

Raptor Migration Summary

Nepal – Autumn 2013

Report Issued: 20 January 2014



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Herein we provide a brief overview of east to west raptor migration in central Nepal in autumn 2013. This is our second full season counting migrating Steppe Eagles and other birds of prey as they make their way towards India, Pakistan, the Middle East and some as far as Africa. Tulsi Subedi with help from many others, monitored this site (“Thoolakharka”) from 15 September through to 8 December, a total of 85 days of continuous observation. The watch site is located in the foothills of the Himalayan Mountains within the Annapurna Conservation Area, about an hour’s taxi ride to the northwest of the city of Pokhara, at a place known to trekkers as “Australian Camp.” We call the watch site “Thoolakharka” – the name of the small town where we stay.

The 2013 season’s totals of the species seen and total number counted are provided in Table 1 (p. 5). We also provide a brief summary of migration highlights and trends for different raptor groups such as Eagles, Falcons and Vultures, as well as three swallow species (pages 7-22). In all, we identified 35 migrant raptor species, seven resident (non-migratory) species and counted approximately 14,000 individuals on migration from as far away as China and Mongolia.

Some of the highlights from the 2013 migration include: 8,684 Steppe Eagles counted – the highest yearly total ever seen on migration in Nepal. The first migrating Steppe Eagles were seen on 7 October. Their migration continued until the last day of the count. The highest single day Steppe Eagle count was on 20 November when 1,102 passed by the watch site. The highest single hour count was on 21 November from 2pm to 3pm (14h00-15h00) when 308 Steppe Eagles were seen.

Other migrant raptor species included ten additional species of Eagles, five species of Vultures, six species of Falcons (*Falco*), three species of *Buteos* (Buzzards), two species of *Accipiters* (Sparrowhawks), four species of *Circus* (Harriers), as well as Osprey (*Pandion haliaetus*), Oriental Honey-buzzard (*Pernis ptilorhyncus* ssp. *orientalis*), Black Kite (*Milvus migrans* ssp. *govinda*) and Black-eared Kite (*Milvus migrans* ssp. *lineatus*) – to name just a few.



Above: view from the watch site (“Thoolakharka”) looking east towards Pokhara and Lake Phewa (far right), with the Annapurna Mountains on the far left (north). Many raptors approach us at or near eye-level, or rise up on updrafts from the valley below on our immediate right – hence the many photos we get “looking down” on migrants. The bare ground is wonderful to walk on with bare feet; also, this cleared area generates strong thermals, so raptors circle right over our heads, especially early and late in the day. This image shows photographers from Thailand, Singapore Malaysia and Finland clicking away at vultures, kites and eagles that have descended to feed at bones and offal placed for them nearby. © Henk Smit on 13 November 2013

