

AUTUMN EGG PRODUCTION BY CAPTIVE PEREGRINE FALCONS

by

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It has been generally assumed that Peregrine Falcons enter the reproductive cycle and produce eggs as a response to the photoperiod, and experiments aimed at stimulating egg production in captive females by means of the control of light are one of the methods being contemplated or utilized by some individuals and institutions conducting domestic reproduction experiments with this species. In addition, it is further generally assumed that any falcon laying eggs, and then being permitted to incubate such eggs for the full normal incubation period, would be unable to produce eggs again in the same season, particularly in the incubation period carried to near or past the June solstice.

During the past four years members of the Canadian Raptor Society and the British Columbia Falconers' Association have recorded five instances with four different pairs of Peregrines that have run counter to both of these assumptions; that is, eggs were produced and incubated, with both sexes taking part in the incubation, on a decreasing day-length and with no artificial light, and this following full-term incubation of one or more sets of eggs laid earlier in the year.

In 1969 a pair of Peregrines owned by George Galicz laid three eggs in April, incubated these full-term (all were infertile), then during the first week of October produced a second set of three eggs, also infertile, but which were also incubated full-term. This seems to be the first recorded instance of autumn egg-laying by the species at the mid-latitudes.

In 1970 a different pair of birds owned by George Galicz laid three eggs in mid-September following full-term incubation of an earlier set of three eggs laid in mid-April. In the same year a pair of falcons owned by Frank Beebe produced eggs in September and October. This set of eggs was peculiar

in that only two eggs were laid by a falcon that on all other occasions, for a period of eight years, had produced four eggs in every set, and even more peculiar in that the second of these two eggs was laid fourteen days after the first one, and that incubation was delayed until after the second egg was produced. These autumn eggs were laid after full-term incubation and hatching of three of a set of four eggs produced in late June—the third set of four eggs each laid earlier in the same year, amounting to fourteen eggs in all from the one falcon in 1970.

In December of 1971 a female Peregrine Falcon belonging to John Polson which had produced eggs in 1969 as an unmated bird, was paired with a tiercel belonging to Ritchie Jones. This falcon then produced two eggs in mid-June which were incubated for two weeks. These eggs were removed at this time and not returned, due to infertility. Two more eggs were subsequently laid in late August, and full-term incubation of these was permitted, at which time both eggs were broken by the birds themselves. Also in 1971 one of the pairs belonging to George Galicz produced three eggs in late March, incubated these full-term, then laid a second set of three in May only fifteen days after the removal of the first set. Following full-term incubation (without hatching) of these they again laid three eggs in mid-August, and again went through full-term incubation. This pair, then, made three separate laying-incubation reproductive attempts in the one season.

The foregoing would seem to provide ample proof that photoperiod is not a factor governing egg production in the Peregrine Falcon, nor does it appear that full-term incubation always concludes further ovulation in any one year. That none of the eggs produced so far on the shortening photoperiod hatched, or even appeared to be fertile, must, in view of the low fertility of even May and June-laid eggs, remain inconclusive, although it may indicate an inability on the part of the male, and photoperiod linked to spermatogenesis can not, as yet, be entirely ruled out. The males, nevertheless, were involved in incubation in all of these instances.

With these cases now on record the production of eggs by captive falcons exposed to artificial light can no longer be looked upon as being a response to the manipulation of the photoperiod, and even the production of fertile eggs, should it occur, may also be coincidental, and should be viewed with caution.