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Trapping of Saker Falcon *Falco cherrug* and Peregrine Falcon *Falco peregrinus* in Saudi Arabia: Implications for biodiversity conservation



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Abstract The numbers of *Falco cherrug* and *Falco peregrinus* trapped during their migration over the Kingdom of Saudi Arabia (KSA) were investigated from published reports and through interviews with well-known trappers and dealers over several years (1989–2013). The number of trapped individuals increased for both species over a 23 year period, which is probably related to an enhanced trapping effort. Time series analysis suggests that the number of Saker Falcons being trapped is likely to be stable with annual fluctuations in the coming ten-year period, whereas the number of trapped Peregrine Falcons will probably decline with a small fluctuation initially. Using the population viability analysis suggests a high extinction rate for the Saker Falcon population migrating through KSA during the coming 10 and 20 years; whereas Peregrine Falcons probably take more than 100 years to reach the extinction threshold. However, the increase in the trapping period, especially in the spring, that has been observed during the last five years could increase the number of falcons trapped in the future. As both falcon species are migratory, implementing conservation actions across all range states is important to ensure a favourable conservation status for the Saker and Peregrine Falcons. Both species will benefit through the implementation of the Global Action Plan (GAP), developed by the Saker Falcon Task Force.

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1. Introduction

The Saker Falcon *Falco cherrug* (from now on referred to as Saker) is classified as Endangered according to the IUCN Red-list of Threatened Species, due to a rapid population decline globally of 47% between 1993 and 2012 (Birdlife International, 2012; IUCN, 2013). According to Kovács et al. (2014) the Saker population trend varies between countries, for instance the population is increasing or stable in Austria, the Czech Republic, Hungary, Slovakia, and

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Ukraine, whilst it is decreasing in Bulgaria, China, Iraq, Kazakhstan, Russia, Serbia and Uzbekistan. As a result of a global population recovery, the Peregrine Falcon *Falco peregrinus* (from now on referred to as Peregrine) is now classified as Least Concern (IUCN, 2013). Both species are considered as passage migrants and winter visitors to Saudi Arabia (Shobrak and Pallaite, 1998; AlRashidi, 2004; Porter and Aspinall, 2010; Kenward et al., 2013). They arrive in Saudi Arabia during September–November on their winter migration, and return between mid-February and April on their spring migration, with a small number of birds being recorded as late as mid-May. There have been a few records of wintering in Saudi Arabia between October and March (Shobrak and Pallaite, 1998; Ferguson-Lees and Christie, 2001; Dixon, 2009; Porter and Aspinall, 2010).

The Saker and Peregrine are typically used by falconers in Arab countries, and traditionally have been trapped for falconry during the autumn migration and released after the hunting season in the spring (Allen, 1980; AlRashidi, 2004). Increasingly, instead of releasing birds trapped on migration, falcons are being retained in captivity by falconers (Erwda, 2003; AlRashidi, 2004; Kenward et al., 2013). At the same time, there has been an increasing demand for juvenile falcons for falconry, with trappers extending their activities to include the breeding grounds, especially in central and northern Asia (Dixon, 2005; Dixon et al., 2012). The dissolution of the Soviet Union in the 1990s has allowed greater access to the breeding grounds, and there has been a marked increase in the level of trapping, especially for Saker (Kenward et al., 2007; Birdlife International, 2013). Trapping in these areas has become unsustainable, which has had a negative effect on falcon

populations, especially the Saker (Barton, 2002a; ERWDA, 2003; Levin, 2003; Karyakin et al., 2004; Kovács et al., 2014). Illegal trapping has been claimed as one of the main causes of decline of the Saker Falcon in Asiatic Russia (especially in the Altai-Sayan region), China, Kazakhstan, Kyrgyzstan, Mongolia, Turkmenistan and Uzbekistan (Li et al., 2000; Nikolenko, 2007; Ma and Chen, 2007; Levin, 2011; Nikolenko and Karyakin, 2013; Collar et al., 2013). This activity, along with other threats such as electrocution by medium-voltage power-lines; unsustainable trapping/harvest along the migration routes, secondary poisoning, decreased prey availability and collision with man-made structures, all appear to have contributed to the decline of the species overall (Nagy and Demeter, 2006; Cites, 2011; Kovács et al., 2014).

