

December 5, 1992

## **MIDWEST PEREGRINE FALCON RESTORATION, 1992 REPORT**

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### **INTRODUCTION**

The eleventh year of restoration of Peregrine Falcons (*Falco peregrinus*) in the Upper Midwest was completed in 1992 with the release by hacking of 92 young falcons. An additional 12 were released at Nipigon, Ontario. Pairs were on territories at at least 37 places by the end of the season. Thirty-three pairs of wild falcons laid eggs (22 in 1991) and at least 68 young fledged successfully, including 14 fostered. (We have stretched the "Midwest" a bit by including three young peregrines fledged in Regina, Saskatchewan. See pair 23 for their Midwest connection.)

Late winter and early spring were mild. While the adults were incubating in April, subfreezing temperatures were recorded several nights in Minnesota, but weather was good after hatching. The result was excellent production of young compared with 1991 (2.1 young per nesting pair in 1992 versus 1.6 in 1991; 1.8 young per territorial pair in 1992 versus 1.2 in 1991). From 1991 to 1992, while the total number of territorial pairs increased only from 30 to 37, the number of young fledged jumped from 36 to 68 (from 32 to 54 if fostered young are not counted). The five pairs nesting in the Twin Cities MN metro area laid 20 eggs and fledged a remarkable 18 youngsters.

Since 1982, 667 falcons produced in captivity have been released in the Midwest. An additional 173 or more young falcons have been fledged by peregrines now breeding on their own in the wild. We think the goal of a self-sustaining wild population with adequate genetic variation has been reached. Releases in the past two years along with production by wild pairs should bring the midwestern population to our stated goal of 40 or more territorial pairs in 1993, if we are not already there. We see no necessity for releasing additional peregrines by hacking in our region, although continued augmentation of small broods and unsuccessful nests may be continued if young falcons are available for this purpose. The most important benefit of providing foster young to pairs who fail to hatch their own eggs, particularly first-time breeders, is to strengthen their attachment to their territory.

One might conclude from the detailed histories of individual pairs of peregrines given below that we know the location of all breeding pairs in the Midwest. This, of course, is not the case. Even some pairs nesting in big cities, such as Chicago, have fledged young undetected by us. We think that several undiscovered pairs may be nesting on remote cliffs on the Iron Range and in the Boundary Waters area of Minnesota and Ontario. Ted Armstrong, Ontario MNR in Thunder Bay, tells us that, based on breeding season observations of field personnel and naturalists, as many as three or four pairs may be on cliffs along Lake Superior between the Pigeon River on the international border and Nipigon. For the past two years, biologists working on the Sibley Peninsula northeast of Thunder Bay, have seen a pair of peregrines (pair 27) fairly regularly through the breeding season, as well as juvenile birds in August, before fall migrants should be present. The problem is that the country is big, cliffs are abundant and often remote, and no one is available to search full-time. For discovery of new pairs, we still rely almost entirely on the chance that some person noticing peregrines on territory will be astute enough to

recognize them for what they are and then follow through with a call to someone in the big network of people interested in peregrine restoration. Although we would like to locate every nesting pair, our failure to do so is one measure of the successful return of peregrines to our region.

## 1992 POPULATION STATUS

### SUCCESSFUL BREEDING PAIRS

(Pairs fledging young, whether their own or fostered)

1. Multifoods Tower, Minneapolis, Minnesota. Adult peregrines were present in Minneapolis through the winter, but not identified. Both Will 04Y and MF1 (Muffin) were identified at the nest box by March 10, the fourth season here for Will, the sixth for MF1. They had four eggs by April 3, all hatched and four young, two males and two females, fledged in late June after being moved from the nest box to a roof box when three weeks old. One young female was found mummified in October, having fallen down a chimney a few blocks from the nest site.

MF1 and an adult male, presumably Will, were still present at the nest site on November 5, 1992.

MF1 has fledged 19 young over her six years; four of these have nested, in Winnipeg, Bayport MN (2, half-siblings), and Madison WI. Her fledged grandchildren (grandoffspring?) total 15, and her first three great-grandwhatever were fledged this year in Regina, Saskatchewan (pair 23).

2. North Central Life Tower, St. Paul, Minnesota. Meg 12R apparently again spent the winter here and nested for the fifth year. Her mate from 1991, Beaner, did not return and she was paired with a new black-banded male on March 15; he was finally identified on June 13 as 04T, the resident male at the Control Data headquarters building in Bloomington MN (see below) the previous three years. Meg laid four eggs by April 9; three hatched and three young males fledged in June from the original nest box, rather than a roof box as in previous years. The nest box was modified by adding a front platform to make it safer for the young to fledge.

A young flying female from Madison WI (see pair 12) was moved to St. Paul to save her from attacks by the new adult male on her home grounds; the St. Paul adults adopted her and she reached independence successfully.

