site, particularly when the decision involves not just the birds but also their human fans.

--At three sites, adults were replaced during nesting. At WPL Edgewater Generating Station, Sheboygan, Wisconsin (pair 40), a new male displaced the old male and helped rear the young from eggs fertilized by the old male. The old male then moved to WEPCO Port Washington Power Plant, Port Washington, Wisconsin (pair 39), where he reared a brood with a one-year-old female, thus fathering seven young in one year.

At New Center, Detroit, Michigan (pair 51), the old female was injured when the young were about a month old; a new adult female replaced her and, after a couple of days, began to feed the young.

At the Multifoods Tower, Minneapolis, Minnesota (pair 8), the old female was killed in a fight after having laid four eggs. The new female did not incubate the eggs, which we removed dead after 20 days of futile incubation by the male. She then laid a new clutch of five, but only one hatched.

--At City Hall, Minneapolis, Minnesota (pair 9), three blocks from the Multifoods Tower, a brood of two fledged undetected until one was grounded and captured. Possibly the Multifoods male was paired bigamously with the City Hall female, but that is only conjecture. Neither adult at City Hall (both banded) has yet been identified. Although these two sites are close, they are separated vertically by about 40 stories and are shielded by tall buildings so the adults cannot see each other from their nest sites.

Table 1

PEREGRINE POPULATION GROWTH AND PRODUCTIVITY
IN THE MIDWEST, 1982-2000

Year	Hacked Young	Terr. Pairs	Nesting Pairs	Success Pairs	Young Fledge	Young/Territor Pair	Young/Nesting Pair	Young/Success. Pair
1982-1986	105	4	2	0	0	0	0	0
1987	73	6	4	1	3	0.5	.75	3.0
1988	87	13	8	6	16	1.2	2.0	2.7
1989	124	16	12	9	22	1.4	1.8	2.4
1990	103	23	16	13	33	1.4	2.1	2.5
1991	117	30	22	17	36	1.2	1.6	2.1
1992	107	37	32	23	68	1.8	2.1	3.0
1993	38	53	43	33	87	1.6	2.0	2.6
1994	66	62	51	41	116	1.9	2.3	2.8
1995	54	67	53	43	118	1.8	2.2	2.7
1996	33	77	58	48	127	1.6	2.2	2.6
1997	35	90	69	58	167	1.9	2.4	2.9
1998	55	99	84	74	205	2.1	2.4	2.7
1999	63	107	89	76	214	2.0	2.4	2.8
2000	32	129	101	83	243	1.9	2.4	2.9
Total	1092	813	642	525	1455	1.8	2.3	2.8

Note: "Young fledged" includes all young surviving to first flight from nest. Falcons hacked in Tennessee, Alabama, and Arkansas are excluded on geographic grounds.

SUMMARY OF PEREGRINE NESTING IN 2000

In the Midwestern United States, southeastern Manitoba, and the Lake Superior basin of Ontario in 2000, 129 pairs were known to be on territories, 101 pairs (78%) laid eggs, 83 pairs (83% of the nesting pairs) were successful in fledging 243 young, 2.9 young per successful pair, 2.4 per nesting pair, 1.9 per territorial pair. Of the 129 territorial pairs, 37 (29%) were on cliffs, 56 (43%) were on buildings, 23 (18%) on smokestacks, 13 (10%) on bridges. Thirty-nine of the 56 building pairs succeeded, fledging 108 young. Six of the 13 bridge pairs fledged 14 young. Seventeen of the 23 smokestack pairs fledged 61 young. Of the 37 cliff pairs, 23 are known to have succeeded, fledging 60 young. The other 14 cliff pairs either failed, did not nest, or the outcome is unknown.

In total, 243 young are known to have fledged in the wild this year, and an additional 32 young were hacked in our area, 23 in Iowa and 9 in Missouri.

2000 POPULATION STATUS

TOTALS FOR REGION:

83 successful pairs fledged 248 young (SP in list below)

18 pairs laid eggs but failed to fledge young (LE)

28 pairs, non-breeding or status not known (NB)

129 territorial pairs

NORTH DAKOTA

1. **NB-Commercial Bank, Fargo, Cass County, North Dakota.** Wick Corwin reports that an adult female (band b/r, believed to be 2/D) paired with an adult male (no bands seen) repeatedly visited a nest box in April and early May. By late May they had been replaced by a new pair, an adult male with a b/r band, not read, and a one-year-old female, probably b/g 9/D, fledged in 1999 at Omaha, Nebraska. This second pair was still present in late July. No nesting occurred.

MINNESOTA

2. **SP-North Central Life Tower, St. Paul, Ramsey County, Minnesota.** Fourteen-year-old Meg 12R again over-wintered here and nested for the thirteenth year with six-year-old four-toed Sota 8/*E, here for the third year. Four eggs were laid, three hatched and two males and a female fledged around June 15. Meg has now fledged 39 young in 13 seasons.

3. **SP-NSP High Bridge, St. Paul, Ramsey County, Minnesota.** Bob Anderson reports that three-year-old female Sophia *3/G paired with twelve-year-old Spanky 04T for the second year. Last year they nested on the High Bridge, this year in a nest box on the smokestack of the nearby power plant. Three young were fledged, two males and a female. One of the young males died near the nest site soon after fledging. Scott Anton and Jon Kerr helped Anderson with the banding. Spanky has now nested at four sites -- the Control Data building in Bloomington, about eight miles southwest, for two years, at the North Central Life building in St. Paul, 1.5 miles northeast, for six years, on the High Bridge last year, and now on a smokestack. His nests have been sequentially in a tray with gravel, a nest box, a steel girder, and a nest box again.

4. **SP-Colonnade Building**, Hwy. 100 and I-394, Minneapolis, Hennepin County, Minnesota. Eleven-year-old Kato 31T has nested here for nine years, this year paired with three-year-old female, Mendota *4/C, here for the second year. The nest box was removed on March 25 by building management, in the hope that the peregrines would leave. Instead, Mendota laid four eggs on the bare granite ledge where the box had been, each egg rolled off. After considerable public and private discussion, a tray with gravel was placed at the site where the nest box had been. Three more eggs were promptly laid in the tray, all hatched, and three young fledged, according to Rich Kaiser and Tom Christianson.

5. **SP-NSP Riverside Plant**, Minneapolis, Hennepin County, Minnesota. Bob Anderson, Raptor Resource Project, and John Tradewell, NSP, report that four-year-old female K/*V, third year at this site, paired with two-year-old male *3/*A, fledged at NSP Sherco. They produced four eggs and fledged three young, two males and a female. Adult male *T/G, fledged in 1997 at NSP Monticello, Monticello, Minnesota, was found badly injured at this site on March 27, presumably in a territorial fight. He subsequently died. Tradewell installed an elegant camera at this box, making it possible to monitor nesting activities and to read leg bands of the adults.

6. **SP-Norwest Financial Center**, Xerxes and I-494, Bloomington, Hennepin County, Minnesota. For the fourth year, a pair of adults appeared in late March and nested in the old tray. The female is unbanded, as in previous years, paired with a new male, Kramer *M/Y, fledged in 1998 at North Central Life, St. Paul, Minnesota. Four eggs were laid and three hatched. The male parent, Kramer *M/Y, was killed in a building collision near the nest site around June 10 when the three chicks were about 26 days old; the female reared the brood to fledging. Paul Budde again helped monitor this site.

[Ford Parkway Bridge, Minneapolis, Hennepin County, Minnesota. This site was not used in 2000, vacant for the second year.]

