

## OBSERVATIONS OF THE TURNSTONE IN BULGARIA

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**Наблюдения камнешарки в Болгарии.** - Д.Н. Нанкинов. - Беркут. 8 (2). 1999. - Камнешарка – северный вид, наблюдавшаяся в Болгарии 103 раза в 13 местах (1891 – середина 1996 гг.). Всего учтено 1387 особей. Предпочитаемые местообитания – оз. Поморье (53,93 % наблюдавшихся птиц) и оз. Атанасовское (36,19 %). Камнешарки наблюдались в Болгарии на протяжении всего года, за исключением февраля. Вид наиболее многочислен во время осенней миграции (август – сентябрь), когда отмечено 68,13 % птиц. Весной (март – май) встречается несколько реже – 20,91 %. Встречи зимующих особей составляют всего 0,5 %. Вдоль болгарского побережья Черного моря проходит пролетный путь, по которому мигрируют камнешарки, гнездящиеся на севере России, к местам зимовок на побережье Восточной Африки. Отдельные особи останавливаются также на внутренних водоемах (рис. 1).

**Abstract.** Two decades ago the number of the Turnstones observed in Bulgaria was exceptionally low. The activation of the fieldwork research during the recent years has created the opportunity to collect enough material about the presence of the species in the country. Published data have been processed as well. We avail of information about 1387 Turnstones. The territory of Bulgaria is situated between the nesting and the wintering area of the Turnstones and they cross it regularly during the autumn and the spring migrations. The species is more numerous in autumn, especially in September, when half (49,46 %) of the observed individuals pass. As a spring migrant the Turnstone is less numerous. 18,60 % of the individuals pass in May. Some individuals remain on our reservoirs in summer and in winter as well. The most preferred habitats are the lake of Pomorie and the Atanasovsko Lake, where 90,12 % of the birds concentrate. These lakes are also the main places for moulting of the Turnstone in Bulgaria.

**Key words:** Bulgaria, Turnstone, habitats, migration, numbers.

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### Introduction

The Turnstone (*Arenaria interpres*) is an arctic species with circumpolar distribution, which passes during seasonal migrations and stops at the Western Black Sea coast. Even during the second half of the previous century H. Elwes and T. Buckley (1870) wrote that this bird "sometimes can be seen near the shore". A. Alleon (1886) observed it "very rarely in youth feathering and never in marital feathering". In the National Museum of Natural History in Sofia exponents from the collection of count A. Alleon are kept: 2 male and 1 female birds, shot near Tchekmedzhe (European Turkey) respectively on 24.05.1893, 5.05.1894 and 13.05.1894, and also of a bird, collected in Bulgaria, but with an unknown date of finding (Collections du Musée, 1907). To this period belongs also the publication of O. Reiser (1894), who observed the birds near the dunes to the north from of Burgas and shot 3 males. According to H.v. Boetticher (1927) the Turnstone is "a frequent shore bird in Bulgaria". During the recent decades, in connection with the activation of

ornithological research, the number of the Turnstones observed in the country has significantly risen.

### Material and Methods

Our observations cover a 23-year period from May 1973 to May 1996. During that time we observed 68 times separate individuals or flocks of Turnstones (total of 1184 individuals), mostly on the reservoirs of the Bulgarian Black Sea coast. Besides, we sought in the literature sources (Reiser, 1894; Jordans, 1940; Prostov, 1955, 1964; Mountfort, Ferguson-Lees, 1961; Groessler, 1967, 1980; Peshchev, 1967; Donschev, 1975, 1984; Nankinov, Darakchiev, 1977; Nankinov, 1978, 1982; Robel et al. 1978; Roberts, 1980; Ernst, 1983; Rinnhofer, 1988; Jaschhof, 1990; Uhlig, 1990, 1991a, 1991b; Milchev, 1995) the published reports about the observations of the species in Bulgaria. Within a period of more than a hundred years (1891-1996) the Turnstone has been observed in our country in 13 places (Fig. 1), 103 times, with a total number of 1387 individuals. Our objective was

