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MIDWEST PEREGRINE FALCON RESTORATION, 1997 REPORT

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NOTICE: All peregrines banded in the U.S. Midwest in 1997 wear a bicolored band, black over red, 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 while wild-produced birds get a black band, in addition to the usual silver USFWS band.

Many of the black/red bands have either the upper (black) or lower (red) character 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 both combinations are in use (H/4 and 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.

We have noticed that the red part of the black/red bands fades badly in a couple of years (it is not clear if all bands fade or only some of them) to a pale orangeish-straw color making it difficult or impossible to read in the field. At one site in Wisconsin, Greg Septon was unable to read the red part of a band on a falcon only three feet away because of the fading. With hundreds of falcons out there wearing these bands, we are already losing valuable information because of the faded bands. We are discussing the situation with the USFWS, supplier to us of the bands. Our old home-made black bands, all now five to ten years old, remain legible unless covered by accumulated dirt.

INTRODUCTION

More Peregrine Falcons (*Falco peregrinus*) have now been fledged in the wild by the new midwestern population than have been released in the entire restoration effort in this area. This year, at least 167 young were fledged wild and 23 more were released at hack sites, making the cumulative totals since the start of the project 787 known wild-produced young versus 780 hacked young. An unknown additional number of wild young have been fledged at undiscovered nests, while the number of young hacked is precise, or close to it. In Minnesota, known production of young this year was 51, almost

double the 27 fledged in 1996, despite a net increase statewide of only two territorial pairs. The difference is explained by 18 successful pairs in 1997, average brood size, 2.8 young per pair versus only 13 successful pairs in 1996, 2.1 young per pair. By contrast, production of young in Wisconsin dropped from 19 to 16, despite an increase of four territorial pairs. Indiana and Ohio, both with bumper crops of young in 1996, each gained two territorial pairs this year but fledged about the same number of young as last year. Ontario's Lake Superior population jumped from seven to 13 pairs, producing a record 25 young, all but two banded.

Here is a nesting summary for the past three 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 Canadian provinces).

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Number of territorial pairs/young fledged

	<i>1995</i>	<i>1996</i>	<i>1997</i>
• Minnesota	17/ 41	20/27	22/51
• Wisconsin	6/14	8/19	12/16
• Michigan	7/4	7/6	8/10
• Nebraska	1/0	1/2	1/0
• Iowa	2/6	2/5	2/2
• Illinois	6/8	7/4	7/7
• Indiana	5/8	7/16	8/15
• Ohio	5/16	7/18	11/19
• Kansas	1/3	1/2	1/0
• Missouri	4/3	6/3	5/9
• Kentucky	1/1	1/0	1/2
• Manitoba	4/6	4/9	3/11
• Ontario	6/8	7/16	13/25
Totals	67/118	77/127	932/167

Of the 167 young fledged in the wild this year, 154 were banded and 13 were not because of undiscovered nests, late discovery of nests, remote locations, and other logistical problems. An additional 23 young were hacked in our area, four in South Dakota, ten in Kentucky, seven in Iowa, and two in Missouri.

Brood size at fledging was 2.7 young per successful nest, 1.6 young per territorial pair, about the same as for the past several years (Table 1). Across the region, annual fluctuations in breeding output per state are not synchronized, averaging out to remarkably uniform regional production statistics from year to year.

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 already occupied, more first-time breeders and replacement breeders have been adults. Here is a capsule summary:

Juvenile peregrines in the breeding population

<i>Years</i>	<i>Nesting pairs</i>	<i>Number of breeders</i>	<i>Number of juveniles</i>	<i>Percent</i>
1987-92	87	174	20	11%
1993-95	123	246	13	5%
1996-97	126	252	6	2%

However, these numbers do not include the six juvenile females that joined adult males on territories this year but did not lay eggs and therefore are not counted above. Also, in Elyria, Ohio, Dave Scott reports that a juvenile male paired with an adult female (pair 86) but they did not nest. At Port Washington, Wisconsin, Greg Septon was challenged by a pair of non-nesting juveniles (pair 76). All nine of these juveniles are likely to breed next year if they survive.

Age and productivity of adults

Forty-six individually identified females laid eggs this year. Their average age is 5.4 years. Thirty-seven individually identified males paired with egg-laying females average 5.7 years of age. Only three of these breeders, all females in Wisconsin, were juveniles (pairs 23, 64, 65). By comparison, individually identified territorial birds in non-laying pairs averaged 2.4 years of age for nine females, 2.5 years for six males. Eight juveniles, six of them females, are included in these non-laying pairs.

A handful of female peregrines in the Midwest have accounted for a large share of the production of young. The top 21 performers (12 or more young fledged, augmented young excluded) have fledged 371 young, 47% of the 787 fledged in the wild through 1997. These 21 females are 28% of the total of 76 female breeders.

- *Sibella 20V* (Firstar, Milwaukee), 28 young, 9 seasons
- *Meg 12R* (North Central Life, St. Paul), 28 young, 10 seasons
- *Comet 11V* (Montgomery Ward and Ford Bridge, Minneapolis), 23 young, 8 seasons
- *Marla 81V* (Colonnade and Multifoods), 21 young, 6 seasons
- **Fridge 43R* (Palisade Head), 21 young, 9 seasons
- *Egore 57V* (Cline Avenue, East Chicago), 20 young, 6 seasons
- **MF-1* (Multifoods Tower, Minneapolis), 20 young, 8 seasons
- *Harriet* (125 S. Wacker, Chicago), 18 young, 9 seasons
- *Mae 31V* (NSP King, Bayport), 17 young, 8 seasons
- *Aurora red4R0* (Rhodes Tower, Columbus), 16 young, 5 seasons
- *Zenith 23W* (Terminal Tower, Cleveland), 16 young, 5 seasons
- *52V* (Winnipeg), 16 young, 7 seasons
- *Suzy Q 52P* (U.S. Steel, Gary), 16 young, 8 seasons
- **Nellie McClung red3C7* (Commodore Perry, Toledo), 16 young, 8 seasons
- *blO/B* (McKenzie Seed Brandon), 15 young, 4 seasons
- *Alice U/K* (Landmark, Milwaukee), 14 young, 4 seasons
- *36R* (NSP Sherco, Becker), 14 young, 6 seasons
- *Judy redA/D* (Detroit), 14 young, 7 seasons
- *redX/H* (MPL Boswell, Cohasset) 13 young, 5 seasons

- **Minnsoar/Ariel 75V* (Mayo Clinic, Rochester), 13 young, 5 seasons
- **Silverstreak 42V* (WPL Edgewater, Sheboygan), 12 young, 5 seasons

* = known or presumed dead

The top 17 males (12 or more young fledged, augmented young excluded) have fledged 275 young, 35% of the total of 787. These 17 males make up 22% of the total of 76 male breeders to date.

