

CAPTIVE BREEDING OF PHEASANTS IN PAKISTAN

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A symposium on captive breeding of pheasants in Pakistan was held on May 11, 1977 at the Pakistan Forest Institute, Peshawar. Mr. K.C. Howman, Secretary, Overseas Projects, World Pheasant Association was the Chief Guest.

Introducing the problem, Mirza said that pheasant population in Pakistan started declining as a result of overshooting and reduction of the natural habitat due to various reasons. The pressure on two species viz., tragopan (*Tragopan melanocephalus*) and chir (*Catreus wallichii*) increased to a limit that the former had to be included in the I.U.C.N. Red Data Book, whereas latter became completely extinct from Pakistan. In 1974 the World Pheasant Association initiated a campaign to restore the pheasants and their habitat with the help of the Forest Departments and World Wildlife Fund, Pakistan. Besides a strict ban on shooting, measures were taken to conserve the habitat by the Forest Departments. To start with two trainees were sent to England for training in captive breeding for 2 months. On return they helped in establishing pheasantries at Ghoragali and Tarlai. Since then the World Pheasant Association England has trained 4 more workers in England for a total of 6 man-months. Wildlife department of the Punjab, N.W.F.P., and Azad Kashmir have started breeding programmes at Ghoragali, Malakandi/Shogran, Lalazar, Maraghzar and Salkhala.

Little success was achieved in hatching chir and monal (*Lophophorus impeyanus*) eggs supplied by WPA England at Ghoragali (Punjab) and Malakandi/Shogran (N.W.F.P.) pheasantries. Koklass (*Pucrasia macrolopha*) eggs collected from the forest were hatched under broody bantams. The hatching was excellent, but the chicks could not survive. Various reasons were advanced for the failures in breeding and efforts were made to correct the mistakes made earlier. Plans were also made to restock the natural habitats with the species already extinct or threatened. Chir pheasant eggs donated by World Pheasant Association, England during the current laying season (1978) will be hatched in Lahore Zoo and 2-month old chicks will be released in Margalla Hills. The site has already been selected and the erection of pre-release pens will be started shortly. An important criterion in the selection of site has been the natural range of the habitat and possible protection against predators and habitat destruction. 60 Ring-necked pheasants (*Colchicus colchicus*) presented in 1976 by Korean Government to the then Prime Minister of Pakistan, were kept at Ghoragali. After hatching of the eggs laid in 1977 the population reached 300. The excess number of birds were distributed to various agencies for further multiplication.

Malik (Mohammad Mumtaz) reported the efforts made so far by the N.W.F.P. Wildlife Wing of Forest Department. 6 eggs of monal, collected from the forest, placed

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under broody hens at Swat and Shogran (3 at each site) failed to hatch. Only 28 koklass eggs hatched out of 138 collected from forest areas in Hazara and Swat. Chicks survived from 3 to 31 days. This season 6 eggs laid in captivity would be hatched under broody hens. 7 eggs of kaleej pheasant (*Lophura leucomelana*) donated by WPA England in 1976 also could not hatch. 8 chir pheasant eggs hatched out of 18-again supplied by WPA England in 1976. Five of the birds were still surviving. The failure in the programme was attributed to lack of technical skill.

Mirza described the joint efforts made by the Pakistan Forest Institute, World Wildlife Fund, Forest Departments of Azad Kashmir and N.W.F.P. and Zoological Survey of Pakistan, to survey koklass, monal and tragopan populations in N.W.F.P., and Azad Kashmir. Though tragopan, was threatened in Pakistan, it was not so in Azad Kashmir where sizable populations were observed in different areas of Neelum Valley. Malik stated that no tragopan had been recorded from N.W.F.P. during the two surveys conducted in 1976 and 1977. Two male birds captured in 1976 and 1978 from Boonja valley in Kaghan, having contiguous borders with Macchiara area of Azad Kashmir, however, suggested a possible crossing over from Azad Kashmir to Kaghan. Quoting sale of 8 freshly stuffed skins of tragopan from Kohistan tribal areas of N.W.F.P. by Divisional Forest Officer, Diamar (Northern areas) he confirmed the presence of this rare pheasant in the area. In his opinion the status of monal had improved during the last two years. The surveys conducted in 1977 showed a population of 530 birds in the whole of N.W.F.P. including Kohistan area. Koklass population in N.W.F.P. registered an increase of 580 birds from 1,964 to 2,544 in 1977. Detailed survey conducted by Pakistan Forest Institute, World Wildlife Fund, and N.W.F.P. teams recorded 136 birds in galis (23 km²) and 400 in Kaghan (57 km²). Koklass was the most commonly found pheasant in N.W.F.P. The Kaleej also increased from 573 in 1976 to 600 in 1977. Chir pheasants were not encountered.