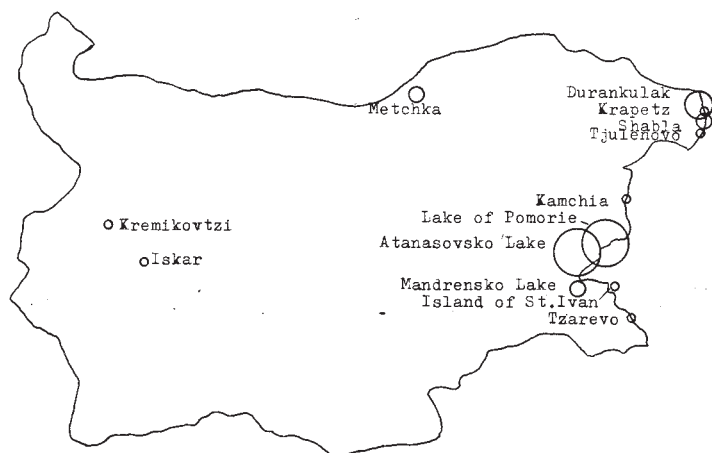


Fig. 1. Location of the Turnstone records in Bulgaria (1891-1996).

Рис. 1. Расположение встреч камнешарки в Болгарии (1891-1996).

○	– 1-10 individuals	1-10 особей;
○	– up to 50 individuals	до 50 особей;
○	– up to 100 individuals	до 100 особей;
○	– over 500 individuals	свыше 500 особей.

to summarise all the materials about the Turnstone and to give a maximum complete picture of its distribution in the country.

### Results and Discussion

The Turnstones passing through Bulgaria belong to the subspecies *A. i. interpres*, Linnaeus, which populates Northern Palearctic (Cramp, Simmons, 1983). The measured specimens, one of them at the Atanasovsko Lake on 8.09.1982, and two specimens shot respectively by A. Prostov (1955) and S. Dontschev (1975) had the following measures: wing – 148-153 mm, tail – 58-64 mm, bill – 20,4-23 mm, tarsus – 26,2-28 mm and weight – 75-105 g.

After 1973 the ornithological investigations along the Black Sea coast, especially in the region of Burgas, have become comparatively regular and this gives us the opportunity to compare the annual representativeness of Turnstone. It can be seen that during separate years it appeared in our country in unequal numbers, and there were years, as for example 1974, 1983, 1986 and 1994, when it

was not observed in Bulgaria. It was numerous in 1973 – 542 individuals observed, in 1979 – 68 ones, in 1981 – 180 ones, in 1987 – 59 ones, in 1993 – 126 ones and in 1995 – 51 ones (Fig. 2a). Consequently, during the different years there were fluctuations in the numbers of the Turnstones, flying through Bulgaria, which were connected probably with the uneven success of their breeding in the nesting territories. Our conclusions were supported by the fluctuations of the species at the Sea

of Azov, during the period of 1940-1970 (Ogulchanskiy, 1973), and also on the Crimean Peninsula, where up to the 1970s the species had been absent during the spring migration (Kostin, 1983).

The most favourable habitats, preferred by the Turnstone in Bulgaria, are: the lake of Pomorie and the nearby sea coast, where more than a half (53,93 %) of the Turnstones in Bulgaria stop; the Atanasovsko Lake and the nearby seacoast – 36,19 %; the seacoast near the lake of Durankulak – 4,69 %; the Mandrensko Lake – 1,44 %; the salt lake of Shabla and the nearby seacoast – 1,15 %. At the other habitats (the seashore near the villages of Krapetz, Tjulenov, at the mouth of the river Kamchia, near the town of Tzarevo and on the Island of St. Ivan) less than 1 % of the individuals stop. Among the inner continental reservoirs the fisheries near the village of Metchka, Ruse district – 1,37 %, and also the sediment reservoir of Kremikovtzi, Sofia district, and Iskar fresh water pool are visited. The big percentage of the individuals observed along the Black Sea Coast shows that a mi-



gration route passes there that is important for the Turnstone population, wintering along the Eastern Mediterranean and in East Africa. Large flocks of this species gather along the coasts of the Red Sea and in Somalia (Kozlova, 1961).

