

# Comparison of past and present Raptor Species Diversity around two Central Anatolian lakes (Turkey)

Mehmet Gürsan

## ABSTRACT

In this study, species, numbers and breeding indicators were recorded for raptor species (Falconiformes) around Lake Mogan and Lake Eymir in Ankara (Turkey) from March 1993 to March 1995. A combination of point and transect counts was carried out at approximately two week intervals by Ankara Birdwatching Group. Eighteen raptor species were recorded of which 5 species, including the globally endangered Lesser Kestrel *Falco naumanni*, bred in the area. Comparison with previous records (1935-1975) from the same area revealed changes in the species composition and population sizes.

## INTRODUCTION

Although it is the nearest lake to Ankara, capital of Turkey, systematic research on the birds of Mogan Lake was lacking except for mid-winter waterfowl counts organized by WIWO and DHKD aimed at monitoring waterfowl numbers. Population and status of raptors was completely lacking. This study is aimed to investigate the historical changes in raptor species composition.

## STUDY AREA AND METHODS

Mogan and Eymir are two lakes about 17km south of Ankara, located between 39°.45N - 32°.50E at an elevation of 970m.

The climate is one of hot and dry summers and cold winters. The hottest month is July (23.3C) and the coldest is January (0.3C). The annual mean precipitation is 373mm. The lowest precipitation is in August (8.5mm), highest in May and December (50.6mm). In 1990 the area became a Special Protected Area

since these are the only wetlands and recreational area near Ankara. The area is 274km<sup>2</sup> and contains 10 small villages and a larger settlement, Gölbaşı town. Vegetation is mainly *Phragmites communis*, *Typha latifolia*, *Orchis palustris*, *Bidens tripartitus*, *Heleocharis ochrolenca* around the lake. Apart from these, *Eleagnus hortensis*, *Salix nigra*, *Populus alba*, *Populus nigra*, *Juglans regia*, *Morus alba* and *Robinia pseudoacacia* are grown in the villages in the area. The northern part of Eymir Lake had a small wood where a pair of Hobby *Falco subbuteo* bred in 1992. Also, since the lake belongs to the Middle East Technical University, the university has planted trees round the lake, of which *Pinus nigra* form the majority. The lakes are rich in waders and waterfowl, especially during migration period.

The main study area was Mogan Lake, which is the bigger of the two, visited every week during migration seasons and every other week when apparent migration stops, from 2nd week of June to 1st week of September and from 1st week of December to 1st week of March. The main study was made from March 1993 to March 1995, covering two years. The censuses were made by a combination of two methods, namely point count and transect count. We have 14 points on the west and 13 points on the east side of the lake.

For Eymir we visited irregularly before and during the study period. For breeding, we counted the occupied nests of obvious breeding species, namely Long-legged Buzzard *Buteo rufinus*, and Lesser Kestrel *Falco naumanni*, and some breeding indicators for more secretive species, like aerial transfer or carrying nest material in case of Marsh Harrier *Circus aeruginosus* and Hobby. 10 X 50, 8 X 40, 12 X 45 binoculars and 20-60 X 77 spotting scopes were used during observations.

For past records I examined Turkey Bird Reports of 1966-67, 1968-69, 1970-73 and 1974-75 to check if there were any differences on raptor species composition. Unfortunately I could not compare numbers, because data were only on presence, not on populations.

## RESULTS

In the area, 25 out of 36 diurnal raptor species regularly observed in Turkey have been recorded. Of these, 8 were recorded as wintering, with one exception *Haliaeetus albicilla*, which has not been observed in the area since 1970. *Circus aeruginosus* was recorded as present in the area outside the breeding season, but in this study at least three pairs were found to breed (carrying of nest material by both male and female, aerial food transfer). Passerines that roost in the reeds around the lakes attract raptors such as

