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Spring Migration of Raptors over East Turkey and Northwest Iran

By Roger Gyllin

Introduction

Although the main features of the migration of raptors over Gibraltar and the Bosphorus are now well known, little information seems to be available on the passage of these birds over the Caucasus. It always seemed obvious that raptors may pass this high mountain range in considerable numbers, but actual observations are apparently almost non-existent. I have been able to trace only three published records. SCHÜZ (1959) quotes RADDE (1884 and later works), who says that *Milvus migrans* in spring follows the lower Kura valley from W to E and that *Falco tinnunculus* in autumn follows the Kura and Rion valleys from E to W. OLEJNIKOV (1966) presents indirect evidence of strong migration of *Circus aeruginosus* over W Caucasus (or the easternmost part of the Black Sea). In April and May 1958 in a small region near Krasnodar in W Pred-Caucasus, no less than 176 *C. aeruginosus* were killed, 153 of them being shot with the aid of a *Bubo bubo* put up in a reed-bed for attracting raptors and corvids. In mid-September 1961, JÄHME (1965) noted heavy migration of raptors, particularly *Hieraaetus pennatus, Buteo buteo*, and *M. migrans*, towards Turkey at Gudauta on the Georgian Black Sea coast (appr. 34 N 40.30 E).

However scanty the information is from the Caucasus, still less seems to be known about the migration further to the south, i. e. in E Turkey and NW Iran. It is a fact seldom pointed out that the Caucasus does not constitute the only barrier to the raptors passing between the Black and Caspian Seas. The mountains in E Turkey and NW Iran are, on the whole, as high as and sometimes considerably wider than the Caucasus, whose widest part is no more than about 100 km. This should compare with, e. g., the mountain range between lakes Van Gölü in Turkey and Rezayieh in Iran, which extends some 300 km in N-S direction, being almost exclusively above 2,000 m with many parts well above 3,000 and some peaks reaching more than 4,000. Also the rest of NE Turkey and NW Iran is very mountainous. To judge from MOREAU (1972), who despite his thorough coverage of the relevant literature could not quote

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any observations, the migration of raptors over this wide and clearly important area is virtually unknown, and the difficulties these mountains might present to the raptors have apparently never been considered. However, KUMERLOEVE (1967 a, cf. also 1967 b) in late October and early November 1964 saw rather strong migration of raptors, particularly *B. buteo* and *M. migrans*, towards SE and SSE at and around Erzurum. He also reports considerable eastward migration along the Black Sea coast in spring 1963, e. g., about 1,000 *B. buteo* at Rize on 28 March, whereas only few raptors were seen flying N inland at Sivas on 8 April. No other spring observations inland seem to have been made. Considering this, some observations I was able to make in spring 1969 while going by car through E Turkey and NW Iran together with PENTTI KINNUNEN, BO RUNESSON, and BO THYSELIUS should be of some interest.

Observations in 1969

Practically no migrating or resting raptors were noted on the Anatolian plateau in early April. The first numbers were observed on 9 April in a valley about 2 km W of Sivas (39.45 N 37 E), where the flat high plateau gradually develops into the more mountainous landscape typical of E Turkey. In the afternoon, 35–40 *Buteo rufinus* and *B. buteo* were seen resting, almost all sitting on the ground. E of Hafik (appr. 39.52 N 37.30 E), later that day, buzzards were seen fairly regularly. On 10 April in the partly rather wintery landscape between Şerefiye and Erzincan, particularly in the river valley E of Suşehri where conditions were better, resting buzzards, probably only *B. buteo*, were not uncommon.

On 11 April, very few *B. buteo* were seen along the 100 km stretch nearest to the west of Erzurum as well as in the first 10 km E of it. The weather was very cold and the countryside offered minimum possibilities for resting migrants with snow sometimes covering about 80 per cent of the ground. However, when conditions improved somewhat nearer to Pasinler, situated at 39.58 N 41.40 E, quite a few *B. buteo* were again seen resting. Along the 20 km stretch W of Pasinler 44 were counted, mainly sitting on telephone posts. Four *F. tinnunculus* were also seen. Just E of Pasinler, another nine *B. buteo* and two *F. tinnunculus* were observed.

In the afternoon of 11 April, we encountered a massive migration of raptors about 25 km WSW of Horasan, where the Aras river converges with the small river coming from Pasinler (appr. 39.58 N 41.54 E). In two hours, 15.45–17.45, we counted 833 *B. buteo*, 30 *M. migrans*, two *Accipiter nisus* or *brevipes*, three *H. pennatus* (all of the light phase), three unidentified *Aquila*, two female *Circus* sp., one thought to be a *C. macrourus* and the other a *C. pygargus*, one female *C. aeruginosus*, and one *F. tinnunculus* or *naumanni*. The *B. buteo* came mainly in flocks of ten to fifty; no less than 412 passed during the first thirty minutes. How many had passed before we discovered this migration is impossible to say. All the birds came within a rather narrow strip about 2 km wide along the Aras valley, which here cuts through the surrounding mountains, all above 2,000 m and in April still covered with snow, from SSW to NNE before taking a more straight E direction. The direction taken by the raptors was due N or slightly E of N. The last birds began to seek roosts, and half an hour after the migration stopped, it was quite dark. The weather was almost overcast, the wind Beaufort E–ENE 3, although, to judge from the clouds, southerly higher up. Apart from the raptors, the only migrants seen were eight *Larus argentatus* and one *Ixobrychus minutus*.