7. **SP-Mendota Bridge**, Fort Snelling State Park, Dakota County, Minnesota. The adults here were not identified this year. Three young, two females and a male, were banded with the help of Mark Pribula and his MN DOT snooper and crew. All three young fledged.

8. **SP-Multifoods Tower**, Minneapolis, Hennepin County, Minnesota. Thirteen-year-old male Will 04Y, here for the twelfth year, and female Brook V/U produced four eggs by April 2, but Brook V/U died after a fight, presumably with the female that immediately replaced her, *E/X, fledged wild in Des Moines, Iowa, in 1998. Will incubated the four eggs with no help from *E/X until they were candled by Mark Bolton, found to be dead, and removed on April 20. Female *E/X then laid five eggs but only one hatched despite normal-appearing incubation by both adults. We speculate that Will 04Y may have been unable to fertilize completely this late clutch after two months of courtship, copulation, and incubation, followed by the whole process again. The single chick, a female, fledged successfully. There have been five females at this site since 1987. Three, and possibly also the fourth, were killed in fights with the females that replaced them.

9. **SP-City Hall, Minneapolis, Hennepin County, Minnesota.** New site. Peregrines have used this old granite building, a peregrine's delight replete with ledges, towers, and cubby-holes, on a fairly regular basis over the past decade. Our assumption was that the birds seen here were the Multifoods pair, whose nest is only three blocks away. This assumption may have been true at times, but this year an unbanded newly-fledged female was picked up on the street at City Hall on July 3, banded, and released. When the young bird was returned to a roof of the City Hall, an adult peregrine protested. Ed Kowal and Jim Felicetta, building engineers, told us that intense falcon activity around the building had been obvious all spring, but that they dismissed it as defense of a feeding area. Two female young fledged. One was banded after being grounded at fledging. The other was grounded two weeks later and died from a severe case of trichomoniasis. The adult female has a silver band on the left leg (1807-348..), right leg bare. The adult male is banded but not yet identified. We have seen him near the site only once since the young fledged. The nest site has not yet been discovered.

Mark Martell suggests that the male at Multifoods may be paired bigamously with the City Hall female. If so, it would be the third case of bigamy in the Midwest and the only one where both females fledged young.

10. **SP-University Bridge, St. Cloud, Stearns County, Minnesota.** Al Grewe and Steve Thurne report that one young was fledged here this year. It was captured but injured during banding and was not releasable. The adults were not positively identified this year.

11. **SP-NSP Black Dog Plant, Eagan, Dakota County, Minnesota.** Bob Anderson (RRP), Chuck Huske (NSP), and Mark Danberg (NSP) report that four-year-old female Nora G/*V, here for the third year, and her unidentified adult mate fledged three female young around June 15. Female Nora G/*V is exceptionally aggressive in nest defense, to the point of possibly endangering herself, according to Anderson.

12. **SP-NSP King Plant, Bayport, Washington County, Minnesota.** Bob Anderson reports that female Mae 31V, eleven years old and nesting here for the eleventh time, paired with an unidentified male (b/r 0/?), probably her fourth mate. They produced four eggs by March 21 and fledged three young, two females and a male, in early June.

13. **SP-NSP Prairie Island, Goodhue County, Minnesota.** Ken Mueller, Dan Orr and Brad Giese of NSP and Bob Anderson report that seven-year-old female 7/1, here for the fourth year, paired with an elusive unidentified male. They fledged four young, three males and one female.

14. **SP-Cargill Elevator, Red Wing, Goodhue County, Minnesota.** Bob Anderson reports that a pair of unidentified banded adults nested in the nest box here for the first time, fledging one young. Anderson visited the site on June 28, but did not band the chick because it was too close to fledging.

15. **SP-NSP Monticello Plant, Monticello, Wright County, Minnesota.** The adults here were not identified, according to Dan Orr and Bob Anderson. The pair fledged four young, two each sex.

16. **SP**-Minnesota Power and Light Boswell Energy Center, Cohasset, Itasca County, Minnesota. An unbanded adult female paired with an unidentified male. They fledged four young, according to Daryl Councilman, MPL, and Bob Anderson. The young were not banded because of their advanced age and bad weather at the time of intended banding. One of the young was severely injured not long after fledging and was still in recovery at TRC in late July.

17. **SP**-Queens Bluff, Great River Bluffs State Park, Winona County, Minnesota. Dedrick Benz first reported this pair on March 6. Matt Solensky read their color bands on March 23. The male is a two-year-old, *E/W, hacked from a cliff at Effigy Mounds National Monument, Iowa, by Bob Anderson, Raptor Resource Project. The female is also two years old, *C/*P, hacked at Mason City, Iowa, by Lowell Washburn, Iowa DNR. One five-week-old young, probably a male, was first seen on the nest ledge on June 27. It fledged successfully. It was not banded, at the request of the MN DNR, to minimize activity at the nest site and improve the chances of success of this important river cliff nesting.

18. **SP**-Faith Bluff, John Latsch State Park, Wabasha County, Minnesota. Ray Faber discovered this pair on April 7. The male is unbanded and the female is Star *K/*5, fledged wild at Ford Parkway Bridge, Minneapolis, Minnesota, in 1998. The nest was in a box placed in a cave on the cliff in 1988. Faber first saw downy young on June 23. Three young fledged around July 10, not banded at the request of the MN DNR. There are three bluffs in this state park, named, from south to north, Faith, Hope, and Charity. The nest this year was on Faith. In 1986 and 1987, the nesting attempts, which failed, were on Hope.

19. **SP**-NorthShore Mining, Silver Bay/Pink Cove cliff, Beaver Bay, Lake County, Minnesota. Warren Lind and Nancy Smith report that a pair of adults nested for the second year in an old raven nest on the supporting beams of a conveyor belt at NorthShore Mining, a taconite plant about two miles northeast of Pink Cove. Neither adult is banded. Three young were fledged. They were not banded because the nest is inaccessible.

Each year, Minnesota North Shore peregrines are banded with the essential and much appreciated help of expert climbers from the Wolf Ridge Environmental Learning Center, Finland, Minnesota. This year, the climbers were Angela Borland, Julie Flotten, Peter Smerud, Lori Walewski, and Joe Walewski.

20. **SP**-Corundum Point cliff, Split Rock State Park, Lake County, Minnesota. Brad Johnson, Julie Flotten, and Joe Walewski finally found the nest site here after three years of searching. The adults were not identified. They fledged three young, two were banded when about 32 days old but the third was too frisky to risk catching.

21. **SP**-Palisade Head cliff, Tettegouche State Park, Lake County, Minnesota. The nest this year was on a ledge last used in 1991, northeast of the parking lot. The adult female is unbanded again, but the male is new to the site, with a red band indicating that he was hacked in Canada. Probably he is red 7/R, hacked at Sleeping Giant Provincial Park, Ontario, in 1994 and present in 1998 and 1999 at Kennedy Creek cliff,

about four miles northeast of Palisade Head. The Kennedy Creek site was not occupied this year. Four young were fledged.

22. **SP**-Manitou cliff, northeast of Little Marais, Lake County, Minnesota. Second year for this site. Again the female is unbanded, the male has a b/r band, but was not further identified. The brood fledged successfully, uncounted and, at the request of the property owners, not banded.

