

A Black Kite *Milvus migrans* on the Saint Peter and Saint Paul Archipelago, Brazil

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ABSTRACT: The Black Kite *Milvus migrans* is a widespread migratory raptor found over much of the Old World. Vagrants have been widely recorded far from its main migratory routes. Here, we report the occurrence of a Black Kite in the Brazilian Saint Peter and Saint Paul Archipelago (SPSPA) in April/May 2014. The bird remained for 32 days in the SPSPA, disappearing at the end of the rainy season. It looked healthy for most of this period and was once seen preying on a seabird chick. We speculate that the species was likely drifted off course by SW tradewinds, which may be responsible for the displacement of several other Old World bird species to the archipelagos of the west equatorial Atlantic, located in the Intertropical Convergence Zone. On the northwest African coast, trade winds are tangent to the western European-west African migratory flyway, which is used by *M. m. migrans* in its seasonal movements between Europe and Africa. We cannot, however, rule out ship-assistance for all or part of its journey to the archipelago. This is the first record of a Black Kite in Brazilian territory, although the species remains unknown on the American mainland.

KEY-WORDS: Occurrence, raptor, record, trade winds, vagrant.

The Black Kite (*Milvus migrans*) is a widespread generalist raptor found over most of the Old World and Australasia (Ferguson-Lees & Christie 2001). Depending on the taxonomic treatment, up to seven subspecies are recognized, some of which are sometimes treated as distinct species (Thiollay 1994, Ferguson-Lees & Christie 2001, 2005). The highly migratory subspecies *M. m. migrans* breeds in continental Europe, north-west Africa and west Asia, and winters primarily in Africa, south of the Sahara (Ferguson-Lees & Christie 2001). During migration, this race principally uses the Western European-West African Flyway, crossing the Strait of Gibraltar (Sergio *et al.* 2014), but substantial numbers migrate through the central and eastern Mediterranean corridors (via the Sicilian Channel and the Bosphorus, respectively); the Russian population moves down along the eastern coast of the Black Sea (Cramp & Simmons 1980, Panuccio *et al.* 2014).

Raptors show different migration strategies because of differences in body features such as aspect ratio and

wing loading between different genera and species. Narrow wings associated with well-developed pectoral muscles, as found in *Circus* and *Falco*, favor longer sea and desert crossings through active flight. Large broad-winged raptors, on the other hand, rely mostly on soaring-gliding to migrate and avoid crossing open water as they cannot sustain active flight for long distances (Ferguson-Lees & Christie 2001). Black Kites are intermediate between these two types and thus tend to use soaring during migration but are also able to perform long powered flights over water (Panuccio *et al.* 2014).

Wind conditions may favor long sea crossings by species that usually avoid crossing water, but crosswinds may take raptors to places off their regular routes (Newton 2008). Vagrant Black Kites have been recorded, for example, in New Zealand (Gill *et al.* 2010), Micronesia (Mariana Islands and Wake Atoll; AOU 2000, Rauzon *et al.* 2008) and at Midway in the Hawaiian Islands in the mid-Pacific Ocean (AOU 2000).

These latter records referred to the subspecies

M. m. lineatus of the central and east Palearctic (AOU 2000, Wiles *et al.* 2004). Although the Hawaiian records led to the inclusion of the Black Kite in the *American Ornithologists' Union* list of North American birds (AOU 2000), the species is actually considered absent from the New World (Ferguson-Lees & Christie 2001). Herein we document the occurrence of the Black Kite in the Saint Peter and Saint Paul Archipelago (SPSPA), a group of oceanic islets under the Brazilian jurisdiction and well outside the species' normal distribution range.

The SPSPA is a small group of rocky islets (~1.7 ha) on the Mid Atlantic Ridge (0°55'N, 29°20'W) without perennial vegetation or natural freshwater sources. It is located 1,100 km from the Brazilian mainland, 650 km

from the Fernando de Noronha archipelago and 1,970 km from the northwest African coast (Figure 1). Only three bird species nest at SPSPA: the Brown Booby *Sula leucogaster*; the Brown Noddy *Anous stolidus*; and the Black Noddy *A. minutus* (Both & Freitas 2004). The largest island, Belmonte, has a lighthouse and a research station, which permanently houses researchers through a long-term scientific research program (Viana *et al.* 2009).

