

RESEARCH ARTICLE

Breeding chronology of three raptor species at Visnagar

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ABSTRACT : To make a study, Visnagar city was selected. The sites were the spaces where species were building the nest. The nest was given particular code number and was constantly observed for the whole year. The nest in which the first egg was laid, the egg was given a number and thus the clutch size was fixed. Due to constant observation, it was possible to notice the incubation period and nesting period. Birds of the family Acipitridae such as black kite, changeable hawk eagle and shikra breed during February to July. Observations showed that birds generally used the material available on the same tree where they build their nest. Changeable hawk eagle required maximum days (26) for nest building *i.e.* more than three weeks, and rest two species, black kite and shikra constructed their nest within 18 and 20 days, respectively. Clutch size ranged from 1 to 4 eggs, within a population. The nestling period of all species was in between 27 to 29 days. Factors, which contributed toward the chick mortality during study period, were predation, starvation, unknown diseases and natural calamity. The range was 77 – 84 days in different breeder species.

Key words : Ecosystem, Clutch size, Incubation, Nestling, Nesting, Hatching, Brood

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INTRODUCTION

Any healthy ecosystem depends on the fertile biodiversity of that ecosystem. The progeny and population are maintained in the habitat only when it breeds. In that reference of species for the ecological study of any place, the study of population as well as its related breeding biology of that place become necessary. In North Gujarat this kind of work on raptors has not been done in past. Breeding chronology of individual bird is done at various places and time. Such as, Mathew and Naik (1986) on *Passer domesticus*, Patel (1986) *Columba livia*, and Naik and Razack (1967) on house swifts *Apus affinis*. Balen (1973) worked on *Parus major*, Immelmann (1971) on ecological aspects of periodic reproduction, Jones (1972) on food as proximate factors regulating the breeding season. The same kind of work on individual has carried out in different countries.

Study area:

For the study on breeding chronology of raptor species, Visnagar city was selected. Visnagar is a Taluka place of Mehsana district, which is about 750 years old. It is situated between 23°42' N and 71°34' E above 127 m.s.l. Moderate vegetation has been recorded inside and

outside the city with few tall trees. The wetland area of the city has become weak in recent time. In the last decade, due to enriched religious passion of the people, birds find various sources of food round the year at various places like top of buildings, temples and houses. Fishing activity is found very less in wetland area. However, no record of birds hunting is noted in this area. Gardens, trees and their related living beings are protected in educational and religious premises like colleges, schools and temples.

RESEARCH METHODS

To make a study, Visnagar city were selected. The sites were the spaces where species were building the nest. The nest was given particular code number and was constantly observed for the whole year. The nest in which the first egg was laid, the egg was given a number and thus the clutch size was fixed. Due to constant observation, it was possible to notice the incubation period and nesting period. Some nests, which were found for once, and then deserted, were not counted. The egg, which had not been hatched and why they failed, was noted during the year. And in the same way, it was also noted in the case of chicks. Thus, the reasons of egg mortality and chick