23. **LE**-Mayo Clinic, Rochester, Olmsted County, Minnesota. On March 31, male *3/*W was here with an unbanded adult female and a one-year-old female X/B, hatched in 1999 at Effigy Mounds National Monument, Iowa. On May 19, an unbanded adult female paired with male *7/K, hatched in 1998 in Mason City, Iowa, were found nesting on a graveled ledge on the Charter House, two blocks north of the Mayo Building. They were incubating three eggs, but none hatched. Male *3/*W was seen at the Cargill elevator in Lake City in September 1999 and at Maiden Rock cliff, Wisconsin, on May 4, where he settled with female *E/*W, fledged wild in 1999 at Cedar Rapids, Iowa. They did not nest this year.

24. **LE**-I-94 Mississippi River Bridge/Riverside Plaza, Minneapolis, Hennepin County, Minnesota. Albert Charles Bergmann reports on this pair, which nested, laid at least two eggs, and failed for the third year on the I-94 bridge when flooded out by rain. The same adults were present, female Phoebe, a six-year-old escapee from falconry in Kansas, and five-year-old male Pippin C/*5. If they re-nested, we did not find it. A nest tray was installed on the bridge by Mark Pribula and crew, MN DOT, in July.

25. **LE**-Space Tower, State Fairgrounds, St. Paul, Ramsey County, Minnesota. A nest box installed here in 1998 attracted a pair of falcons this year. The male was an unbanded adult. He was accompanied on May 10 by juvenile female Miranda W/C, fledged at NSP Monticello in 1999, but the site seemed to be deserted by late May. In early July, Mark Martell found two peregrine eggs with partially developed embryos (probably seven to ten days old) in the nest box. An unbanded adult male peregrine was found injured on nearby railroad tracks on June 23. He was banded and released in late summer after recuperation at TRC. Fifteen-year-old Harriet *P/*5 was found in debilitated condition from a protozoan infection (trichomoniasis) less than one mile from the fairgrounds on May 9. Harriet had nested for years in Chicago, been injured, probably in a territorial fight, in late January 1998, sent to TRC, and released in Minneapolis in late summer, 1998. When found in May, Harriet had a well-developed incubation patch and had recently ovulated. We speculate that Harriet had been paired with the unbanded male, had laid two eggs in the Space Tower nest box, and then was overwhelmed by trichomoniasis, perhaps not dealt with effectively by her aging immune system. The juvenile female was probably attracted by the unpaired male but was not yet ready to breed. Harriet is now living out her life on permanent display at TRC.

26. **LE**-Hull Rust Mine, Hibbing, St. Louis County, Minnesota. Norman and Delores Ebert report that a pair arrived here in late March and nested close to the previous nest sites. Both adults were unbanded. The female was not seen after the first week of July. No young were fledged, indicating that the attempt failed. On August 15, however, a young peregrine was seen chasing pigeons and perching in a tree in Hibbing, suggesting that another nest in the area fledged young.

27. **LE**-Bong Bridge, Duluth, St. Louis County, Minnesota. Dave Evans reports that after a lapse of a year, a pair nested again here, producing two eggs by late April. The female was incubating on May 16, but the nest failed by June 5. Evans noted that both adults were banded, but was not able to read their bands.

[Kennedy Creek cliff, Lake County, Minnesota. No peregrines were seen here this year. Male red 7/R, here in 1998 and probably 1999, may have moved to Palisade Head, where a red-banded male nested this year.]

28. **NB**-NSP Sherco Plant, Becker, Sherburne County, Minnesota. Dan Orr, NSP biologist, reports that nine-year-old female 36R was found dead at the site in early spring, probably killed by one-year-old female Julie W/V, fledged in 1999 at NSP King, Bayport, Minnesota. Julie W/V remained on the territory, unpaired early but joined by an adult male late in the season. Male D/C, nesting here in 1999, was killed a few miles west of the site in a collision with a car in early spring.

29. **NB**-Hwyl 61 bridge, Hastings, Dakota County, Minnesota. Single peregrines have been seen at this pigeon-infested bridge occasionally in the past several years. This year on March 23, Matt Solensky identified an adult male under the south end of the bridge as Smoke *3/*1, fledged wild in 1998 at NSP King, Bayport, Minnesota. On July 3, Bud Tordoff saw an adult male on the railroad bridge just downstream from the highway bridge and an adult female, Bern W/*D, on a high-line tower at the south end of the highway bridge. Bern W/*D was fledged wild in 1998 at NSP Sherco, Becker, Minnesota. No young birds were seen on July 3 and the adults gave no evidence of having nested.

30. **NB**-NSP Granite Falls, Granite Falls, Yellow Medicine County, Minnesota. Bob Anderson reports that two falcons visited the nest box here intermittently in early spring, but did not remain to nest.

31. **NB**-Champion International paper mill, Sartell, Stearns County, Minnesota. Peregrines were seen here again this year by Mike Asselin and Al Grewe, but there was no evidence of nesting in the nest box installed on a building roof. This site is 7.5 miles upstream from the University Bridge nest site in St. Cloud.

32. **NB**-Blatnik Bridge, Superior, Douglas County, Wisconsin / Duluth, St. Louis County, Minnesota. Dave Evans saw peregrines here several times over the season, but there was no evidence of nesting.

33. **NB**-Finn Church cliff, two miles northeast of Tofte, Cook County, Minnesota. A big recent slide of rock and dirt obliterated the nest ledge used for the past three years. Female Algoma 77V was seen here early; if she nested, the evidence was destroyed by the rockfall.

34. **NB**-Hat Point cliff, northeast of Grand Portage, Cook County, Minnesota. This site, successful for several years, was not visited this year in time to identify adults

or to count any young that may have fledged. On July 28, Dave Evans saw no peregrines in an hour spent on the cliff top.

WISCONSIN

35. **SP-Firststar Center, Milwaukee, Milwaukee County, Wisconsin.** Greg Septon reports that twelve-year-old female Sibella 20V, twelfth year at this site, and ten-year-old male Bill 74T, tenth year, produced four eggs by April 13, hatched three around May 12, and fledged two females and one male. Sibella has now fledged 37 young.

36. **SP-Landmark on the Lake, Milwaukee, Milwaukee County, Wisconsin.** Female Alice U/K, banded here as an adult in 1995 and age therefore unknown, paired again with ten-year-old Omni 76T, both birds in their seventh year at this site. Five eggs were laid April 12 to 18 and four hatched May 20. Two females and two males fledged around July 1, according to Greg Septon. Omni 76T was found injured here on July 13 and euthanized on July 21.

37. **SP-Froedtert Malt, Milwaukee, Milwaukee County, Wisconsin.** Greg Septon reports that eight-year-old Leopold C/D, six years at this site, paired with five-year-old female Raynie A/*H, third year at this site. They produced four eggs by March 27, all four hatched around April 28, and two females and two males fledged around June 11. Raynie is still exceptionally aggressive in nest defense.

38. **SP-WEPCO Oak Creek Power Plant, Milwaukee, Milwaukee County, Wisconsin.** Greg Septon reports that the male here is believed to be six-year-old Griffin 5/*D and the female is four-year-old Atlanta L/*C, here for the second year. The pair fledged four females around June 24.

[Hoan Bridge, Milwaukee, Milwaukee County, Wisconsin. This site, discovered in 1999, was not occupied by peregrines this year.]

39. **SP-WEPCO Port Washington Power Plant, Port Washington, Washington County, Wisconsin.** Greg Septon reports that two-year-old male Flaps 8/*T paired here with one-year-old female Whitney 6/*E, fledged last year at Froedtert Malt, Milwaukee. They produced three eggs and fledged three young, one female and two males. Flaps 8/*T earlier in the spring was paired with female Liberty E/*D at Sheboygan, Wisconsin, where he fertilized four eggs before being evicted by a new male, as yet unidentified. He therefore has the unique distinction of siring seven young in a single season at two locations, as a result of losing a fight!

