

The White-breasted Kingfisher, *Halcyon smyrnensis*, in Turkey: On the occurrence of an endangered species

by Vincent van den Berk and Max Kasperek

Abstract: The size of the Turkish population of the White-breasted Kingfisher is estimated to be about 100-150 pairs of which approx. 75% are concentrated in five localities. This makes the species vulnerable. A distribution map is given.

Kurzfassung: Der türkische Brutbestand des Braunliestes wird auf etwa 100-150 Paare geschätzt, wobei etwa 75% auf nur fünf Gebiete konzentriert sind und wodurch der Bestand leicht gefährdet werden kann. Die Verbreitung wurde kartographisch dargestellt.

Key words: Alcedinidae – Turkey – Middle East – endangered species – zoogeography

1. Introduction

The White-breasted Kingfisher is a candidate for a Turkish Red Data Book. The knowledge of its distribution, population size and the location of its breeding sites is essential for any conservation. Although accurate counts are still rare, the present knowledge will be summarized here. A dot map of the distribution of this species in Turkey has been published by KUMERLOEVE (1961) and a less detailed map by CRAMP (1985). During the past 25 years, bird-watching activities have been increased enormously in Turkey and an improved and more detailed dot map can be presented here.

2. Records

2.1. Breeding distribution

From the surroundings of İzmir, KRÜPER & HARTLAUB (1875) reported that the White-breasted Kingfisher "breeds at big rivers" and KRÜPER collected one clutch on 4.5.1894 (KUMERLOEVE 1961). However, no further records have become known since then. At present, the known northernmost breeding area is the lower Büyük Menderes valley where breeding season records are available even from the last century (SELOUS 1900) and breeding has been confirmed several times in the surroundings of Söke since 1980 (KOCH and many other observers). The White-breasted Kingfisher also bred at the nearby Bafa Gölü in 1980/81 but apparently not since then (KASPAREK 1988). Further south, in the Sarıçay lowland close to Milas (Güllük Körfezi), DIKSEN & PRINS observed one individual in the early breeding season, on 1.4.80, and many observations since 1985 suggest breeding of a few pairs. In the Köyceğiz wetland complex (including the Dalyan delta), the White-breasted Kingfisher was recorded first in 1960 (KUMERLOEVE 1961) and many records since then especially during the last 2-3 years suggest breeding of a few pairs. In the Antalya - Alanya area, two individuals were seen at Aksu near Antalya on 24.4.67, one to the north of Manavgat on 2.4.72 and one on a small stream near Alara Çay between Manavgat and Alanya on 26.4.66

(Bird Report 1966-67, 1970-73).

At the lower Göksu, the first record which indicated breeding was by WARNCKE (1968) to the east of Silifke in 1967. Subsequently, breeding holes were found in the banks of the Göksu River below Silifke on 2.5.84 (KOCH, MACKE et al.), on 8.4.86 (HUSBAND) and on 9.4 and 22.4.87 (KILIÇ & KASPAREK). Up to 6-8 birds were recorded together (11.3.86, BERG). Although the records are concentrated in a small area, there is nothing which contradicts the assumption that the breeding area extends to the mouth of the Göksu River. So the population size might be several, perhaps several tens of pairs. HOLLON (1955) saw one White-breasted Kingfisher about 8 km north of Mersin on 14.5.51 and up to 4 were present in flooded woodland around Erdemli on 16-31.3.72 (Bird Report 1970-73). KOCH observed one near Erdemli on 22.4.84.