Iqbal reviewed the efforts made in Pakistan in incubating the eggs. He described various types of incubators presently in use and emphasised their unsuitability under our conditions. The reasons, in his view, were faulty power supply, variable voltage, improper maintenance of humidity and buildings constructed ignoring the specifications. The physical location of the machine, atmospheric conditions and the altitude also affected its efficiency. He emphasised that the eggs requiring the same percentage of relative humidity should have been hatched together. For example, monal and tragopan eggs hatch best at 84% R.H. whereas chir pheasant eggs require much less humidity, hence eggs of both the groups cannot be hatched together in the same machine. He was of the view that hatching under broody hens/bantams was preferable to incubator hatching where all the problems quoted above would be overcome by natural means and suggested that broody hens should be arranged before the collection or import of eggs, and set on dummy eggs to habituate them and to test their faithfulness to the nest. Before setting, the hens should be properly dusted under the tail, round the vent, inside the thighs and under the wings with suitable insecticides. A 40 cm² saucer shaped box with finely sifted earth lined with dried grass at its bottom should be used as a nest after thorough cleaning and sterilization. The imported eggs should be allowed to rest for a day by storing in a cool and moist place at 10-13°C. The suitable number of eggs per hen varied according to the size of eggs, 10-14 for chir and

koklass, 5-8 for monal. In case the use of incubator was inevitable, he recommended the forced draught cabinet type in preference to still air incubators.

He stated that Lehtrar Captive Breeding Project, met with a failure because the eggs of various species e.g., quail (*Coturnix* spp), partridges (*Francolinus* spp.) and pheasants were being hatched together in the same machine. Bantam eggs imported from England could not be hatched due to power failures. He also observed that the same was happening at Lahore Zoo where the eggs of poultry, bantams, partridges, pheasants, guineafowl and ducks, with all their differing requirements were being hatched in the same machine.

Beg, a progressive farmer, reported the developments he had made on his farm. At a cost of Rs. 15,000 he manufactured an electric incubator to accommodate 10,000 eggs—but the eggs had to be rotated by hand. He released 100 quail (*Coturnix coturnix*) over an area of 4 hectares. After 15 days he scanned 10 hectares and flushed 33 birds out of which 10 were shot. Failure of captive breeding programmes was in his view due to improper management by the Government agencies, hence the need for generating interest in private individuals.

Howman stated the steps being taken by World Pheasant Association to help captive breeding programmes and re-introduction efforts in Pakistan, India and Nepal: provision of eggs, training, and expert advice. Being well aware of the habitat conditions in Pakistan, he recommended Manshi forests in Sharan (Kaghan) as the most suitable area for the studies on pheasants. Regarding the reconstruction of habitat he suggested natural and artificial measures for the improvement of vegetation to reach a mixed forest stage. Delay in transportation of eggs from the airport to the breeding station and/or from the forest areas to pheasantries and low protein contents in the feed of young birds in captivity were, in his view, the main causes for the failure of breeding programmes. The use of broody hens set on dummy eggs was recommended right from the time of egg collection in the forest or the airport. As pheasant habitat is a good tourist attraction, he suggested improvements to make these areas more attractive as has been done in Nepal where 70,000 tourists visited comparable areas in 1976.

Asghar described the pheasant diseases commonly encountered in breeding programmes at Lahore Zoo. Nutritional deficiency, especially protein, was the main cause for various diseases like New Castle (not frequent), diphtherion and coccidiosis—a protozoan disease. Furazone ointment and furazone in solution were being used for curing the two last mentioned. Aviary tuberculosis was another disease commonly occurring in the pheasants. To cure most of the diseases, besides administering medicines, nutritional quality of the feed was improved—by providing insects as a necessary part of the diet. Ectoparasites were treated by fumigating the birds. He also reported the efforts made by Lahore Zoo to motivate the people towards conservation of wildlife through the use of seminars, film shows and popular literature.

Severinghaus broadly outlined his work on Mikado and Swinhoe pheasants of Taiwan and described ecological, behavioural and sociological aspects of wildlife conservation. Regarding sociological impacts, he quoted the example of gir lion in India

whose food was constantly shared with "Harijans" but the fact was known after 70 years of study in 1969. He showed an interest in starting socio-economic studies in the pheasant habitat of Pakistan. Aleem at this stage informed the audience of the efforts being made to study the socio-economic conditions in the watersheds of Pakistan—which also are the pheasant habitats.

A film prepared by WPA was shown to describe different phases in the management of captive breeding centres. Different aspects of artificial insemination in pheasants shown were later described by Howman.

A general discussion was held after-wards. Mohyuddin pointed out that partridges were also an equally important game and efforts should be made to breed them in captivity. Mirza informed that partridges only required protection. Khan Mohammad described abortive efforts for the introduction of ring-necked pheasant in Sind.

Khattak, in the end summed up the Proceedings and thanked all the participants.

Participants referred to above.

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