Riv. ital. Orn., Milano, 77 (2): 143-146, 30-XI-2008

THE ISLAND OF PANTELLERIA: AN IMPORTANT STOP-OVER SITE DURING SPRING MIGRATION OF HONEY BUZZARD, *PERNIS APIVORUS*

RIASSUNTO – L'Isola di Pantelleria: un importante sito per il passaggio del Falco pecchiaiolo, *Pernis apivorus*, durante la migrazione primaverile.

Introduction

The Central Mediterranean strongly involves the spring migration of Honey Buzzard, *Pernis apivorus* (AGOSTINI, 2002, 2003; CRAMP & SIMMONS, 1980; PREMUDA, 2004; ZALLES & BILDSTEIN, 2000), as highlighted by observations at the most important known bottle-neck sites in Italy such as: the Strait of Messina (AGOSTINI *et alii*, 1995; AGOSTINI & MALARA, 1997; GIORDANO, 1991; CORSO, 2001),

the island of Marettimo (AGOSTINI & LOGOZZO, 1998), Capo d'Otranto (GUSTIN, 1989; PREMUDA *et alii*, 2004), Monte Conero (BORIONI, 1995; GUSTIN *et alii*, 2002, 2003) and Monte San Bartolo (PANDOLFI & SONET, 2001, 2003).

During raptor migration over water, islands are very important areas for roosting (to stop migration in case of bad weather or to stop overnight), feeding (to recover the necessary energy for powered flight over water) and soaring (to exploit flight over land, increasing altitude in order to perform as much gliding flight as possible, minimizing energy expenditure). In addition, acting as geographic references, the islands can influence the orientation behavior and shape the pathways of migrating raptors. Thus, raptors often converge over islands in order to decrease the risks of a long powered flight over water surface (AGOSTINI *et alii*, 2004; KERLINGER, 1989).

The aim of the present paper is to show the importance of the Island of Pantelleria for the spring migration of Honey Buzzard and to suggest the classification of the island as IBA for congregatory raptor birds.

Study area and methods

Pantelleria (36°45'N – 12°00'E) is a volcanic island (84 km^2), about 110 km SW of Western Sicily and 70 km E-SE of the Cap Bon Peninsula (Tunisia). The observation sites (Kuddie Bruciate, San Marco, Punta Fram and Suvaki) were located at low altitude (from 50 to 200 m a.s.l.) at the NW side of Pantelleria which is the nearest to Tunisia. Daily observations were made from the 24th April to the 1st May 2004, recording mainly time, number of individuals, species, flight direction of birds (incoming and outgoing). Data recording was aided by binoculars, telescopes and compasses.

Results and discussion

A total of 4446 Honey Buzzards were recorded over 72 hours of observation (61 individuals/hour), with a peak of 1592 birds on 30th April 2004, of which 757 in a single flock. 3464 (78%) Honey Buzzards observed arrived from W-NW, while 982 (22%) arrived apparently from SW and continued towards NE in the direction of Sicily. During the observation period the Cap Bon Peninsula was never visible to observers, with the exception of the evening of 30th April.

The particular behavior recorded in spring at the island of Pantelleria consists of a real orientation and navigation ability of Honey Buzzards, who left Tunisia heading towards E-SE, to continue migration towards NE, in order to reach Sicily. Assuming that the island of Pantelleria was always visible to raptors at the Cap Bon Peninsula or at the middle of the Sicilian channel crossing, the observed behavior consists of a real decision making capability of Honey Buzzards (to head towards SE, in order to reach NE at the end). On the contrary, assuming that Pantelleria island was not always visible to raptors, the observed behavior could additionally suggest a real learning capability of Honey Buzzard, that can follow a pre-known indirect route, learned during a previous migration, perhaps when the wind conditions were not suitable along

the Sicily channel (AGOSTINI *et alii*, 2007). The same behavior, however in exactly opposite flight directions, was observed during a field survey on autumn migration at the island of Pantelleria, where Honey Buzzards were recorded coming from NE (Sicily), soaring over or roosting at the island and then continuing W-NW towards the Cap Bon Peninsula (Tunisia). In this study the observation post was located at an altitude of about 600 m a.s.l., along the slopes of Montagna Grande and during the period the Cap Bon Peninsula was nearly always out of sight of observers (AGOSTINI *et alii*, 2004; 2005).

Pantelleria and the Pelagian islands have already been defined as IBA, mainly due to the breeding population of Cory's Shearwater, *Calonectris diomedea*, and Storm Petrel, *Hydrobates pelagicus* (HEATH & EVANS, 2000). Regardless of the afore-mentioned raptor observations, the island of Pantelleria has to be considered as an important stop-over site during the spring migration of Honey Buzzard in the Central Mediterranean. In addition, it probably should be included as an Important Bird Area, category B1 (criterion iv) (European large congregations: at least 3000 *Accipitridae* on spring or autumn migration) and C5 (large congregations - "bottleneck" sites in European Union) (HEATH & EVANS, 2000).

Acknowledgements – We wish to thank Tommaso Capodiferro, Ottavio Janni and Fabio Mastropasqua for their help during observations; LIPU-Birdlife Italy for the support to the research; Nicolantonio Agostini for comments on an earlier version of the manuscript.

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