Tarsus River (= Tarsus Çayı or Berdan Çayı) below Tarsus town and the ditches and pools in that area seem to provide an excellent breeding habitat. In May 1987, this breeding population was estimated to at least 40-45 pairs. The summarized data are: Five calling males in the Karabucak Eucalyptus plantation just south-west of Tarsus and 10-15 calling males and two nests in the Kulakköy plantation near the mouth of Tarsus River. The latter population was concentrated in the flooded parts adjacent to the river. 25-30 pairs were counted directly along Tarsus River below the town of Tarsus, where 19 occupied nests were found. Distances between nests varied from approx. 200 m to 800 m. However, some may have been missed. The pairs seemed to be more or less evenly distributed. Previous records during the breeding season in this area are available since 1957 and breeding was confirmed in 1964, 1965, 1968, 1984, 1985, and 1988 (GROH 1968, KUMERLOEVE 1961, 1970, WARNCKE 1965, KASPAREK, NOESKE unpubl.). MERTENS (1973) reported further breeding details, unfortunately without dates.

At Seyhan River, the White-breasted Kingfisher was seen below Adana in May 1957 (KUMERLOEVE 1961) and north-west of Doğankent, some 20 kms south of Adana, on 19.5.1987 (VAN DEN BERK et al. 1988). AHARONI (1930) mentioned the White-breasted Kingfisher as a breeding bird of Amık Gölü and MEINERTZHAGEN (1935) observed a few there between 14 and 28.5.1933. In the Euphrates-Tigris-system, KOCH, MACKE & WITTENBERG observed one at the Turkish border with Syria near Kargamış on 8.5.80 and BERG heard the voice of apparently this species near Halfeti on 16.3.86. KUMERLOEVE (1967a) observed 2-3 individuals at Zarova Çayı about 20 kms south-east of Siirt on 1.6.65 and south of Cizre in mid May 1962.

2.2. Records outside the breeding season

In all areas where the White-breasted Kingfisher was found breeding in recent years, records outside the breeding season including winter are also available. That is from the lower Büyük Menderes River, from Bafa Gölü, Güllük Körfezi, the Köyceğiz/Dalyan area, Göksu Delta, and the Tarsus area. Records outside those areas are as follows:

RIGLER (1852) and again WAHBY (1930) listed the White-breasted Kingfisher among the birds of İstanbul without comment. One specimen in the collection of the

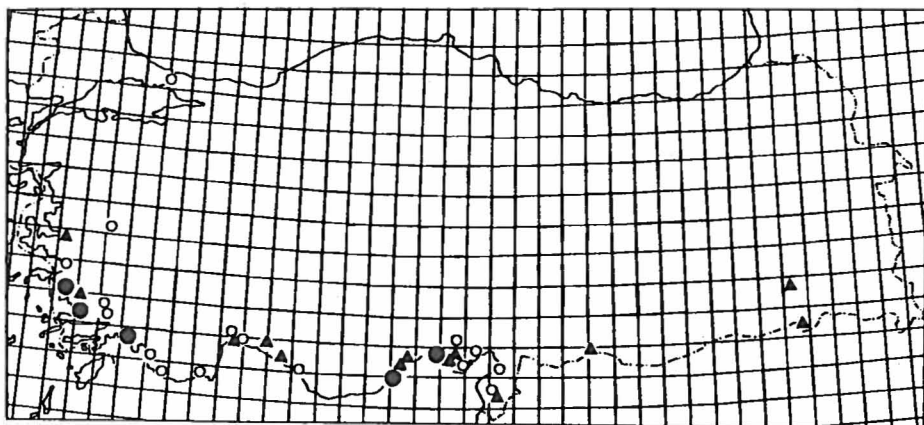


Fig. 1. Distribution of the White-breasted Kingfisher in Turkey. The main breeding sites are marked with a large dot, possible sites with triangulars. Other records are indicated by circles.

Aegean University at İzmir (KILIÇ & KASPAREK) seems to be from the surroundings of the town and to have been collected during the last decade like most of the birds exhibited there. DIJKSEN & KONING saw two individuals at Marmara Gölü on 7.12.71 (cf. Bird Report 1970-73). KRÜPER (1875) obtained information that the White-breasted Kingfisher occurs near Efes in the delta of the Küçük Menderes River (before 1864) and DANFORD (in: DRESSER 1872) also mentioned this site. In 1970, two individuals were observed on 22-23.8 and two on 3-5.10 (Bird Report 1970-73). Although this area has been visited by many birdwatchers during recent years, no other records are available and it seems unlikely that the species occurs there regularly.

