

Short Communication

A Recovery of a Lanner Falcon *Falco biarmicus* Suggesting a Possible Movement Pattern in the Jordan's Breeding Population

Mohammed Al Zoubi* , Ashraf El-Halah, and Nashat A. Hamidan

Abstract: The numbers of raptors admitted to the Royal Society for the Conservation of Nature's (RSCN) Rehabilitation Center have increased over the past decade, with a total of 140 raptors treated, ringed and released. Among these raptors is the Lanner Falcon *Falco biarmicus*, which had been ringed and released on the third of August, 2017, after spending nearly 580 days in the Rehabilitation Center. 445 days following its release, a telephone call from a falconer was received confirming the capture of this individual Falcon in Al Hafirat, Madinah Province, Saudi Arabia, nearly 850 km away from the released site. This piece of information suggests the occurrence of a possible movement pattern of this species. The confiscation of juveniles' lanner falcons over the past four years indicates that a possible breeding population still exists in Jordan. However, more detailed surveys are needed to confirm its breeding in Jordan in addition to modern tracking technology to determine the movement patterns of the species.

Keywords: Rehabilitation, Ringing, Saudi Arabia, Confiscation, Recovery.

Introduction

The lanner Falcon *Falco biarmicus* (F. b) is considered as an Afrotropical/Palaearctic species and its range of distribution extends from southern Europe, covering former

Yugoslavia, Italy, and Greece in the west and across Georgia, Armenia, Azerbaijan eastwards, including northern Iran, and southwards across the Middle East and the Arabian Peninsula (del Hoyo, and Collar 2014; Global Raptor Information Network 2020). In Africa, the species has been found throughout the continent except for in the equatorial region, patchily through northern Africa, and from Senegal and Gambia eastwards to Ethiopia and Sudan and southwards through East Africa and western and northern Angola down to the south in most South Africa (Global Raptor Information Network. 2020). Among the five subspecies that were recognised within its distribution range, the subspecies *F. b. tanypterus* is known to be found in the regions extending from north-east Africa to Sudan, Jordan, Iraq, and into the Arabian Peninsula (Jennings 2010; del Hoyo and Collar 2014). In Yemen, the subspecies *F. b. abyssinicus*, best known in Sahel Zone, Ethiopia and Somalia, was collected from an area near Lahij (Jennings 2010).

According to the IUCN Red List assessments, the species is globally considered as a Least- Concern (LC) species. However, regional assessments of the European and the Arabian Peninsula populations showed severe declining in its population, therefore, the species must be considered as Endangered (EN) in Europe (BirdLife International 2016) and as a Critically-Endangered (CR) species in the Arabian Peninsula (Symes et al. 2015). Most of the Lanner Falcon populations are resident, although some migration movements have been recorded locally in West Africa (Thiollay 2006). In the east and south-western populations, nomadism was

*Corresponding author:

mohammad.alzoubi@rscn.org.jo

The Royal Society for the Conservation of Nature,
Conservation Monitoring Center, PO Box 1215,
Jubaiha 11941, Jordan.

recorded (del Hoyo et al., 1994; Ferguson-Lees and Christie 2001). In southern Africa, the species is partially migratory, which means that some birds involve in some sort of migration movement, others are resident (van Zyl et al., 1994). Moreover, immature birds showed mobility more than adults, with the extent of migration varying with environmental conditions, especially rainfall patterns and their effects on prey abundance (Jenkins 1997). Ferguson-Lees and Christie (2001) described some dispersion patterns especially by juveniles and some adults including a southward movement for breeding especially in the Middle East; they also reported north-south movements in Africa.

In Jordan, this species is considered as a passage migrant and winter visitor, with few records of breeding pairs in the country (Andrews, 1995, Snow and Perrins 1998). However, according to Symes et al. (2015), no recent breeding record has been found in Jordan. Unfortunately, the movements of this species are poorly studied. However, this short communication, gives an idea about the possible migration movement of the Lanner Falcon which is probably breeding in Jordan.

Rehabilitation Centre

Among the principal obligations of the Royal Society for the Conservation of Nature (RSCN) is to provide care and rehabilitation for injured and confiscated animals and birds. Therefore, the Rehabilitation Center was established in 2008 by the RSCN. Despite being in operation for more than ten years now, the Rehabilitation Center started to conduct the necessary systematic documentation of raptors only five years ago, during which more than 140 raptors were admitted to the center (Al Zoubi et al., 2020). Five causes for this admission have been identified by Al Zoubi et al. (2020 In. press) as: illegal possession, malnutrition, orphaned young, trauma, and infectious diseases. When received, these birds are usually evaluated and kept for rehabilitation. If they are recently captured from the wild with no signs of illness, they

will be immediately released. The duration of rehabilitation of the confiscated birds varied over the past five years from one day to 580 days (Av. 53.72). The longest stay in rehabilitation before release was for a Lanner Falcon *Falco biarmicus*. The Center had also received confiscated Lanner Falcon' chicks during 2015, 2017, and 2018.