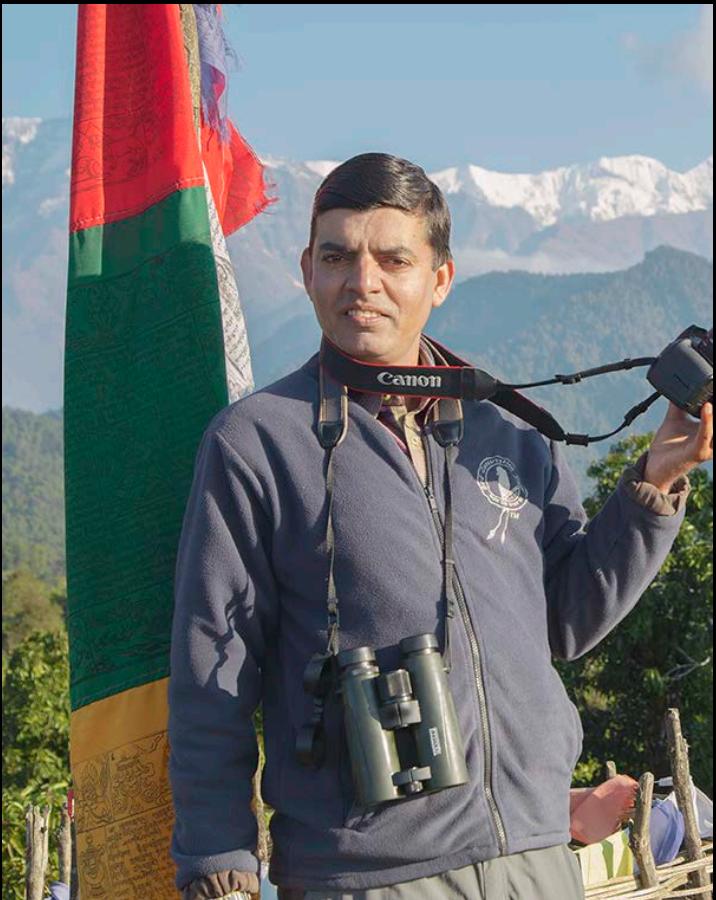
Cover photo: Bearded Vulture (adult), also known as the Lammergeier; © 14 Nov 2013 by Robert DeCandido PhD



Juvenile (first plumage) Steppe Eagle (left) and 2nd to 3rd plumage Steppe Eagle (right) - rdc

Overall, the best time in autumn 2013 to see the most raptor species on one day was mid-October to early November, but different species peaked at different times during the migration. For example, the migration of Amur Falcon (*Falco amurensis*), Lesser Kestrel (*Falco naumanni*) and Oriental Honey-buzzard (*Pernis ptilorhynchus*) peaked from 10-25 October; by comparison migration of Himalayan Vulture (*Gyps himalayensis*) peaked from 20 November to 5 December. On the other hand, the largest movement of Steppe Eagles began about 18 November and continued for the next week or so. (NOTE: in 2012, the peak migration time for Steppe Eagle was the first ten days of November.) Among the 35 species of migrating raptors we see, several are listed on the IUCN list: White-rumped Vulture is critically endangered; two species (Egyptian Vulture and Saker Falcon) are classified as endangered; three species (Pallas's Fish Eagle, Imperial Eagle, Greater Spotted Eagle) are vulnerable; and two species (Cinereous Vulture and Pallid Harrier) are near threatened. Beside the migrating raptors, seven additional non-migratory species (including two critically endangered species) were regularly seen in the area. The most common ones are Black Eagle (seen almost every day); Mountain Hawk-eagle and Bearded Vulture (both seen every other day). We have been told that this watch site is the best place in the world to see and photograph Bonelli's Eagle and Bearded Vulture.

Autumn 2013 also saw the publication of two of our articles about raptors in Nepal in the journal **BirdingASIA**: (a) Indian Vulture *Gyps indicus*: first record for Nepal; and (b) The East-West migration of Steppe Eagle *Aquila nipalensis* and other raptors in Nepal and India. We wish to thank our many contributors and "raptor spies" including Carol and Tim Inskip; Hem Sagar Baral PhD; Sharad Singh; Surya Bahadur Gurung; Keith Bildstein PhD; Benny & Ingrid Fredriksson; Krishna Mani Baral; Martti Siponen; Khemthong Tonsakulrungruang; Parinya Paduntin; Prakasit Chancharas; Dr. Chuenchom Hansasuta; Antero Lindholm & Annika Forsten; Lim Aun Tiah, Mohammed Syafiq Sivakumaran and the group from Malaysia; Hari KC (Khatri Chhetri) of **Australian Camp Hotel**; and Max Kaiser of South Africa.



