

ON THE QUESTION OF THE INCUBATION PERIOD OF THE BLACK KITE *MILVUS MIGRANS*

Information is lacking on the duration of incubation of the Black Kite, previously discussed on the basis of existing literature (Meyburg 1967). In 1969 I made the following observations on a nest in the Grunewald woods in Berlin:

- 27 April, 18.30 hrs. First check of eyrie; it contained one egg weighing 52 g.
- 28 April, 18.30 hrs. Still only one egg, which was quite warm.
- 29 April, 19.30 hrs. Now two eggs in the eyrie.
- 30 May, 06.00 hrs. First egg lightly pipped.
- 31 May, 20.00 hrs. The chick had just emerged completely and was still quite damp. It weighed 33 g.

The following conclusions can be drawn:

- (1) Eggs were laid at intervals of at least 24 hours. (When observing six eyries of *Milvus migrans lineatus* Haneda & Koizumi (1965) noted on six occasions an egg-laying interval of three days and of two days on only one occasion.)
- (2) Incubation began before the laying of the second egg.
- (3) The incubation period lasted at least 34 days.
- (4) Hatching took about 38 hours.

Additional records in the literature have also been examined. Brosset (1967 a, b) took "new-laid" eggs from two eyries in Morocco which hatched after 31–32 and 36–37 days of artificial incubation respectively. Link (1969) recorded an incubation period of only 25–26 days for the last egg of a 4-egg clutch in Bavaria. Data provided by Haneda & Koizumi (1965) indicate an incubation period of 33 days (± 1) for the second egg of a 3-egg clutch of *Milvus migrans lineatus* in Japan. Finally Van Someren (1956 : 50) recorded an incubation period of about 38 days in the case of a 2-egg clutch of *Milvus migrans parasitus* in Kenya.

This variation between 25 and 38 days poses the question of the reason for this extraordinarily big difference. Brosset (1967 a) thinks it may depend upon the size of the egg, which varies considerably in the case of the Black Kite. The sequence in which the eggs were laid and the size of the clutch are also possible relevant factors. A phenomenon observed in some birds of prey (e.g. the Goshawk *Accipiter gentilis*), as in other birds which "incubate" from the first egg onward, is that the hatching interval is shorter than the laying interval, making the "incubation period" of the last egg shorter than that of the first. In future studies it is desirable, therefore, to include information on the size of the egg (full weight when fresh and dimensions), the number of eggs in the clutch and the weight of the newly-hatched chicks.

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