40. **SP-WPL Edgewater Generating Station, Sheboygan, Sheboygan County, Wisconsin.** A new banded unidentified adult male displaced male Flaps 8/*T, who moved to Port Washington, and paired with four-year-old female Liberty E/*D. However, four eggs laid from March 30 to April 6 had already been fertilized by Flaps 8/*T. All four hatched May 7 to 9, both adults tended the young, and three females and a male fledged around June 16, according to Greg Septon.

41. **SP**-Busch Agricultural Resources Complex, Manitowoc, Manitowoc County, Wisconsin. Greg Septon reports that an unbanded adult male, as in 1998 and 1999, and four-year-old female Nerissa *5/R, Sibella's granddaughter, produced four eggs March 20 to 26, two hatched April 26 to 28, and one male and one female fledged around June 6.

42. **SP**-WPS Pulliam Power Plant, Green Bay, Brown County, Wisconsin. Greg Septon reports that an unidentified banded adult male, as in 1999, and three-year-old female *H/2 produced four eggs March 12 to 19, hatched all four April 22 to 24, and fledged four young, three females and a male, around May 31. This is the fifth year for nesting at this site.

43. **SP**-WEPCO Pleasant Prairie Power Plant, Pleasant Prairie, Kenosha County, Wisconsin. Greg Septon reports that two-year-old Breezer *R/*2 paired with an unidentified adult male. They produced four eggs by April 10, hatched three by May 10, and fledged two females and a male June 21. The partly eaten remains of an unbanded adult male, probably last year's male here, were found in the nest box on April 10.

44. **SP**-Dairyland Power Cooperative, Alma, Buffalo County, Wisconsin. John Thiel and Bob Anderson report that four-year-old female Alma *5/T paired with three-year-old male Gamma *T/P, fledged at NSP Prairie Island in 1997. They fledged four young, three males and a female. Gamma *T/P replaced male 4/*G, here the past three years, in a fight in early spring that left 4/*G injured. He was later released in La Crosse, Wisconsin, and paired with a new female (pair 47) at a new cliff site four miles north of Alma.

45. **SP**-Dairyland Genoa Power Plant, Genoa, Vernon County, Wisconsin. Bob Anderson and Brad Foss report that four-year-old female Scooter U/W paired with male V/W, certainly for the second year and probably for the third year. Four young were fledged, three males and a female.

46. **NB**-Maiden Rock cliff, Buffalo County, Wisconsin/Cargill Elevator, Lake City, Wabasha County, Minnesota. The elevator was visited by at least three peregrines in March through May, but the pair that showed most interest, adult male *3/*W and female *E/*W, settled on the Maiden Rock cliff, two miles away across Lake Pepin in Wisconsin. There was no nesting at the elevator in 2000 according to Tom Sexton. At Maiden Rock, the pair showed interest in a specific ledge and copulated, but did not nest. Female *E/*W was in nearly full juvenile plumage, except for her face, in April but by June 27 she was about half way through the molt to adult plumage. On July 16, an adult male was present on this cliff.

47. **NB**-Maassen Bluff (a.k.a. Jayhawk Bluff), two miles south of Nelson, Buffalo County, Wisconsin. New site. Gary Grunwald discovered this new cliff site. He watched the falcons all spring and reported them in late June to Dave Linderud, Wisconsin DNR, who in turn notified Bob Anderson, RRP. On July 18, Matt Solensky read the bands: the female was one-year-old Star of the North R/*1, fledged wild in 1999 at the Colonnade, Minneapolis, Minnesota; the male, five-year-old 4/*G, who nested the

past three years at Dairyland Cooperative, Alma, four miles south of Maassen Bluff. Bob Anderson says that male 4/*G was injured in a fight with male Gamma *T/P at Alma on March 14. The injured falcon was fished from the river by power plant workers and taken to Laura Johnson for treatment of a back wound. On March 18, he was released at Granddad Bluff in La Crosse, about 50 miles south of Alma. Several people at the plant watched to see if another fight would ensue, but none was seen.

Behavior of the pair seen on visits to Maassen Bluff in late June and July suggested that they gradually lost interest in the site and did not nest. Female Star of the North R/*1 was killed near the nest site on August 24 by a vehicle. A new adult female, purple band on right leg, moved into the territory on September 17, according to Gary Grunwald. Courtship flights by the male and visits to the “nest ledge” by both adults were seen by Grunwald through late September.

Maassen Bluff (official name, according to Dave Linderud; called Jayhawk Bluff by us in 1977) was the site of an experimental release of three peregrines in 1977 by The Peregrine Fund. Two of the newly-fledged young were killed by Great Horned Owls, the third was trapped and returned to Cornell University for release in the East. Five years passed before the availability of young peregrines from Lynn Oliphant at the University of Saskatchewan made possible the next midwestern release, five birds at Weaver Dunes, near Kellogg, Minnesota, in 1982.

48. **NB**-Racine County Courthouse, Racine, Racine County, Wisconsin. Greg Septon reports that two banded immature falcons were seen here in spring. The male is Donny M/E, fledged last year in Manitowoc, Wisconsin. They did not nest.

49. **NB**-Alliant Energy, Cassville, Grant County, Wisconsin. Bob Anderson reports that an adult male and a banded one-year-old female were present here through the spring, but did not nest, probably because of the female’s immaturity.

[La Crosse, La Crosse County, Wisconsin. Pat Manthey, WI DNR, saw two peregrines here on August 19 and read their bands: adult male b/r *3/*5, hatched at Mason City, Iowa, in 1998; female b/g Pat X/B, hatched at Effigy Mounds, Iowa, in 1999, already in adult plumage. The male was eating and the female was begging. Maybe this is a new pair that has settled in La Crosse.]

MICHIGAN

50. **SP**-Ameritech/Book Building, Detroit, Wayne County, Michigan. Judith Yerkey, Detroit Peregrine Coordinator, and Tim Payne, MI DNR, report that four-year-old Marical A/*C paired with a new unidentified banded adult male when Pop disappeared between March 3 and 7. Three young were fledged, two males and a female. Pop’s carcass was found in July on a building roof four blocks south of the Book Building. Most likely he was killed in a fight with the new male.

51. **SP**-New Center/Fisher Building, Detroit, Wayne County, Michigan. Judy Yerkey and Tim Payne report that seven-year-old female H 6/H, seventh year at this site, paired again with six-year-old Speedster A/*6, his fifth year at the site. Two eggs

hatched around April 25. On May 22 female H 6/H was injured and was replaced on June 1 by female 4/G, an adult of unreported age from New York state. After a couple of days, 4/G began to feed the two young, both fledging around June 8.

52. **SP**-Monroe Edison Power Plant, Raisin River, Monroe, Monroe County, Michigan. Judy Yerkey and Tim Payne report that five-year-old female, Monroe E/K, here for the third year, paired with five-year-old male, Leopold N/*4, here for the fourth year. Their first clutch was lost in a heavy rainstorm. They re-nested in April and fledged one young male.

53. **SP**-Porcupine Mountains Wilderness State Park, five miles west of Silver City, Ontonagon County, Michigan. Barb Rogers, Joe Rogers, and Ethan McJames report that an unidentified pair fledged three young around the first week in July. Two female young were banded on June 23; a young male was too mobile to risk capturing.