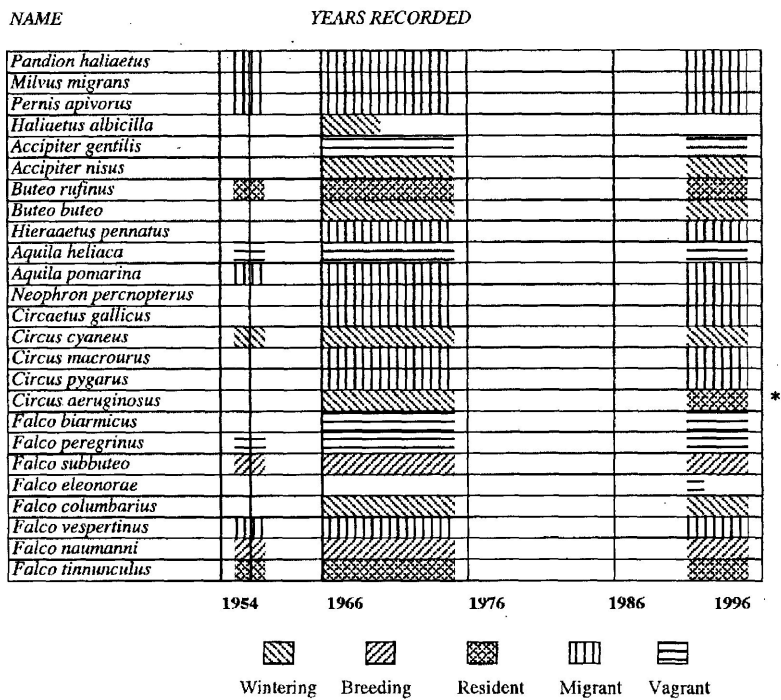
Sparrowhawk *Accipiter nissus* to these areas, especially at dusk. Also extensive numbers of wintering coots provide food for wintering raptors.

Seven species were recorded only in the migration season, including Osprey *Pandion haliaetus* and Red Footed Falcon *Falco vespertinus* which form the majority of migrant raptors in the area. Five species were found to breed in the area, including the globally threatened Lesser Kestrel and the Marsh Harrier which were formerly recorded as absent in the study area during the breeding season.

CONCLUSION

Raptors are known to be sensitive to disturbance (Newton 1979), and the study area receives large numbers of visitors including hunters (although prohibited) every weekend. But in contrast to my expectations, the raptor composition of the area seems unchanged since the 1930s. I think that most important changes occurred in numbers rather than species, but unfortunately there are no data available on previous numbers. Of the 25 species recorded in the area, one, White-tailed Eagle *Haliaetus albicilla* has been recorded wintering in the area between 1966-69, but has not since. The Imperial Eagle

Table 1. Raptors recorded at Lakes Mogan & Eymir.



\* Corrected to show as Resident

*Aquila heliaca* is known to have bred in neighbouring suitable habitat in the past, while Lanner *Falco biarmicus* and Goshawk *Accipiter gentilis* are suspected of having done so and recorded rarely, although recent information is lacking (Turkey Bird Reports 1966-75).

The Marsh Harrier is a common raptor of most Central Anatolian wetlands and is known to have bred in at least two localities, but recorded as absent from the study area during the breeding season. In this study, three pairs were found breeding in the area. I could not find any clues to range extension for the species, but expansion of reeds may provide a suitable nesting area which did not exist before.

The Lesser Kestrel is a common breeding raptor in Central Anatolia, but colonies with more than 15 breeding pairs are rare (Parr *et al.*). In the study area there was a colony of four pairs, but in the post-breeding period the species was more abundant.

A Long Legged Buzzard *Buteo rufinus* nest was found on a *Salix alba* about 6m from the ground and was still occupied when the study ended.

Also two European Kestrel *Falco tinnunculus* nests were found on two neighbouring electricity pylons about 8m from the ground near Eymir Lake.

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H. Mehmet Gürsan  
Bilkent-1 Sitesi, D7 No.23  
06533 Bilkent, Ankara, Turkey