[Control Data Corporation Headquarters, Bloomington, Hennepin County, Minnesota. This territory was unoccupied in 1992. Linda Falch, CDC, reported single peregrines at CDC on February 21 and March 2; at least once later a single falcon was seen here. On June 13, Tordoff identified the resident male at the NCL tower in St. Paul as 04T, the CDC male in the previous three years. We surmise that his mate 08V (and Beaner, the 1991 St. Paul male) failed to survive the winter and that 04T moved from the CDC territory to the choice downtown St. Paul territory, nine miles away. The pair at CDC did not nest in 1989, fledged three young (two fostered, one later died in a building collision) in 1990, and two fostered young (one later died, building collision) in 1991. The adults refused to use a nest box provided for them, laying each year instead in a gravel tray on a narrow ledge after losing first clutches before the tray was provided. The one natural young they produced at CDC in 1990 nested in 1992 at the Mayo Clinic in Rochester MN (see pair 6).]

3. NSP King Power Plant, Bayport, Minnesota. Female Mae 31V spent the winter here on territory, according to Mike Miser, NSP. She was joined on March 3 by her half-sibling mate 13T (identified by Tordoff on May 1), reuniting the

pair for the third year. They had their first of four eggs on March 23. Three young males hatched by April 29 and fledged near June 10.

4. Montgomery Ward, St. Paul, Ramsey County, Minnesota. Two adult falcons were here on March 1; the female appeared to be Comet 11V (confirmed on March 19), back for the third year, but the male was a stranger, rich buff below in contrast to white-breasted Maverick 05T, who was identified here on March 16. Unfortunately, the strange male was not identified before he left; he had a black band on his left leg, silver right. Four eggs were laid; four young hatched and fledged in late June.

5. Colonnade Building, Hwy. 100 and I394, Minneapolis, Minnesota. The same peregrines here but not nesting in 1991, two-year-old female 81V and three-year-old male 31T, produced four young this year, two males and two females, in a nest box on a 15th floor ledge on the northeast corner of the building. Male 31T wintered here (he is a son of Meg, the St. Paul female who also is non-migratory), but female 81V apparently was gone until early March. Tordoff identified both birds by black band number on March 10. Their clutch of four eggs was complete on April 9; all hatched within 24 hours on May 13 and 14 and fledged June 19 to 23, males first. Each youngster ended on the ground after its initial flight, failing to find any perch on the glass building below the nest level. Each was then released on the 17th floor roof behind an eight foot parapet. Within hours, each had flown over the parapet and found either the high building ledges or safe lower perches. From then on, development to independence proceeded normally despite the glass building, heavy road traffic nearby, and a three inch downpour in the night on July 2 which left the young falcons too wet to fly well for half a day.

6. Mayo Clinic, Rochester, Minnesota. The falcons here but not nesting in 1991 returned and nested for the first time in a box on the Plummer Building. This was the second year for the female Minnsoar 75V and the third for the male Chase 06T. According to Bonnie Brooks, MN DNR, and Ted Bartel, Mayo, they were present by March 20, produced a clutch of three eggs by April 17, and hatched one young male by May 20 which fledged along with a fostered young female in early July. Later in July, Tom Hennessy (Mayo) reported that the young male was found dead in a roof drain on the Plummer Building. In late August, Ted Bartel reported that the young female was also found dead on a roof of the Mayo complex.

7. NSP Sherco Plant, Becker, Sherburne County, Minnesota. Two tall smokestacks at this plant have attracted peregrines for several years. In summer of 1991, Bob Anderson and Rob McIntyre supplied a nest box which was installed by NSP workers at the 400 foot level of one stack. Dan Orr, NSP biologist, saw an adult male, later identified by Orr and Bob Anderson, as 94T, at the box on March 24. He was released in Cedar Rapids IA in 1990. A one-year-old female, 36R, joined him by March 30. She was released in LaCrosse WI in 1991. They produced three eggs by late April, but incubation appeared to be disrupted by the presence of a third adult peregrine seen on April 30, possibly an Arctic migrant. No eggs hatched, so two young, one each sex, from Bob Anderson were given to the pair. These fledged successfully in July.

Peregrines are regularly attracted to power plant smoke stacks, which are usually near water, and will readily nest if a box is installed. Anderson and his colleagues have recently placed boxes on smokestacks at four Minnesota power plants; in 1992, two held nesting pairs and the other two had single males. Stacks with elevators and catwalks at various levels are easiest to work with. Power plant employees have been very cooperative. The important first flight

usually goes well from chimney nests, with the young ending up on a lower catwalk or on the roof of the main building.

8. Palisade Head, Lake County, Minnesota North Shore.

Dudley Edmondson saw one adult here on his first visit on March 14, and two adults on April 4. He later identified them as the same birds as in 1991; female Fridge 43R, back for the fifth year, and a distinctively marked male with only a silver band on the right leg, back for the second year. They nested on a new ledge about 150 yards south of the 1991 nest and fledged three young, two males and a female, from an unknown number of eggs in mid-July. Peter Harris and XXXX, of the Wolf Ridge Environmental Learning Center, did the climbing to the nest ledge. Tordoff read the USFWS band on the male as 816-22147 through a Questar telescope, and concluded that the original black band had been lost somehow. (The black bands for males are made brittle by the anodizing and always crack at the hinge when the lock-on tab is closed.) But this USFWS band number was put on Calvin 48T, released in Madison WI in 1989; a new adult male showed up in Madison in June 1992 (see pair 12), and Tim Ellestad read 48 on his black band but could not see the letter. Only two males have been banded on the left leg with black bands numbered 48: 48T, Madison WI 1989; 48Y, Trap Hills MI 1988. The final identity of both the Palisade Head male and the new Madison male remains to be determined.

