

RAPTOR RESEARCH FOUNDATION MEETING
WASHINGTON, D.C., MARCH 2-6, 1969

Report by Byron E. Harrell

The occasion of the North American Wildlife and Natural Resources Conference in Washington, D.C., in March 1969 provided an opportunity to have a concurrent meeting of the Foundation. Outside of the chance for informal discussion and the attendance at a National Audubon Society session on Peregrines, there were two scheduled events.

The first event was an informal gathering in the bird collection of the U. S. National Museum from 1 to 5 o'clock on Sunday, March 2. This session, announced as a "workshop," was an opportunity for about 15 or 20 of our members to examine specimens in the collections. Dr. Richard Zusi, Curator of Birds, had made the arrangements and was available for any of our needs.

The last event was a tour of Patuxent Wildlife Research Center from 9 a.m. to 2 p.m. on Thursday, March 6, especially in the divisions where work on raptors is being conducted. Some of our members had been out there earlier in the week. As it turned out, only six persons were able to go on Thursday, but it was very profitable for them. Richard Porter and Stanley Wiemeyer talked to us about their pesticide work and showed us the equipment for food preparation which for the large number of birds is a sizable operation. From there they took us out to the pens where the pairs of American Kestrels are kept and where some new large breeding cages for Bald Eagles and Peregrines are being constructed. The Rare and Endangered Species program was explained to us by Glen Smart. Although there was some preliminary work, the program primarily dates from 1966 and now consists of a staff of 22 working in three sections. This is a Laboratory Investigation section involved in basic research including a research veterinarian in the nutrition field and a reproduction physiologist. They hope to get involved with pathology and behavior as well. The Ecology section is involved with field work with emphasis on habitat and determining and alleviating limiting factors. The Propagation section is involved with captivity breeding to produce, condition, and release species for reintroduction where now exterminated such as has now begun with the Masked Bob-white. We visited some of their pens and in addition to a number of non-raptors saw their Peregrines, Merlins, and Bald Eagles. These projects are just starting and the birds are still in temporary facilities. It was too early in the season for the Snail Kites to be out, and the Andean Condors we only saw at a distance. At the Bird Banding Laboratory we talked to Earl Baysinger, Larry Hood, and Jim Ruos. Many of the problems of the Laboratory were discussed and a tour of the offices to see the processing procedures was undertaken. Such a visit would be very

profitable for any bander. In addition to the above, our members had further opportunities to talk with these or other personnel on raptor problems. Our thanks go to all those who helped out, and especially to Stan Wiemeyer who made most of the arrangements.

In addition to our meetings of special interest to Raptor Research Foundation members was a session on Peregrines scheduled by the National Audubon Society for Tuesday afternoon, March 4. Originally scheduled for 1 p.m. in a conference room which had about twenty chairs, the session was started with standing room only, but since there were more people outside in the hall, arrangements were made to move to another location. Although the acoustics were not very good, at least all of the 100 or so persons present had a seat. The meeting itself was not anticipated to last more than an hour or so, but it lasted several hours. Probably most of those in attendance were members of our organization or of the North American Falconers' Association. Your reporter attempted to take notes on the proceedings. The comments are paraphrased below as well as I could from these notes. Under the circumstances I am unable to vouch for the complete accuracy, but nevertheless, I feel that the account will give to those not present a fair idea of the nature of the discussions.

The session had been organized by, and was opened with a few remarks by Roland Clement, Vice President of the National Audubon Society. The Society was stimulated to consider the status of the Peregrine and its protection by reports last September that the take by trapping on the coast of Texas, Florida, Maryland, and elsewhere was anticipated to be heavy. At that time the Society sent a memorandum requesting a moratorium on trapping until the situation became clearer. Since that time there were many letters and this session was planned for the North American Wildlife and Natural Resources Conference in March 1969. The agenda with requested speakers was as follows:

- Tom Cade (Cornell University)--Status of populations of Peregrines.
- Joe Hickey (University of Wisconsin)--Background on effects of pesticides.
- Jim Enderson (Colorado College)--concern of North American Falconers' Association.
- Allan Studholm (Fish and Wildlife Service)--Outline of what we face in regulation, especially the problem of regulating the take of such species.
- Discussion period for other comments over each of these above topics.