(left) Henk Smit at work photographing moths with student onlookers
(right) Tulsi Subedi, Director, at the Raptor Watch site with the Annapurna Mountains in the background



Bird's eye view of the agricultural landscape in the lowlands below the Thoolakharka Raptor Watch

Species - 2013	Total Counted	Peak Time Frame*
1. Oriental Honey-buzzard	642	9 Oct – 24 Oct (60)
2. Common Buzzard	102	7 Oct – 22 Oct (12)
3. Long-legged Buzzard	11	16 Oct – 23 Oct (3)
4. Upland Buzzard	8	7 Nov – 13 Nov (2)
<i>Unidentified Buteo</i>	3	----
5. Northern Sparrowhawk	110	7 Oct – 25 Oct (7)
6. Northern Goshawk	10	20 Nov – 30 Nov (10)
<i>Unidentified Sparrowhawk</i>	1	30 Oct – 7 Nov (4)
7. Steppe Eagle	8,684	10 Nov – 22 Nov (1,102)
8. Booted Eagle	109	20 Oct – 3 Nov (7)
9. Short-toed Eagle	2	21 Oct – 22 Nov (1)
10. Crested Serpent-eagle	5	6 Oct – 20 Oct (1)
11. Pallas's Fish Eagle	1	19 Nov (1)
12. White-tailed Eagle	2	10 Nov – 15 Nov (2)
13. Imperial Eagle	1	27 Nov – 29 Nov (1)
14. Greater Spotted Eagle	2	20 Nov – 26 Nov (1)
15. Bonelli's Eagle	30	11 Nov – 22 Nov (4)
16. Mountain Hawk-eagle	6	21 Oct – 6 Nov (2)
17. Golden Eagle	4	1 Nov – 5 Dec (1)
<i>Unidentified Eagle</i>	2	----
18. Black Kite ssp. <i>govinda</i>	356	27 Sep – 13 Nov (40)
19. Black-eared Kite ssp. <i>lineatus</i>	153	17 Sep – 28 Sep (22)
20. Osprey	5	1 Oct – 12 Oct (2)
21. Hen Harrier	9	27 Sep – 17 Nov (2)
22. Eastern Marsh Harrier	1	24 Sep (1)
23. Pallid Harrier	2	5 Oct – 7 Nov (1)
24. Pied Harrier	1	7 Nov (29)
<i>Unidentified Harrier</i>	0	----
25. Peregrine Falcon ssp. <i>calidis</i>	18	6 Oct – 30 Oct (2)
26. Saker Falcon	1	6 Oct (1)
27. Northern Hobby	211	23 Sep – 9 Oct (33)
28. Amur Falcon	90	16 Oct – 22 Oct (24)
29. Lesser Kestrel	69	6 Oct – 25 Oct (14)
30. Common Kestrel	318	7 Oct – 17 Oct (29)
<i>Unidentified Falcon</i>	14	----
31. Egyptian Vulture	40	15 Sep – 20 Sep (6)
32. White-rumped Vulture	127	20 Sep – 12 Oct (16)
33. Himalayan Vulture	2,215	13 Nov – 5 Dec (221)
34. Cinereous Vulture	57	12 Nov – 5 Dec (11)
35. Griffon Vulture	44	19 Nov – 30 Nov (12)
<i>Unidentified Vulture</i>	1	----
<i>Unidentified Raptor</i>	18	----
2013 - TOTAL - 2013	13,485	3 Nov. – 25 Nov. 2013

Table 1 (previous page). Raptor species identified and number counted at Thoolakharka (Nepal), 15 September through 8 December 2013 including unidentified raptors. Number in parentheses in “Peak Time Frame” is the highest **daily** count within the peak migration period. **Note:** individuals of certain species such as Mountain Hawk-eagle, Bonelli’s Eagle and Himalayan Vulture can be both migrants as well as residents of the region. The 2013 total comes from daily observations of migrants heading east to west made by Tulsi Subedi, Sandesh Gurung, Henk Smit, Surya Bahadur Gurung and Robert DeCandido. Integral and essential help was provided by teams of observers from Thailand, Malaysia, Finland, Singapore and Sweden. It was truly a delightful experience to be working with like-minded people from all across the globe.