9. Environmental Learning Center, Finland/Lake Superior cliff north of Kennedy Creek, Lake County, Minnesota. According to Rose Welch and Ronnie Cummins, the 1991 pair was back this year in early April. The female is Blueberry 20P and the male has a green anodized band on his left leg and a breeder band on his right, both back for the third year, second at this site. They nested again in the old raven nest used in 1991, fledging three young in mid-July. As in 1991, we were unable to band the young at this site, this time because of loose rock and precarious support for the raven nest.

10. Rouchleau Mine, Virginia, St. Louis County, Minnesota. Jerry McHugh and Jeff Lightfoot, MN DNR, report that an adult peregrine over-wintered in Virginia, most likely the female 25V, who had been injured in an accident in Virginia in late July 1991 and released back home in early August after treatment at The Raptor Center. Both adults were present in late March. On April 23, 1992, McHugh reported that the pair had been incubating four eggs for about a week in the old cliff hack box used in 1991. Four young, two each sex, hatched in mid-May and fledged in late June. The adult female was identified as 25V by distinctive plumage details and behavior; the male in both 1991 and 1992 was very shy, never approaching the nest closer than hundreds of yards when the young were being banded. We assume it was the same male both years but do not even know if he is banded.

11. First Wisconsin Center, Milwaukee, Wisconsin. Greg Septon says that female Sibella 20V, fourth year, and male Bill 74T, second year, produced four eggs by March 25, hatched all four by April 28, and fledged two males and two females in June. One young was grounded by heavy rain and killed by a car on June 19.

12. State Capitol Building, Madison, Wisconsin. A new pair, identified by Tim Ellestad and Greg Septon, made up of an adult male, Jade 72T, and a one-year-old female, Alula 25R, replaced the pair that nested here unsuccessfully in 1991. Jade was released in Madison in 1990; Alula is from the wild nest on the Multifoods Tower in Minneapolis in 1991. The newcomers were seen copulating in late February. Their clutch of two eggs, laid by April 10 in the nest box ignored by the 1991 pair, produced one female young hatched by May 13. A young

male from Vic Hardaswick was added to give her company. Ellestad noted that Jade 72T became conspicuously lethargic from May 13 through May 23, sleeping for hours in the daytime; he was found dead on the Capitol dome by Charlie Gieck, WI DNR, when the youngsters were banded on June 11. He was too badly decomposed to determine the cause of death.

A new adult male, later tentatively identified by Ellestad as Calvin 48T (see pair 8, above; Tim saw the numerals on the black band but not the letter), had already taken over the territory by June 10. He courted Alula by providing her with food which she then fed to the babies. Any assumption that this was parental behavior on his part was shattered when the young fledged. He attacked them relentlessly, driving the young female to the ground. She was rescued by Gieck and sent to St. Paul, where we marked her with paint and released her at the NCL Tower where three young males were already on the wing. She was adopted by the adults and seen several times in the following weeks.

Back in Madison, the young male was fed by Alula after being driven from the territory by the new male, but he was found dead later west of the Capitol on a building on the University of Wisconsin campus, probably killed by the adult male as they were seen "colliding" in mid-air, according to C. Gieck.

13. Edgewater Generating Station, Sheboygan, Wisconsin. Greg Septon and Jim Marks report that the pair on this new nesting site includes female Silverstreak 42V, in Chicago in 1990 and 1991, and two-year-old male Max 70T, released in Madison in 1990, nesting in a box placed on the roof of the plant in 1991. They produced four eggs by May 5. Two eggs hatched, one young was fostered and one disappeared, and two young fledged in July. One of these was found on September 2 at Two Rivers WI with a badly injured wing; it is in The Raptor Center.

14. 125 S. Wacker Building, Chicago, Illinois. A reunion of an old pair, female Harriet, 6th year, and male Jingles, 4th year paired here with Harriet but somewhere else in 1991, produced four eggs by March 27 on the same ledge used before. Three young, two females and a male, hatched on April 28 and fledged in late June, according to Mary Hennen and Dave Willard.

Harriet was released in Minneapolis in 1985 and is the oldest surviving peregrine in the Midwest, as far as we can tell. As a juvenile she was unusually light colored; now she has a distinctive pale smoky appearance which makes it easy to keep track of her.

