

First record of the Northern white-breasted hedgehog *Erinaceus roumanicus* Barrett-Hamilton, 1900 (Mammalia Erinaceidae) in the Aegean island of Chalki (Dodecanese, Greece)

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ABSTRACT The presence of the Northern white-breasted hedgehog *Erinaceus roumanicus* Barrett-Hamilton, 1900 (Mammalia Erinaceidae) for the Aegean island of Chalki (Dodecanese, Greece), is here recorded for the first time. *E. roumanicus* is common in many Aegean islands, however, his presence in Chalki had never been reported.

KEY WORDS Northern white-breasted hedgehog; Chalki; Dodecanese; *Erinaceus roumanicus*; Rhodes Archipelago.

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INTRODUCTION

Erinaceus roumanicus Barrett-Hamilton, 1900 (Mammalia Erinaceidae) has a global distribution extending from central and eastern Europe, the Baltic and the Balkan Peninsula eastwards through Belarus, Ukraine, and Russia, reaching as far as western Siberia. In the south, its range extends as far as the northern Caucasus and the island of Crete. It is recorded from sea level to at least 1,400 meters (Lapini, 1999). Within the Mediterranean region, it ranges from Italy and Slovenia, through the Balkan Peninsula (Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Albania, Macedonia, Bulgaria, Greece, and European Turkey) and extending south into the Near East Anatolian Turkey. The northern white-breasted hedgehog inhabits farmland, parks and gardens in rural and urban areas, scrubby habitats at the edge of forests, and shrubby vegetation.

Like its congener *E. europaeus*, it is more abundant in artificial than in natural habitats (Lapini, 1999). Many are killed by collision with cars (Lapini, 1999), but this is unlikely to cause widespread

population declines (Amori et al., 2010). Hedgehogs consume a variety of food, but mainly of animal origin: different invertebrates, small vertebrates (rodents, amphibians, reptiles, eggs of birds and their young). Of secondary importance are fruits, mushrooms and other (Peshev et al., 2004).

According to a morphological study carried out by Kryštufek et al. (2009), insular hedgehogs tend to be smaller on remote islands and larger on islands close to the mainland coast, which is their putative source of colonization. However, the insular response is not uniform and the large size close to the mainland is possibly a result of frequent introduction (Masseti, 2012).

Several subspecies have been described from the European range of the northern white-breasted hedgehog; six subspecies were reported from continental and insular Greece. Chalki specimens should belong to the subspecies *E. roumanicus rhodius* Festa, 1914 that is present in the neighboring island of Rhodes.

MATERIAL AND METHODS

Study area

Chalki is a small island belonging to the Dodecanese Archipelago (south-eastern Aegean Sea), located south-west of Rhodes Island. Its coordinates are 36°13'44.49" N; 27°34'18.74" E. Administratively Chalki is part of Rhodes Regional Unit. Its located west of Rhodes (Monolithos Cape), from which is only five nautical miles, southeast of Tilos (10 nautical miles), and north of Karpathos. It has a length of 10 km, a width of 4 km and an area of 28,125 km². The wider and more important bays are Imborios and Pondamos (Iliadis, 1950). Chalki is a mountainous and rocky island and Maistros Mount (593 m a.s.l) represents the highest peak. The entire island, except for the eastern part, is surrounded by very steep cliffs with scarce accessibility. These vertical cliffs allowed the presence of a rare and highly specialized chasmophytic flora. Several species are endemic with a distribution area limited to the island and to the south-eastern Aegean, including western Turkey (Cattaneo & Grano, 2014; Cattaneo & Grano, 2015). Recently, a new species for science that seems to be restricted to Chalki and the nearby island of Tilos has been discovered: *Seseli halkensis* Cattaneo, Tan et Biel (Cattaneo et al., 2016). The island is essentially dry, and lacks of superficial hydrography, however, the numerous wells on the island are still rich in water. In ancient times Chorio (the current Palio Chorio) was the capital, village by now abandoned. Currently the population, which amounts about three hundred inhabitants, is concentrated exclusively in Imborios, which appears to be the only village on the island. Together with the small surrounding islands, Chalki is included in the Natura 2000 network (GR 4210026) for the presence of particular bird species and for a peculiar chasmophytic flora related to elective habitats represented by crevices in the limestone rocks of these islands (Cattaneo & Grano, 2014; Cattaneo & Grano, 2015).

Methods

The author and his wife Cristina Cattaneo investigated the island of Chalki in four different times, during August 2014, April 2015, August 2016 and

August 2017. The first investigations were also extended to the neighboring island of Alimia. Researches have brought important discoveries to this island for flora (Cattaneo & Grano, 2014, 2015, 2018; Cattaneo et al., 2016), theriological fauna (Grano et al., 2015), reptiles (Grano & Cattaneo, 2015, 2017; Grano et al., 2015) and land snail (Liberto et al., 2017). Despite these researches, the presence of the hedgehog on the island has never been ascertained. Only recently have specimens been sighted on the island. Some alive and only one hit by a car. The example of figure 1 was photographed in a road off the main road to Pondamos beach, near the school by Daniel Foulkes-Jones.

RESULTS AND CONCLUSIONS

Masseti & Sara (2003) and Masseti (2012) consider that this species has been introduced in all the Aegean islands where they are found, imported for supply of food and to control snakes. In fact, this small mammal is present in most of the Greek Aegean islands. The reasons why it has never been reported before is due to several reasons: Chalki is a small island with few inhabitants all residing in the same village, the island is particularly arid and cultivated fields and gardens are practically inexistent, except for a few very small personal cultivation near the houses. Only one road is accessible for the few cars on the island and therefore kill-road finds are very rare. One of the reasons some hedgehogs have been seen during this period may be due to the tranquility that all wildlife has had due to the lockdown of activities and tourism due to the COVID-19 pandemic.

Indeed, while a drop in transportation during the coronavirus lockdowns led to lower pollution levels around the world, the slowdown in tourism also lowered another big problem: the massive presence of humans in natural areas.

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Figure 1. *Erinaceus roumanicus* from Chalki, Dodecanese Archipelago (south-eastern Aegean Sea).

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