We spent the night along road E 23 in the Aras valley about 25 km ENE of this observation point on the western outskirts of Horasan. In the morning of 12 April, the valley was full of *B. buteo* and *M. migrans*, suggesting that many of the birds coming up the Aras valley from the south on the preceding day had spent the night here. Going SE over the mountain range to Ağri, we at first noted fairly few raptors,

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although we saw some *B. buteo*, *Circus* sp., and *F. tinnunculus*. In the fields 10 km W of Ağri (39.43 N 43 E), which constitute part of the Murat valley cutting through the mountains from SW to NE, the picture changed radically. Many migrants, including ducks and waders, were seen here, *M. migrans* was common, and the whole area was absolutely crowded with resting *B. buteo*. Nearer to the Iranian border, but still in the Murat valley, *B. buteo* was still common. For instance, along the stretch 49—58 km E of Ağri, from our car driving at normal speed, we counted 54 *B. buteo*, 31 *M. migrans*, and two *F. tinnunculus* or *naumanni* sitting on the ground or on telephone posts. Further east on the other side of the divide, the number of raptors was insignificant compared with that in the Aras and Murat valleys, only 10 *B. buteo* being seen along the roadside 60—83 km E of Ağri.

We camped in Iran, only 5 km inside, i. e. south of the border along the main road. During the night and in the morning of 13 April, the temperature was close to zero with intermittent snow. We spent two and a half hours watching the large numbers of various birds resting in the fields below the snow-capped mountains. Raptors seen here were about ten *B. buteo*, eight *M. migrans*, one *Circaetus gallicus*, one *Circus* sp. and at least six *C. pygargus*, one *Neophron percnopterus*, one *Gypaetus barbatus*, one *Gyps fulvus*, and 2—3 *F. tinnunculus*, i. e. a fair number of species, some of them probably locals, but all in small numbers except perhaps *C. pygargus*, three of which were males and three females. One of the females took height and flew NE.

At 12.30 local time, we drove eastwards. 12 km ESE of Makou (39.16 N 44.37 E) 25 *B. buteo* were seen soaring, whereafter they flew ENE. Along the stretch 19—26 km E of Makou, we counted 27 *B. buteo*. Further to the SE and E, only few raptors were observed; e. g., along the whole stretch 62—36 km W of Marand, only one *B. buteo*, four *M. migrans*, two *C. aeruginosus*, a male and a female together, and one *Falco subbuteo*. E of Marand (38.26 N 45.44 E) and the rest of the way to Tehran on this and the following days, very few and probably only local birds of prey were noted.

We spent the rest of April and most of May driving towards and making observations in SE Iran without noticing any migration of raptors. The only exceptions were a male *C. macrourus*, which in the morning of 20 April flew N through an oasis in the desert about 20 km NW of Yazd (32.03 N 54.15 E), apparently hunting on its way as the opportunity occurred, and an adult *Haliaeetus leucoryphus* flying N along the river 5 km S of Hajiabad (28.18 N 55.53 E) between Kerman and Bandar Abbas on 27 April.

Discussion and conclusions

From our observations, obviously large numbers of raptors, particularly *B. buteo*, migrate towards the high but narrow mountain range of Caucasus in the second decade of April. There is strong evidence that many of these birds, when passing the wide mountain areas of E Turkey and NW Iran, follow the river valleys, such as the Aras and Murat valleys, which cut through the mountains in a more or less N—S direction. It must be emphasized how very inhospitable most of this area is to the raptors, or to any migrants, at this time of the year. To judge from the large number of resting raptors seen in the river valleys, it is obvious that at least a good many of the migrants do not cross this hostile high mountain area in one sustained flight, but stop to rest where conditions are tolerable.

The direction of the raptors seen coming up the Aras valley on 11 April would have taken the birds not to the Central Caucasus range with its peaks of about 5,600 m but to the probably rather suitable lowland along the Black Sea coast. However, the large numbers seen next morning further to the east in the same river valley call for caution; possibly at least some birds continued northwards only to roost on the nearby mountain slopes.

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What happens further to the north with this migration must necessarily be speculation. But a good guess is that many of the raptors coming up the Aras valley W of Horasan would meet those coming up the Murat valley to Ağri in the Arpa valley (appr. 43.40 E), i. e. at the border river between Turkey and the Soviet Union. If so, this must be a place with a most spectacular raptor migration.

The direction taken by the soaring *B. buteo* ESE of Makou on 13 April would again take them not to the Central Caucasus range but to the west coast of the Caspian Sea (although admittedly across the Armenian highland south of the NW—SE running Kura valley).