15. Cline Avenue at Lake Michigan, East Chicago, Indiana. This site was occupied for the fourth year, but by a new pair of peregrines. The 1992 female is Egore 57V, released in Madison WI in 1990, and the male is unbanded, possibly from the unbanded brood of three fledged here in 1989. Again, the nest was in the same cave-like opening under the highway overpass used earlier. Four young, two females and two males, were banded by John Castrale, IN DNR, and fledged in late June. One of the young males hit a truck and was killed on June 24 and one of the young females disappeared shortly thereafter. After the previous adult male, Floyd 34Y, was found dead below the nest in May 1991, he was replaced in late June by a new adult wearing a black band on his left leg, silver right, clearly not the same bird as the 1992 male, but never positively identified.

16. U.S. Steel, Gary, Indiana. For the third year, the same pair nested successfully on the same ledge in this huge steel mill. The adults, identified by John Castrale and Redig, are siblings, female Susy Q 52P and male Doc 55Y, released in Grand Rapids, Michigan, in 1988. They had four eggs, hatched two, and fledged one young in late June. The second young died at fledging when grounded and run over by a truck.

17. Commodore Perry Motor Inn, Toledo, Ohio. At this abandoned hotel site two young were fledged in 1988, none in 1989, one in 1990, one in 1991, and three in 1992, according to Mark Shieldcastle, OH DNR. The adult female, Canadian red band 3C7, released in St. Catherine, Ontario in 1987, was in her fifth nesting here; her mate in 1992 was Solo 20Y, back for the second year. They hatched three eggs and fledged three young, their best year yet.

18. Book Building, Detroit, Michigan. Judith Yerkey, Detroit peregrine coordinator, reports that in March, two-year-old female Judy red AD (named Judy in recognition of Judy Yerkey's meticulous record of the history of the Detroit peregrines by Bob Healy, Detroit Peregrine Return, and Tim Payne and Bob Hess, MI DNR), released in Sudbury, Ontario in 1990 and first seen in Detroit in summer of 1991, was paired with an immature male Son of Solo, 41X, fledged in Toledo in 1991. They probably made a nesting attempt, as two abandoned eggs were found on the Westin Hotel. Male 41X was succeeded (ousted?) on May 4 by an unidentified one-year-old male (black band with "8P" seen on his right leg, numbers somewhat obscured, no USFWS silver band). Three eggs were laid by Judy red AD by May 17, none hatched; two young were fostered on June 17 and they fledged successfully July 20 and 21.

19. Southwestern Bell Building, St. Louis, Missouri. Walter Crawford reports that the same pair as in 1991, now a two-year-old female and a three-year-old male, both released in St. Louis, nested for the second year but failed to hatch their eggs. Two foster young were raised by the pair and fledged successfully.

20. Woodman Building, Omaha, Nebraska. According to John Dinan, Nebraska Game and Parks, in late September 1991, female 33R, released two months earlier in Des Moines, Iowa, appeared in Omaha, where she joined male, 53T. He had been released in Omaha in 1989 and had held downtown Omaha as his territory in 1990 and 1991 without a mate. The new pair produced 3 eggs by May 11, hatched all three on June 12 and 13, and fledged three young in late July, certainly the first peregrine nesting in Nebraska in almost a century and perhaps the first ever. (Flying young peregrines were reported seen in the Pine Ridge of northwestern Nebraska around the turn of the century.)

*Robert Nero supplied this information on Canadian peregrines.*

21. Delta Winnipeg Hotel, Winnipeg, Manitoba. Robert Nero reports that the death in September 1991 of Maud 27P, the female peregrine nesting in downtown Winnipeg for three years, opened a territorial vacancy quickly filled by female 52V, released in Cedar Rapids, Iowa in 1989, who had wintered in Winnipeg in 1990-91 but was ousted by migratory Maud after her return from winter quarters. 52V then moved for the summer of 1991 to the University of Manitoba campus where she paired with Maud's son black 1X but produced no eggs. Back downtown in 1992 after again overwintering, she paired with male red 5P9, now in his fourth nesting season there. They produced four eggs, hatched two, and fledged these two young along with two more fostered young.

Nero points out that three of the four peregrine subspecies in 52V's ancestry are non-migratory, which probably accounts for her overwintering in Winnipeg, in contrast to the long migrations to Central or South America typically made by Canadian falcons.

22. Administration Building/Mary Speechly Hall, University of Manitoba, Winnipeg, Manitoba. Three-year-old male black 1X paired in 1992 with a new

female red EH, released in 1990 in Brandon, Manitoba. She laid two eggs in a rain gutter, ignoring a nearby nest box. After the eggs failed to hatch, two captive-produced young were put in the box, where the male quickly adopted them and began to feed them, as he had with fostered young in 1991. Within a week, the female's maternal instincts won over and she joined her mate in caring for the chicks. Soon she took over most of their care and they fledged in late July.

23. Regina City Hall, Regina, Saskatchewan. It is a long reach from Minnesota to Saskatchewan, but this new pair is included here because the male, black 3D, is a son of Maud 27P and grandson of Minneapolis matriarch Muffin MF1. He was fledged in Winnipeg in 1990 and was in Regina in 1991 but did not nest. His mate is female red 8B3 (in Canada, red bands usually indicate hatched peregrines, black bands mean wild-produced), released at the University of Manitoba, Winnipeg, in 1990. The pair produced four eggs, hatched three, and fledged four young, one fostered.