Tom Cade stated that the Peregrine was a polytypic species consisting of 20 or 22 subspecies around the world. The species is nearly cosmopolitan, being found on all the continents except Antarctica, but the center in the Holarctic.

The species has become extinct in eastern United States where there formerly were 300 pairs. Everywhere south of Canada there is a reduction in breeding. The range in North America formerly found extended to the south to Tamaulipas and Baja California in Mexico, and north to Thule in Greenland and to 73-74°N in the Canadian arctic islands. Centers of population were in the Appalachians (now extinct) and on the west coast from Washington through British Columbia. In most of the interior, the species was a rather rare breeder and in the arctic tundra region there were good numbers which were highly migratory. The population in the Pacific Northwest and the Aleutians (the subspecies called Peale's Falcon) consists of fairly large numbers. Since the 1965 Peregrine Conference there seems to be no essential change, but those studied show high levels of pesticide in the birds and their eggs. Likewise the eggs are thinner, which is probably part of the same phenomenon.

Joe Hickey said that the Peregrine decline in Europe and North America was marked by a disease. In the breeding segment of the population in Ireland, Germany, and England, reproductive failure starting in 1947-1948 with no further change in breeders until the 50's when there were 4, 5, 6, or 7 years of breeding failure. Finland has gone from a population of 1000 to extinction and Switzerland will lose its population. The changes are first noted when juvenile birds appear at the eyrie; confirming a prediction in 1964 in Switzerland there were no young produced in 1968. (Juvenile birds are now at eyries in the Brooks Range in Alaska.) British observers have noted and documented broken eggs and eating of eggs. The Sun-Life Building Peregrines (Montreal) had broken eggs in 1947 and ate the eggs in 1948. Ratcliffe detected the thinning of egg shells in Peregrines and European Sparrow Hawks but not Golden Eagles. American data on Peregrines, some Bald Eagles, some Osprey indicate thinning of egg shells taking place in 1947 in California and Massachusetts. This effect is now known to be related to liver condition which breaks down steroids, including sex hormones and possibly vitamin D. This is especially an effect of DDE which concentrates into large quantities in higher trophic levels in the ecosystem. Concentrations have been noted in Herring Gulls, pelicans, Prairie Falcons, and others. Experiments with Mallard at Patuxent showed thinning of egg shells with 3 ppm of DDE.

Jim Enderson, who has a background as both ornithologist and falconer, spoke for N.A.F.A. The North American Falconers' Association is the only national falconry group and has 410 members, some of whom are avid devotees of Peregrines. These members are disturbed by the long-term prognosis and are anxious about future access to birds. There is a general feeling that as long as take is reasonable a small hopefully insignificant portion may be taken. The take in proportion to total production is small. N.A.F.A. is anxious to develop machinery so take can be controlled carefully.

Allen Studholm discussed some problems relative to law enforcement. The public often believes the way to solve a problem is to pass a law, but this is clearly not enough; the law must be acceptable before it is enforceable, and there must also be a means of control. Most of the states have laws that protect raptors, nearly all including Peregrines. A federal law might help but there are 6,000 or 7,000 state agents and only about 150 federal agents. The Lacey Act makes it a federal offense if birds taken illegally in one state are transported to another. Need more than an idea for effectiveness, but need specifics in order to enforce; in some areas the additional federal laws have helped. He also brought up the problem of strong states rights sentiment might make the passage currently very difficult.

Clement commented on the state laws, three of which protect no hawks or owls, six others only some raptors, and about half protect all hawks. He also mentioned the New York law for falconry regulation. John Aldrich commented on Cade's remarks and emphasized the need to know more about the movements of these populations; for example, are the migrants on the west coast Arctic or not; on the east coast the birds are probably Arctic.

