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LETTERS

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APPARENT NATURAL RECOLONIZATION OF AN ISLAND BY THE SEYCHELLES KESTREL (*FALCO ARAEA*)

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The Seychelles Kestrel (*Falco araea*) is an island species endemic to the Seychelles Archipelago in the Indian Ocean (Fig. 1). It is the world's smallest kestrel (Cade 1982). Historical accounts described the Seychelles Kestrel as “tolerably common” in the 1860s (Newton 1867) and “frequently seen on nearly all the islands” in the 1930s (Vesey-Fitzgerald 1940). Historically, the Seychelles Kestrel was recorded breeding on the islands of Mahé, St. Anne, Cerf, Long, Therese, Silhouette, North, Praslin, Curieuse, La Digue, Felicite and Marianne (Newton 1867, Oustalet 1878, Hartlaub 1877, Vesey-Fitzgerald 1940).

Following human colonization of the islands in 1772, and resulting human persecution of the kestrel, the Seychelles Kestrel was extirpated from La Digue and Praslin Islands by 1960 (Gaymer et al. 1969). By 1966, the species was considered to be critically endangered and close to extinction (Vincent 1966), with fewer than 30 birds confined to the main island of Mahé (Gaymer et al. 1969). However, surveys in 1973 located 49 pairs and researchers estimated a total population in the archipelago of 150–300 birds (Feare et al. 1974, Temple 1977). By 1974, breeding was believed to be restricted to Mahé and Silhouette Islands. During these years, the local name of the Seychelles Kestrel was “Manzeur des Poules” which translates to chicken big-eater. This name reflected poor knowledge of the species, whose prey are mainly geckos and ground skinks, and a negative attitude toward the bird (Watson 1981).

Thereafter, sporadic reports of juvenile kestrels on Praslin and La Digue Islands from 1975 to 1977 were recorded, but no adult birds were seen (Watson 1981). Subsequently, Watson (1981) estimated carrying capacity of approximately 370 pairs. An evaluation of the status of the Seychelles Kestrel in 1985 described the species as being far

more numerous and widespread than previously thought, possibly due to under-recording in the past (Collar and Stuart 1985). Surveys in 2001–2002 suggested that the population had remained stable over the previous 25 yr (Kay et al. 2002).

Due to the reduced distribution of this species, 13 birds (six males, seven females) were released on Praslin Island in July and August 1977 in an attempt to reintroduce the species (Watson 1981). By October 1980, at least 10 pairs were present on Praslin Island. Consequently, the same researcher strongly recommended new translocations to La Digue, Flicit, Sisters, and Marianne Islands (Watson 1981). Translocations were considered necessary due to the behavioral reluctance of island birds to cross what they may regard as extensive bodies of water (Komdeur et al. 2004), as well as the tendency of long-lived species to remain strictly sedentary on islands (Ferrer et al. 2011).

On 30 August 2009 at 0730 H, we saw a pair of adults (one male and one female) making territorial calls on La Digue Island at 4°21.9707'S, 55°49.8018'E. During 15 min of observation, we watched this pair perching together on a tree and calling. On the same day at 0945 H, we detected another pair of adults perching together at the top of a coconut palm and making territorial calls at 4°22.9490'S, 55°50.3138'E. We cannot be positive that these two sightings were of different pairs of kestrels. However, given that we saw these birds 2.04 km apart and mean territory size of this species is 0.82 km² (Watson 1991, Gerlach 2002), it seems improbable that they were the same pair. Both observations were made at the beginning of the breeding period just before egg-laying (Watson 1991), with the birds showing typical pre-breeding behavior (i.e., perching very close to each other almost all the time, calling repeatedly). As far as we know, this was the first time since the extirpation of the species from this island that adult kestrels, specifically two pairs of adults, have been observed on the island (Fig. 1).

The question remains as to how these birds were able to recolonize this island given the birds' apparent reluctance