54. **SP**-International Bridge, Sault Ste. Marie, Chippewa County, Michigan. Brian Ratcliff reports that a pair, male with red band ?/*K, defended a nest site on June 6 on the U.S. side of the bridge. Joe Rogers and his crew visited the site on June 20 but did not locate the single young that had been seen earlier in the nest. Later, it was seen flying at the bridge. It was not banded.

55. **LE**-State Capitol, Lansing, Ingham County, Michigan. Mark Dietrich reports that three-year-old female Stelco, black 4/S, paired with an unbanded adult male for the third year. At least two eggs were laid on pigeon dung on a poor site on the state capitol building. As happened last year, the eggs fell and the nest was abandoned. A nest box or tray has yet to be installed.

56. **NB**-Grand Island, north of Munising, Alger County, Michigan. Joe and Barb Rogers found an apparently nesting pair on the northwest side of the island but were unable to reach the site to determine the outcome because of logistical problems.

57. **NB**-Whittier Apartments, Detroit, Wayne County, Michigan. Nine-year-old Sunrise 55R, at this site for the sixth year, continued her bizarre pairing behavior. Her mate in 1999 was her two-year-old son Cinder *5/C, her tenth mate. He disappeared at the end of January. Five more males paired with her for periods of a couple of weeks to a month, each soon disappearing. As of July, she seemed to be alone at her nest site, although seen flying with potential mate #15. The succession of males this year included three adults and two one-year-olds, the latter from Monroe, Michigan, and Fort Wayne, Indiana, according to Judy Yerkey.

58. **NB**-Grand Haven Board of Light and Power, Grand Haven, Ottawa County, Michigan. John Mills reports that a pair of peregrines visited a nest box on a smokestack here fairly regularly through the spring but did not nest. In July, only a single bird was present.

[Pictured Rocks National Lakeshore, near Munising, Alger County, Michigan. Joe Rogers reports single peregrines seen here twice during the nesting season, but no evidence of nesting or of a territorial pair.]

[Trap Hills, Ontonagon County, Michigan. Joe Rogers reports that no peregrines were seen here this year in many hours of observation.]

[Keweenaw Peninsula, Keweenaw County, Michigan. Reports of peregrines in this area reach Joe Rogers regularly, but no nesting pairs have been found. The area has good cliffs and inland lakes and marshes.]

SOUTH DAKOTA

[Zip Feed Mill, Sioux Falls, Minnehaha County, South Dakota. Charles Patterson and Tim Keyser report that three-year-old male Top Gun *H/C, hatched here in 1997, was seen at various sites all spring, but there was no evidence of pairing or nesting.]

NEBRASKA

59. **NB**-Woodmen Tower, Omaha, Douglas County, Nebraska. John Dinan and Chris Thody, Nebraska Game and Parks Commission, reports that six-year-old male Zeus X/R and a new unbanded female were seen here March 16. Zeus X/R, in his fifth year here, was still present in mid-September, but not paired. There was no evidence of nesting.

IOWA

60. **SP**-Firststar Bank, Cedar Rapids, Linn County, Iowa. Kim Bogenschutz, Iowa DNR, and Jodeane Cancilla, Macbride Raptor Project, report that two-year-old female *S/*5, fledged in Des Moines, Iowa, in 1998 and nesting here for the first time, and eleven-year-old male 64T, here for the eighth year, produced four eggs and fledged four young.

61. **SP**-American Republic, Des Moines, Polk County, Iowa. Kim Bogenschutz, Pat Schlarbaum, and Bruce Ehresman, Iowa DNR, report that nine-year-old female 13R, nesting here for the eighth year, paired again with ten-year-old male 93T, his seventh year at this site. They produced four eggs and fledged two male young.

62. **SP**-Lansing cliff/Alliant Lansing, Lansing, Allamakee County, Iowa. Bob Anderson, Raptor Resource Project, reports that three-year-old female Joanne *6/V paired again with three-year-old male Alpha *T/M, both nesting here for the second year. In 1999, they nested in a box on the smokestack of the power plant. This year, Anderson placed a box on the cliff just yards from the smokestack. The pair vacillated between sites but finally settled on the cliff box, from which they fledged four young, three males and a female around June 27. The young female was later found dead, trapped in the bottom of the smokestack. These were the first young peregrines known to fledge from a cliff nest in the Mississippi River valley since the extirpation of the original population by DDT in the 1950s and early 60s.

ILLINOIS

63. **SP**-125 S. Wacker, Chicago, Cook County, Illinois. Female Dory *C/4, here for the second year, paired with fourteen-year-old Jingles, laid four eggs, and fledged four young, according to Mary Hennen, Chicago Academy of Sciences.

64. **SP**-5821 Broadway, Irving Park, Chicago, Cook County, Illinois. Mary Hennen reports that female Eleanor 2/8, now seven years old, paired for the seventh year with ten-year-old male Franklin 95T. They produced four eggs and fledged two young.

65. **SP**-Unitarian Church, Hyde Park, Chicago, Cook County, Illinois. Mary Hennen reports that nine-year-old female Magnolia 22R and ten-year-old male Orion 77T nested here for the fourth year on a decorative ledge with no nest box or gravel tray. Four eggs were laid, all hatched, and four young fledged.

66. **SP**-Jackson Street Prison, Chicago, Cook County, Illinois. An unidentified adult pair (both with black/red bands) nested in an inaccessible area here for the third year. They fledged three young, two of which were grounded and banded, according to Mary Hennen.

67. **SP**-University of Illinois, Chicago, Chicago, Cook County, Illinois. Second year for this site. Three-year-old female Rosie *6/D, fledged in Milwaukee in 1997, and an unidentified banded b/r male produced four eggs, hatched three, and fledged three young, one after a spell in rehabilitation.

68. **SP**-Execu-Stay Marriot/Allerton Hotel, Chicago, Cook County, Illinois. Mary Hennen reports that ten-year-old female Oog 62V and eleven-year-old male Fast Eddy 88Y nested this year on the Marriot. They fledged three young, one of which died in a building collision shortly after fledging.

69. **SP**-Union Electric power plant, Venice, Madison County, Illinois. New site. Mike Cooke reports an unidentified pair, each with a silver band only and therefore probably the pair nesting previously on the McKinley Bridge, 300 yards away, fledged four young, three females and one male.

70. **LE**-First United Methodist Church, Evanston, Cook County, Illinois. Second year for this site. Three-year-old female Zoom *4/H and three-year-old male *P/M produced three eggs that did not hatch, according to Mary Hennen.

71. **LE**-Lakeview, Chicago, Cook County, Illinois. Mary Hennen reports a pair here that hatched at least one young, but none fledged.

INDIANA

72. **SP**-One Summit Center, Fort Wayne, Allen County, Indiana. Six-year-old female Freedom U/*8, fifth year nesting at this site, paired again with five-year-old male Roosevelt R/*4, his fourth year here. They produced four eggs by mid-March, hatched all four around April 21, and fledged four young, three males and a female, by the end of May, according to John Castrale, Indiana DNR. John Winebrenner and John Meyer watch this site.

73. **SP**-Market Tower, Indianapolis, Marion County, Indiana. John Castrale reports that seven-year-old male Kinney 7/*3 paired for the sixth year here with eight-year-old female Scout 28W. This year egg-laying began the third week of March. Four eggs were laid, three hatched by the end of May, probably one female and two males. They fledged beginning June 7. Diane Doyle and Richard Kinnett keep track of these birds.

