



Marine birds of the Aeolian Islands, South Tyrrhenian Sea: present status and conservation

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ABSTRACT

The Aeolian Archipelago form an area of considerable importance for bird conservation because it harbours the only nesting sites for three species (Yelkouan Shearwater *Puffinus yelkouan*, Mediterranean Storm Petrel *Hydrobates pelagicus melitensis* and Eleonora's Falcon *Falco eleonora*) occurring in the wide basin of the Southern Tyrrhenian Sea. Furthermore, the Aeolian colonies of Eleonora's Falcon hold one fifth of the Italian population. From censuses carried out during a nine-year study (2005-2014), the breeding populations are estimated at c.80-100 pairs of Scopoli's Shearwater *Calonectris diomedea*, less than 10 pairs of Yelkouan Shearwater, at least 15 pairs of Mediterranean Storm Petrel, 114-126 pairs of Eleonora's Falcon, and about 1,000 pairs of Yellow-legged Gull *Larus michahellis*.

INTRODUCTION

The Aeolian Archipelago, located between 38°48'-38°21'N and 15°15'-14°20'E, consists of seven islands and several islets of volcanic origin, almost entirely designated as a Special Protection Area (SPA). Apart from the Yellow-legged Gull *Larus michahellis*, which is very common and widespread in the archipelago

(about 1,000 breeding pairs: Perco *et al.* 1986, N. Baccetti pers. comm.), the marine avifauna of these islands includes four species listed in the Annexe 1 of the 2009/147/EC Directive: Scopoli's Shearwater *Calonectris diomedea*, Yelkouan Shearwater *Puffinus yelkouan*, Mediterranean Storm Petrel *Hydrobates pelagicus melitensis* and Eleonora's Falcon *Falco eleonora*.

METHODS

Field investigations have been carried out in the archipelago during a nine-year study (2005-2014) to map the species distribution and estimate their population. Surveys were carried out by counting the calling birds for Yelkouan Shearwater; by active research of nests for the Mediterranean Storm Petrel; by using both methods for Scopoli's Shearwater; and by counting the nests as close as possible from the sea and the coast for Eleonora's Falcon.

RESULTS

Scopoli's Shearwater *Calonectris diomedea*

Doderlein (1872), Moltoni & Frugis (1967), Massa (1985), Iapichino & Massa (1989)

and Lo Valvo *et al.* (1993) had recorded it as a possible or probable breeding species. Its population was estimated at about 80-100 pairs by B. Massa (in Sultana 1993) and 30-80 pairs by Baccetti *et al.* (2009). During the present study the occurrence of this species has been confirmed on the islands of Vulcano (25-30 pairs), Lipari (<10), Salina (30-35), Scoglio Faraglione (off the Island of Salina, 5-8 pairs), and Alicudi (15-20 pairs). The species has also been irregularly observed near Filicudi and Panarea. Most of the nesting sites are located on islets or on the west or south-western slopes of the islands; at Vulcano one site is known locally as "Petra 'i quajetri" (Pietra Quaglietto in the IGM map), a toponym clearly derived from the vernacular name of the Scopoli's Shearwater.

Yelkouan Shearwater

Puffinus yelkouan

The Yelkouan Shearwater has been recorded on the island of Salina since the 1940s (Moltoni & Frugis 1967), the only island in the archipelago where the species has been detected so far (Massa 1985, Iapichino & Massa 1989, Corso 2005). Calling birds were counted during two surveys in March and April 2014 in a small portion of inaccessible rocky shoreline along the south-western coast of the island. The size of this population is probably less than 10 pairs. Furthermore, during the last years single birds or small groups of individuals (up to 6) were regularly observed in the channel between Salina and Lipari in winter and early spring.