For hawk watchers, the best weather conditions for migration watching at Thoolakharka occur when (a) clouds obscure the Annapurna Mountain range, approx. 25 km to our north; and (b) when winds are from the northeast at approx. 10 km/hr. Compared to the weather in 2012, we had many more days with overcast conditions to our north. When dense clouds fill the mountain foothills, migrants – particularly Steppe Eagles – shift their flight south to lower elevation. At such times eagles and other raptor migrants pass directly over Thoolakharka. This allows us to age and sex the Steppe Eagles. In 2013, we aged 57% of the migrating Steppe Eagles (4,967 individuals), that passed above *and* below us. Raptors are not afraid of people in Nepal because no one shoots them, nor pays them much attention during migration. Here at Thoolakharka the migrants come very close and make for wonderful photo opportunities – this watch site is possibly the best location in Asia to photograph migrating raptors.

Typically, weather early in the migration period (from mid-September through approx. 20 October) is dominated by the lingering effects of the summer monsoon that comes to this area from the southeast. At this time, the nearby Annapurna Mountains are often shrouded in clouds, and rain may occur. Beginning in late October and continuing through approx. 20 November, high pressure building in from the north dominates our weather. Generally clear conditions prevail and some migration shifts back to our north, away from our watch site and into the foothills of the mountains. Rain is rare during this time, and weather becomes increasingly cool (25C during the day up to approx. 20 November, and 5-10C at night; then after 20 November, it is closer to 20C by day, and down to 3-5C at night). For the 25 November through 15 December time frame, the weather becomes unsettled again – and clouds and fog increase. In some years, clouds only obscure the mountains, while in other years, fog and clouds may envelope the region, and visibility at the watch site is on the order of 50m or less. Temperatures during the day might only reach 15C if overcast, and at night, it can be very cold – sometimes 0C. However, for photographers, light in late November and December is very good: soft and without harsh contrasts from direct sunshine.

Weather can vary from year-to-year in this area of Nepal. In 2012, during September-October, it was generally clear and rain-free here at Thoolakharka. By comparison in 2013, there were more rainy days and the area was often shrouded in clouds. By early November, in both 2012-2013, the weather was stable: clear



Adult Mountain Hawk-eagle (left) and second plumage Bonelli’s Eagle (right) - rdc

with light winds. In years when winds come from the north, we get good flights of raptors. We had more days with northerly winds in 2013 – and associated high clouds that originated from the Annapurnas. If you are thinking of visiting, light weight clothing (shorts, t-shirts and sandals) are fine for the day. Bring a fleece and mittens for morning/late afternoon. For night while sitting and talking to others at dinner in the restaurants, you will need heavy fleece pants with a wind-block layer; and for your upper body a thermal base layer and coat. Bringing layers to wear is the best strategy.

Eagles

In 2013, we observed twelve (12!) species of eagles at Thoolakharka. Eleven species are migrants and listed in Table 1. One species (Black Eagle) is strictly resident and frequently seen hunting the area as well as doing undulating territorial displays. Two other species (Mountain Hawk-eagle and Bonelli's Eagle) are resident, though we judged a few individuals to be migrants through the area. Steppe Eagle is the most notable migrant at our site, and accounts for 65% of all the raptors we see on migration here. This year 57% of the Steppe Eagles passed so close to us so we could age them as either first plumage (hatched year/juveniles), second to fourth plumage (sub-adults) and \geq fifth plumage (adults). For visuals of the 2013 data, see Figure 1 below, and for comparison with the 2012 Steppe Eagle migration data, see Figure 2 on the following page, as well as Figure 4 on the top of page 9.