- *Will 04Y* (Multifoods Tower, Minneapolis), 26 young, 9 seasons
- *Bill 74T* (Firststar, Milwaukee), 23 young, 7 seasons
- *Spanky 04T* (Control Data and NCL, St. Paul), 20 young, 8 seasons
- *Kato 31T* (Colonnade, Minneapolis), 19 young, 6 seasons
- *Jingles* (125 S. Wacker, Chicago), 18 young, 8 seasons
- *Szell 67Z* (Terminal Tower, Cleveland), 16 young, 5 seasons
- **Maverick 05T* (NCL and Montgomery Ward, St. Paul), 16 young, 5 seasons
- *red*7/3* (McKenzie Seed, Brandon), 15 young, 4 seasons
- **red5P9* (Delta Winnipeg, Winnipeg), 15 young, 6 seasons
- *Mercury 21X* (Lazarus, Dayton), 14 young, 4 seasons
- *Omni 76T* (Landmark, Milwaukee), 14 young, 4 seasons
- *Pop* (Detroit), 14 young, 6 seasons
- *bl1/X* (Winnipeg), 14 young, 7 seasons
- *55X* (NSP Black Dog, Eagan), 13 young, 5 seasons
- *74X* (MPL Boswell, Cohasset), 13 young, 5 seasons
- *Chase 06T* (Mayo Clinic, Rochester), 13 young, 6 seasons
- *Marty 53Z* (Cline Avenue, East Chicago), 12 young, 4 seasons

* = known or presumed dead

What makes an adult productive?

Are these highly productive breeders producing more young just by living longer or do they also produce more young per year, when compared with breeders who have survived to breed only one, two, or three seasons? The answer is *both*. Living longer obviously contributes to lifetime reproduction. However, the 21 productive females listed above have produced an average of 2.6 young per nesting season (371 young in 142 nesting seasons), compared with 2.0 young per nesting season from 38 midwestern females which nested only one (juveniles excluded), two, or three times (141 young in 72 nesting seasons) before disappearing. The difference between 2.6 yg./season and 2.0 yg./season is statistically highly significant (p-value is .0083).

The same conclusion holds for males. The top 17 males listed above have produced 2.8 young per nesting season (275 young in 99 nesting seasons), compared with 1.5 young per nesting season for 31 midwestern males which nested only one (again, juveniles excluded), two, or three times (98 young in 65 nesting seasons). The difference between 2.8 yg./season and 1.5 yg./season again is highly significant. The comparisons are a bit sloppy, however, because the usually negative effect of the first nesting attempt on an individual's average annual output decreases the longer that individual lives, but it

still is clear that the most productive adults are doing something better, in addition to living a long time. Perhaps good health contributes to both longevity and annual productivity, or perhaps being able to find a secure nest site enhances both survival and reproductive output, or perhaps those older adults are better at choosing good mates.

One damn thing after another

--A noteworthy event was the death of Fridge 43R, the senior cliff-nesting falcon in the Midwest. She was hacked in 1986 at the Multifoods Tower in Minneapolis and nested at Palisade Head on Lake Superior from 1988 through 1996, fledging 21 young. On April 12, 1997, she hit a window and was killed just south of Grand Island, Nebraska. It is interesting that cliff-dwelling Fridge met her end in a window collision, a fate that rarely happens to old urban birds with their long experience with windows and glass buildings. A new unbanded female quickly replaced Fridge at Palisade Head (pair 16).

--Gail Jackson's team of climbers banded 23 of the 25 peregrines fledged from Ontario cliffs along Lake Superior (pairs 53-60, 71, 90-93).

--A genuine mystery emerged in Monroe, Michigan, where a peregrine seems to have risen from the dead. Back in 1995, female 1807-49784, E/G, fledged from a nest in Indianapolis, Indiana, on May 30. In late July, an anonymous phone caller to the Indiana DNR reported that this bird, identified by *both* band numbers, was "shot by his friend." This year, Judy Yerkey reports that allegedly defunct female E/G nested at Monroe, Michigan, fledging one young (pair 28). Did Judy misread the band? No. She read E/G on the black/red band repeatedly, and when challenged by John Castrale and Tordoff, went back and read the last four digits on the FWS band, 9784. So what actually happened back in Indianapolis in midsummer two years ago?

--As if E/G had not stirred up enough dust by her resurrection, she moved her four-day-old chick(s) from a nest box back to the I-beam where they had originally hatched. Judy Yerkey says the configuration of the box, the age of the chicks, and the location of the beam preclude any possibility of the chicks having moved back to the beam on their own. In Cleveland in 1993, Sara Jean Peters saw (on video) Zenith 23W pick up a chick in her bill, move it about 18 inches back to the scrape, and set it down unharmed. Bob Anderson has seen his captive falcons pick up chicks in their feet and put them back down. He also has seen adults pick at chicks with their beaks, and twice watched an adult pick up a chick in its beak and kill it. However the move was made, the Monroe chicks hatched on an I-beam, were put in a nest box placed over the nest site on the I-beam, and later at least one of the chicks was out of the box and back on the I-beam, from which it ultimately fledged.

-- Peregrines nesting on smokestacks or buildings of five power plants along the Mississippi produced 14 young this year. At Alma, Wisconsin, three young were fledged from a smokestack nest box in the midst of cliffs used historically by peregrines.

--Two broods (pairs 61 and 66), each with four chicks, died in circumstances suggesting poisoning. At Omaha, the brood of four died suddenly shortly after hatching; the Colonnade brood of four died within a few hours at 13 days of age. Elsewhere in the Midwest there have been about ten cases of peregrine deaths most likely caused by

poisoning. We suspect that Avitrol, the recommended poison for pigeons, is the culprit, even though it has not yet been identified in tissues of dead birds. Peregrines frequently ingest crop contents of pigeons, as shown by corn and wheat in regurgitated pellets. This raises the possibility of primary poisoning in addition to secondary poisoning through consumption of flesh of poisoned prey.

--In our 1994 midwest peregrine report, Bruce Fall devised a mathematical way to estimate the number of undiscovered nesting pairs of peregrines in our area, based on the proportions of unbanded vs. banded birds in the breeding population. The estimate in 1994 was that the undiscovered pairs might make up from 4 % to 15% of the total population. A calculation based on 1997 data estimates that 32 young may have fledged from 16 unknown nests, which would be about 18% of the total population. There is considerable slop in the assumptions that underlay the calculations, but even so, the ballpark estimate of one unknown pair for every five or six known pairs seems believable, because it suggests that the inevitable "loss of control" of the new population is occurring. Despite our best efforts, the percentage of the population that is banded is sure to decrease over time. If interested in details of the calculation procedure, see the 1994 report or ask Tordoff for a copy. Here are the relevant numbers for the current calculation:

--known wpr banded breeders, 1997 = 42

--known wpr unbanded breeders, 1997 = 15

--sum wpr banded young through 1996 = 495

--sum known wpr unbanded young through 1996 = 73

--wpr young, 1997 = 167

--unbanded but known wpr young, 1997 = 15

--unbanded young from undiscovered nests = X (X=32 young, or 16 nesting pairs)

1997 POPULATION STATUS

SUCCESSFUL BREEDING PAIRS (Pairs fledging young)

1. Mayo Clinic, Rochester, Olmsted County, Minnesota. Ted Bartel, Mayo staff, reports that nine-year-old male Chase 06T paired with a new female, one-year-old Lori X/*V, fledged from NSP Black Dog, Eagan, Minnesota, in 1996. Female Minnsoar (Aerial) 75V, who nested here for five years and fledged 14 young (one augmented), was present in late winter but then disappeared. The new juvenile female failed to lay eggs or to be very attentive to the nest box. Chase, however, was clearly ready for parental duties so we gave him four dummy eggs that he incubated faithfully. We then moved the smallest chick, about 12 days old, from the brood of four young at the North Central Life Building in St. Paul, Minnesota, to the Mayo nest. For several hours, Chase tried to brood the chick, which wanted to be fed, not brooded. By late afternoon, Chase was feeding the adopted chick, a female, which later fledged successfully. Female Lori did not feed the chick or show much interest in it, although she remained in the territory. She was not aggressive towards it after it fledged. This year, the excellent video nest coverage was extended to several other buildings in the Mayo complex.