Mediterranean Storm Petrel

Hydrobates pelagicus melitensis

The species has been recorded in the late 19th century by Giglioli (1881) on Lisca Nera. This small islet surface has been strongly reduced by erosion and currently

consists of emerging rocks not suitable for breeding birds. During the early 1990s, a nest with a chick was found on the island of Filicudi, and a dead adult on Salina Island (Lo Cascio 1994). More recently a nesting site was discovered on Scoglio Faraglione: two damaged eggs were laid at different times in the same nest in 2005, and one damaged egg was found in 2006 and 2009. A fully fledged dead young was located in 2008, and two damaged eggs were found in two nests in 2011. Successful breeding with fully fledged young was recorded only in 2007 (Lo Cascio 2007, P. Lo Cascio unpubl. data). In late August 2013, another nesting site characterized by the typical oily smell was detected on Scoglio Montenassari (off Filicudi Island) in a partially accessible small cave. In June 2014 the cave contained at least 15 nests, and on 13 July, 6 of them had hatched chicks. There are few observations concerning the species in the seas around the archipelago, but a juvenile, originating possibly from the Aeolian Islands, was found at Cefalù (northern Sicily) on the 3 September 2010 (B. Massa pers. comm.).

Eleonora's Falcon

Falco eleonorae

The Eleonora's Falcon has been recorded from some Aeolian Islands since 1960s (Moltoni 1960, Moltoni & Frugis 1967); but the first detailed information on the size of its colonies was given by Massa (1978), who reported 28 breeding pairs on Alicudi, 30 pairs on Filicudi, 5 pairs on La Canna (off Filicudi) and 20 pairs on Salina Island. During the same period Moltoni & Pirovano (1980) recorded 5-6 pairs at Panarea. Between 1994 and 1996, numbers appeared to be stable for all colonies. However 29-33 pairs were counted on Panarea (including 3-5 nests on the nearby islet of Scoglio La Nave), and irregular occurrences of Eleonora's Falcon have been recorded on Strombolicchio Islet off Stromboli

(Lo Cascio 2000). From data collected between 1998 and 2010, Corso & Gustin (2009, 2012) have reported remarkable numerical fluctuations in some colonies, such as that on Filicudi (from 24-27 pairs in 2007 to 14-16 in 2008), and an apparent decline for those of Salina Island (from 25 pairs in 1998 to 5 pairs in 2010) and Panarea (15-20 pairs in 2008). However, the authors point out the significant increase in the number of breeding pairs in the colony of Alicudi, with a maximum of 50 counted in 2007, although apparently subject to numerical fluctuations (20-22 pairs in 2008). During the last surveys (August-September 2012, P. Lo Cascio unpubl. data), 56-60 breeding pairs have been counted on Alicudi, 30-32 on Filicudi, 4-5 on La Canna, 10-12 on Salina Island and 15-17 on Panarea Island. The size of the population occurring in the archipelago is currently estimated between 114 to 126 breeding pairs.

DISCUSSION

Despite the small size of its breeding bird populations, the Aeolian Archipelago should be considered an area of considerable importance for conservation because these islands harbour the only nesting sites for three species (Yelkouan Shearwater, Mediterranean Storm Petrel and Eleonora's Falcon) occurring in the wide basin of the Southern Tyrrhenian Sea. Furthermore, the Aeolian colonies of Eleonora's Falcon hold one fifth of the Italian population (Spina & Leonardi 2007).

The uninhabited and rat-free islets of Scoglio Faraglione and Montenassari in particular, are so far the only sites where the occurrence of *Hydrobates pelagicus* has been noticed. While the rough morphology of the latter islet is characterized by an abundance of suitable habitat for the species (small caves, deep rocky crevices), the few nests discovered at Scoglio Faraglione have been found in

a rather exposed position. This could be a possible cause of the large number of reproductive failures observed during the last surveys. In fact, the breeding season of the species coincides with the peak of human disturbance. The islet lies in the bay which is a favourite destination for nautical tourism in summer, and is visited daily by hundreds of boats.

Massive tourism could be one of the major factors that cause the instability and the decline observed for some populations of Eleonora's Falcon. The colony of Salina Island is located not far from Scoglio Faraglione and therefore may be potentially affected by a high level of noise and marine traffic. At Panarea, the falcons are nesting on cliffs and on the nearby islet (Scoglio La Nave) on a stretch of coast intensely frequented by boats and other vessels. Moreover, this colony is situated just 400m from a helicopter landing pad. Although overflying is formally banned within the boundaries of the SPA, between July and September some private companies are particularly active in daily connections from the mainland to the island. Flights are not controlled or effectively restricted, and aircraft often approach the island along routes right in front of the colony. Therefore it is not excluded that the remarkable increase recorded for the Alicudi Island population (about 100% during the last decade) may have occurred as a consequence of the shift of breeding pairs from perturbed colonies such as Panarea and Salina to Alicudi Island, where the level of disturbance and pressure is significantly lower.

