

The Migratory bird 'Amur Falcon'; its Conservation in Nagaland

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Abstract

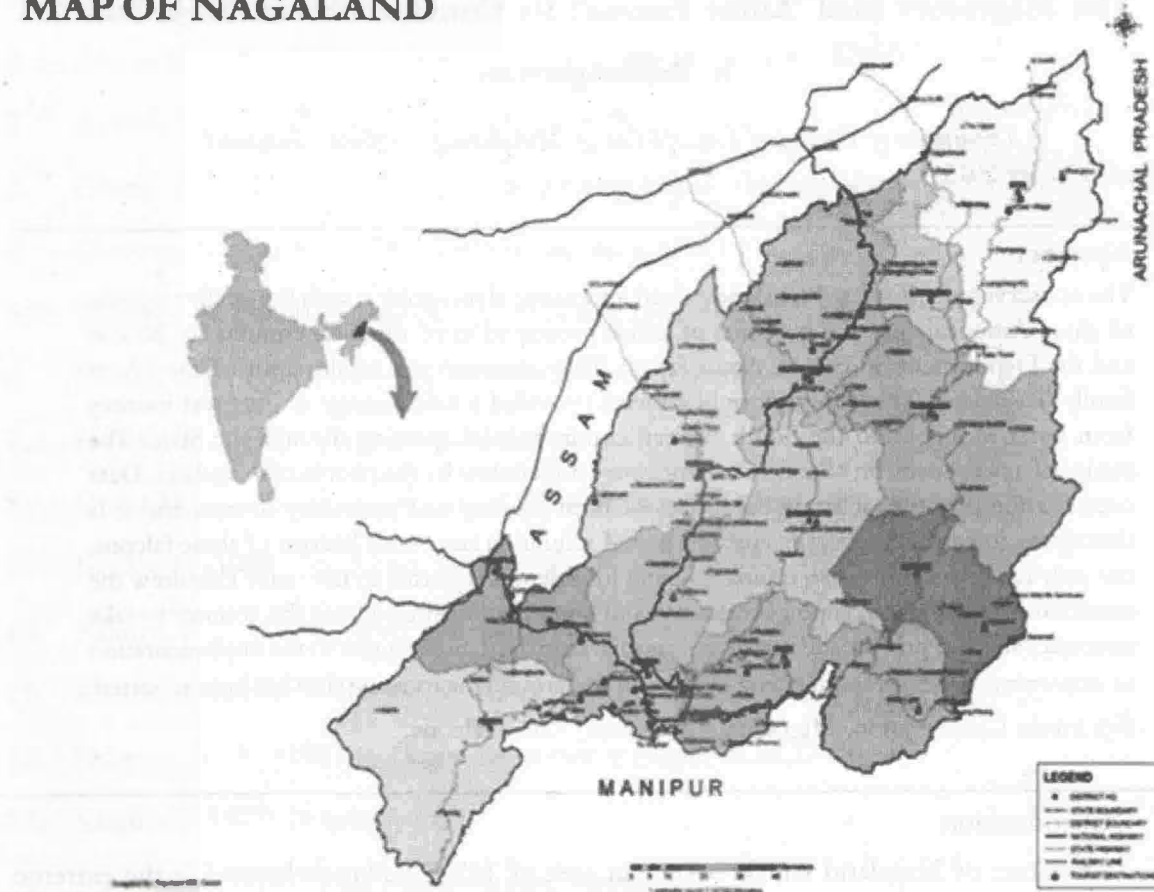
The conservation efforts in Nagaland gained international recognition with the satellite tagging of three Amur falcons, the outcome of active participation of the local community, NGOs and the Department of Forest. Amur falcon (*Falco amurensis*) is a small raptor of the falcon family (*Falconidae*). These migratory birds were provided a safe passage on its great journey from inner Mongolia to the South African continent while passing through the State. The study will try to focus on conservation measures undertaken by the people of Nagaland. Data used for the purpose of study comprises of both primary and secondary sources and it is descriptive in nature. During its epic journey of migration large scale harvest of these falcons, not only for its meat but also rampant killing for sale was reported in the state. This drew the attention of the central, state government and conservationist all across the country to take necessary steps to protect and conserve this migratory bird. Subsequent to the implementation of conservative measures, no killing of birds in and around the roosting sites has been reported.

Key words: Conservation, Migration, Community, Amur falcons.