### **BREEDING PAIRS, OUTCOME UNKNOWN**

24. Traps Hills, Bergland, Ontonagon County, Michigan. For the fourth year, a pair of peregrines apparently nested here, but the birds were not identified and the outcome of the nesting is unknown.

25. Porcupine Mountains Wilderness State Park, about five miles west of Silver City, Ontonagon County, Michigan. For the third year, a pair of peregrines apparently nested here, about 12 miles from the Trap Hills site, but again the adults were not identified and the outcome is unknown.

26. Nipigon, Ontario. Ontario MNR Conservation Officer Rusty Rustenburg reports that a pair of peregrines apparently nested again on the same cliff near the mouth of the Nipigon River used in 1991. The identity of the adults and the outcome of the nesting are not known.

27. Sibley Peninsula, northeast of Thunder Bay, Ontario. As noted above in the introduction, Ted Armstrong, Ontario MNR, reports that biologists working northeast of Thunder Bay on the Sibley Peninsula, largely roadless and with many fine cliffs, have seen adult peregrines repeatedly in the past two summers and have noted juveniles in August, well before migrants from the Arctic should be present. We think this information is definite enough to count these as a nesting pair.

Armstrong also suspects, from field reports, that one or more additional pairs of peregrines may be nesting on remote cliffs, lakeshore and inland, in the area between the Pigeon River on the international border and Nipigon.

28. Pie Island, mouth of Thunder Bay, Ontario. Ann Schimpf reports that she, John Tofte, and Paul Treuer, saw two adult peregrines on a big cliff overlooking Lake Superior in late June. Ann and her companions were on a long canoe trip around Lake Superior; she says that the falcons flew to several ledges on the cliff and seemed to be at home. No other evidence of breeding was noted and their inclusion here as a breeding pair is only a guess.

### **UNSUCCESSFUL BREEDING PAIRS**

(Eggs laid, but no young fledged)

29. Bong Bridge, Duluth, St. Louis County, Minnesota. For the third year, a pair of adult peregrines was present here. On May 13, 1992, Steve Cavanaugh, MN DOT, reported three eggs on a new site close to the 1991 nest. The eggs were placed on a steel beam below the roadway with almost no loose substrate. They failed to hatch although incubated at least until early June. Perhaps the steel beam, in the absence of insulating nest material, acted as an insatiable heat sink in the cold of Duluth harbor. The 1992 adults were not identified but their behavior indicates that at least one of them had prior experience with the bridge. We think that the clutch represented a second nesting attempt, given its small size and late date.

30. Mt. Leveaux, Lake County, Minnesota. On May 9, Jim Carlson found a pair of adult peregrines back at a cliff nest built and used by Common Ravens in 1989 and 1990 and by peregrines in 1991. On June 1, Tordoff saw the female incubating. Later in June, however, Carlson found the nest abandoned, although the adults were still present. If eggs hatched, perhaps the small young were killed by black flies. The adult female seemed to be continuously bothered by them on June 1.

31. Brittanica Building, Chicago, Illinois. An unidentified pair nested here but failed. The female, believed to wear a silver band, was incubating from March 26 to April 14. Both adults were present until early May.

32. Park Plaza, St. Louis, Missouri. A new pair, identified by Walt Crawford as female 56V, released in Madison, Wisconsin in 1990, and male 93T, released in Cedar Rapids, Iowa in 1990 and present at a hack site in Des Moines in 1991, nested at this new site. The adult female was found unconscious on March 23 on the 27th floor of the Park Plaza, rehabilitated at the World Bird Sanctuary in St. Louis, and released on March 29. She returned to the Park Plaza, where on May 8, the last of a clutch of three eggs was laid on a bare ledge of the 29th floor; at this time an abandoned clutch of two eggs was found on the 27th floor, presumably laid in March and lost because of the adult female's mishap. Two of the three eggs of the second clutch broke and the nest was abandoned. Both adults were still in the area in August; nest boxes are being placed on the building.

This site is four miles due west of the nest at the Southwestern Bell Building.

33. American Republic Insurance Building, Des Moines, Iowa. Laura Jackson, IA DNR, reports that a new pair laid two eggs in an unsuitable nesting site, ignoring a gravel tray provided for them; one egg fell from the ledge and the other cracked during incubation and failed to hatch. This is the first peregrine nesting in Iowa in nearly 30 years. According to Bruce Ehresman, Iowa DNR, the female was tentatively identified in late summer as 19R, still on territory; she was released in Kansas City MO in 1991.

34. Centennial Bridge, Davenport, Iowa. Mark Washburn and Ed Temper, Iowa Falconers Association, report that an unidentified adult male was found in early February. He was visited by several females until April 22, when an unidentified one-year-old female decided to stay. They apparently nested, but the ledge on the bridge is almost inaccessible; the nesting failed, but no additional details are known.