In the Büyük Menderes valley, the records go back as far as 1878-79: DANFORD (in: DRESSER 1872) described the occurrence along the northern line of the plain between Güllübahçe ("Kelebash") and Doğanbey ("Domatia"). He probably recorded the species there in winter and early spring of 1878-79. KOSSWIG (1955) showed in a map an occurrence in the area of Muğla. One was seen at Dipsiz Çayı near Yatağan on 25.8.70 (Bird Report 1970-73). STRICKLAND (1842) obtained one specimen which was collected by FORBES at "Macri" which is Fethiye at the end of February. Singles were seen at the nowadays almost drained Ova Gölü on 29.12.69 and one near Finike on 29.8.70 (Bird Report 1968-69, 1970-73).

DANFORD (in: DRESSER 1872) found the species "tolerably abundant on the Duden So [= Düden Suyu, a small stream at the coast between Antalya and mouth of the Aksu] and other streams near Adalia [= Antalya]". He collected three specimens, one each on 19.12.1874, 24.12.1874, and on 18.1.1875. From this century, there is only the record of one individual at Döşemealtı to the north of Antalya on 3.9.66 (Bird

Report 1966-67). One was seen on Dimçay east of Alanya on 27.9.74 (Bird Report 1974-75).

SCHRADER (1891) who was resident at Mersin from 1882-85 found the species in the surroundings of the town a few times and WATSON (in: KUMERLOEVE 1961) observed the species there in apparently 1960. In the Çukurova area outside the Tarsus River system, DANFORD (1880) noted the species at Yakapınar (Misis) in January 1879, SCHRADER (1891) collected this species in the surroundings of Adana in the 1880s and KUMERLOEVE (1961) found it again there in the 1950s. He also noted that "White-breasted Kingfishers are not rare at Akyatan Gölü and in the Ceyhan delta". JACOBY watched one at Akyatan Gölü on 28.12.85 and at a pool west of Tuzla Gölü, the White-breasted Kingfisher was seen twice during winter: One each on 4.1.82 (MÜLLER & JACOBY) and on 22.12.86 (KASPAREK). At Seyhan Barajı above Adana, singles were seen in August and October 1968/69 (Bird Report 1968-69). One specimen collected at İskenderun on 23.12.51 was mentioned by KUMERLOEVE (1961).

In the Amık Gölü area, KUMERLOEVE (1961, 1963) mentioned one specimen from the village Demirköprü collected on 28.12.51 and several on the north and north-east side of the lake at the end of August 1956. After the drainage of the lake, only KINZELBACH observed six individuals at Asi Nehri (Orontes) north to Antakya on 20.9.82.

3. Discussion

There are at present five main areas of the White-breasted Kingfisher in Turkey: Büyük Menderes Delta, Güllük Körfezi, Köyceğiz Gölü and its southern marshes (Dalyan area), lower Göksu River (Silifke area) and the area south of Tarsus. It is assumed that at least 75% of the whole Turkish population nests within these localities. Among these, the delta south of Tarsus plays the most important role because of its outstanding population size. Although the habitat as described in CRAMP (1985) is widespread along the Mediterranean coast, the actual distribution is limited to rather few localities. The most important breeding area known so far along Tarsus (Berdan) River is characterized by floodplains bounded by dikes. As these river forelands are almost annually flooded, the possibilities for intensive arable farming are limited. In the plains and on the riverbank sides, many pools and ditches, scattered trees and scrub are found. There are often fringes of woods present. The river carries water all year long and has steep banks. Extensive *Eucalyptus* plantations extend into damp locations. The rather isolated but concentrated occurrence in this area is remarkable because there is plenty of apparently suitable habitat in the surroundings. These areas are still little studied.