2. Multifoods Tower, Minneapolis, Hennepin County, Minnesota. Seven-year-old female Marla 81V, nesting for the sixth time, third year at this site, and ten-year-old Will 04Y, nesting here for his ninth year, produced three eggs and fledged two females and a male.

3. North Central Life Tower, St. Paul, Ramsey County, Minnesota. Eleven-year-old Meg 12R again over-wintered here and nested for the tenth year; her mate was nine-year-old Spanky 04T for the sixth year. Four eggs were laid, four hatched by May 12. Two males and a female fledged around June 29 and a second female chick was moved to the Mayo Clinic, Rochester, Minnesota, where it also fledged.

4. Norwest Financial Center, Xerxes and I 494, Bloomington, Hennepin County, Minnesota. New site. In 1991, peregrines visited this building through the summer. At the urging of Kathy Dean, we put a gravel tray in a sheltered spot and forgot about it when the falcons left. This year, a pair of unbanded adults nested in the old tray. Four eggs were found on May 20. Three hatched June 2 and two males and a female fledged in mid-July.

5. Ford Parkway Bridge, Minneapolis, Hennepin County, Minnesota. This was the second year for this site. Nine-year-old female Comet 11V returned for her eighth nesting season, paired for the fourth year with four-year-old Lindee 1/*A. Their previous nest site was the Montgomery Ward tower, demolished in 1996. They fledged three female young despite some harassment by kids climbing on the beams under the bridge. The chicks were banded via a snooper provided by the city of St. Paul.

6. Mendota Bridge, Fort Snelling State Park, Dakota County, Minnesota. Mark Cleveland, MN DNR, reports that peregrines were at this site by April 9. Three-year-old female E/C nested here for the second year, paired with a male banded black/red 1/*?, as

in 1996. The red part of the male's band is faded and unreadable. Three young, two females and a male, were banded June 6 via a MN DOT snooper. Early in the nesting, the Minnesota River flooded the bottomlands below the nest, but by fledging time the river was back in its banks and the young fledged successfully.

Note that six young were fledged at these two bridges (pairs 5 and 6) with no human assistance beyond providing the bridges. Successful fledging from bridges is enhanced where the young have easy access to beams beneath the roadway during their early explorations.

7. NSP King Plant, Bayport, Washington County, Minnesota. Bob Anderson, Raptor Resource Project (RRP), and Paul Simonet report that female Mae 31V, eight years old and nesting for the eighth time, again spent the winter here. She paired again with five-year-old Caesar 49Z, her full brother from the Multifoods Tower in Minneapolis, his second confirmed year here and possibly his fourth. As in 1996, they again produced four eggs, only one hatched, and the female chick fledged in mid-June.

8. NSP Black Dog Plant, Eagan, Dakota County, Minnesota. Bob Anderson and Dan Orr (NSP) report that three-year-old Skywalker U/R paired here for her second year with her six-year-old half-brother 55X, nesting here for the fifth year. Both fledged wild from the Montgomery Ward site in St. Paul, same mother, different fathers. They fledged two female and one male young.

9. NSP Prairie Island, Goodhue County, Minnesota. New site. There has been peregrine activity at this nuclear power plant for several years, but this was the first nesting. Ken Mueller and Brad Giese of NSP and Bob Anderson report that four-year-old female 7/1 paired with four-year-old male Malin 0/*7, both fledged in 1993, 7/1 from the Montgomery Ward tower, St. Paul, and Malin from the Multifoods tower, Minneapolis. They produced four eggs and fledged two males and two females in early July. Malin 0/*7 was paired unsuccessfully at this site in 1995 with then-juvenile female E/C, who nested in 1996 and 1997 at the Mendota Bridge (pair 6). He was probably also here intermittently in 1996.

10. NSP Sherco Plant, Becker, Sherburne County, Minnesota. Dan Orr, NSP biologist, reports that six-year-old female 36R, back for the sixth year, paired with an unidentified banded adult male. They produced four eggs, hatched two, and fledged two female young in mid-June.

11. NSP Monticello Plant, Monticello, Wright County, Minnesota. Three-year-old female Camilla E/B, here for the second year, paired with male 1/*?, probably the same male present here in 1995 and 1996, judging by plumage and partial reading of his band (the red part too faded to read). They produced four eggs and fledged four young, a male and three females, in late June, according to Dan Orr, Dave Wisted (NSP), and Bob Anderson.

12. Minnesota Power and Light Boswell Energy Center, Cohasset, Itasca County, Minnesota. Daryl Councilman, MPL, reports that the same pair, six-year-old female red X/H, hatched at Nipigon, Ontario, and six-year-old male 74X, fledged wild at the Rouchleau Pit, Virginia, Minnesota, nested for the fifth year. Four eggs were laid, all

hatched, and two males and two females were banded by Councilman and Bob Anderson on June 12 and fledged in early July.

13. Bong Bridge, Duluth, St. Louis County, Minnesota. Dave Evans and Tordoff trapped nine-year-old Bong female 34R at the nearby Blatnik Bridge on March 22 and took a blood sample. She later nested with an unidentified male at her original nesting spot on the Bong Bridge, hatching and fledging three young, two males and a female, in mid-July, for her best effort yet. The operator of the nearby railroad bridge told Dave Evans in late July that, while fishing under the bridge, he heard at least two of the young calling from places in the bridge substructure remote from the nest site, indicating successful fledging. Despite this promising start, no young falcons could be located later by Evans in seven hours of bridge watching. Perhaps the chicks moved from the bridge to nearby industrial buildings and elevators soon after fledging. In her previous six nestings, Bong female produced a total of three young, none of which was ever seen after fledging.

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 Lori Walewski, Joe Walewski, Peter Smerud, and John Kuhlstedt.

14. Corundum Point cliff, Split Rock State Park, Lake County, Minnesota. New site. Dave and Sybil Hopkins, of Fargo, North Dakota, discovered this pair while canoeing on Lake Superior. They reported scolding adults and young calling on the cliff. Dave Evans confirmed the nesting on July 18, when he identified one adult as three-year-old Dudley 8/*D, fledged in 1994 at Palisade Head, 13 miles up the North Shore. When banded, Dudley was identified as a male, but Evans thinks it is actually a female. He saw one adult and two flying young, probably only a few days on the wing. Tordoff visited the site on July 24 and also saw two flying young and one adult. The young were not banded.

15. Pink Cove cliff, Beaver Bay, Lake County, Minnesota. Curt Gubrub, Beaver Bay Club, located the nest, second year for this site, eight miles southwest of Palisade Head and five miles northeast of Corundum Point. The female is unbanded and the male's banding status was not determined; both are adults. Four eggs were present on May 13. On June 19, three chicks about 11 days old were banded; a fourth was too small to band. All four young fledged. Four young ravens fledged from a nest about 80 yards away on the same cliff while the peregrines were still incubating.