Turnstones fly over Bulgaria and stop at the Bulgarian reservoirs all the year round (Fig. 2b). They have been observed during all the months of the year, except in February. We suppose that the non-nesting young individuals remain here for the whole year until their sexual maturity. The spring migration and the gradual shift of separate individuals northwards can be observed after 18.03, but the March migration is weak. There is a slight increase in the migration in April, and it is most intensive in May, when 18,6 % of the Turnstones observed in the country pass. The spring migration is over during the last days of May. Separate individuals remain for the spring (June and July) on our reservoirs. From the first days of August the coming of the Turnstones from the north can be tangibly felt. The autumn migration becomes more intensive and in September it is most massive. Then 49,46 % of the individuals have been observed. The flight southwards ceases at the end of September, though during some years, as for example 1981, the seasonal migration goes on in November as well (13.11.1981, Atanasovsko Lake – 139 individuals). Comparing the numbers of Turnstones during different months we can say, that they are most numerous during the autumn migration (August-September) – 68,13 % of the individuals, then during the spring migration (March-May) – 20,91 %, 0,5 % of all the Turnstones observed winter in our country. Despite the spread opinion (Cramp, Simmons, 1983) that the Turnstone does not winter in East Europe, into the winter area of the species there should be included the Western Black Sea coast and the coasts of Greece and Turkey, where the bird winters as well (Bauer et al., 1969; The OST Bird Report, 1975).

The Turnstones observed in Bulgaria in May (258 individuals) were in full marital

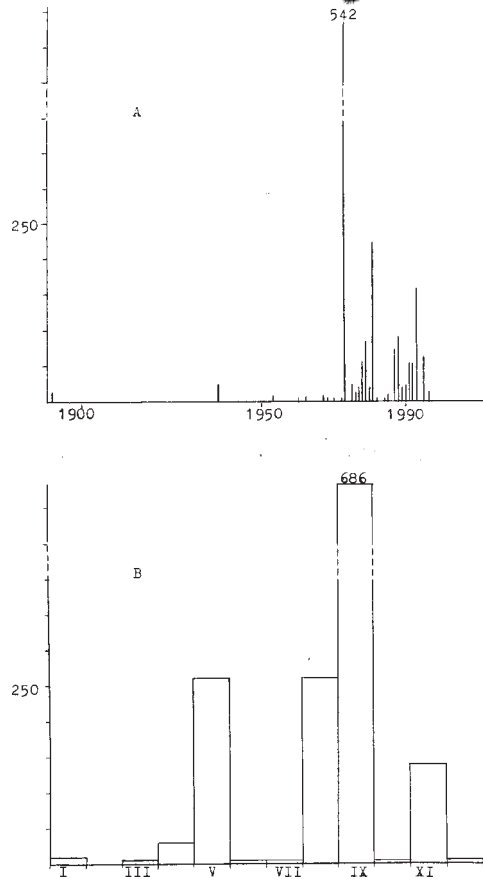


Fig. 2. Number of observed Turnstones in Bulgaria.

Рис. 2. Количество наблюдавшихся камешарок в Болгарии.

A – by years по годам;

B – by months по месяцам.

feathering, and those observed in September (686 individuals) – in an advanced stage of moulting. In marital feathering were also the birds observed during the summer months (until almost the second half of August). The spring (premarital) moulting is partial, and the autumn (postmarital) one – complete and quite prolonged (the replacement of the primary pen-feathers is completed for about 80 days) (Branson et al. 1979). The main places for moulting of Turnstone in Bulgaria are the lake of Pomorie and the Atanasovsko Lake,



where during some years in September more than 100 birds remain. Less numerous groups moult near Durankulak, Shabla, and also on the Island of St. Ivan.