Following the revised population status of the Saker (IUCN, 2013), a Resolution was adopted at the 10th Conference of the Parties to the Convention of the Migratory Species (CMS) listing the species on Appendix I. Subsequently, a Saker Falcon Task Force (STF) was established under the auspices of the Coordinating Unit (CU) of the UNEP/CMS Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU). The main goal of the STF is to develop a Global Action Plan for the conservation of the Saker. This Global Action Plan includes a management and monitoring system to help ensure that the trapping of wild falcons is sustainable (Williams, 2013; Kovács et al., 2014).

As for the Peregrine Falcon, the species were put on the endangered species list in 1970 because of a problem with egg shell thinning that was caused mainly by use of the pesticide DDT during the 1950s and 60s, habitat loss, hunting,

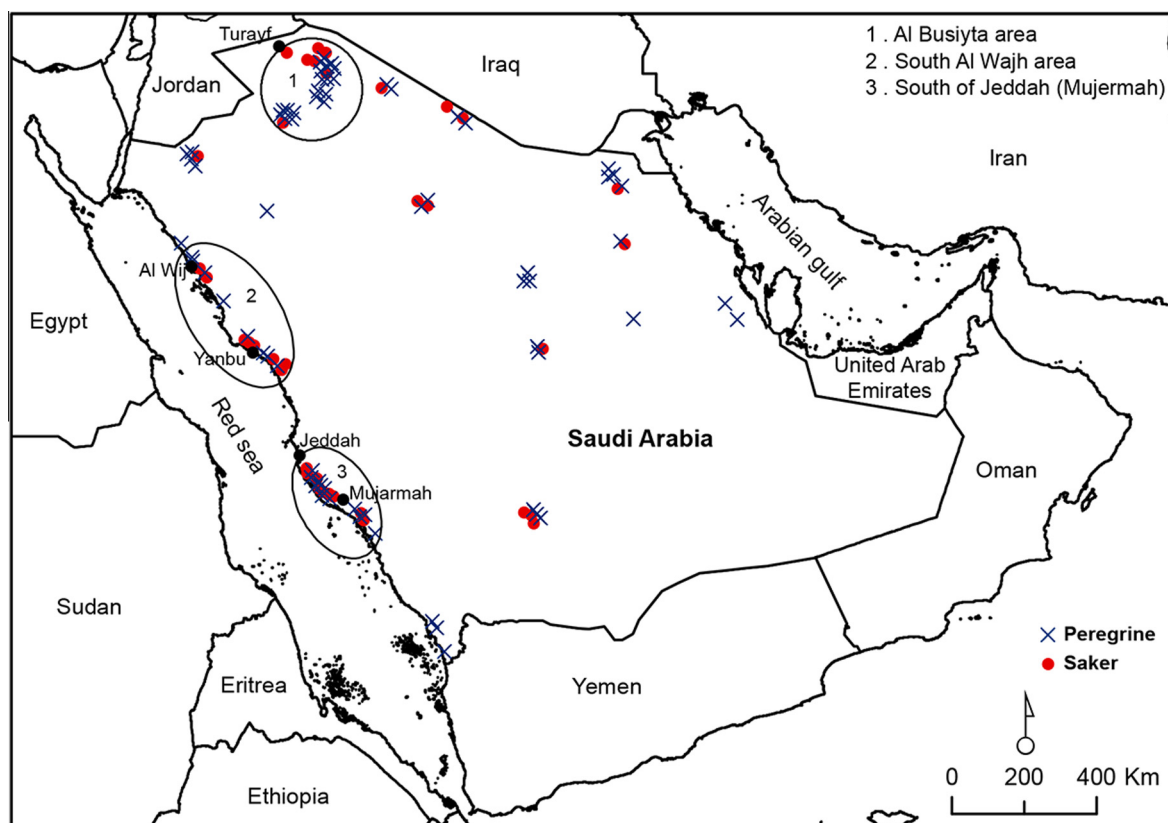


Figure 1 Locations of falcon captures in Saudi Arabia (<<http://www.mekshat.com/vb/showthread.php?t=322535>>).

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