



Refresher training for mist netting birds in Wakhan, Badakhshan Province, Afghanistan



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December 2013

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Cover Photo

Hafizullah “Noori” sets-up a bird mist net along a buckthorn hedge in Gozkhan, Wakhan District, 4 October 2013.

All photographs: WCS Health Interface Team

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General background

Migration is the regular seasonal movement, most often along a north-south axis, undertaken by many animal species in spring and autumn. Migration in birds is determined according to an internal biological clock but also as a result to changes in food availability, habitat quality, breeding opportunity, or weather conditions. Non-migratory birds are said to be resident or sedentary. The amplitude of bird migration is highly variable according to species and geographical locations, from relatively localized, such as altitudinal movements within an area, to formidable travels across continents and oceans, sometimes between breeding and wintering areas several thousand km apart.

Mist netting is a popular method used by ornithologists to capture migrating birds (particularly passerines) for the needs of researches, which include species diversity, ecological monitoring, or health investigations. Mistnets are typically made of nylon and suspended between two poles, resembling an oversized volleyball net. When properly deployed, against a vegetated background, and in the absence of wind, the nets are virtually invisible. The mesh size of nets varies according to the size of the species targeted for capture. Net dimensions are approximately 1–3 m high by 6–15 m long. The use of mist nets usually requires permits specified by country wildlife protection legislations. Safe and fast mist net handling requires considerable training and skill to avoid injuring captured birds.

In an attempt to refresh and maintain operational the mist-netting capacity of the Health Interface Team, acquired in 2007-2008 during avian influenza surveillance work, a two-day mist-netting refresher was organized in early October 2013 near the village of Gozkhan in Wakhan District, Badakhshan Province.

Methods

On 2nd of October the Health Interface Team travelled from WCS headquarters in Qila-e Panja to Gozkhan Village and searched for a favorable site to set up mist

nets. Gozkhan is an interesting place for mist netting activities because of the reported abundance of birds using the extensive riparian vegetation patchily disseminated along river courses. Earlier works have also shown that this habitat is likely to host a wide variety of bird species during migration times (WCS, unpubl.). A rare species, the large-billed reed warbler (*Acrocephalus orinus*), which was rediscovered only recently in Afghanistan (Timmins et al. 2011) uses this habitat in the vicinity of Gozkhan during breeding season. The team selected a trapping site near a river in front of dense and high thickets to render the nets as undetectable to birds as possible.

On 3rd of October the team deployed two 2.5m-high (ie. 6 pockets), 10m-long, black mist-nets at UTM 43 S 29342670 – 409993997, and on 4th of October at UTM 43 S 29350605 - 409995378 (Plate 1).

A prerequisite for successful mist-netting is to operate in windless conditions. Because during the mission wind was minimal in the morning, nets were therefore deployed only between 5:00 and 10:00 am.

Results

Despite almost 10 hours of cumulated trapping effort over two consecutive days we captured only three bird specimens: a female white-winged redstart (*Phoenicurus erythrogastrus*) at 6:13 am and a male blue throat (*Luscinia svecica*) at 7:23 am on the first day, and a male white-winged redstart at 5:47 am on the second day.



Plate 1: The top photo, Ali Madad “Rajabi” fixes a mist net to capture birds, near Gozkhan Village, Wakhan District, Badakhshan Province, Afghanistan, October 2013. The below left photo, Hafizullah “Noori” carefully removes a bird from a mist net and below right photo, an adult male blue throat (*Luscinia svecica*) captured in a mist net in the riparian vegetation near Gozkhan Village, Wakhan District, Badakhshan Province, Afghanistan, June 2009.

Discussion

Both captured species are common breeders in Wakhan, yet the white-winged redstart typically breeds at higher elevations than Gozkhan area (ie 2,900 m asl).

In summer it is a very common species in Pamirs and the Hindu Kush, at higher elevations (up to 5,000 m asl), occurring usually in arid barren alpine lands at or near snowline, in moraines and boulder meadows, as well as near running water. Although Rasmussen and Anderton (2005) map (Vol. 1, p 250) shows that the species is only a summer visitor to Wakhan, we have made observations of large numbers of white-winged redstarts aggregating in the buckthorn *Hippophae* thickets all along the Wakhan and Panj River in December and January, supporting that the species overwinters in the District yet at relatively low altitudes (2,500-3,200 m asl).

The blue throat breeds along running waters in both Pamirs and the Hindu Kush Range of Wakhan District. During breeding season we have seen this species as high as c. 3,600 m asl, which corresponds to the upper limit of riparian vegetation growth in Wakhan. It is also a common migratory species in the area. Until mid October it is not uncommon along upper reaches of glacial streams in Pamirs and the Hindu Kush. Yet on the contrary to the white-winged redstart it does not seem to stay in the district during winter. As for the two white-winged redstarts the captured blue throat could have been a bird descending from higher altitudes.

The paucity of captures was in line with the few birds present in the riparian habitat of Gozkhan at the time of our visit. In order to increase the chance of captures and improve our mist netting experience, we hope to resume another refresher training mission in Gozkhan in spring 2014.

Literature Cited

Timmins RJ, Ostrowski S, Mostafawi N, Noori H, Rajabi AM, Svensson L, Olson U, and Poole CM. (2010). New information on the Large-billed Reed Warbler *Acrocephalus orinus*, including its song and breeding habitat in north-eastern Afghanistan. *Forktail* 26: 9-23

Rasmussen PC and Anderton JC. (2005). Birds of South Asia. The Ripley Guide. Volume 1 and 2. Smithsonian Institution and Lynx Edicions, Washington DC and Barcelona.