74. **SP**-Cline Avenue at Lake Michigan, East Chicago, Lake County, Indiana. This year a new female for this site, five-year-old Laurie E/*H, paired with eight-year-old male Marty 53Z, his seventh year at this site. Laurie E/*H nested the past two years near Wheatfield, Indiana. Back-dating places egg-laying in late March, hatching in late April. Two male chicks fledged by June 8, according to John Castrale and Joy Bower.

75. **SP**-Inland Steel, East Chicago, Lake County, Indiana. John Castrale reports that eight-year-old female Courtney 25W paired for at least the fifth year here with seven-year-old male Glory 2/*2. They produced five eggs by April 5 in an inaccessible spot. Four hatched beginning May 5, but only two fledged in early June, the losses perhaps caused by bad weather. The chicks were not banded. Robert Page reports on this site.

76. **SP**-U.S. Steel, Gary, Lake County, Indiana. Twelve-year-old female Suzy Q 52P and ten-year-old male Vulcan 79T nested again, the eleventh year for the locality and Suzy Q, the eighth for Vulcan. They produced four eggs by April 2, hatched two by May 8, and fledged two young in mid-June, according to John Castrale and Ted Weitzel.

77. **SP**-NIPSCO Bailly Plant/Bethlehem Steel, Porter, Porter County, Indiana. Five-year-old female Barb E/L, her third year here, and six-year-old male Bailly 4/9, his fifth year here, nested under a conveyor belt, producing five eggs in early April; four hatched around May 3, and three females fledged in mid-June, according to John Castrale and Mel Waldo. This pair switches between a smokestack box (1996, 98,99) and a steel mill (97, 00) a mile apart.

78. **SP**-NIPSCO Schahfer Plant, Wheatfield, Jasper County, Indiana. John Castrale and Barry Matzat report that a new unidentified b/r banded female and four-year-old male Rollin K/*8 had four eggs by April 18, hatched all four starting May 18, and fledged two males and two females at the end of June.

79. **SP**-NIPSCO Power Plant, Michigan City, LaPorte County, Indiana. John Castrale and John Derouin report that a new female, Cloud Dancer *B/*G, fledged wild in 1998 in Green Bay, Wisconsin, and five-year-old Uncle Billy 3/*B, his fifth year here, produced five eggs in early April; three hatched in early May, and three females fledged by mid-June.

80. **NB**-Kokomo Gas and Power, Kokomo, Howard County, Indiana. Peregrines were seen here intermittently from January through spring, with a courting pair present for a few days in April, according to Wayne Yoder, Phil Kelly, Ed Braun, and John Castrale. The male had a b/r band. The banding status of the female was not determined. On April 19, no falcons were present and the nest box had no scrape.

OHIO

81. **SP**-Commodore Perry Motor Inn, Toledo, Lucas County, Ohio. Dave Scott and Bill Roshak, Ohio Division of Wildlife, report that three-year-old female *7/X and three-year-old male Fury *G/A, both here for the second year, produced four eggs and fledged three males from the nest box that was relocated last year to accommodate repairs but returned to its original position before this season.

82. **SP**-Terminal Tower, Cleveland, Cuyahoga County, Ohio. Dave Scott and Steve Wilcox, Ohio Division of Wildlife, report that eight-year-old female Zenith 23W,

nesting here for her eighth year, paired with a new male, Buckeye *R/K, fledged wild in 1996 in Columbus, Ohio. Buckeye *R/K was at Case Western Reserve in Cleveland in 1998 and 1999, but did not nest successfully there. Four eggs were produced, three hatched, and three male young fledged in late June. This site was on the internet this year.

83. **SP-LTV Steel**, Cleveland, Cuyahoga County, Ohio. Eight-year-old male A/2, here for the third year, paired for the second year with six-year-old female Star 5/X. Four eggs were laid by March 27, but Star 5/X died on April 10. The eggs were taken to the Cleveland Zoo and hatched in an incubator. The four young were moved when about five days old to Akron, where the nest on the First Merit Bank had failed. All four young fledged, three females and a male, according to Steve Wilcox and Dave Scott.

84. **SP-Hilliard Road Bridge**, Lakewood, Cuyahoga County, Ohio. Dave Scott and Sara Jean Peters, Ohio Division of Wildlife, report that six-year-old female Athena 5/V and seven-year-old male Buckeye 3/1 (identification not confirmed this year), used this site for the third year. The pair produced at least three eggs that hatched around May 1. The assistance of the Ohio Department of Transportation allowed one male and two female chicks to be banded in mid-May. All three fledged by mid-June.

85. **SP-Bohn Building**, Cleveland, Cuyahoga County, Ohio. Three-year-old male Wizard S/*8, here for the second year (identification not confirmed this year), paired with a new female, Clearpath *5/A, fledged wild in Detroit in 1997. Four eggs were laid, all hatched and four young fledged, two of each sex. In 1999, Clearpath battled with Zenith at the Terminal Tower in Cleveland in mid-March but was evicted. She then moved to Case Western Reserve where she nested unsuccessfully with Buckeye *R/K, who this year nested at Terminal Tower (pair 82), according to Sara Jean Peters and Dave Scott, Ohio Division of Wildlife.

[Case Western Reserve University, Cleveland, Cuyahoga County, Ohio. This site was inactive this year. The adults here last year nested elsewhere in Cleveland this year, female Clearpath *5/A at the Bohn Building (pair 85) and male Buckeye *R/K at Terminal Tower (pair 82), according to Dave Scott and Sara Jean Peters, Ohio Division of Wildlife.]

86. **SP-Rhodes State Office Tower**, Columbus, Franklin County, Ohio. Dave Scott and Donna Daniel, Ohio Division of Wildlife, report that two-year-old female, Katie *B/*U, here for the second year, paired with the resident male Bandit (unbanded, but identity presumed by plumage and behavior), here for the seventh year. Four eggs were laid and four young fledged by mid-June, two of each sex.

87. **SP-PNC Bank**, Cincinnati, Hamilton County, Ohio. Dave Scott and Rick Jasper report that ten-year-old male Falcor 29X paired with two-year-old female Princess *B/*S, fledged wild at Manitowoc, Wisconsin in 1998. Three eggs were laid, two hatched and both young fledged by mid-June, a male and a female.

88. **SP-Miami Fort Station**, Cincinnati Gas and Electric, Cleves, Hamilton County, Ohio. This power plant, located 20 miles west of Cincinnati, attracted a pair of peregrines for the fourth year. The male is six-year-old River Ace 7/*A and his mate, new this year, is female Mary Ellen *B/*B, fledged wild in 1998 at Froedtert Malt,

Milwaukee, Wisconsin. Four eggs were laid, all hatched, and three males and a female fledged at the end of May, according to Dave Scott and Rick Jasper. One young was found dead near the nest site in late July.

89. **LE**-Liberty Bank, Dayton, Montgomery County, Ohio. Dave Scott and Rick Jasper, Ohio Division of Wildlife, report that seven-year-old female Baltimore 7/D paired again with ten-year-old male Mercury 21X (identification not confirmed this year) at this new location, having moved from the demolished Lazarus Building. The pair produced four eggs that hatched by May 12. The young were all lost before two weeks old, most likely to heavy rain.

90. **LE**-First Merit Bank, Akron, Summit County, Ohio. Four-year-old female J.P. *G/3 and five-year-old male Bandit 3/*P, both here for the fourth year, produced four eggs by March 24 but the eggs failed to hatch. Four small young from LTV Steel in Cleveland, hatched at the Cleveland Zoo, were moved here May 2 and the three females and a male were raised to fledging.

