

Bourgeois K. et Vidal E., 2007. Yelkouan Shearwater nest-cavity selection and breeding success. *Comptes Rendus Biologies*, 330: 205-214.

We describe, for the first time, nest-cavities selected by the Mediterranean endemic Yelkouan Shearwater *Puffinus yelkouan* on French islands, comparing it with the sympatric Cory's Shearwater *Calonectris diomedea*. By monitoring 179 suitable cavities during four years, we show that Yelkouan Shearwaters select deeper cavities and with more winding tunnels than those selected by Cory's Shearwaters or unoccupied cavities. Logistic regression modelling indicates that cavities with nest-like characteristics are not limited. We show that breeding success is enhanced in deeper cavities, with winding tunnels and higher block covers. We do not find any apparent competition between the two shearwater species.

Bourgeois K., Curé C., Legrand J., Gómez-Díaz E., Vidal E., Aubin T. et Mathevon, N., 2007. Morphological versus acoustic analysis: what is the most efficient method for sexing Yelkouan Shearwaters *Puffinus yelkouan*? *Journal of Ornithology*, 148: 261-269.

Sexing monomorphic seabirds is particularly difficult, and available methods have various disadvantages, such as seasonal non-applicability or stress induction. The Yelkouan Shearwater *Puffinus yelkouan* is a poorly studied seabird endemic to the Mediterranean basin. Ecological and biological data are needed for this species, thus necessitating the development of appropriate field methods. Here, we tested two methods for sexing yelkouan shearwaters: the classical morphological method and a new acoustic method. Morphological analysis demonstrated sexual differences in head, leg and feather measurements, with a high degree of overlap resulting in only 87.2% accuracy. In contrast, acoustic analysis showed that the highest value of the fundamental frequency (FC) and duration of the clear note of calls did not overlap between males and females. Yelkouan Shearwaters can be sexed with 100% accuracy by measuring FC. If $FC < 678.4$ Hz, the bird is female, while if $FC > 678.4$ Hz, the bird is male. Other advantages of this method are its simplicity and noninvasiveness, which are particularly important for a potentially threatened species.

Bourgeois K., Dromzée S., Vidal E. et Legrand J., 2008. Yelkouan Shearwater *Puffinus yelkouan* presence and behaviour at colonies: not only a moonlight question. *Comptes Rendus Biologies*, 331: 88-97.

We describe and test the influence of several environmental and biological factors on the presence and activity patterns of the Mediterranean endemic Yelkouan Shearwater *Puffinus yelkouan* at colonies. Bird arrival at breeding sites is highly correlated with nautical dusk for moonless or slightly moonlit nightfalls and correlated with moonset when the moon is visible. Breeding cycle and wind speed affect both the arrival times and presence at colonies. Bird activity also varies throughout the night and sex ratio on colonies throughout the breeding cycle in relation to breeding duties. Breeder and non-breeder behaviour particularly differs in the time spent on the ground outside burrows, without protection. Finally, factors other than moonlight can be essential in determining the presence and behaviour of petrels and shearwaters at breeding sites, and we need to determine how differences in behaviour at colonies could be related to differential predation risk.

Bourgeois K. et Vidal E., 2008. The endemic Mediterranean Yelkouan Shearwater *Puffinus yelkouan*: distribution, threats and a plea for more data. *Oryx*, 42: 187-194.

The endemic Mediterranean Yelkouan Shearwater *Puffinus yelkouan*, elevated to the rank of species in 2002, is poorly monitored and studied. Despite this lack of data and the susceptibility of closely related species to threats at breeding sites and foraging areas, the yelkouan shearwater is currently considered to be at low risk of extinction. This review, based on published documents, personal communications with scientists and our own observations, summarizes available data on range, population size and trends, and on threats to the species' existence. Breeding sites range from the Marseille islands (France) to Bulgarian islands in the Black Sea but many are not confirmed. The estimated global population is 11,355-54,524 pairs but most censuses are probably overestimates and the global population could be only a few thousand breeding pairs. There is evidence of a population decline and susceptibility to introduced mammals, particularly feral cats *Felis catus* and Ship Rats *Rattus rattus*, and to accidental bycatch in fishing gear. We highlight the lack of accurate and regular censuses of the species, and the alarming situation suggested by the little data available. We recommend that the Yelkouan Shearwater be categorized as Near Threatened on the IUCN Red List, encourage collaborative work to clarify its status, and make a plea for more data on the species' demography and ecology, and for the evaluation of terrestrial and marine threats.

Bourgeois K., Vidal E., Comor V., Legrand J. et Dromzée S., 2008. Colony-site selection drives management priorities for Yelkouan Shearwater populations. *Journal of Wildlife Management*, 72: 1188-1193.

We tested whether colony-site availability could allow for an increase in the unusually small breeding populations of Yelkouan Shearwater (*Puffinus yelkouan*) on the islands of the Port-Cros National Park (France) if feral cat eradication were undertaken. Comparisons between colony and noncolony sites indicated Yelkouan Shearwaters preferred deep-soiled and low-outcrop-covered coastal sites. A substrate cover, light avoidance, and sea proximity model suggested that 17.5% of unoccupied sites are suitable for colony establishment. The low proportion of suitable sites currently used by Yelkouan Shearwaters suggests that these colonies could be refuges and that feral cat eradication will probably lead to a breeding population increase.