The Turkish sites are all in lowland with access to water. Although the White-breasted Kingfisher is evidently aquatic in origin, it is adapted widely to terrestrial dry habitats, short of deserts and interior of dense forests (CRAMP 1985). However, terrestrial habitats are accepted only in the main area and not in Turkey which is the westernmost edge of the range. The ecological amplitude thus seems to be lower at the edges of the distribution area where apparently suboptimal habitats are not occupied.

All the breeding localities are in the Aegean and the Mediterranean region of Turkey. The northernmost breeding site has been established around İzmir, although recent information lacks (still breeding?). Also at Küçük Menderes Delta, where the species probably used to breed, it does not occur any more. In south-east Turkey, there are only a few records along the rivers Euphrates (Fırat) and Tigris (Dicle) and their tributaries. It has not become evident whether the species really breeds there, as e.g. the Birecik area is visited by so many bird-watchers, but White-breasted Kingfishers have never been recorded. In Northern Syria, the White-breasted Kingfisher was mentioned as early as the 18th century by RUSSELL (1794) for Haleb (Aleppo) and KUMERLOEVE (1964, 1968) saw two at Soutane Dere and at the Trigris River at the border with Turkey and Iraq in 1962. WITTENBERG (1979) recorded the species at Mosul in 1978. South of Bagdad, the White-breasted Kingfisher becomes fairly common.

The size of the whole Turkish population might be between 100 and 150 breeding pairs. PORTER (in: CRAMP 1985) estimated the Turkish population at 100 pairs or more. All breeding sites are situated within the most important flat and fertile agricultural lands of Turkey where agriculture is still in a developing stage and will undoubtedly be intensified. In the Çukurova area for instance, 70% of all Turkish agricultural chemicals are used (ALTAN 1981). On the other hand, MENDELSSOHN (in: CRAMP 1985) stated that the population of the White-breasted Kingfisher of Israel has increased with the growth of agriculture, which produces one of its main foods, mole-cricket, *Gryllotalpa gryllotalpa*, apparently resistant to heavy pesticide use in these areas. The agricultural developments and the fact that the Turkish population is not only limited but also concentrated gives clear evidence that a study of habitat and factors limiting distribution must have high priority. For the time being, breeding site protection and habitat conservation it is urgently needed.

The 19 occupied nests found along Tarsus (Berdan) River in 1987 were all high up in the steep bare banks, up to 4 m high, of outer meander bends. In these bends the channel is deep and the bank yields by caving in, allowing the bend to grow in radius. As a result these nesting sites do not exist long. The same is true for both occupied nests found in the Kulakköy plantation. Here, the tunnels were bored in eroded road sides on dune sand. In CRAMP (1985) it is said that site fidelity is marked and birds sometimes even return to the same hole year after year. We doubt this latter possibility for the nesting sites found in 1987. Display in front of breeding holes was noted at the beginning of April (5.4.87, 8.4.86, 9.4.87). An incomplete clutch with three eggs and a complete one with five eggs was found on 27.4.65 (LEHMANN in: KUMERLOEVE 1970) and two complete clutches with six eggs each on 6.5.64 (WARNCKE 1965).

Outside the breeding season, the species shows little dismigration. Usually the birds can be found at or in close distances to their breeding sites. Only the records from Marmara Gölü and from various places in the Çukurova area give indication for some dismigration which is, however, only some tens of kilometres. The incompleteness of older sources do not allow any judgement as to whether the records from İstanbul are examples for dismigration or whether they suggest wider breeding grounds

in those days. In Greece and on Cyprus, the species has been recorded once each (KUMMER 1964, FLINT & STEWART 1983). In Iraq, the habitat spectrum becomes wider in winter, when White-breasted Kingfishers can even be seen e.g. in the gardens of Bagdad city (ČTYROKÝ 1987).

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