#### **NONBREEDING TERRITORIAL PAIRS**

35. Duluth Hotel/Central High School, Duluth, Minnesota. In late March and early April, two adult peregrines were seen here by Dudley Edmondson and Dave Evans. The birds disappeared for about a week and showed up again on April 13. Edmondson read the female's black band, 76V, released on Isle Royale MI in 1990; the male's black band was not read, but plumage details and behavior indicate that both birds were those present in 1991. They disappeared again in mid-April and were not reported until July 25, when Edmondson saw an adult at the Duluth Hotel. One was still present there in late August. These adults would have tried to nest somewhere; perhaps there was a vacancy in the Bong Bridge pair filled by one of the Duluth Hotel birds, as with the NCL/CDC pairs in St. Paul.

[Irving Park, Chicago, Illinois. This territory, occupied for several years, was vacant after February 1992; the female Silverstreak 42V, present here in 1990 and 1991, nested in 1992 in Sheboygan, WI (pair 13).]

[Hyde Park, Chicago, Illinois. This territory, occupied in 1990 through spring, 1991 was vacant in 1992.]

[Waukegan, Illinois. Mary Hennen, Chicago Academy of Sciences, keeps track of peregrines in the Chicago metro area. She reports two adult peregrines seen frequently on a downtown Waukegan building from March to April 19. No nesting was attempted.]

[Lake Calumet, Chicago, Illinois. Hennen reports two adult peregrines seen regularly perching and flying near the Continental Grain buildings through April. Only one was seen periodically through the summer.]

36 Lazarus Building, Dayton, Ohio. Denis case, Ohio DNR, reports a pair of falcons in late March and early April, an immature female 66R, released in Columbus OH in 1991, and an adult male 21X, released in Cincinnati OH in 1990. No nesting was attempted. Two nest boxes were installed on December 17, 1992.

37. Terminal Tower, Cleveland, Ohio. Steve Wilcox, Sara Jane Peters, and Harvey Webster report that an adult male, 67Z, fledged in Toledo OH in 1988, was paired with a hybrid peregrine X prairie falcon (presumably produced in captivity by artificial insemination). Efforts to capture and remove the female failed. They did not nest.

38. Instar Bank Building, Cedar Rapids, Iowa. Laura Jackson reports a lone male peregrine present from early spring finally attracted a female in mid-May. Courtship feeding led to visits to the box and a nest scrape in the gravel, but they did not nest. Neither bird was identified XXXage?XXX

39. Kansas City, Missouri. DeeCee Darrow, John Meyer, and Jim Wilson, MO Dept. of Conservation, report a pair of peregrines present all summer. The male is 39X, released in Kansas City in 1991; the female is 28R, released in 1991 in Des Moines IA. They interacted unaggressively with the young being hacked this summer, even bringing food to them occasionally.

#### **SINGLE TERRITORIAL ADULT FALCONS**

40. NSP Blackdog Power Plant, Bloomington, Minnesota. A nest box provided by Bob Anderson and Rob McIntyre was installed on a smokestack by NSP personnel in spring. An adult peregrine was present and using the box from late spring through the summer. A second falcon was seen once in early summer. No

birds have been identified yet. The territory is along the lower part of the Minnesota River valley, an area rich in wildlife.

41. Clay Boswell Power Plant, Cohasset, Itasca County, Minnesota. Bob Anderson and Rob McIntyre gave a nest box to Daryl Councilman, who works in this plant. He installed the box in spring 1992 on a tall smokestack. An adult male peregrine was present at the box from late spring through summer, but did not attract a mate.

42. State Capitol, Lincoln, Nebraska. John Dinan, Nebraska Game and Parks, reports an adult male peregrine, black band on left, silver right, was resident in 1992. An adult plumaged bird was first reported at the Capitol in late August 1990 to mid-October. From spring 1991 to mid-October an adult male was present, visited briefly by a female in spring. On April 23, 1992, an adult unbanded female appeared and was courted by the resident male. On May 5, a second female, in immature plumage appeared. The next day only the new female and the adult male were seen. She was apparently unbanded and was last seen on May 8. The male remained all the rest of the season. Judging by the dates, these females were probably migrants bound for high latitudes and unwilling to stay. One of these years, the Lincoln male should attract a midwestern female ready to settle down there.

43. Dennis Ruppert reports a male peregrine, 82P, released at Pictured Rocks MI in 1989, has spent the past three winters in Sarnia, Ontario, across the St. Clair River from Port Huron MI. Ruppert does not know where this bird spends its summers.

44. Ted Armstrong, Ontario MNR, reports that an adult unbanded peregrine was present in July on Lake Nipigon, Ontario, making an easy living on gull chicks taken from their nests.

#### **SUMMARY OF PEREGRINE NESTING IN 1992**

Summing up the natural breeding in 1992, 38 pairs were on territories, 34 pairs (89%) nested, 23 (61%) pairs were successful in fledging 68 young (counting 14 fostered young), 3.0 young per successful pair, 2.1 per nesting pair, 1.8 per territorial pair.