From 16 April to 17 May 2014 LSH, BCLM and GTN photographed a Black Kite at Belmonte Is., SPSPA. The bird was identified as an adult by the absence of pale markings on the upper wing and the lack of a two-toned, cream-tipped under tail, which are typical features of juveniles (Ferguson-Lees & Christie 2001, 2005)

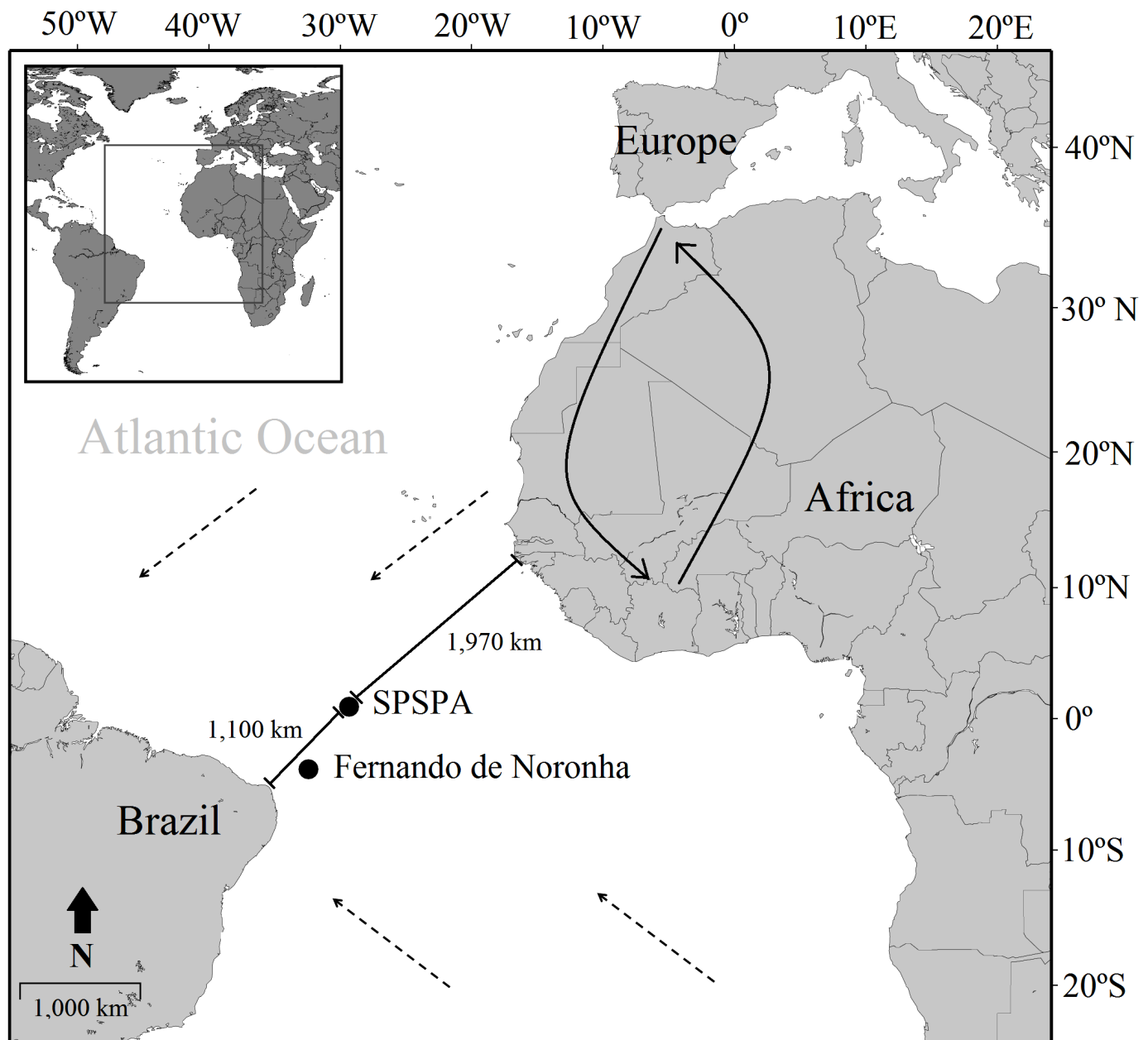


FIGURE 1. Map showing the Saint Peter and Saint Paul (SPSPA) and the Fernando de Noronha archipelagos between African and South American continents. Solid arrows schematically indicate the seasonal migrations of Black Kites *Milvus migrans* through the western European-west African migratory flyway: northward pre-breeding migration during northern spring; southward post-breeding migration during northern autumn. Dashed arrows indicate the easterly surface winds which are predominant between 30°S and 30°N.

(Figure 2a–d). The bird was a medium-sized hawk with a notched tail, grayish-white iris, yellow legs and mostly reddish-brown underparts. The brown, lightly barred tail (not rufous and distinctly forked), the lack of a whitish panel on the inner primaries on the underwing, and the presence of six primary “fingers” excluded the similar Red Kite *M. milvus* (Ferguson-Lees & Christie 2001). The predominantly whitish (as opposed to brown or

rufous) crown identified it as belonging to the nominate subspecies and also ruled out *M. fasciicauda* (also referred to as *M. milvus fasciicauda*) from the Cape Verde Islands (Hille & Thiollay 2000, Ferguson-Lees & Christie 2001). The all-dark Northern Marsh Harrier (*Circus aeruginosus*) is another potential vagrant from the Old World, often confused with the Black Kite, but its tail is slightly rounded and unbarred (Ferguson-Lees & Christie 2001, 2005).