91. **LE**-Cleveland Clinic, Cleveland, Ohio. Male Coke C/Z, fledged wild in 1999 at LTV Steel, Cleveland, paired with two-year-old female Chesapeake *P/*S, banded when rescued from Chesapeake Bay in 1998. Two eggs were laid but the nest failed in incubation.

92. **LE**-Cuyahoga River I-90 Bridge, Cleveland, Ohio. New site. An unbanded adult male and female black *K/O, fledged wild in 1998 at Niagara Falls, Canada, produced three eggs but failed in incubation. The nest was on a steel girder with inadequate substrate. After the nest failed, a tray with gravel was installed with the help of the Ohio Department of Transportation.

93. **NB**-Bank One, Lima, Allen County, Ohio. Dave Scott and Bill Roshak report that a new unbanded female and male Orrville black 2/C, wild-produced in London, Ontario, in 1996, were here until late April. They were seen again in June but did not nest.

94. **NB**-Bank One, Canton, Ohio. Male Erie *T/W was seen with an unbanded female early in the spring, but there were few sightings after April. No evidence of nesting.

95. **NB**-Mary's Church, Sandusky, Ohio. An unidentified male and a b/r banded female were seen here but apparently did not nest.

96. **NB**-Dayton Power and Light, Aberdeen, Ohio. An unidentified pair was seen near this power plant and a nearby bridge over the Ohio River, but there was no evidence of nesting.

KANSAS

[Kansas Power and Light, Topeka, Shawnee County, Kansas. Joanne Brier reports that peregrines were seen here twice in April, with no evidence of nesting.]

MISSOURI

97. **SP**-Commerce Tower, Kansas City, Jackson County, Missouri. Laurie Brown, Missouri Department of Conservation, report that an unidentified adult pair (male

probably 39X, but not confirmed) nested here, produced four eggs, hatched three by May 10, and fledged two young. One was injured and banded, the other was not banded because the nest site is inaccessible. This was the fourth successful peregrine nesting at this site.

98. **SP**-Chase Park Plaza, St. Louis, St. Louis County, Missouri. Eight-year-old female 2/3, nesting here for the eighth year, paired with eight-year-old male 73R, his fourth year at this site. Three young males fledged, according to Mike Cooke.

99. **LE**-Interco Building, Clayton, St. Louis County, Missouri. Mike Cooke reports that female R/*A paired again with male 2/*Y. When two eggs had been laid, male 2/*Y was killed, apparently by a new unbanded male. The female carried on, laying two more eggs. Only one egg hatched and the chick died at four days of age.

100. **LE**-St. Louis University Hospital, St. Louis County, Missouri. New site. Mike Cooke reports that an unbanded juvenile female, paired with a male (either *K/Y or *K/D) hatched in St. Louis in 1997, laid three eggs in an inaccessible gutter. The nest failed. A nest box will be installed in the fall.

[McKinley Bridge, St. Louis, St. Louis County, Missouri / East St. Louis, Madison County, Illinois. The silver banded pair (pair 70) that nested here from 1996 through 1999 apparently moved 300 yards this year to the Union Electric power plant in Venice, Illinois.]

KENTUCKY

101. **SP**-Ohio River Kennedy Bridge (I-65), Jeffersonville, Indiana/Louisville, Jefferson County, Kentucky. Laura Burford reports that an unidentified pair of adults fledged four young in late May. The young were not banded.

102. **SP**-Louisville Gas and Electric Company (LG&E), Bedford, Trimble County, Kentucky. Laura Burford reports that three-year-old female Natasha *6/Y, fledged wild in 1997 at Toledo, Ohio, paired with three-year-old male Greyfire *K/V, hatched at Calloway, Missouri, in 1997. They produced four eggs, one hatched, and one female young fledged on June 11.

103. **LE**-Kentucky Utilities Ghent Station, Ghent, Carroll County, Kentucky. Two adult peregrines were defensive here all spring, according to Laura Burford, but did not succeed in fledging young. Egg-laying here is assumed but not confirmed..

MANITOBA

Bill Koonz and Tracy Maconachie, Manitoba Wildlife Branch, supplied the following information on Manitoba falcons

104. **SP**-McKenzie Seed Building, Brandon, Manitoba. Probably the same pair of nine-year-olds nested here for the seventh year, female Phoebe black 0/*B (ID confirmed) and male Mufasa red *7/3 (ID not confirmed). Four eggs were laid in late April, all hatched on May 28 and 29, and four young fledged, two males and two females

105. **LE**-Delta Winnipeg Hotel, Winnipeg, Manitoba. Eleven-year old female Madame 52V paired with a male thought, but not confirmed, to be four-year old Simba black 2/7. At least two eggs were laid, one hatched on May 29, but the chick was dead

on June 12 after a six-day spell of cold wet weather. The nest site used this year was on the 13th floor; east side; in past years the nest was in a box on the 31st floor, west side.

ONTARIO

Ted Armstrong, Ontario Ministry of Natural Resources, Brian Ratcliff, Thunder Bay Field Naturalists, and Steve Scholten sent the following summary of peregrine nesting along the Ontario North Shore of Lake Superior. Brian Ratcliff organized a team of climbers again this year. They banded 27 young falcons at 10 cliff sites, most reached by hiking and climbing and some by helicopter. Many of the Ontario sites are much more difficult to reach than most sites in the Midwestern U.S. The climbers this year were Frank Pianka and other members of the Alpine Club of Canada.

106. **SP**-Mt. McKay, Thunder Bay, Ontario. A pair was seen here on March 31. The male is unbanded, the female has only a silver band, right leg. Four young were banded on June 24 and fledged, three females and one male.

[Turtle Head, Pie Island, Ontario. On June 7 and 29, single adults were seen near the 1999 nest site, nesting not confirmed.]

[Pie Island, Perch Lake. A single adult was seen on June 7, at the nest site used in 1996 and 1997.]

107. **SP**-Pie Island, Greenstone Point. New site. On a helicopter flights on June 7 and 29, Brian Ratcliff saw a banded adult female peregrine with four young.

108. **SP**-Squaw Bay, Ontario. An unbanded male and a banded unidentified female were seen on April 12. On June 26, three young were banded, two females and a male.

109. **SP**-Squaretop Mountain, Ontario. Female red B/9, hatched at Killarney ON in 1993, paired with an unidentified male. On June 23, two chicks about 24 days old were banded. The previous day, June 22, female red B/9 was killed in a collision with a building.

110. **SP**-Mink Bay, Ontario. New site. Brian Ratcliff reports that three young, two females and a male, were banded here on June 28,

111. **SP**-NW Mollie Mountain, Ontario. On July 6, Brian Ratcliff and his crew banded two male chicks here. Neither adult was identified.

112. **SP**-Copper Cliff Road West, Ontario. A banded female and an unidentified male fledged three young, two males and a female, banded July 7.

113. **SP**-Thunder Cape, Sleeping Giant Provincial Park, Ontario. Female Pathfinder b/r *G/*4, fledged wild in 1997 at Pink Cove, Beaver Bay, Minnesota, paired with male black 02X, fledged wild in 1990 at Palisade Head, Minnesota, and first seen here in 1995, produced two female young, banded June 29.

114. **SP**-Whitefish Lake, Ontario. An unbanded adult male and an unidentified female were seen here on April 20. On June 25, four chicks were banded, three males and a female.

115. **SP**-Nipigon River Mouth, Nipigon, Ontario. A pair, male not banded, was seen here on June 7 and June 17. Three chicks were banded on July 3, two males and a female.

116. **SP**-Old Woman Bay, Lake Superior Provincial Park, Ontario. A pair was seen on April 13, incubation on May 22, and two chicks about 23 days old were seen on June 19.