Of the 34 nesting pairs, nine were on cliffs, 22 were on buildings, two on bridges, and one under a highway overpass. Nineteen of the 22 building pairs succeeded, as did the highway pair. Neither bridge pair was successful in fledging young, and of the nine cliff pairs, one failed, three are known to have succeeded, and the outcome is unknown for the other five. Of the 68 young known fledged in the wild, all were banded except three at Kennedy Creek MN. Additional young may have been fledged at Nipigon and Sibley Peninsula, Ontario, and at Trap Hills and Porcupine Mountains, MI UP.

#### **PEREGRINE RELEASES IN 1992**

Fourteen young were fostered:

--Bob Anderson provided four young added to wild broods: two at the NSP Sherco plant at Becker MN, one at the Mayo Clinic, Rochester MN, and one at Sheboygan WI.

--The South Dakota Raptor Trust provided three, one in Madison WI and two in Detroit MI.

--At the Southwestern Bell Building, St. Louis, Missouri, two young from Charles Robinson were provided to a pair whose eggs failed to hatch.

--In Winnipeg, Manitoba, two young from the Canadian Wildlife Service were added to the wild brood on the Delta Winnipeg Hotel; two were given to the pair on the Administration Building/Mary Speechly Hall at the University of Manitoba, after their eggs failed to hatch; and one was added to the brood on Regina City Hall. All fostered young fledged successfully. Young added to wild broods are counted in our totals as "wild-produced" rather than hacked to emphasize their rearing by wild falcons rather than their captive origin.

#### Wisconsin

La Crosse. Fifteen peregrines were released in groups of (approximately!) three, four, six, and two from the La Crosse City Hall. See hack-site report for details on the various adventures and accidents involving the birds at this complex release, but a brief summary is that thirteen dispersed successfully.

Racine. Ten peregrines were released from the Racine County Courthouse in two groups of five in late June and early July; all fledged and dispersed successfully.

Kenosha. Fifteen falcons were released in July from two boxes in groups of 4, 4, 4, and 3 from the Pleasant Prairie Power Plant. All survived and dispersed.

#### Michigan

, Grand Island, Pictured Rocks National Lakeshore, 10 miles NE of Munising. A cooperative project by the U.S. Forest Service, Hiawatha National Forest, Michigan Department of Natural Resources, and the Michigan Audubon Society released eight peregrines from one hack box on a cliff on Lake Superior on July 13. All fledged successfully, but one male disappeared six days after release and was later found dead.

#### Ohio

Akron. Seven falcons were released in a single group from the roof of the Ohio Edison Building. All dispersed successfully.

#### Indiana

Fort Wayne. Sixteen peregrines were released in groups of four, four, five, and three from the Anthony Wayne Building. Two were killed in building collisions before dispersal and two died after dispersal. The young falcons took at least seven prey species; see the full hack site report for details.

#### Iowa

Muscatine. Eight young falcons were released by the Iowa Department of Natural Resources Nongame Programs, Iowa Falconers Association, Quad Cities Conservation Alliance, and the Illinois Department of Conservation from the Stanley Building on July 25. All fledged but two were injured later; one had to be killed, the other is recovering in The Raptor Center.

#### Missouri

Kansas City. Thirteen peregrines were released in groups of four, three, three, and three from two hack boxes on the Commerce Bank Building. Two died before dispersal, one later. Three adults from 1991 releases visited the site and even fed some of the young falcons.

#### Ontario

Nipigon. According to Rusty Rustenburg, Conservation Officer, the Ontario Ministry of Natural Resources (Thunder Bay District), Canadian Wildlife Service,

and the Thunder Bay Field Naturalists, led by Harold Kish, cooperated in a release of 12 peregrines.

To sum up production for 1992 in the Midwest, 68 young were fledged by wild pairs and 104 young (including the 12 at Nipigon, Ontario, part of the Midwestern population although not released under our auspices) were released from captive pairs, for a total of 172. Of the 104 hacked young, 92, 88%, lived to independence.

### **GENETIC ANALYSIS**

We continued collecting blood in 1992 from all released young and from all wild young banded, and wild breeders not previously sampled. 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. Sharon Moen has gathered pedigree data and done the laboratory work and genetic analysis.

### **PLANS FOR 1993 AND BEYOND**

In 1988, we suggested a new goal for the midwestern restoration effort of 40 territorial pairs of peregrines for the nine state area (Minnesota, Wisconsin, Michigan, Nebraska, Iowa, Illinois, Indiana, Ohio, and Missouri) and western Ontario. We had at least 37 pairs on territory at the end of summer, 1992. Even ignoring the certainty that we are missing some wild pairs, the goal of 40 territorial pairs will be reached in 1993 barring some unforeseeable disaster. We see no need for further releases in the Midwest, either to increase the wild population size or to enhance its genetic diversity. It might be argued that some areas now low in peregrines would benefit from further releases, but the mobility of the birds after release or fledging should guarantee that good nesting sites anywhere in the Midwest will be found eventually and occupied. The large cohorts of young hacked or fledged in the wild in 1991 (144) and 1992 (172) should add about 50 potential breeders in the years ahead, assuming conservatively that only one in six survives to reach breeding age. It seems a reasonable guess that in about four years, the midwestern wild population of peregrines will exceed 50 nesting pairs producing over 100 young annually, as well as a non-breeding population of unknown size. This is probably a larger population of peregrines than lived here in the pre-DDT days, because of the large number of city pairs today.