FIGURE 2. Black Kite *Milvus migrans* recorded in the Saint Peter and Saint Paul Archipelago, Brazil, from 16 April to 17 May 2014, (a) and (b) resting on Belmonte Is.; (c) and (d) in flight, showing diagnostic under and upper wing patterns (photographs: L. S. Hoffmann).

The bird appeared healthy when first detected and in the following two weeks. After two days of intense rain, it was found in a seemingly weakened condition and with the feathers soaked on Belmonte Is. on the 3rd May. Two days later, the kite apparently recovered its body condition and began to fly over the SPSPA, remaining mainly in the vicinity of seabird colonies. On one occasion, five days after recovering, it was seen capturing a nestling Brown Booby and carrying it away without difficulty. The kite disappeared 32 days after its arrival on the 18 May.

This record of a Black Kite on the SPSPA is the first for Brazilian territory and only the second for the combined area of coverage of the checklists of North and South American birds (AOU 1998 & supplements, Remsen *et al.* 2015). The species, however, remains

unreported in the continental Americas (e.g., CBRO 2014, Remsen *et al.* 2015). The Black Kite may have reached the SPSPA with the assistance of trade winds originating in the northwest coast of Africa, which are tangent to the main flyway used by *M. m. migrans* in its movements between wintering areas in northwestern Africa and breeding areas in western Europe (Sergio *et al.* 2014). This region lies within the Subtropical High area, a high-pressure center in the Northern Hemisphere from which winds blow in a southwesterly direction. On the equator, these winds meet winds blowing from the Southern Hemisphere's Subtropical High area, which move northwestward from the southeast, forming the Intertropical Convergence Zone (Talley *et al.* 2011). The geographical position of this zone varies over the year, and

from February to early June it is on the equator, where precipitation is highest (Riehl 1979).

The timing of the bird's arrival in the archipelago suggests that it strayed from its normal route and was perhaps drifted off its normal route during northbound migration. At the Strait of Gibraltar, the passage of migrating Black Kites towards the breeding grounds in spring peaks in the first half of March, while migration across the Mediterranean in more easterly routes occurs progressively later (Panuccio *et al.* 2014). Overall, the migratory season spans from late February through May (Ferguson-Lees & Christie 2001). The date on which the bird disappeared from SPSPA coincided with the end of the rainy season in the archipelago. Therefore, it may have survived for a month, due in part to the availability of freshwater provided by the frequent rains, and also by preying opportunistically on seabird nestlings.

The occurrence of other species of Old World birds in the SPSPA, such as the Little Egret *Egretta garzetta*, Eurasian Kestrel *Falco tinnunculus*, Lesser Moorhen *Gallinula angulata* (Bencke *et al.* 2005) and Western Reef-Heron *Egretta gularis* (Fedrizzi *et al.* 2007) is also likely to be associated with this particular configuration of easterly winds, although ship assistance cannot be ruled out in some cases. Records of Northern Pintail *Anas acuta*, Gray Heron *Ardea cinerea*, Squacco Heron *Ardeola ralloides*, Western Reef-Heron, Eurasian Whimbrel *Numenius phaeopus*, Bar-tailed Godwit *Limosa lapponica* (Silva & Olmos 2006), Eurasian Spoonbill *Platalea leucorodia*, Redshank *Tringa totanus* (Schulz-Neto 2004) and Corncrake *Crex crex* (Burgos & Olmos 2013) in Fernando de Noronha can be attributed to the same atmospheric phenomenon.

Under the appropriate conditions, archipelagos of the west equatorial Atlantic can serve not only as resting places for vagrant birds straying from the Western Palearctic and Ethiopian regions, but also as a gateway to the successful colonization of the New World, as was suggested for Western Reef-Heron (Fedrizzi *et al.* 2007) and Squacco Heron (Davis 2010). Although ship-assistance is theoretically possible for all or part of the journey for such birds, we consider that the occurrence of a Black Kite in the SPSPA is most likely a case of natural vagrancy. The species is physiologically capable of long over-water crossings; the SPSPA has no harbor and there is no regular shipping route that directly connects the archipelago to the Old World, although vessels pass close by; there is a system of trade winds that facilitate the westward dispersal of off-course migrants across the equatorial Atlantic Ocean; there are many other documented cases of Old World birds that arrived in islands of the west equatorial Atlantic in recent times and it is unlikely that most were ship-assisted, particularly shy birds that avoid landing on man-made structures such as

vessels, as is the case with the Pintail, Corncrake, Eurasian Whimbrel, Eurasian Spoonbill, Redshank and Bar-tailed Godwit; and finally, the date on which the bird appeared in the archipelago coincided with a period of high migratory activity of the Black Kite in the west Palearctic. We suggest the use of the Portuguese name "Milhafre-preto" in Brazil, given its widespread usage in Portugal.

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