There were some comments on perspective in research. Clement said there should be work on the coordination of pesticide assay to provide control to avoid wasted effort. Someone commented on the question of encouragement of breeding and the tricks of maintaining the birds while the pesticide clears out, estimated at 15-20 years. Ed Friley, a longtime Audubon member, asked about the Audubon Society policy on pesticides. Mention was also made of an industrial source of chlorinated hydrocarbons.

Enderson commented on the main thrust since the 1965 Peregrine conference. The over-all picture is not at all clear. The picture in the Latin American wintering grounds is not understood at all. Much of the movement data from banding is based on the work of persons keeping Peregrines. Hickey said Cade and he should get together and make a prediction. Data last year on Pacific procelleriforms showed them loaded with pesticides (large amount in oil); any Peregrine population exploiting petrels as in Baja California is in danger. A report in the *Canadian Field Naturalist* on the Queen Charlottes was thought conservative. Hickey did not feel any optimism that chlorinated hydrocarbons will stop in time to save the species from extermination for even with cessation of use the northern populations will be in danger for DDT will not be stopped for malaria farther south.

Cade also commented on pesticides and on Enderson's remarks. Perhaps remote pairs in the west and in populations feeding on seed eaters are safe, but he thought sea bird or shore bird feeders were doomed. Perhaps most of DDT obtained from winter range. In some areas DDT use is down but worldwide use is up. He is going back to Alaska the next two summers to look at changes.

Charles Callison, the Executive Vice President of the National Audubon Society, referred to an earlier question that their policy has clearly been against the chlorinated hydrocarbons since before Rachel Carson's "Silent Spring" and has been expressed at hearings of the USDA and of Congress, through editorials, and in many other ways. Another comment was made that we should be concerned with any pesticide that tends to cycle in the environment.

Dr. Dustman of the Patuxent Wildlife Research Center spoke on the work of this center of importance to raptors. He requested Dr. Porter and Mr. Wiemeyer to comment on the use of American Sparrow Hawks as experimental animals and also on the effects of combinations of DDT and dieldrin. He also mentioned work with eagles as indication of levels. In addition there is work on captivity breeding.

Dr. Porter spoke about experiments with heavy dosage levels in combinations, one group with 1 ppm dieldrin and 5 ppm DDT and the other 3 ppm dieldrin and 15 ppm DDT. The higher amounts were close to lethal for some of the birds died; the lower is close to a field level. The disappearance of eggs and eating of eggs were parts of reproductive failure. A significant difference in thickness of egg shells was observed, and also in second generation birds there was mortality following hatching.

A letter from Bob Risebrough on pesticide accumulation of marine birds was read. He did not think that pesticides would exterminate the Peregrine but thought that the levels were high enough to cause a stress so that they could not stand any pressure; he therefore recommended that they should be strictly protected.

Bill Huey from New Mexico said that this was one of the states without protection, and although after six years a bill was defeated new ground was broken and a group of followers has developed. He is quite concerned with the status of Prairie Falcons there; the Peregrine is rare.

Byron Harrell, President of the Raptor Research Foundation, spoke about the various lines of effort of this group. Since I took no notes on my own remarks, they are not reported here, but the regular reader of the *Raptor Research News* is familiar with their general nature.

Howard Leach of the California Fish and Game Department told about the falconry licensing in that state. In response to a request they send an application and the rules. The license cost \$15.00. Last October there was a prohibition on take of Prairie Falcons and Peregrines (they can be brought into the state, however). In a follow-up sent to licensed falconers, 113 replies were received reporting 60 Prairie Falcons and 47 Peregrines (the

only two raptors in the original regulations). He also commented on the Peregrines on Moro Rock which fledged three young this year. The local Audubon group had established a 24-hour protective watch of the nest.

A paragraph from the Risebrough letter was read. He suggested that all Peregrines in captivity should be marked with permanent bands and that trapping should be allowed only at a few specific localities to aid in regulation.