Health Status and Treatment

The Lanner Falcon (Figure1) was confiscated on January 1, 2016 by the environmental police unit, the Royal Rangers, after being offered for sale on social media. Upon time of confiscation, the falcon was found to be one-year old, and had broken primaries, early stage bumblefoot, and suffered from general weakness. The bird was kept at the RSCN's Rehabilitation Center for 580 days, where it received treatment for bumblefoot following the procedures of (Remple, 2006). Afterwards, the bird went through intensive training for flying and its weight was carefully monitored. Three months before its release, the bird was kept free, and was isolated in a large aviary (10 m long, 5 m width, 3 m high), while being fed with living quails and pigeon for the last week of stay before release.

Release and Recovery

Following the RSCN's releasing protocol, the bird was ringed with the RSCN ring (serial number: B0052), and was released on the 3rd of August, 2017 at the confluence point between Mujib and Hidan River in southern Jordan (lat: 31.450602, Lon: 35.599888).

On October 22, 2018 (445 days later), the authors received a phone call from Saudi Arabia informing the Center that a Lanner Falcon holding the same ring was captured in Hafirat Al-Aida site (lat: 26.434224, Lon: 39.260922) at Al Madinah Al Monawara province, Saudi Arabia. The place where it was captured is located around 850 km south of the releasing site. This suggests that some sort of movement or dispersion of this species has occurred in Jordan. Similar movement patterns were recorded for the

African populations as ringed birds in South Africa were found 695 and 1200 km away from the release sites (Global Raptor Information Network, 2020). The authors had asked the trapper to release the bird for the purpose of research; however, no further information was available afterwards concerning this bird.

In regard to the Saudi Arabian population, the Lanner Falcon is known to be formally breeding in Hijaz and the eastern province (Jennings 2010). In 2015, a large survey was carried out in the Kingdom of Saudi Arabia to identify active nests at former breeding sites and locations known by falcon trappers. Sadly, no breeding pairs or active nests were found (Bin Othman 2016). According to Jennings (2010), there is also a migrant and wintering population.

However, the species is traditionally used by Arab falconers; therefore, the species

was targeted by falcon trappers (Bin Othman 2016; Shobrak 2015). This activity probably represents the most critical threat to the species in the Arabian Peninsula.

In conclusion: the confiscation of Lanner Falcon chicks over three seasons suggests that the species is probably still breeding in Jordan; however, this needs more investigation. The recovery event of the Lanner Falcon proves that the species is dispersing southwards, similar to other populations in Africa. This finding is encouraging for further satellite tracking research in order to identify its movement patterns, and to determine the status of this species in the country. These acts will probably help work out a proper species conservation plan, which takes into consideration programs for raising awareness among trappers and falconers to support the conservation of the species in Jordan.



Figure 1. The Lanner Falcon at the releasing site © Hamidan, 3rd August, 2017.

References

- Andrews, IJ. 1995. The Birds of the Hashemite Kingdom of Jordan. Burns and Harris (Print) Limited, Dundee.
- Al Zoubi, M, Hamidan, N and Amr, Z S. 2020. Causes of raptor admissions to rehabilitation in Jordan. *J Raptor Res.*, (In press)
- Bin Othman, A. 2016. Current Status of Falcons in the Kingdom of Saudi Arabia. Unpublished MSc thesis, University of South Decota. USA.
- BirdLife International. 2020. Species factsheet: *Falco biarmicus*. <http://www.birdlife.org>.
- Del Hoyo, J and Collar, N J. 2014. HBW and BirdLife International Illustrated Checklist of the Birds of the World Volume 1: Non-passerines. Lynx Edicions, Barcelona.
- Ferguson-Lees, J and Christie, D A. 2001. **Raptors of the World**. Houghton Mifflin, Boston, MA
- Global Raptor Information Network. 2020. Species account: Lanner Falcon *Falco biarmicus*. Downloaded from <http://www.globalraptors.org> on 30 May. 2020
- Jennings, MC. 2010. Atlas of the breeding birds in the Arabia Peninsula. *Fauna of Arabia*, **25**, 751.
- Remple, J D. 2006. A Multifaceted approach to the treatment of bumblefoot in raptors. *J Exotic Pet Med.*, **15**(1), 49–55. doi:10.1053/j.jepm.2005.11.003
- Shobrak, M. 2015. Trapping of Saker Falcon *Falco cherrug* and Peregrine Falcon *Falco peregrinus* in Saudi Arabia (Aves: Falconiformes). *Saudi J Biol Sci.*, **22** (4): 491-502.
- Snow DW and Perrins C M. 1998. **The Birds of the Western Palearctic**. Concise Edition. Volume 1, Non-Passerines. Oxford University Press.
- Symes, A, Taylor, J, Mallon, D, Porter, R, Simms, C and Budd, K. 2015. The Conservation status and distribution of the breeding birds of the Arabian Peninsula. Cambridge, UK and Gland, Switzerland: IUCN, and Sharjah, UAE: Environment and Protected Areas Authority.