16. Palisade Head cliff, Tettegouche State Park, Lake County, Minnesota. Eleven-year-old female Fridge 43R was killed in a window collision near Grand Island, Nebraska, on April 12, 1997. One adult peregrine was seen at Palisade Head in April, but the territory seemed unoccupied in May. On June 19, our banding crew from the Wolf Ridge Environmental Learning Center discovered a new pair with four chicks on a low cliff a quarter of a mile southwest of the main palisade, beyond the favorite cliffs of the rock climbers. Both adults are unbanded; the male is probably the same male here in 1995 and 1996. Two male and two female young were banded and fledged.

17. Finn Church cliff, two miles northeast of Tofte, Cook County, Minnesota. Dave Evans and Tordoff found the nest on a new ledge on May 13. Jim Carlson thinks

the female is again seven-year-old Algoma 77V, nesting here for the fifth year, paired again with an unbanded male, but was unable to confirm this by reading her band. Three chicks, two females and a male, were banded on June 19 and assumed to have fledged.

18. Hat Point cliff (=Wauswaugoning Bay), northeast of Grand Portage, Cook County, Minnesota. Dave Duncan, U.S. Fish and Wildlife Service Special Agent, reported peregrine nesting here in 1996. This year, Dave Evans visited the area on July 7 and saw two adults and one flying young, which was not banded.

19. Firstar Center, Milwaukee, Milwaukee County, Wisconsin. Greg Septon reports that nine-year-old female Sibella 20V, ninth year at this site, and seven-year-old male Bill 74T, seventh year, produced four eggs in late March, hatched four in early May, and fledged four females in mid-June; making Sibella's reproductive output 28 young, not counting two augmented. Bill's total is now 23. One youngster was killed in a window collision shortly after fledging. Sibella and St. Paul's Meg 12R have both fledged 28 young, but it has taken Meg a year longer than Sibella to do it.

20. 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 seven-year-old Omni 76T, both birds in their fourth year at this site. Four eggs were laid and all four hatched around May 25. Two males and two females fledged June 27 to July 3, according to Greg Septon.

21. WEPCO Pleasant Prairie Power Plant, Kenosha, Kenosha County, Wisconsin. New site. An unbanded adult male paired with two-year-old Raynie A/*H, who spent the nesting season in 1996 at the WEPCO Oak Creek Plant, according to Greg Septon. They produced four eggs, two of which hatched. At banding, one female chick had a broken leg which had already fused; it was sent to The Raptor Center for rehabilitation. The other female fledged in mid-July.

22. WPS Pulliam Power Plant, Green Bay, Brown County, Wisconsin. An unidentified banded adult male and an unbanded adult female produced four eggs in mid-April, hatched three and fledged three females in late June.

23. Dairyland Power Cooperative, Alma, Buffalo County, Wisconsin. New site. Bob Anderson reports that male 4/*G, fledged wild in 1995 at NSP Sherco, Becker, Minnesota, paired with juvenile female *5/T, hatched in 1996 at Mason City, Iowa. Four eggs were laid by May 23, three hatched in mid-June, and three females fledged in late July.

24. Porcupine Mountains Wilderness State Park, five miles west of Silver City, Ontonagon County, Michigan. Joe Rogers reports that an unidentified pair of adults nested here, produced four eggs, three hatched, and one young survived to fledge.

25. Ameritech/Book Building, Detroit, Wayne County, Michigan. Judith Yerkey, Detroit Peregrine Coordinator, and Tim Payne, MI DNR, report that seven-year-old female Judy red AD paired again with six-year-old male Pop, her seventh year in Detroit, his sixth. They moved from the Book Building to Ameritech, produced four eggs by April 15, hatched all four, and fledged three females and a male June 27 to 29.

26. New Center/Fisher Building, Detroit, Wayne County, Michigan. Judy Yerkey and Tim Payne report that four-year-old female H 6/H, fourth year at this site, paired again with three-year-old Speedster A/*6, wild-produced at the Book Building, Detroit, in 1994. They had four eggs in late March, three hatched, and two female and one male young fledged June 11 to 14. The three young dispersed at 78, 76, and 73 days of age.

27. Whittier Apartments, Detroit, Wayne County, Michigan. Six-year-old Sunrise 55R, nested at this site for the third year, paired with an unbanded male (known by Judy Yerkey to be the same bird here in 1996, called Seven, Sunrise's seventh mate). Three eggs were laid but only one hatched. The male chick fledged on June 21.

28. Monroe Edison Power Plant, Raisin River, Monroe, Monroe County, Michigan. New site. Judy Yerkey and Tim Payne report that female E/G, wild produced in Indianapolis, Indiana, in 1995, paired with an unidentified adult male. They produced four eggs. The original male was replaced in June by a new male, Leopold N/*4, wild produced in Columbus, Ohio, in 1995. The four eggs from the original pair were on an I-beam. A box was installed on the I-beam, three eggs hatched May 15/16, and the chicks were placed in the box. One chick, according to Judy, was moved by E/G from the box back to the I-beam, where it survived to fledge June 30. The other two chicks did not survive. Leopold showed normal parental behavior to the surviving youngster, although he is not its father.

29. Firststar Bank, Cedar Rapids, Linn County, Iowa. A pair thought to be the same pair as in 1996, six-year-old female 49R, nesting here for the fifth year, and male 64?, here for the fourth year, produced four eggs, two hatched, and two males fledged in late June, according to Jaime Edwards, Pat Schlarbaum, and Bruce Ehresman.

30. 125 S. Wacker, Chicago, Cook County, Illinois. Twelve-year-old Harriet, the oldest Midwest peregrine with only seven more years to go to set a world record, and her mate, eleven-year-old Jingles, were provided with a new nest box in which they produced four eggs. Three hatched, and two females and a male fledged. One was later found dead in Lake Michigan. This is Harriet's tenth year nesting at this site and the ninth for Jingles, according to Mary Hennen.

31. 5821 Broadway, Irving Park, Chicago, Cook County, Illinois. Mary Hennen reports that female Eleanor 2/8, now four years old, paired for the fourth year with seven-year-old male Franklin 95T. They produced four eggs by April 9 and hatched three young. Three females were banded and fledged in late June.

32. Unitarian Church, Hyde Park, Chicago, Cook County, Illinois. New site. Mary Hennen reports that six-year-old female Magnolia 22R and seven-year-old male Orion 77T, whereabouts unknown in 1996 after losing their nest box, moved to this site in 1997 and nested on a decorative ledge with no nest box or gravel tray. They produced four eggs, one of which hatched; the female chick was banded and fledged with no problems.

33. War Memorial\Market Tower, Indianapolis, Marion County, Indiana. John Castrale, Indiana DNR, reports that four-year-old male Kinney 7/*3 paired for the third year here with five-year-old female Scout 28W. This year they moved to the War Memorial, where she was observed incubating in a gutter by March 13. A platform was

provided for the four eggs on March 17. Three eggs hatched by April 11; two females and a male fledged May 21-24, again the earliest peregrines on the wing in our area.

34. Cline Avenue at Lake Michigan, East Chicago, Lake County, Indiana. John Castrale reports that seven-year-old female Egora 57V and five-year-old male Marty 53Z were back, the sixth year at this site for Egora, the fourth for Marty. The site has been occupied for nine years. Egora was injured on February 9, rehabilitated and released nearby on March 5, when a second female was seen. Egora was near the nest March 12 and laid three eggs by April 11. Two hatched and two young were fledged June 21, unbanded because the necessary "snooper" was broken. Egora's performance after a month recuperating in captivity is remarkable.