1. Introduction

The State of Nagaland which covers an area of 16579 Sq.km is located in the extreme North Eastern corner of India. It lies between 25°6' N to 27°4' N latitude and 93°20' E to 95°15' E longitude, bounded by Assam in the north and west, Myanmar and Arunachal Pradesh in the east and Manipur in the south. The topography is predominantly hilly, with altitude ranging from 194 metres to 3840 metres above the sea level. The highest peak is Mt. Saramati measuring 3840m and the plain area is limited only to Dimapur and some portion of the adjoining area merging with the plain of Assam valley. According to 2011 (census) the population of Nagaland is 1980602 with a density of 119 person per sq.km. There are 11 administrative districts with more than 82.26% rural population. The state enjoys a sub-tropical climate with summer mean temperature ranging between 16°C to 31°C and winter mean temperature ranging between 4°C to 24°C. It receives rainfall at an average of 2000 to 2500 mm that occurs during monsoon season from mid June to Sept. The State is richly endowed in both its flora and fauna as it falls under one of the Bio-diversity hotspots region of the World.

MAP OF NAGALAND



Source: Nagaland GIS & Remote Sensing centre.

2 Characteristic Features of the Bird:

The Amur falcon (*Falco amurensis*) is a small raptor of the falcon family (Falconidae). It was earlier treated as a subspecies of the red-footed falcon (*Falco vespertinus*) and known as the **Eastern Red-Footed falcon**. Males are dark grey with reddish brown thighs and undertail coverts; reddish orange eye-ring, cere, and feet. Females are duller above with dark scaly markings on white under parts, an orange eye ring, cere, and legs. Only a pale wash of rufous is visible on their thighs and undertail coverts.

The Amur falcon feeds mainly late in the evening or early in the morning capturing a wide range of insects in the air or on the ground. They capture most of their prey in flight, sometimes by hovering but will also pick prey by alighting on the ground. The winter diet appears to be almost entirely made up of insects but they take small birds and amphibians to feed their young

in their breeding range. The rains in Africa produce swarms of termites, locusts, ants and beetles that provide ample food. Their migration over the Arabian Sea coincides with the timing of the migration of dragonflies (*Pantala flavescens*) and these are thought to provide food during the most arduous part of their migration route. Their breeding habitats are in open wooded country with marshes. During migration they stay in open forest or grasslands, roosting colonially on exposed perches or wires. The Amur falcon breeds in east Asia from the Transbaikalia, Amurland, and northern Mongolian region to parts of North Korea. The breeding season is May to June and several pairs may nest close together. Abandoned nest platforms belonging to birds of prey or corvids and even tree hollows are re-used for nesting. Three or four eggs are laid (at two day intervals). Both parents take turns to incubate and feed the chicks which are hatched after about a month. The young birds also leave the nest after about a month.

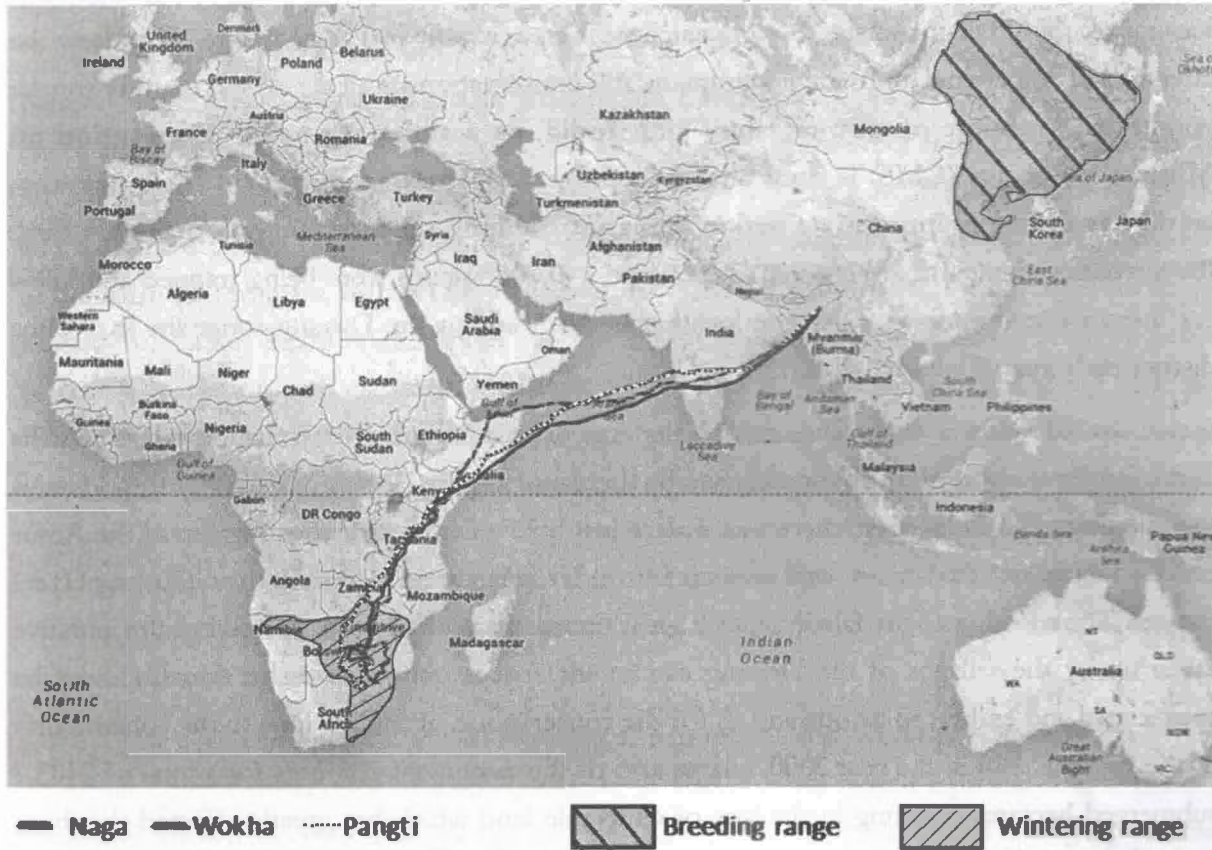
They migrate in a broad front through India, sometimes further east over Thailand and Cambodia and then over the Arabian Sea, sometimes in passage on the Maldives and other islands to reach southern Africa. Birds going over India are thought to be aided by strong winds blowing westward. These winds are strong at an altitude of about 3000m and the birds are thought to fly at a height of above 1000m during migration.