Richard Fyfe of the Canadian Wildlife Service reported some evidence of decline in Northwest Territories. He also mentioned the problem of isolated birds being able to maintain themselves. He showed a graph with data from Cade, Enderson, and Fyfe that indicated different dosages within the Arctic. Prairie Falcons in Alberta within 50 miles of each other had sharply different pesticide levels. In one Prairie nest the young were dead at four weeks. In response to a question from Hickey, the differences in the arctic dosages probably related to the food habits, those feeding on Lapland Longspur, Snow Bunting, and Harris Sparrow showing less pesticide. The high levels show up first in fish and bird eaters.

Porter asked Hickey a question and he said that it looks like the Peregrine populations are going all the way. In his last report, Dr. Ratcliffe thought that the declines should have stopped when dieldrin stopped but the populations are still sick. On the other hand Golden Eagles in the highlands recovered their good reproductions with reduction of DDT use in sheep dip.

Clement mentioned the decline in pesticide use. Although this was general there also tended to be an increase in others (as dieldrin). Dr. William Stickel of Patuxent said the trend in DDT use has fallen off rather sharply until last year, but the decrease was made up by dieldrin and toxophene. There was increase last year, but less domestic.

Enderson returned to the numbers of falconers with Peregrines. California was already mentioned. In Pennsylvania there are 36 licensed falconers with six Peregrines and four for scientific purposes. Berry said that in Colorado with 20-30 falconers there are less than a dozen Peregrines, some about five years old. Meng said there were around a dozen in New York. Enderson said responsible falconers were interested in controlled take. Clement felt something could be worked out. Someone commented we should know sex and age when taken. Jim Rice mentioned the Maryland migrant population the annual capture is 37; one year out of 24 taken 16 were banded. Cleaver said that we need information on commercial trapping; some kinds advertised for sale had not yet been caught. Mention was made of a *San Francisco Chronicle* ad quoting \$400 for

a Peregrine and \$1100 for a Goshawk. Fyfe said there were never more than one or two passage birds trapped per year and noted that British Columbia was at least trying hard to control the take from the Queen Charlottes. Hickey inquired on the age ratio at Assateague.

A local falconer said this year of 70-80 Peregrines seen on the dunes close enough to tell there were 5.7 adults to 1 young. From Cape May to Cape Hatteras there are about a dozen persons banding. Someone commented that over a 10-year period, birds caught averaged 83% adult. A question about the Bird Banding Laboratory was turned over to its Director, Earl Baysinger. He said that his office was not in a position to do research on the material. He also said that statements that they were anti-banding were not true, provided that persons maintain and submit decent records.

Chandler Robbins commented that for most species we do not have information from year to year and discussed the beginning of a bird population survey. They hope to do something with winter birds. He stressed the importance of basing the data on some sort of random sampling.

At this point the meeting had lasted longer than the Chairman had anticipated, but there was unanimous agreement to continue, following a break.

Jim Enderson made some comments on behalf of N.A.F.A. Falconry as a sport is one of small numbers. Probably below 200 fly Peregrines. Falconers are usually interested in the species they use. Since N.A.F.A. has a voluntary membership, a rigid control of its members is unlikely and since any control over non-members is impossible, regulation should be outside of N.A.F.A. N.A.F.A. guidelines for falconry regulation have been used in nearly half of the states. New York and Colorado are considering or adopting laws. However, states have shown little interest in Peregrines as a species. Can 48 states do anything individually meaningful on a species like this? It is not likely except for problems such as at Moro Bay that are well defined. How could a system be developed? It is a question of commercialism. Apparently not important on eastern seaboard where old falconers know what is going on. There are ads in sporting goods magazines. Here Oklahoma has not moved but Colorado does (there it is illegal to buy and sell). Several other comments were made. Cleaver questioned what to do except agitate for laws that we want as the New York law. If no state laws, then need federal law, but that is difficult to implement. Hickey was not sure N.A.F.A. can't do it. A migratory species cannot be controlled at a state level. Federal regulation involves bureaucracy, not too happy a solution. Stanley Marcus, N.A.F.A. Secretary, mentioned a couple of problems--lack of police power to run enforcement and lack of funding to do entire research job. Many contribute time and money but not enough funding to develop in depth. Ham