The Turnstone feeds on Molluscs, Crustaceans, Snails, Insects and their larvae, Spiders, rarely on fish, birds' eggs and carcasses (Beven, England, 1977). In the stomachs of birds shot on our Black Sea coast the remains of minute *Mollusca*, *Crustacea* (Prostov, 1964), insects, *Gastropoda*, *Ceritolum sp.*, *Rissoa splendida* and gastrolites have been found (Dontschev, 1975). Searching for food, the Turnstone turns stones, soil lumps, mussel valves and other objects near the reservoirs, digs the soil or picks food from the earth's surface. In the dry basins of the Atanasovsko Lake and the lake of Pomorie it gathers insects, hidden under the cracked pieces of dry mire. Here we have observed Turnstones poking into the excrements of domestic animals. After eating the resting birds prefer to perch on the poles stuck into the water or on the dykes of the lakes. On the seashore the Turnstones pick molluscs, stuck to the stones showing out of the water. They poke their bills into the damp sand or the piled seaweed, from where they pick worms, small crabs, minute molluscs, insects and other invertebrates. In such places near Turnstones small groups or single Sanderlings (*Calidris alba*) keep, which gather food among the dug up sand. For example, on 22.05.1973 on the beach near the salt lake of Shabla 7 Turnstones and 10 Sanderlings, and between the salt lake of Shabla and the lighthouse – 5 Turnstones and 1 Sanderling fed. The Turnstones feed also near dead fish, Dolphins or other animals, thrown out by the sea, where they find worms, flies, and also pick of the carcasses.

The Turnstone has been observed most frequently in small flocks of 3-10 individuals (Prostov, 1964), in pairs or single. Formed marital pairs are observed during the spring migration. Rarely the flocks amount to 42 individuals (Uhlig, 1990). They concentrate in favourable habitats, together with Sander-

lings, Dunlins (*Calidris alpina*), Curlew Sandpipers (*C. ferruginea*), Little Stints (*C. minuta*), and also with Redshanks (*Tringa totanus*), Grey Plovers (*Pluvialis squatarola*), Lapwings (*Vanellus vanellus*), etc.

The territory of Bulgaria lies between the nesting and the wintering areas of the Turnstone. The birds nesting on the Scandinavian Peninsula and along the coasts of the White Sea migrate in autumn south-westwards to England, France and West Africa, while those, hatched to the east from the Kanin Peninsula fly to East Africa, passing over our country, the Black Sea and Eastern Mediterranean (Lidel, Bianki, 1985). The Turnstones are predominantly night migrants, covering long distances in one night over the land or the seas and preferring to stop (for food and rest) along the seacoasts and the nearby reservoirs. Some of the individuals are quite conservative - they stick to the same migration routes, nesting, wintering and concentration places. Out of 3200 Turnstones ringed for 15 years in South-west England – 92 % were caught again in the same places (Branson et al., 1978). Nevertheless there is a connection between the two migration routes (over West and East Europe). Though rarely, individuals from the Scandinavian population have been observed flying through East Europe and back. A Turnstone, ringed in autumn in South France, was shot two years later on the Crimean Peninsula; another one, nesting in Sweden, was found 9 years later in summer at the mouth of Petchora river; a third one – an autumn migrant through England, flew over Greece 3 years later (Glutz et al., 1977). It is possible, that some individuals, migrating in autumn along the West European coast, turn south-eastwards-eastwards and find themselves on the Balkan Peninsula. For example, a bird, ringed on 16.08.1952 in Denmark, was found 13 days later (29.08) in North Italy (Johansen, 1955). Finnish birds were also observed in Italy (Cramp, Simmons, 1983).

The Turnstone in Bulgaria is protected by the Law of Protection of Nature. Among the negative influences on the species in the re-



gion we can point out the pollution of the reservoirs with petroproducts. The seacoast has been polluted with petrol from the drills in the Romanian sector of the Black Sea (15.08. 1993 on the beach near Durankulak – 20 Turnstones with dirtied abdomens), and also by the petrol waste, let out by ships. The habitats of the species near Durankulak, Shabla, Kamchia, in the lake of Pomorie and the Atanasovsko Lake, and on the Island of St. Ivan, are within protected territories.

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