35. Inland Steel, East Chicago, Lake County, Indiana. John Castrale reports that seven-year-old female Courtney 25W, hatched in Racine, Wisconsin, paired for at least the second year here with four-year-old male Glory 2/*2, hatched in South Bend, Indiana. They nested on an I-beam, producing four eggs by March 31 which hatched beginning April 30. Two chicks died shortly after hatching and the survivors were moved to a nearby nest box on May 12.. Two young males fledged June 6.

36. U.S. Steel, Gary, Lake County, Indiana. Using a new box, the same pair, nine-year-old female Suzy Q 52P and seven-year-old male Vulcan 79T, nested again, the eighth year for the locality and for Suzy Q, the fifth for Vulcan. They produced three eggs by April 16. hatched all three by May 6 but one chick later disappeared. Two males fledged June 12, according to John Castrale.

37. One Summit Square, Fort Wayne, Allen County, Indiana. Three-year-old female Freedom U/*8, second year nesting at this site, paired with a new male, two-year-old Roosevelt R/*4, wild produced in Columbus, Ohio, in 1995. They produced four eggs, hatched and fledged four young. One was grounded but returned uninjured to the roof. Another broke a wing and is in rehabilitation at The Raptor Center. John Castrale reports that Freedom was also at this site in 1995 but did not nest.

38. NIPSCO Power Plant, Michigan City, LaPorte County, Indiana. John Castrale reports that three-year-old Diana D/U and two-year-old Uncle Billy 3/*B nested here for the second year, producing four eggs by April 14 and fledging two young, a male and a female, despite a storm that moved the smokestack nest box eight inches.

39. Commodore Perry Motor Inn, Toledo, Lucas County, Ohio. Peregrines have nested on this vacant building for ten years, female red 3C7 for the first eight years and three-year-old Carmen D/N for the last two. Carmen was paired again with her full brother, four-year-old male C/U, his third year in Toledo, both wild-produced from the Firststar Center, Milwaukee. Dave Scott, Ohio Division of Wildlife, reported that access to the site has been restored at least temporarily after being prohibited for years. Four eggs were laid in late March or early April and hatched by May 12. Two males and two females were banded and fledged by the end of June.

40. Terminal Tower, Cleveland, Cuyahoga County, Ohio. Sara Jean Peters and Dave Scott, Ohio Division of Wildlife, report that nine-year-old male Szell 67Z paired for the fifth time with five-year-old female Zenith 23W. Between March 13 and April 5, four eggs were laid, possibly by a different female. A partial band reading suggests that

Zenith was present at this time. On April 16, seven eggs were seen and Zenith was identified on the nest. The eggs were candled and found not to be viable. The eggs were removed and by May 19 a new clutch of four eggs was being incubated. Hatching began on June 19 and all four young were banded and fledged by August 1. On August 4, one of the young was found dead on a ledge near the nest site, cause unknown. Another young, found with a broken leg at Sandusky, Ohio, on September 17, died the next day at TRC. Despite the confusion surrounding the early nesting season, this pair had an outstanding performance this year.

41. LTV Steel, Cleveland, Cuyahoga County, Ohio. New site. An unidentified pair of adults nested here in 1997 with unsubstantiated reports from workers that at least two young were produced in 1996 as well. The female has a black band. Three eggs were laid on an exposed beam on the side of an abandoned building near the Cuyahoga River within this industrial complex. Hatching occurred around May 4 and a nest box was installed at banding. Two females and a male fledged June 20, according to Dave Scott.

42. Rhodes State Office Tower, Columbus, Franklin County, Ohio. Dave Scott reports that six-year-old female Aurora red 4RO returned for the fifth year, paired for the fourth year with an unbanded male, Bandit (identity presumed by plumage and behavior). They produced four eggs by April 7, hatched them beginning May 9, and fledged four young, two of each sex, around June 23. One was killed in building collision shortly after fledging. The nest site camera was hooked up through the Internet and the Ohio Division of Wildlife's home page to provide interested birders a rare glimpse of nesting falcons and their young. Interest was extremely high and the banding was shown live over the Internet as well.

43. Lazarus Building, Dayton, Montgomery County, Ohio. Dave Scott reports that four-year-old female Baltimore 7/D paired again with seven-year-old male Mercury 21X. They produced four eggs in early April, hatched them beginning May 13, and fledged four young, two of each sex, around June 27.

44. Commerce Tower, Kansas City, Jackson County, Missouri. New site. John Meyer and Laurie Dohm, Missouri Department of Conservation, report that a one-year-old wild-produced St. Louis female 3/*Y paired with six-year-old male Terr 39X, hatched here in 1991. They had three eggs by April 29 and hatched two young by June 5 that fledged June 22. One of these, a male, was banded on June 23. This was the first successful peregrine nesting documented in Kansas City. Female 3/*Y was killed on July 25 in a building collision in Kansas City.

45. Southwestern Bell, St. Louis, St. Louis County, Missouri. Mike Cooke reports that XXX.

46. Park Plaza, St. Louis, St. Louis County, Missouri. Five-year-old female 2/3, nesting here for the fifth year, paired with an unidentified male wearing a silver and a black band, producing four eggs, three hatched May 12, and XXXX young fledged, according to Mike Cooke.

47. Interstate Highway 270 Bridge, St. Louis, St. Louis County, Missouri. Mike Cooke reports XXXX

48. Clayton, St. Louis County, Missouri. This site is on the west side of metropolitan St. Louis. Mike Cooke reports that female R/*A, XXage, source?XX paired with male 2/*Y XX age? source?XX, producing 4 eggs. Three female and one male young were banded May 20 and fledged in mid-June.

49. Ohio River Kennedy Bridge (I-65), Jeffersonville, Indiana/Louisville, Jefferson County, Kentucky. Laura Burford reports a pair of unidentified adult peregrines nested in a girder beneath the bridge. The nest site was discovered when the young were about five weeks old; hatching was estimated near April 24. Two young fledged; they were not banded. One was later found with a broken wing and is at TRC.

Robert Jones, Tracy Maconachie, and Robert Nero, Manitoba Wildlife Branch, supplied the following information on Manitoba falcons

50. Delta Winnipeg Hotel, Winnipeg, Manitoba. Eight-year-old female 52V paired again with eight-year-old male black 1/X, her sixth season here, his third at this site. They produced four eggs by May 1, hatched all four by June 4, and fledged two male and two female young. One male young died in a collision with a building shortly after fledging

51. St. Boniface Cathedral, Winnipeg, Manitoba. New site, one-half mile from the Delta Winnipeg Hotel. Seven-year-old female E/H, hatched in Brandon MB in 1990, paired with three-year-old male *7/1, wild-produced in Brandon in 1994. Their nest was not discovered until fledging was in progress. Three young were fledged, one of which was banded when grounded but uninjured. Female E/H was at the University of Manitoba in 1993, 1994, and 1995; she was unreported in 1996.

52. McKenzie Seed Building, Brandon, Manitoba. The same pair of six-year-olds nesting here for the fourth year, female black O/B and male red *7/3 (reported erroneously in earlier years as 7/3 and 7/*3), produced four eggs, hatched four by June 4, and fledged three males and a female.