117. **SP**-Devil's Warehouse Island, Lake Superior Provincial Park, Ontario. An unidentified pair had three young here, about 20 days old, on June 19.

118. **SP**-Pukaskwa Point, S. of Pukaskwa National Park, Ontario. New pair. Three-year-old adult male black 2/0, fledged in 1997 at Devil's Warehouse Island, and an unidentified black banded female had one chick about 18 days old on June 18. It was not banded.

119. **SP**-Havilland Bay, North of Sault Ste. Marie, Ontario. On June 19, one adult and four chicks about 26 days old were seen by Brian Ratcliff from a helicopter.

120. **SP**-Red Sucker Cove, Marathon, Ontario. Female black 2/Y, fledged wild in 1997 at Thunder Cape, Sleeping Giant Provincial Park, and an unidentified adult male fledged one female chick, banded on June 30, according to Brian Ratcliff.

121. **LE**-Mt. McRae, about three km from Mt. McKay, Thunder Bay, Ontario. An unidentified pair was seen on April 12. On June 17, the female was still incubating. The nest was abandoned and one egg was collected on July 13.

122. **LE**-Pie Island, Le Pate. A pair was seen on June 7 and 29, the female sitting tight on the nest on both days.

123. **NB**-Robertson Lake, near Goulais River, Ontario. A territorial pair was seen on April 20 and a single adult on June 13.

124. **NB**-Pie Island, East Side, Ontario. On June 7, a pair was seen, Outcome not known.

125. **NB**-S of Adam's Apple, Sleeping Giant Provincial Park. New site. A pair was seen on June 7 from a helicopter, but not when checked on June 29.

126. **NB**-Kama Bay, Ontario. On June 7, a pair showing strong territorial defense was seen, but no proof of nesting was seen in a visit on June 17. One adult has a red band, indicating that it was hacked.

127. **NB**-Richardson Harbor, Pukaskwa National Park, Ontario. New site. A territorial pair was seen here from a helicopter on June 18.

128. **NB**-Cliffs S or Lomond River, Ontario. New site. A pair was seen on June 7 from a helicopter and one adult on July 2.

129. **NB**-Flatland Harbor, Ontario. New site. A pair was seen on April 24 and 26; single birds were seen June 7, July 2, and July 11.

PEREGRINE RELEASES IN 2000

Iowa

Dubuque, Dubuque County. Seventeen peregrines from South Dakota Raptor Trust, Lance Christensen, and Mark Bolton, 11 males, 6 females, were hatched here in four groups banded on June 23, June 27, July 5, and July 12. All survived to dispersal, according to Lowell Washburn, Iowa Department of Natural Resources, and Irene Berry, chief hatch site attendant.

MEC Louisa, Louisa County. Six male peregrines, from Mark Bolton, hatched here from a power plant roof were released on July 25, according to James Haack, MidAmerica Energy, and Lowell Washburn, Iowa DNR. All survived to independence.

Missouri

Three sites, vicinity of St. Louis, St. Louis County. Nine young from Walter Crawford, World Bird Sanctuary, were hatched in the area, according to Mike Cooke.

In sum for 2000, 243 young were fledged by wild pairs and 32 young were released from captive pairs, for a total of 275.

GENETIC ANALYSIS

We continued collecting blood in 2000 from all released young and from all wild young banded in the U.S., and from whatever wild breeders were handled. The goal is to measure inbreeding, outbreeding, genetic variation, changes in occupancy of territories, dispersal of adults and young, success of the different genetic stocks introduced, and long-term development of genetic structure in the new Midwestern population.

The peregrine blood samples collected over the years uniquely represent the history of the Midwest population. Only a handful of study skins and skeletons, acquired randomly, have been preserved, in contrast to the nearly full coverage of blood samples available. Sophisticated as current techniques of blood analysis may seem today, they will be considered primitive in a few decades. The blood specimens are in the permanent tissue collections at the Bell Museum of Natural History, University of Minnesota, where they are available for genetic and other analyses in the future.

PLANS FOR THE FUTURE

Annual percentage increases in territorial pairs in the U.S. part of the Midwest from 1987 through 2000 show the rapid early growth and recent slower growth typical of new populations. This year, however, a big increase in new pairs in Ontario obscures the leveling off elsewhere. It appears that a plateau in number of territorial pairs in this area will not be reached for several more years.

Year	Pairs	Increase	% increase
1987	6		
1988	13	7	117%
1989	16	3	23%
1990	23	7	43%
1991	30	7	30%

1992	37	7	23%
1993	53	16	43%
1994	62	9	17%
1995	67	5	8%
1996	77	10	15%
1997	90	13	17%
1998	99	9	9%
1999	107	8	8%
2000	129	22	21%

The collective prediction made in the 1998 report was that by 2008, roughly 192 pairs would be on territories in the Midwest. At that time, this seemed to us almost unreachable. Today, however, we are more than a third of the way there in only two years. The surprising appearance of five pairs on river cliffs this year raises the possibility of perhaps a dozen river cliff pairs in another two years, and perhaps as many as 18 to 20 at carrying capacity. Every earlier prediction of peregrine population growth in the Midwest has turned out to be too conservative. We will just have to wait to see if the current prediction of 192 pairs is also too conservative.

Enthusiasm for peregrine management has already diminished at a few sites where aggressive individual birds pose a threat to people. At any site where peregrines and people are in close regular contact there is always the possibility that a non-aggressive bird will be replaced by an aggressive individual. Removal of troublesome pairs may not be easy, as shown at the Colonnade in Minneapolis this year. The general public, as well as building managers, have a stake in management decisions affecting urban pairs.

We need to continue to try to:

- Identify all breeders.
- Band all wild young produced.
- Collect and analyze blood from all young and from any adults handled.
- Appropriately manage pairs nesting on man-made structures.
- Monitor the newly-established peregrines on the river cliffs and on suitable cliffs elsewhere in the region.
- Collect, coordinate, and circulate information among Midwest peregrine workers through reports, meetings, and regular informal contacts.

ACKNOWLEDGMENTS

The Midwest Peregrine Project is a cooperative effort involving many people and organizations. The University of Minnesota provides the overall coordination of the project through Pat Redig, Mark Martell, and Matt Solensky of the Raptor Center and Bud Tordoff of the Bell Museum of Natural History and the Department of Ecology, Evolution, and Behavior. We are able to maintain our database on peregrines, which is

the basis of the various reports you receive, through the enthusiastic cooperation of people interested in peregrines in the 13 U.S. states and two Canadian provinces in our area. We thank all of you who have sent us information. John Castrale prepared the graphs in this report and detected many inconsistencies in the database. We are also grateful to those who read parts of an early draft of this report for help in detecting errors and omissions. Please let us know about mistakes that we missed.

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- BCED Minnesota
- Big Game Club Special Projects Foundation
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- Raptor Resource Project
- U. S. Fish and Wildlife Service
- U. S. Forest Service
- Wolf Ridge Environmental Learning Center

Each cooperating state or province has, in addition, its own list of cooperators. Falcons for release were obtained from the falcon breeders listed below.

BREEDERS SUPPLYING PEREGRINES FOR 2000 RELEASES

- Mark Bolton, Hugo, Minnesota (Dubuque and Louisa, Iowa, releases)
- Walter Crawford and Mike Cooke, World Bird Sanctuary, St. Louis, Missouri (St. Louis releases)
- Victor Hardaswick and Don Hunter, South Dakota Raptor Trust, Centerville, South Dakota (Dubuque, Iowa releases)