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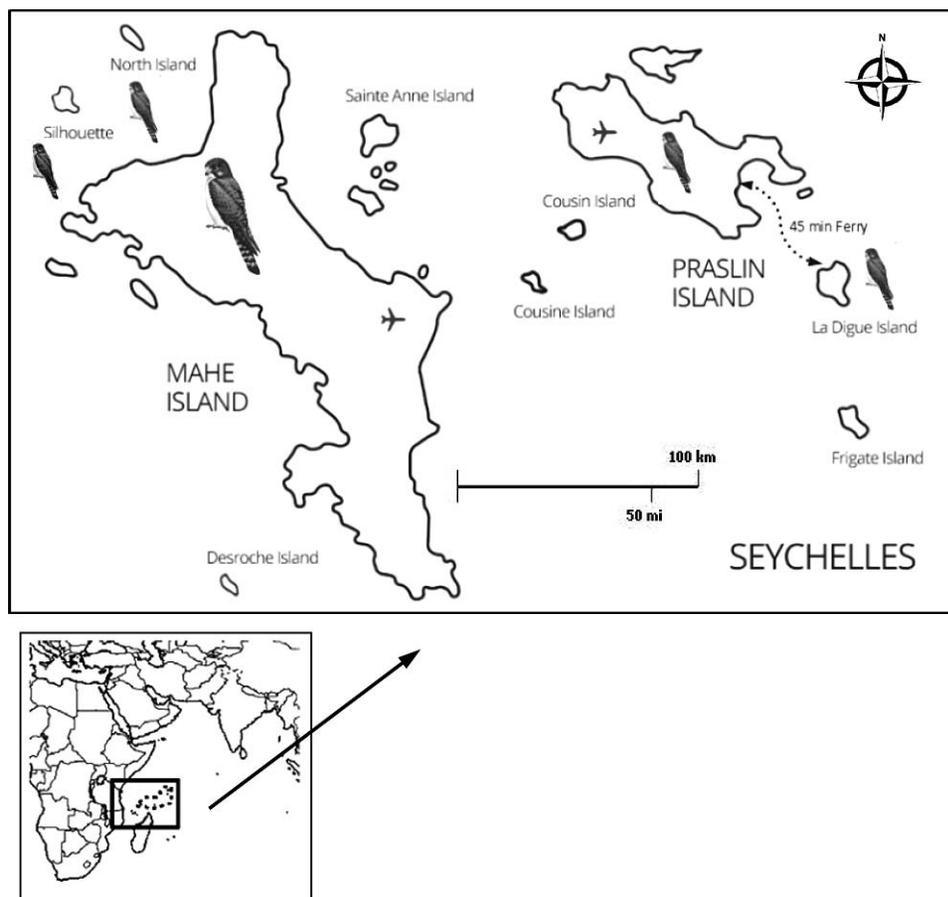


Figure 1. Islands in the Seychelles Archipelago on which adult Seychelles Kestrels occur currently shown with kestrel symbol on or near island. Ferry route between Praslin and La Digue Islands shown with dotted line. Kestrels were observed on La Digue in 2009 as described in this report.

to cross water (Watson 1981) and the distance of several km between islands. On 1 September 2009, we observed a juvenile Seychelles Kestrel perching on the mast of a ferry transporting us from Praslin to La Digue islands, which are separated by 6.8 km (3.7 nautical miles). We realized the bird was there when we were approximately 1.5 km from the Praslin port. The kestrel flew away in an unknown direction some minutes later. Currently, there are 49 weekly ferry trips from Praslin to La Digue islands (https://www.seyferry.com/en_GB/cat-rose-inter-island-ferry-praslin-la-digue). We propose that kestrels could be using the ferries as a platform to rest during flights between islands or even to make the entire trip. This kind of behavior (i.e., a falcon perching on a ship mast) has been documented in other species of falcon (Craddock and Carlson 1970, Rogers and Leatherwood 1981, Whittington 2014). In the Seychelles Islands, concerns about unintended transportation of exotic species among islands by ships

have led to various regulations (e.g., the arrival of private ships is banned on many islands; hulls of authorized ships are continuously inspected upon arriving at the beach). Yet, the potential beneficial effect on the recovery of formerly extirpated native species has not been considered. The use by native birds and other animals of the increasing number of ships connecting strategic points all over the world requires additional study.

Recently, Groombridge et al. (2009) used genetic analyses to demonstrate that Seychelles Kestrels endured a population crash after 1940, supporting historical estimates of population sizes. According to these authors, after this bottleneck, the population experienced a recovery period (1973–2002) with only minimal conservation efforts on their behalf. The authors compared this recovery to that of the Mauritius Kestrel (*Falco punctatus*), another small insular kestrel, one which received a higher level of conservation management to recover its popula-

tions. To explain the unaided recovery of the Seychelles Kestrel, the researchers described several ecological differences between Seychelles and Mauritius islands, including less-intensive use of DDT and other organochlorines and a lower level of native forest destruction in Seychelles than in Mauritius Islands. We believe that one additional factor influencing the differences is the effect of tourism. The number of tourists per inhabitant is three times higher in Seychelles than in Mauritius (3.18 tourists/inhabitant in Seychelles and 1.1 in Mauritius), representing a greater proportional effect in the local economy and social perception in Seychelles. Tourism in Seychelles is the most important nongovernment economical sector, with about 15% of the total direct employments. Tourist traffic, not only for access to sun and beaches but also for nature viewing, has been increasing in recent decades (from 90,000 visitors per year in 1991 to more than 303,000 in 2016), promoting increases in the number of ferry trips between islands and changing local perceptions of the values of their native fauna (Veríssimo et al. 2009). Both factors together could help promote the recovery of the Seychelles Kestrel. Locally, the Seychelles Kestrel is no longer called “Manzeur des Poules;” now it is usually called “Katiti” after its call, giving hope for the survival of the smallest kestrel in the world.

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