The cliffs along the Mississippi and its tributaries still remain vacant, presumably because of the presence of Great Horned Owls. Whether peregrines will be able to reoccupy those cliffs in the years ahead is a fascinating question.

### **ACKNOWLEDGEMENTS**

The Midwest Peregrine Project is a cooperative effort involving many people and organizations. The University of Minnesota provides the overall coordination and administration of the project through Dr. Pat Redig of the Raptor Center and Dr. Bud Tordoff of the Bell Museum. Financial and logistical support for the Minnesota part of the effort is provided by Minnesota DNR Nongame Wildlife Program, Minnesota DNR Parks and Recreation, Endangered Species Office and Minnesota Cooperative Fish and Wildlife Research Unit of the U. S. Fish and Wildlife Service, U.S Forest Service, Minnesota Falconers Association, Iron Range Resources and Rehabilitation Board, Wolf Ridge Environmental Learning

Center, Mayo Clinic, Northwest Airlines, BCED Minnesota in Minneapolis and St. Paul, and The Shelard Group. Each cooperating state and agency has, in addition, its own list of cooperators, for which see the individual hack site reports. Falcons are obtained from private falconer/breeders, listed in the appendix, throughout North America. Falcons were supplied through us to the Wisconsin, Michigan, Ohio, Indiana, Iowa, and Missouri releases on a contract basis. The day-to-day devoted care that makes hacking falcons successful was provided by the hack site attendants listed in the appendix.

#### Appendix

### **BREEDERS SUPPLYING PEREGRINES FOR 1992 RELEASES**

Robert Anderson, Hugo, Minnesota  
Richard Graham, Colorado Springs, Colorado  
John Harrell, Gaithersburg, Maryland  
Don Hunter and Victor Hardaswick, Centerville, South Dakota  
Peter Jenny, Sheridan, Wyoming  
Lynn Oliphant and Paddy Thompson, Saskatoon, Saskatchewan  
Mike Petersen, Boise, Idaho  
Pete Widener, Sheridan, Wyoming  
Steve Sherrod, Bartlesville, Oklahoma  
Dan Thee, North Powder, Oregon  
Skip Tubbs, Bozeman, Montana

### **1992 CONTRIBUTORS TO PEREGRINE RESTORATION IN MINNESOTA**

#### ***Individuals***

Anne Marie Plunkett

#### ***Organizations***

BCED Minnesota  
Big Game Club Special Projects Foundation  
Mayo Clinic  
Minnesota DNR Nongame Wildlife Program  
Minnesota Department of Transportation  
Minnesota Falconers Association  
Northwest Airlines  
University of Minnesota Graduate School Faculty Grant-in-Aid  
The Shelard Group  
U. S. Fish and Wildlife Service

### **1992 HACK SITE ATTENDANTS**

Michigan

Grand Island National Recreation Area, Hiawatha National Forest, near Munising: Joe Rogers, Jim Bean, and volunteers David Bacab Ortiz, Jeremy Rogers, Barb Rogers, Mary Derr, Susan St. Pierre, and Bonnie Box Top, Night Security Patrol!

Wisconsin

LaCrosse: Patricia Skewes, Melissa Grover, plus 34 volunteers!  
Coordinator, Charlene Gieck.

Racine: Mary Parisi, Jonathan Melk.

Kenosha: Roarke Donnelly, Debbi Gunther.

Indiana

Fort Wayne: John Castrale, Coordinator, Janie Fink, Chief, Amy Krauss,  
Bill Bougher, Crystal Phillips, Allen Parker.

Iowa

Muscatine: Julie Ann Plummer, Dorothy Cunningham, and IFA members Mark  
Washburn and Dan Belknap.

Ohio

Akron: Kristina Wilkes, Supervisor, Yvonne Krebs, Rosanne Barile, Angela  
Petrasek.

Missouri

Kansas City: Mike Lampe, Eric Arnold, Mark Floersch. Coordinators,  
DeeCee Darrow, John Meyer, Jim Wilson.

**Table 6. PEREGRINE POPULATION GROWTH IN THE MIDWEST**

Year	Total rel.	Terr. pairs	Nest. pairs	Succ. pairs	Young fldgd	Yg/t pair	Yg/n pair	Yg/s pair
1986	102	4	1	0	0	0	0	0
1987	170	6	3	1	1	.17	.33	1.0
1988	254	13	8	6	12	1.1	1.5	2.0
1989	370	16	12	9	22	1.4	1.8	2.4
1990	453	23	16	13	33	1.4	2.1	2.5
1991	563	30	22	17	36	1.2	1.6	2.1
1992	667	37	32	23	68	1.8	2.1	3.0

Note: Starting in 1989, "young fledged" includes all young surviving to first  
flight from the nest.