Ted Armstrong, Ontario Ministry of Natural Resources, Brian Ratcliff, Thunder Bay Field Naturalists, and Gail Jackson, Parks Canada, sent the following summary of peregrine nesting along the Ontario North Shore of Lake Superior. Gail Jackson organized a team of climbers again this year. They banded 23 young falcons at seven cliff nests, most reached by helicopter. Many of the Ontario sites are much more difficult to reach than most sites in the midwestern U.S. We congratulate and thank lead climbers Robert Dye, Andi Dye, and Rodney Swatton from Lakehead University, School of Outdoor Recreation, Parks, and Tourism, and Frank Pianka with the Alpine Club of Canada.

53. Mt. McKay, near Thunder Bay, Ontario. Seven-year-old female red G/R, hatched in Nipigon, Ontario, in 1990, paired with eight-year-old male red O/K, released in Sturgeon Bay, Ontario, in 1989. This is at least the third year here for male O/K and the second year for female G/R. They were on territory by April 11. Three young, two males and a female, were banded on July 10 and fledged near the end of the month.

54. Mt. McRae, about three km from Mt. McKay, near Thunder Bay, Ontario. Two unidentified adults were here on April 29. Two female young, 34 and 36 days old, were banded on July 19.

55. Thunder Bay, Pie Island, Perch Lake, Ontario. A pair of adults with black bands, one banded on the left leg, one on the right (left equals hacked, right equals wild-produced for birds in the Midwest prior to 1993; black is also used on wild-produced birds in Canada) fledged four young, one female and three males. All were banded on July 6 and are assumed to have fledged safely.

On September 22, Gail Jackson reported that the adult female here has been identified as Chipper 94P, hacked in Madison WI in 1989 and trapped and released by Ken Holkestad at Moose Mountain, Duluth MN on September 30, 1990. Gail thinks it likely that Chipper 94P has been nesting on Pie Island for several years.

56. Thunder Bay, Sleeping Giant Provincial Park, Thunder Cape, Ontario (= Sibley Peninsula in previous reports). Nine-year-old female 04V, hacked in 1988 at the Wolf Ridge Environmental Learning Center, Finland, Minnesota, paired with seven-year-old male 02X, fledged wild at Palisade Head, Minnesota, in 1990. Male 02X was netted near here in 1995 and a female with a black band on the left leg was here in 1996; most likely these individuals have been here for the five years the site has been known to be occupied. They produced four young this year, two of each sex, which were banded on July 6 at ages ranging from 32 to 35 days.

57. Thunder Bay, Squaretop Mountain, Ontario. New site. Four-year-old female red B/9, released at Killarney Provincial Park, near Sudbury, Ontario, in 1993, paired with an unbanded adult male. The pair was present on April 11. One female and two male young, 22 to 24 days old, were banded on June 26.

58. Nipigon, Nipigon River mouth, Ontario. Peregrines have been present here for the past five years, but nesting was confirmed only for 1996. This year, an adult female with a red band and an unbanded male, as in 1996, were present on April 23. Three young, two males and a female, 26 and 28 days old, were banded on July 4.

59. Nipigon, Kama Hills, Ontario. New site. A single adult was seen five km southwest of here on May 9; it is uncertain if it was one of the adult pair.. On June 27, two young about 20 days old were seen during a helicopter survey. Although they were not banded, we are assuming they fledged.

60. Lake Superior Provincial Park, east end of Lake Superior, Ontario. This site has been in use for five years. The male, present here also in 1996, is seven-year-old red right 1/9, hacked at Five Islands, Nova Scotia, in 1990. The female's identity is not known. This year, young were seen on June 8; four young, three females and a male ages 29 to 33 days, were banded on June 29.

UNSUCCESSFUL BREEDING PAIRS

(Eggs laid, no young fledged)

61. Colonnade Building, Hwy. 100 and I-394, Minneapolis, Hennepin County, Minnesota. In late February, a new unidentified female and the 1996 female Elma were seen here on different days by Rich Kaiser. By March 28, only Elma remained, paired for the second year with eight-year-old Kato 31T, his sixth year at this site. The pair produced four eggs and hatched four young, all of which died in a few hours on May 24

when 13 days old. The most likely explanation is that the chicks were poisoned, presumably by food delivered by the parents (see also pair 66). This is the second instance of probable poisoning at this site.

62. Riverside Plaza, Minneapolis, Hennepin County, Minnesota. New site. Albert Charles Bergmann discovered this pair and watched them through the season. The female was hatched in 1994 in captivity by Scott Johnson in Junction City, Kansas. Johnson flew her in falconry; she escaped in October 1994, wearing falconry bracelets and a breeder band, which was read by Martell. Bergmann has named her Phoebe. The male, identified by Bergmann on September 8, is Pippin C/*5, fledged wild from the Multifoods Tower, Minneapolis, in 1995. We installed a nest box on the roof on April 8, but on April 22 Bergmann located the female incubating on the indoor/outdoor carpet of an apartment balcony. We put the three eggs in a gravel tray on April 24 and incubation continued. On May 27, only two eggs remained and by May 30 none remained. The pair did not re-nest. Both birds were still present in October.

63. St. Cloud State Correctional Facility/University Bridge, St. Cloud, Stearns County, Minnesota. The same pair, six-year-old female Olivia 26R and five-year-old male St. Pauli Boy 76Z, has been present here for four years, previously nesting on the bridge with little success. This year they moved less than a mile to a nest box on the water tower at the prison, where they again failed to fledge young. Ben Baloun reports that incubation was in progress by April 21, but when the nest was checked on May 20 only one egg was present. The adults abandoned the nest by May 25.

64. Froedtert Malt, Milwaukee, Milwaukee County, Wisconsin. Greg Septon reports that five-year-old Leopold C/D paired this year with an unbanded juvenile female. She laid two eggs May 4 –6, hatched one on June 17, but the chick and remaining egg disappeared between June 20 and 24.

65. Edgewater Generating Station, Sheboygan, Sheboygan County, Wisconsin. Four-year-old Grant B/N, nesting here for the third year, paired with a juvenile female wearing a purple band and a black/red band. She laid three eggs by May 2. One disappeared during incubation. The remaining eggs were cold on later visits. None hatched; two were salvaged by Greg Septon.

66. Woodman Tower, Omaha, Douglas County, Nebraska. John Dinan and Jeanine Lackey, Nebraska Game and Parks Commission, report that three-year-old female Winnie *T/6 paired again with three-year-old male Zeus X/R. Four eggs were laid by April 12, four chicks hatched May 16. All died soon after hatching, in circumstances which suggest that poisoning might have been responsible, perhaps used for pigeon control (see also pair 61).

67. American Republic, Des Moines, Polk County, Iowa. Jaime Edwards, Pat Schlarbaum and Bruce Ehresman, Iowa DNR, report that six-year-old female 13R, nesting here for the fifth year, paired again with seven-year-old male 93T, his fourth year at this site. They produced five eggs in two places which were then placed into one scrape. None hatched.

For several years, males identified as 93T have been reported nesting simultaneously in St. Louis and Des Moines. Pat Schlarbaum, Iowa DNR, reports that

this year a special effort was made to verify the band number of the Des Moines male. According to Pat, he is 93T. This leaves two possibilities for St. Louis, 93X hacked at Isle Royale MI in 1991 or 93Y hacked at Madison WI in 1989. The best bet is 93Y, which could be misread as 93T.