Further investigations are required to assess the threats for the Aeolian marine bird populations. The above preliminary observations clearly suggest that the lack of proper management of the protected areas and designated Natura 2000 sites is likely to have harmful effects on the conservation of some priority species listed in the Annexe 1 of the 2009/147/ EC Directive.

REFERENCES

- Baccetti N., Capizzi D., Corbi F., Massa B., Nissardi S., Spano G. & Sposimo P. (2009). Breeding Shearwaters on Italian islands: population size, island selection and co-existence with their main alien predator, the black rat. *Rivista italiana di Ornitologia* 78: 83-100.
- Corso A. & Gustin M. (2009). Status e migrazione pre-riproduttiva del falco della regina *Falco eleonora* in Sicilia. *Alula* 16: 205-207.
- Corso A. & Gustin M. (2012). Second-calendar-year Eleonora's Falcons attending breeding colonies in Sicily. *British Birds* 105: 738-742.
- Doderlein P. (1872). Avifauna del Modenese e della Sicilia ossia catalogo ragionato e comparative delle varie specie di Uccelli che si rinvencono in permanenza o di passaggio nelle provincie di Modena, di Reggio e della Sicilia. *Giornale di Scienze naturali ed economiche* 8: 40-124.
- Giglioli E.H. (1881). Notes on Avifauna of Italy. *Ibis* 23: 182-222.
- Iapichino C. & Massa B. (1989). *The Birds of Sicily*. BOU Checklist 11, London.
- Lo Cascio P. (1994). Accertata nidificazione di uccello delle tempeste, *Hydrobates pelagicus*, nelle Isole Eolie (Aves: Procellariiformes). *Naturalista siciliano* 18: 179-180.
- Lo Cascio P. (2000). Note sul falco della regina, *Falco eleonora*, nell'Arcipelago Eoliano (Sicilia). *Rivista italiana di Ornitologia* 69: 187-194.
- Lo Cascio P. (2007). Nuovi dati sulla nidificazione di *Hydrobates pelagicus* nell'Arcipelago Eoliano (Tirreno meridionale). *Rivista italiana di Ornitologia* 77: 59-60.
- Lo Valvo F., Massa B. & Sarà M. (eds.) (1994). Uccelli e paesaggio in Sicilia alle soglie del terzo millennio. *Naturalista siciliano* 17: 1-375.
- Massa B. 1978. Observations on Eleonora's Falcon *Falco eleonora* in Sicily and surrounding islets. *Ibis* 120: 531-534.
- Massa B. (ed.) (1985). Atlas Faunae Siciliae. Aves. *Naturalista siciliano* 9: 1-274.
- Moltoni E. (1960). Uccelli rinvenuti durante una gita ornitologica a Stromboli (Isole Eolie) dal 21 al 29 agosto 1959. *Rivista italiana di Ornitologia* 30: 78-87.
- Moltoni E. & Frugis S. (1967). Gli uccelli delle Isole Eolie (Messina, Sicilia). *Rivista italiana di Ornitologia* 37: 91-234.
- Moltoni E. & Pirovano S. (1980). Osservazioni ornitologiche autunnali a Panarea ed Uccelli ad oggi noti per l'isola (Eolie). *Rivista italiana di Ornitologia* 50: 3-18.
- Perco F., Lambertini M., Lo Valvo M. & Milone M. (1986). Gabbiano reale *Larus cachinnans* Pallas, 1811. In: Fasola, M. (ed.), Distribuzione e popolazione dei Laridae e Sternidae nidificanti in Italia. *Supplementi alle Ricerche di Biologia della Selvaggina* 11: 53-72.
- Spina F. & Leonardi G. (2007). *Piano d'azione nazionale per il Falco della regina (Falco eleonora)*. Quaderni di Conservazione della Natura 26, MATTM & INFS, Roma.
- Sultana J. (1993). *Important Seabird Sites in the Mediterranean*. Malta Ornithological Society, Valletta.