3. The Great migration of the Amur falcon:

Around the month of October- November, winter sets in over the Northern hemisphere and temperature falls below freezing point. Water freezes over and so various life forms start hibernating. Survival becomes a concern for non hibernating birds like the Amur falcons and hence they adopt a different but difficult strategy for survival. They undertake an epic marathon migration covering a long distance of around 22,000 km during their onward and backward elliptical journey. It is one of the longest distances covered by any bird. They go to southern African countries another hemisphere where summer sets in at that time. While undertaking such a long journey, their fat reserves get depleted. To replenish this, they stop at several places in the north-eastern part of India like Habang in Assam, Mizoram, Tamenglong in Manipur etc but the primary stop over roosting sites are found to be in some districts of Nagaland, one of which is in Pangti village of Wokha district. During this time of the year, it is observed that winged termite are found in abundance which serve as food for the Amur falcon. To study and understand this journey and to assess the conservation of this majestic bird, an International team of Ornithologist took up a joint mission to satellite tag Amur Falcons in Nagaland between November 4-9, 2013 initiated by the Wildlife Institute of India (WII), Dehradun in collaboration with Nick Williams,

Head of the Coordinating Unit of the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MOU); Hungarian ornithologists Peter Fehervari, Szabolcs Solt, and Peter Palatitz; and Department of Forests, Ecology, Environment and Wildlife, Nagaland. They declared Nagaland as the "Falcon Capital of the World" after estimating that about one million Amur falcons roost in the State during the small aerial predator's annual migration on the way to South Africa. According to Nick Williams "This is by far the largest and most spectacular roost of any species of Falcon ever seen anywhere in the world; it represents a unique and irreplaceable part of the rich biodiversity in Nagaland". On the 7th of November 2013 three satellite tagged Amur falcons were released from Pangti village. The birds were fitted with the state-of-the-art 5 gram Solar-Powered PTT (Microwave Telemetry Inc.) with antenna on their backs like a backpack using a specially made teflon harness. One male was named 'Naga' in short for Nagaland; one female was named 'Wokha' after the name of the district which is globally important for its roost site; and a second female was named 'Pangti' after the village located in Wokha district and in recognition of the efforts made by the people of Pangti to protect these falcons. This was the first time the Amur Falcons were satellite tagged and released as a result of which Nagaland entered the international map in the conservation movement. According to satellite tracking, the three falcons took different routes in their migration which can be observed from the map given below. They crossed over Manipur, Mizoram, Bangladesh, Bay of Bengal, Andhra Pradesh, Karnataka, Maharashtra, Arabian Sea and entered Somalia on Nov 16, 2013. The migratory routes of the falcons in Africa also converged at several locations along Somalia, Kenya, Tanzania, Malawi, Zambia, Mozambique, Zimbabwe, Botswana and South Africa. Unfortunately while in the South African continent the transmission from Wokha was discontinued for reasons unknown. It appears that the bird may have died or the transmitter was thought to have fallen off. Naga and Pangti after having spent some months started their return migration on March 21 from Botswana and on April 3 from South Africa respectively and within a span of 16 to 20 days, both the birds arrived in Somalia. From there again, they had taken different routes crossing over the Arabian Sea, Gujarat, Madhya Pradesh, Bihar, Meghalaya, Manipur, Myanmar, Laos, Vietnam, China and reached inner Mongolia by May 7, 2014. Both the falcons did not return to the Doyang roost site in Nagaland during their migration to Mongolia and instead flew across south through Manipur state and into Myanmar. Interestingly after staying the whole summer there, on 7th of October 2014 a small flock of about 100 falcons were reported to have arrived at Pangti village along with which Pangti and Naga came later on and for which a celebration programme was organized by the Pangti villagers to welcome them on 3rd of November 2014.

