

Spring migration of the White Stork, *Ciconia ciconia*, and the Black Stork, *Ciconia nigra*, over the Bosphorus

(Aves: Ciconiidae)

Zeynel Arslangündođdu, Cem Dalyan, Ergün Bacak, Ümit Yardım,
Cemil Gezgin, Vedat Beşkardeş

Abstract. The spring migration of the White Stork (*Ciconia ciconia* (Linnaeus)) and the Black Stork (*C. nigra* (Linnaeus)) over the Bosphorus, one of the migration bottlenecks of the eastern European population, was studied in 2006, 2008, 2009 and 2010 at a ridge north of Sarıyer close to the Black Sea. The number of White Storks counted per season was up to 119,381 in 2008, but it was less than half of that in 2006 and 2009. These big fluctuations do not reflect population trends but are probably due to slight shifts in migration routes from year to year. The number of Black Storks varied between 1,118 in 2006 and 3,052 in 2008. The medians of spring migration were 6 April for White Storks and 17 April for Black Storks,

Key words. Storks, spring migration, Bosphorus, Istanbul.

Introduction

The European population of the White Stork, *Ciconia ciconia* (Linnaeus), comprises about 180,000–220,000 pairs (BIRDLIFE INTERNATIONAL 2004). Storks from the western population breeding in West and Southwest Europe and in northern Africa migrate to the southwest to Gibraltar in Spain and mix there with the African birds. They winter in West Africa. Birds from the eastern population migrate through Turkey and the Middle East and winter in East Africa (CRAMP & SIMMONS 1977). All birds from the eastern population migrate over Turkey (KASPAREK & KILIÇ 1989, RITZEL 1980) and they enter Anatolia via three routes: over the Dardanelles Strait in the west, the Kapıdağ Peninsula in the mid-Marmara Sea, and the Bosphorus Strait in the east. The latter is the preferred route.

The first documentation of soaring bird migration over the Bosphorus dates back as far as the 19th century and has subsequently been studied on many occasions. However, most work has been done on the autumn migration. Spring migration studies were by MAUVE (1938), SCOTT (1964), COLLMAN & CROXALL (1967), RITZEL (1980), CIRIK & SMITH (2005), and ÜNER et al. (2010). The spring migration of White Storks in Turkey starts in early March (KASPAREK & KILIÇ 1989). The latest recorded date of migrating White Storks is 18 June in 1973 with a flock of 76 specimens (OST 1974). The White Stork migration has two peaks between March and June, in the third to fourth weeks of March and late April to early May (RITZEL 1980, COLLMAN & CROXALL 1967, KASPAREK & KILIÇ 1989). Whilst KASPAREK & KILIÇ (1989) estimate that about 25% of White Storks pass over the Marmara Sea rather than the Bosphorus Strait, BOSSCHE et al. (2002) claim, in reference to spring migration, that storks avoid sea crossings and enter Europe from Turkey almost exclusively through the Bosphorus and the Dardanelles.