68. Wacker and Michigan, Chicago, Cook County, Illinois. Mary Hennen reports that this “river pair” produced a clutch at one site, abandoned it after a week of incubation, moved to a second site, laid two eggs, and abandoned them. It is not known if the same individuals have been involved, but the outcome of nesting at this location has been poor – one young fledged in four years. Both adults have black bands, the female’s is ?2V, the male’s is ??.

69. Lakeview, Chicago, Cook County, Illinois. Two unidentified adults were present. One egg was laid, it rolled off a ledge, and no further nesting was attempted.

70. Bethlehem Steel, Burns Harbor, Porter County, Indiana. This pair (identification of both adults uncertain; female with b/r band on left leg) apparently moved to this site from the Bailly smokestack used last year. Three-year-old female Isabella 2/7 (?) paired again with three-year-old male Bailly 4/9 (?). Their nest was found on May 22 with an eggshell and a recently dead day-old chick. Adult peregrines were seen at the nest box on the Bailly smokestack in February and March and again on June 9.

71. Robertson Lake hack site, near Goulais River, Ontario. New site. A male red right 7/G, hacked here in 1994, paired with a female with an unread red band on her right leg. They had two eggs but incubation failed on June 30.

TERRITORIAL PAIRS, NON-BREEDING OR STATUS UNKNOWN

72. Kennedy Creek, Lake County, Minnesota. In 1996. Peter Harris reported two adult peregrines at a new cliff a mile southwest of the site used for several previous years. This year, ten-year-old female Blueberry 20P was identified at the new site, with an adult male wearing a red band, indicating hacking in Canada. Residents nearby assure us that the cliff had been occupied in 1996. Apparently no young were fledged in 1997 and no nest ledge was discovered.

73. WEPCO Oak Creek Power Plant, Milwaukee, Milwaukee County, Wisconsin. Male Griffin 5/*D, wild-produced at Landmark on the Lake, Milwaukee, in 1994, paired this year with juvenile female Sheri X/*U, fledged wild last year at the NSP Black Dog Plant, Eagan, Minnesota. They used the nest box on a smokestack, made a scrape, but did not lay.

74. Busch Agricultural Resources Complex, Manitowoc, Manitowoc County, Wisconsin. Greg Septon reports that a male 3/?, a wild-produced midwestern adult, and juvenile female *5/R, fledged in Toledo, Ohio, last year, occupied this site all season, but did not nest.

75. Racine County Courthouse, Racine, Racine County, Wisconsin. Greg Septon reports that four-year-old male Joshua 0/*A was intermittently territorial here again, as in 1995 and 1996. A female Atlanta L/*C, fledged in 1996 at Green Bay, Wisconsin, was shot in Trenton, Ohio, November 25, 1996, rehabilitated at The Raptor Center, and

released in Racine on May 1. Jeff Worrell spotted an immature female, perhaps Atlanta, on two days in mid-May. No nesting activity was noted

76. WEPCO Port Washington Power Plant, Port Washington, Washington County, Wisconsin. Two juveniles defended this site when Greg Septon checked the box on June 11. He was unable to determine their banding status.

77. Genoa Power Plant, Genoa, Vernon County, Wisconsin. Bob Anderson reports an adult male and a juvenile female at this site, where a nest box was installed three years ago. No eggs were laid and dummy eggs were not incubated. Banding status of the pair was not determined.

78. Trap Hills, Ontonagon County, Michigan. Joe Rogers visited this site seven times, finding a pair of unidentified adult peregrines in residence on six trips. The birds, present from May through July, were using the same ledge as for the past two seasons. Whitewash from droppings at the ledge increased as the season wore on, but Rogers was unable to determine the outcome of the nesting.

[Pictured Rocks National Lakeshore, near Munising, Alger County, Michigan. Brian Kenner, National Park Service, and Joe Rogers saw no peregrines here in 1997.]

79. Grand Island, north of Munising, Alger County, Michigan. Peregrines nested here in 1995 but not in 1996. Joe Rogers reports seeing peregrines repeatedly here in 1997. The likely nest area is in the northeast part of the island, but no nest was found nor were flying young seen. Access to the cliffs on the north side of Grand Island is difficult.

[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.]

80 Belmont, Chicago, Cook County, Illinois. A pair was present here but no other information is available.

81. McKinley Bridge, East St. Louis, St. Clair County, Illinois. XXXX any 1997 information? XXX

82. Evansville, Vanderburgh County, Indiana. A pair of peregrines was seen in January and the female was confirmed as Phoenix U/Y, present here in 1995 and 1996. Reports of pairs or single birds continued through early spring, tapering off in April and May. An adult male reappeared in June and single birds were seen throughout the rest of the summer. John Castrale suspects the male may be Screech 2/*L, who was here in 1995 and probably 1996, but this was not confirmed.

83. Case Western Reserve University, Cleveland, Cuyahoga County, Ohio. An unidentified pair of peregrines, each banded, was seen but no nesting was attempted. A nest box was placed in the area. Division of Wildlife staff were told that a pair was also seen in 1996, but no young were observed..

84. Gold Coast, Lakewood, Cleveland, Cuyahoga County, Ohio. Dave Scott reports that the 1996 pair, three-year-old female Athena 5/V and four-year-old male Buckeye 3/1, were territorial, aggressive, and displayed courtship behavior early in the nesting season but were unable to find a suitable nest site due to removal of the nest box and other steps taken to minimize conflicts between the pair and building tenants, maintenance personnel, and management staff. An unbanded bird was seen in mid-May around the site and the pair has not been seen since late spring.

85. Akron, Summit County, Ohio. A pair of peregrines was seen here near the nest box. The female is J.P. *G/3, fledged wild in 1996 from the New Center, Detroit, Michigan; the male is Bandit 3/*P, fledged wild in 1995 from the Book Building, also in Detroit. This pair did not nest but was seen regularly throughout the nesting season according to Sara Jean Peters and Dave Scott.

86. Elyria, Lorain County, Ohio. Dave Scott reports that an unbanded adult female was paired with a juvenile male *A/5, fledged in 1996 in Pittsburgh, Pennsylvania. A nest box was installed in the area in early April, but nesting did not occur this year.

87. PNC Building (formerly known as Central Trust Tower), Cincinnati, Hamilton County, Ohio. Peregrines were seen around the 1996 nest site in March and April. Neither bird was identified and few sightings were reported after the end of April. Courtship displays and scraping were noted early on but no eggs were laid and the status and identity of the falcons seen early in the season is unknown according to Dave Scott.

88. Miami Fort Station, Cincinnati Gas and Electric, Cleves, Hamilton County, Ohio. This power plant is located 20 miles west of Cincinnati. An unidentified pair of peregrines was seen in a nest box on a smokestack on May 30. A second check of this site on July 15 revealed an aggressive pair around the nest box but no sign of any young or eggs. Power plant workers suggested that a third bird may have been in the area but its presence was never confirmed.

89. Kansas Power and Light, Topeka, Shawnee County, Kansas. Joanne Brier reports the pair that had nested here for four years did not appear this year. She identified A/*8, fledged wild here in 1995, at the nest box in June. This bird was banded as a male but she thinks it may be a female. Earlier in spring, she saw a juvenile, probably 9/*S, fledged here in 1996, perched on a sign near the nest box. Other observers also reported peregrines seen in downtown Topeka.