Satellite Tracking of Amur Falcons — The Routes of the Three Falcons in Season One



Source: R. Suresh Kumar- Tracking the Incredible Journey of the Amur Falcon.

4 Findings

The presence of this bird in the state has been observed from time immemorial as some of the elders fondly recount and is known by different names like Molulem in Ao dialect, Enenum/ Elelum/Volelum in Lotha dialect etc. Efforts in the conservation of Amur falcon have been reported from Changtongya village of Mokochung district in 2008 when Kanglatu Community Bio-Diversity Reserve was established with the intervention of Forest department and the co-operation from the village community. Previously people were interested in jhum cultivation and fuel wood extraction in this area, but it became a place of interest for all because of mass migration of Amur falcons. Initially local people of the area were happy with the amount they fetched by hunting and selling these birds not knowing the extent of damage that it caused to the birds and

the journey that they had to endure from Mongolia to the South African continent for their survival. Later in October 2012, an NGO, **Conservation India** reported of massive large scale harvest of these falcons in the Doyang catchment area, mostly in Pangti village. This drew the attention of the central and state government and conservationists all across the country to take conservative measure of this migratory bird. **India, as a signatory to the Convention on Migratory Species (CMS) is duty bound to prevent this massacre, provide safe passage, as well as draw up appropriate action plans for the long-term conservation of this bird.** Researchers estimated that between 120,000 and 140,000 falcons were being trapped and killed for human consumption in just one location in Nagaland at the Doyang roost site in Wokha district each year (Dalvi et. al. 2013).

In 2013 efforts were shifted from Kanglatu (Mokokchung district) to Pangti village (Wokha district) following the shift of roosting site by the Amur falcons. It was narrated by the elders of Pangti village that in the past, there was a place just below the present roosting site of the Amur falcons which attracted many wild animals but today it is submerged under the Doyang Hydel Project. The roosting of the falcon in such great number is yet to be ascertained but the initiative taken up by the villages of the Doyang catchment area is quite impressive which should be appreciated and embraced by one and all for the conservation of nature. Due to the construction of the Doyang dam in the year 2000, a large area of the catchment accounts for a total of 2405.2 submerged hectares resulting in the loss of cultivable land which has greatly affected the jhum cycle. It is worth mentioning that in Pangti village, the jhum cycle has reduced to only 5 years while terrace fields have been totally submerged. In addition, plantation crops like orange, banana etc have also been affected. Despite all these constraints, the people of this village have taken a bold decision to conserve the Amur falcon which was previously considered a means of income during the roosting season for the poor farmers. The Chairman of Pangti village and his council members led the community participation movement for conservation, that resulted in the signing of a tripartite Memorandum of Understanding (MoU) involving Pangti, Ashaa and Sungro villages, under Wokha district with the Wildlife Trust of India (WTI) and Wokha-based NGO Natural Nagas to assist Nagaland Forest department to stop wide-scale hunt of Amur Falcons in Doyang Reservoir. Following the MoU a resolution was cleared by the villagers to penalize offenders up to five thousand rupees and a protection squad was formed by the villagers. Subsequently under the Rapid Action Programme, 'Bird for Bird' programme was implemented by distributing poultry to stop the killing of Amur falcon and another programme called 'Grain for Grain' was also

initiated to compensate the losses incurred due to wild elephants menace. The villagers were also given some financial incentive for their efforts in the conservation of Amur falcons.

