

Tracking Small Falcons Around the Globe

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Avian migration has always fascinated people; now recent advancement of technology has allowed us to glimpse into the journey of two long distance migrants in the 130-200 gram average body mass range: the Amur and Red-footed Falcons, two closely related species. Amur Falcons have the longest known migratory routes amongst raptors, up to 20,000 km. The conservation ecology research team of falcoproject.eu has now tracked the journey of 3 Amur (since 2013) and 18 Red-footed Falcons (in 2009 and 2014), using 5g Solar PTIs.

Although the two species have distinct breeding ranges in the steppe zone of Eurasia and Northern Asia, both are highly gregarious throughout their life cycle. Aggregation in the breeding period, en route and in the wintering grounds makes a substantial portion of the population vulnerable to local threats such as the practice in Nagaland, India of harvesting Amur Falcons for bush meat. According to some sources up to 120,000 birds were estimated to be consumed by locals annually.

The shores of the lake near Doyang Dam, Wokha district, Nagaland, India (see map/area 1) are known as the Falcon Capital of the World. This is no exaggeration; our research team estimated a minimum of 1 million Amur Falcons present at a single roost site (see photo 1). Aided by local former hunters, the team trapped and tagged two adult females and an adult male. Surprisingly, all birds flew nearly non-stop crossing the Indian subcontinent and Arabian Sea to reach the shores of Somalia. This 5600 km non-stop flight took approximately 5.5 days, with an average speed of 43 km/h. Spring migration commenced in late March, early April. The first individual left the Horn of Africa on 18 April at nearly the exact location it arrived in autumn. Once again the Arabian Sea and India were crossed rapidly and the bird's stopover site in northern Vietnam (map/area 3) was reached less than 10 days after leaving Africa (map/area 2). This area has never before been recognized as a stopover site for the species. The male reached its breeding grounds in Inner Mongolia in early May, while the female that remained active to date reached the area a month later.



Photo by Péter Fehérvári

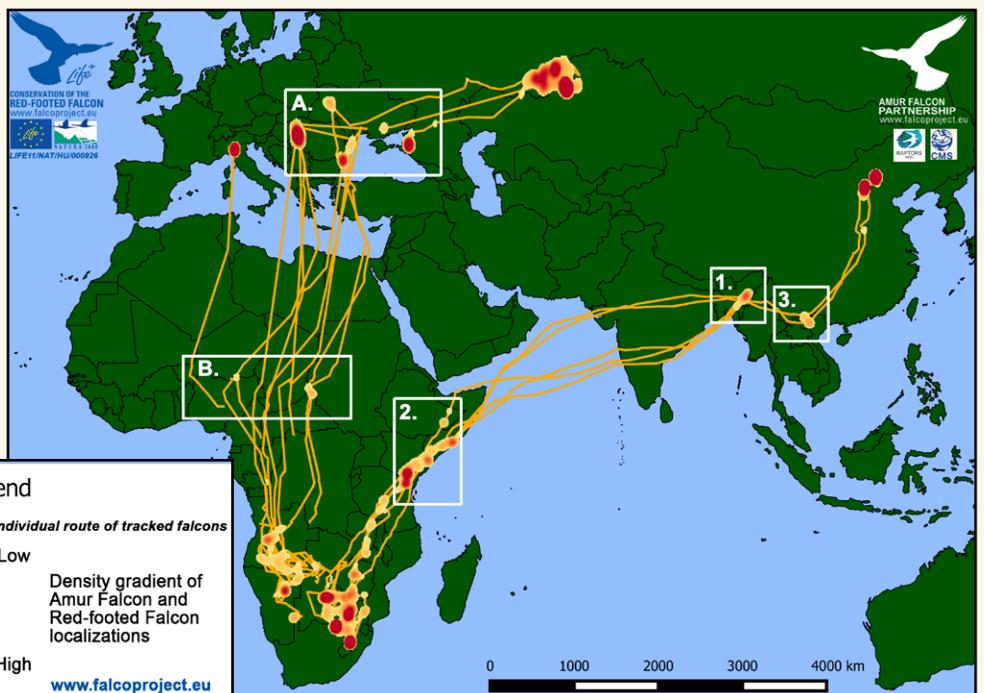
Photo 1. Amur Falcons over the Doyang Dam, Nagaland, India.

conducted weekly surveys of roost sites in the Carpathian Basin and reports of roost sites up to tens of thousands strong in southern Ukraine, both suggest that this area is of utmost importance to fuel up prior to southward movements. The birds left the area predominantly in the last week of September and with long, nearly non-stop flight migrated across the Mediterranean Region and the Sahara, drifting westwards due to northeasterly trade winds in the desert. The first major stopover region is the Sahel region (map/area B). Later the birds crossed the equatorial rainforest region and reached their wintering grounds in southwestern Africa. Individual tracking did not provide sufficient data on spring migration to date; however the patterns observed in this species suggest that they take a more westerly route in the northern hemisphere. Often large number of individuals can be observed in western Europe in spring, probably due to the more westerly routes and cyclone systems in the Mediterranean Basin.

Tracks of tagged and active falcons, and other species, can be followed in "near-real time" on the satellitetracking.eu website. One of the most valuable results of tracking the migration of these remarkable species is identification of migratory stopover sites. Implementing legislative efforts to

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The breeding distribution of Red-footed Falcons ranges from northern Italy to Kazakhstan. We tagged individuals in various locations within this vast area. Initially 8 birds were tagged within the Carpathian Basin in the breeding season of 2009; in 2014 we tagged 1 bird from Italy, 3 birds in Hungary and 3 birds in Kazakhstan. We tagged 3 birds in eastern Romania that were already on migration. Currently, we have results of the post-nuptial migration of the species. The birds from the eastern extent of the breeding range circumnavigated the Caspian Sea from the north in late August, early September and utilized a stopover region around the northern Black Sea coastline (map/area A). Annually



Migratory route and stopover sites of Red-footed and Amur falcons.