[Manitoba Legislative Building, Winnipeg, Manitoba. This site was not used in 1997, although peregrines were seen here early in the season.]

90. Thunder Bay, Sturgeon Bay, Ontario. New site. A juvenile female, red band on right leg indicating hatched in Canada, paired with an unbanded adult male at a site used for hacking in 1989. The pair was observed on May 3 and what may have been an incubation exchange was seen on May 28, but no nest or adults were seen on June 25. An adult male was present on July 7.

91. Thunder Bay, Sleeping Giant Provincial Park (lookout), Ontario. New site. A pair, one adult with a red band, was seen here June 27, near a hack site used in 1990 and 1994-96. On July 8, no birds were found in a ground search of the area.

92. Thunder Bay, near Molly Mountain, Ontario. New site. A pair was seen at this site just north of the Minnesota-Ontario border on June 25, during a helicopter survey in poor viewing conditions because of heavy rain. One young may have been seen, but on July 6, a ground search found one adult and no nest or young.

93. Thunder Bay, Pie Island, le Pate, Ontario. A helicopter survey on June 25 in heavy rain reported two young possibly seen, but on July 6, a second helicopter survey found no nest or young; one adult was seen on the second survey.

SINGLE TERRITORIAL FALCONS

94. State Capitol, Lincoln, Lancaster County, Nebraska. John Dinan reports that a banded male was present here for the nesting season. No female was seen.

95. NIPSCO Power Plant, Wheatfield, Jasper County, Indiana. John Castrale reports that an immature female falcon was seen during the winter and on through the summer. A male was also seen the week of April 13. Castrale thinks the female has taken up residence but the male seen in April may have been just passing through.

96. Tower Building, South Bend, St. Joseph County, Indiana. A one-year-old banded male (L/?) was reported here several times in May and June, according to John Castrale.

SUMMARY OF PEREGRINE NESTING IN 1997

Summing up the natural breeding in 1997, 93 pairs were known to be on territories, 71 pairs (76%) laid eggs, 60 pairs (85% of the nesting pairs) were successful in fledging 167 young, 2.7 young per successful pair, 2.1 per nesting pair, 1.6 per territorial pair.

Of the 93 territorial pairs, 22 (24%) were on cliffs, 50 (54%) were on buildings, 14 (15%) on smokestacks, 6 (6%) on bridges, and one under a highway overpass. Thirty-one of the 50 building pairs succeeded, as did the highway pair. Four bridge pairs fledged 13 young, and XX2XX failed or outcome unknownXXX. Nine of the 14 smokestack pairs fledged 24 young. Of the 22 cliff pairs, 14 are known to have succeeded, fledging 40 young. For seven cliff pairs the outcome is unknown and one pair probably failed.

Of the 167 young known fledged in the wild, 155XXX were banded. Unbanded birds were: one or more at Hat Point, two at Corundum Point, and one at Pink Cove, Minnesota; one at Porcupine Mountains, Michigan; one in Chicago, Illinois; two at Cline Avenue, East Chicago, Indiana; one in Kansas City, Missouri; XX at the I-270 Bridge and XX at the McKinley Bridge, St. Louis, Missouri; two at the I-65 bridge at Louisville, Kentucky; and two at the Kama Hills, Nipigon, Ontario. Additional unbanded young were fledged, of course, at unlocated nests.

PEREGRINE RELEASES IN 1997

South Dakota

Sioux Falls, Minnehaha County. The Lakota Audubon Society sponsored the release of four male peregrines from the 190 foot Zip Feed mill in July. The South

Dakota Raptor Trust (Victor Hardaswick and Don Hunter) supplied the birds. Charles Patterson, President of LAS, and Tim Keyser, Project Coordinator, organized the release. Lisa Evans was the head hack site attendant. All four falcons reached independence successfully; one was later injured (electrocution?) and died at TRC.

Iowa

Mason City, Cerro Gordo County. Three peregrines from the Raptor Resource Project were released here under the direction of Lowell Washburn, Iowa DNR. Two reached independence successfully. One was found injured about 75 miles from the hack site about a month after release; it died a week later at TRC.

Bluffton, Winnishiek County. Four peregrines from the Raptor Resource Project were released under the direction of Bob Anderson in two batches of two from a cliff along the Upper Iowa River in late July and early August, in an effort to establish nesting peregrines on the river bluffs. One bolted at release and was not seen again; the other three reached independence successfully.

Missouri

Sumvilla Tower, Springfield, Greene County. John Meyer reports two male chicks from the South Dakota Raptor Trust were hacked and successfully fledged on August 20.

Kentucky

Kentucky Utilities Ghent Station, Ghent, Carroll County. Ten young peregrines from the South Dakota Raptor Trust were released by the Kentucky Department of Fish and Wildlife Resources, according to Laura Burford. One male drowned and a second male was euthanized after a foot injury probably caused by electrocution. A second release is planned for this site in 1998. A release planned for the Kentucky Utilities E.W. Brown Station at Burgin was cancelled because birds could not be obtained.

In sum for 1997, 167 young were fledged by wild pairs and 23 young were released from captive pairs, for a total of 190. Of the 23 hacked young, 21 lived to independence.

XXXDone to hereXXX

GENETIC ANALYSIS

We continued collecting blood in 1996 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.

Dr. Robert Zink and colleagues continued their study of changes in mitochondrial DNA with aging of individual peregrines. They are analyzing blood samples from birds of known age and, especially, multiple samples from single individuals captured more than once. We remind you again that it is important for this study to take a blood sample each time an adult peregrine is handled.

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

While the annual increases in territorial pairs from 1987 through 1997 measured in percentage show rapid growth earlier and recent inevitable leveling off, annual incremental growth in territorial pairs continues rapid, with the 15 new pairs this year exceeded only by the 16 in 1993..

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	93	16	21%

Early guesses by us that the current peregrine carrying capacity in the Midwest would be somewhere below 100 pairs were too conservative, but the actual final figure will depend on how well pairs are able to re-occupy the river cliffs, and how much help is provided to attract additional pairs to man-made structures. For example, in the course of the peregrine release this year in South Dakota, Don Hunter attracted our attention to the series of power plants with tall smokestacks along the Missouri River, none of which has been enhanced with a nest box to attract breeding peregrines. Probably enthusiasm for peregrine management will diminish when the species is declared no longer endangered, but it seems likely that peregrines will continue to attract substantial public interest and support.

Our major immediate tasks remain the same:

- Identify all breeders.
- Band all wild young produced.
- Collect and analyze blood from all young and from any adults handled.
- Manage city pairs so that production of young, enthusiastic cooperation of building managers, and public appreciation of the falcons are all fully enhanced.
- Try to find effective ways to help peregrines re-establish themselves on the river cliffs and on suitable cliffs elsewhere in the region.

- Collect, coordinate, and circulate information among the Midwest peregrine workers through reports, meetings, and regular informal contacts.
- Avoid naming any more falcons “Orion” or “Phoenix.” (We already have six “Orions” and five “Phoenixes”!).

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- Minnesota Falconers Association
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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 1997 RELEASES

- Robert Anderson, Raptor Resource Project, Hugo, Minnesota (Iowa releases)
- Victor Hardaswick and Don Hunter, South Dakota Raptor Trust, Centerville, South Dakota (South Dakota and Kentucky releases)