The participation of various NGOs such as Wildlife Trust of India (WTI) Dehradun, Natural Naga from Wokha, Nagaland Wildlife and Biodiversity Conservation Trust (NWBCT) based at Dimapur, the local churches, the student bodies etc had a great impact on the success of the conservation programmes. They have been constantly working hand in hand with the villagers and with the department concerned by organizing awareness campaign at the villages and schools in the form of seminars, distribution of literature, posters, hoardings etc. Flexi banner depicting slogans for Amur falcon conservation and also about punitive measures were put up in public places. A marathon was organized in Pangti village by the Forest department along with the Students' Union. The fishermen of Pangti village formed an organization called the "Amur Falcon Roosting Area Union" (AFRAU). These are the landowners of the roosting area who are fishermen and had resorted to harvesting of these birds in the earlier years, but today these reformed hunters are enthusiastically cooperating with the Forest department and have started several initiatives of their own by putting up billboards, maintaining visitors Entry register, keeping strict vigil around the roosting area etc.

The Department of Forests, Ecology, Environment and Wildlife, Nagaland led by the Principal Chief Conservator of Forest & Head of Forest Force played a pivotal role in making Nagaland known globally through the satellite tagging of Amur falcon and taking up various initiatives. They have constructed a Watch Tower cum Resting shed in Pangti village from where visitors can have a grand view of the Amur falcons. The Forest Department further deployed frontline staff at the roosting sites and market areas to control the trapping, killing and selling of the birds. Trap/ nets used for capturing the birds were seized. The captured birds were also seized and those which were still alive were set free while the unfortunate ones were disposed off. Other local law enforcement agencies such as the village council, police and District administration were alerted for necessary action to stop any recurrence. The government also directed the Village council chairman, VCMs and GBs of all the villages in the catchment area of the DHEP to take immediate steps/measures including imposition of fines and reporting to the concerned authority to prevent hunting, trapping and sale of Amur Falcons within their respective jurisdiction. They were also informed that violation of the orders would invite appropriate and necessary action such as non-release of developmental funds etc. With all such measures, the conservation of the Amur falcon in Nagaland took a leap forward and it has been reported that not a single bird was

killed in and around the roosting sites. Their efforts have been recognized both nationally and internationally. The Pangti Village Council was conferred the Governor's Commendation Certificate during the Independence Day celebration in 2014. They have also won the Royal Bank of Scotland "Save the Species" award 2014, Balipara Foundation Award has been given jointly to the Nagaland Forest Department and Pangti Village Council, the Amur Falcon Conservation was featured during the Plenary Session of the 8th Asian Raptor Research and Conservation Network (ARRCC) held at Pune in February 2014 and also at the IUCN World Parks Congress 2014 held at Sydney, Australia in November 2014. A film company 'Silver Back Films Ltd' from the United Kingdom has also made a series on the Amur falcons in Nagaland.

5. Conclusion

With the conservation issue of the Amur falcons gaining global recognition and given the success of the community participation in the Doyang catchment area of Wokha district, a common strategy of giving a free passage to these birds and treating them as a 'guest' has been taken up in the State. It has been reported that in most of the District Planning and Development Board meetings, the importance of conserving the Amur falcons have been featured. There are reports that in Longleng district large flocks of Amur falcon roost during the same season and the people of the district have also taken up various measures to protect the bird. With the joint efforts of the Government, local communities, NGOs and various agencies, not a single bird was killed in the State, but large scale massacre elsewhere in neighboring States have been reported. A local newspaper report dated 24th of October 2014 under the caption 'Rampant killings of Amur falcons raises concern in Assam' stated that over 100 birds were killed at New Tumbung village near Umrangso area of Dima Hasao. Raids were conducted in the village by the forest officials and volunteers of a local environmental NGO, 'Blue Hills Society' and they nabbed over 10 children with snares and catapults. They also recovered a few birds from the children which were later released. The Blue Hills Society, which is working on conservation of Amur falcons in Dima Hasao under Wildlife Trust of India's programme, had also decided to deploy its volunteers in New Tumbung and its adjoining areas to prevent hunting. Again the same paper on 4th of November 2014 reported that large number of Amur falcons were being killed by hunters in Tamenlong district of Manipur, however the State Government did not take any remedial steps to protect and conserve the migratory bird. The occurrences of such activities in the neighbouring states present great challenges to the conservative measure that has been carried out successfully in Nagaland. It is therefore, imperative that broad base efforts spanning all States that lie along

the migratory route of the falcons needs to be taken up involving the local communities, for a long lasting solution of the problem and for the very survival of this migratory bird.

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