Our almost total lack of observations of migrating or resting raptors south of the eastern part of the Caucasus and also further east in Iran is interesting. There are reasons for believing that it reflects the true situation, and I am not aware that anyone has seen a raptor migration of any importance in Iran. For instance, PASSBURG (1959, 1966), who lived for four years in Tehran and paid several visits to the Caspian littoral, saw only few migrant raptors, except possibly *M. migrans*. NIELSEN & SPEYER (1967) suggested that, on the isthmus of Pahlavi (appr. 37.30 N 49.30 E) at the SW corner of the Caspian Sea, large numbers of raptors might migrate in spring. However, SCHÜZ (1959), who spent the whole spring of 1956 there, noted no really large numbers, although, as might be expected, many species. The same applies to NIELSEN (1969) himself when watching the migration there in April 1967

This would mean that most of the raptors which winter south of the Sahara and breed in the Soviet Union from perhaps 35 E eastwards to at least 90 E will pass to the west of Van Gölü. Including the minority that undoubtedly passes to the east of the mountains between Van Gölü and Rezayieh or even straight across these mountains, it still means that practically all the raptors breeding in the vast area extending between longitudes 35 E and 90 E (or still further east) migrate between 37 E and 46 E when at 39 N with most of them concentrated approximately from 41 E to 43.30 E.

The migration we saw is, of course, only an insignificant fraction of the migration of, above all, *B. buteo* that must pass E Turkey and NW Iran. MOREAU (1972, p. 201) estimates that the autumn migrant population of *B. buteo* is over 6 million birds. There are therefore good reasons for believing that the migration taking place over the Caucasus area, and thus over E Turkey and NW Iran, must be considerably larger than that over the Bosphorus, where a maximum of nearly 33,000 *B. buteo* has been counted in one autumn (Ornithological Society of Turkey, Bird Report 1968—1969, p. 48).

A few words can also be said on the species composition of the migrating raptors. A considerable number of species must pass E Turkey and NW Iran heading for or coming from the Caucasus in spring and autumn, respectively, probably much the same as at the Bosphorus. Certain differences, however, are to be expected. Thus, there is little reason for believing that anything comparable to the large numbers of *Aquila pomarina*, which migrate via the Bosphorus, would be seen in E Turkey and NW Iran. *Aquila rapax*, on the other hand, does not pass the Bosphorus and, as it is not rare on migration in the Lebanon, it probably mainly migrates through E Turkey and NW Iran (KUMERLOEVE 1962, NIELSEN & CHRISTENSEN 1970). By far the most numerous species we saw were *B. buteo* and, rather less frequent, *M. migrans*. A species which could be expected to be seen in large numbers, but was not observed by us, is *Pernis apivorus*. This is noteworthy, as we observed this species both on the Bulgarian Black Sea coast and at the Sea of Marmora in early April the same year (GYLLIN 1971, 1972). This species, its staple food being larvae and adults of hymenoptera, arrives late at its northern breeding grounds, e.g., in Central Sweden in mid-May or even early June. That it was seen in Bulgaria and W Turkey so early thus seems more surprising than that it was not seen in E Turkey and NW Iran. Probably,

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the *P. apivorus* breeding in the Soviet Union with its late springs leave their wintering grounds later than those breeding in, e. g., the Balkan countries, where the weather is comparatively warm already in early April. The route via E Turkey/NW Iran would also be most hostile to a species such as *P. apivorus* in mid-April. The main passage of *P. apivorus* over E Turkey and NW Iran thus probably takes place not earlier than the first half of May.

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Summary

Observations carried out in E Turkey and NW Iran in April 1969 revealed a heavy northward passage of raptors, mainly *Buteo buteo* and *Milvus migrans*. There is evidence that in this mountainous area many raptors follow the river valleys, e. g., the Aras and Murat valleys. Most raptors, particularly *B. buteo*, wintering south of the Sahara and breeding in the Soviet Union from appr. 35 E eastwards to at least 90 E are thought to migrate between 37 E and 46 E when at 39 N with most birds concentrated between 41 E and 43.30 E.

Zusammenfassung

Beobachtungen in der NE-Türkei und im NW-Iran Mitte April 1969 ergaben einen massiven Durchzug von Greifvögeln, besonders von *B. buteo* und *Milvus migrans*. In diesem gebirgigen Gebiet folgen offenkundig viele Arten den Tälern, zum Beispiel dem Araxes- und dem Murat-Tal. Weiter ostwärts im Iran wurde dagegen bis Ende Mai nahezu kein Greifvogelzug bemerkt. Diese Beobachtungen wurden mit der Literatur verglichen. Den Befunden zufolge konzentrieren sich nahezu alle Greifvögel, die südwärts der Sahara überwintern und auf dem Heimzug ihr Brutgebiet in der Sowjetunion von ungefähr 35 E wohl bis weit in das sibirische Tiefland hinein ansteuern, unter etwa 39 N (Armenien) zwischen den Längen 37 E und 46 E, am dichtesten wohl zwischen 41 E und 43.30 E, um sich erst jenseits des Kaukasus auszufächern.

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