radio licensing might be a model. He also mentioned problem of commercialism and shooting, the latter states cannot control. Enderson thought not all insurmountable. Someone said certain areas can be controlled. Northwest Territories controls the take, but other areas not. Falconers are interested in breeding program as a supply. Some are interested in reintroductions. Others think should be reasons for taking, insist birds for breeding be treated distinctly from time of taking. Jim Grier mentioned the problem of flying to increase chance of reproduction.

Clement mentioned the work of the National Audubon Society in the raptor field. They have always been concerned as indicated by publishing May's book. They have also tried to increase the list of states which protect raptors. Six years ago they became very concerned about the future of the Bald Eagle and hope to summarize some of this soon. The Society helped to pass the law on Golden Eagle and are now working with sheep people to sponsor research. Sprunt would like to do more. A registry might be possible.

Hickey said there was a broad spectrum in pen keeping a falcon. There is a problem of the fringe of falconry. If not the states, what kind of federal regulations can be lived with. Peregrines are surrounded by suspicion. What can be done by N.A.F.A.? He also talked about population recording, the need for cooperators, and putting it on a biologically sound basis. Perhaps areas at five-year periods in sample areas in the Canadian arctic. Population indices can be used in the U. S. as by Rice mentioned earlier, and Berger and Mueller on Wisconsin shores who estimated back into the 1930's. There are changes in a five-year looping average which does not appear in the Duluth hawk pass. Peale's Falcons also need attention as well as birds in Baja California.

Fyfe said some estimates are based on habitat but prey abundance varies very widely. Bathurst Inlet is a site set up for a sampling area this year. Additional prairie areas, and an area for Bald Eagle in northern Saskatchewan were set up. Donald Blood and Fyfe will try to do a good survey of the Queen Charlottes. Prairie Falcons are also receiving attention; that situation is not bright. In response to an earlier remark there is cooperation in the pesticide work between the Canadians and Patuxent. He also commented that the Raptor Research Foundation has often been left out of remarks, but all of this is their purpose.

Hickey came back to the problems of surveys. Cade commented that money to do all that is required will take dough. There are some old areas, but we need additions. He also said breeding projects should be encouraged. Porter's results have been good, a major breakthrough, for experimental birds can reproduce in small areas equal in productivity to wild Sparrow Hawks. The step from Sparrow Hawks to larger falcons is a big step but important

especially if pessimism is accurate. Hickey asked whether this should be at amateur or professional level; Cade answered both. Patuxent has a number already. Cade mentioned some individual birds work better than others. Porter commented on conditions for birds to avoid hurting themselves. He had little trouble with Kestrels in pairing. Meng has had two Peregrines for five years, which are fed fresh pigeons and also some Peale's which are fairly tame, but no results. Henry Kendall has bred Prairie Falcons. Last year Larry Schram in Washington state and several in Germany did have success with Peregrines.

Clement mentioned the problem of the pet keeper and eliminating it by licensing. He also noted the cooperation in developing the New York law, and finally the need for more money. Meng commented that all these studies are all right but what about chlorinated hydrocarbons. Clement got a laugh when he said "we are underhanded" but he quickly changed that to undermanned, not enough staff to push it far enough.

Carl Buchheister, President Emeritus of the National Audubon Society, also commented on the amount of chlorinated hydrocarbons sold in the U. S., but that the *Wall Street Journal* had today (March 2, 1969) a large article on Wisconsin legislation on pesticides. Another person commented on the possibility of Federal protective legislation; he also felt the states would follow suit.

A final remark was made by Marcus who said the falconers came loaded for bear and were pleased to find such a good tone of the meeting.