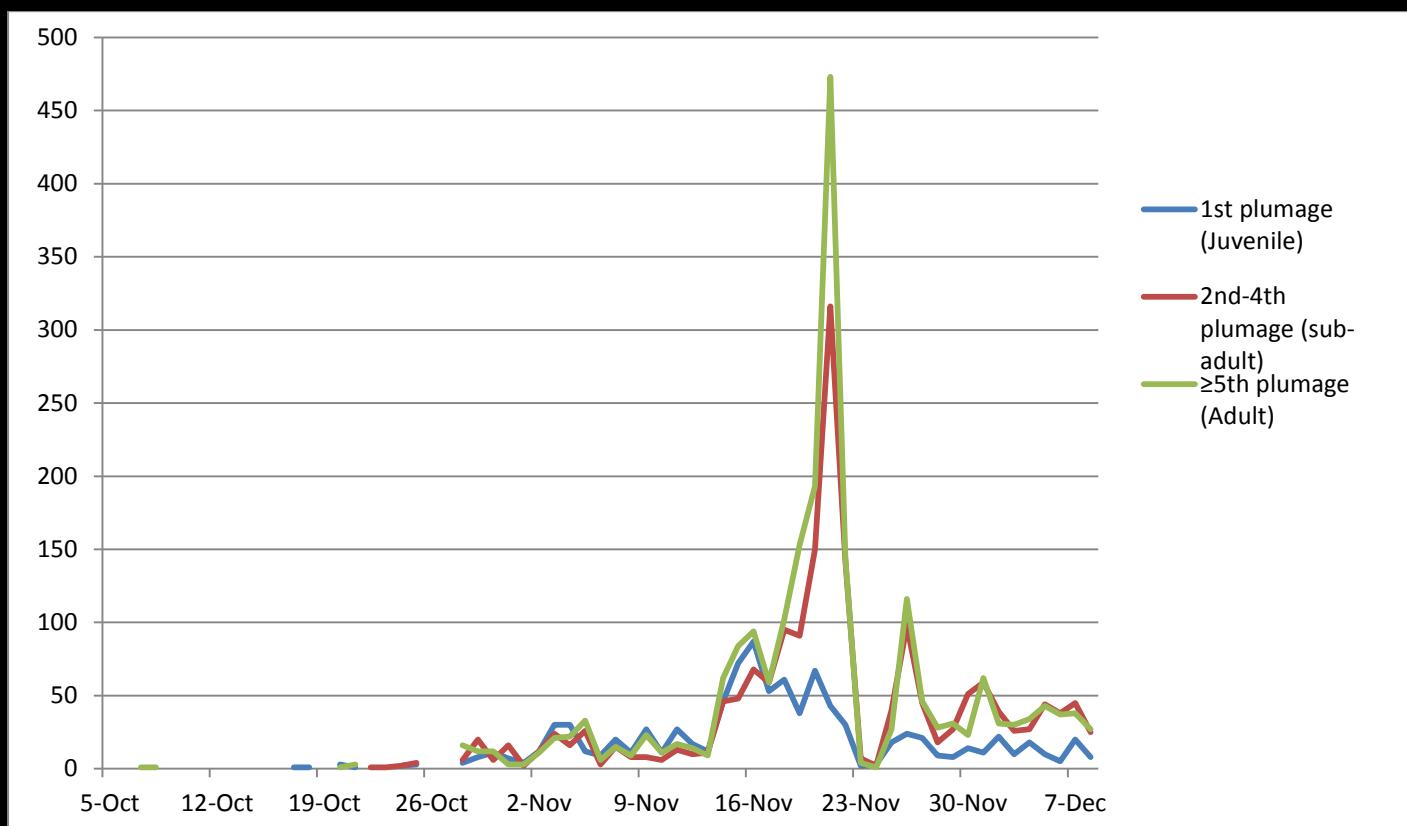


Figure 1. Age ratios of Steppe Eagles counted on migration from early October through early December 2013.
Data © Tulsi Subedi 2013.

In 2013 Steppe Eagle migration peaked in the second half of November. During this peak time period, 1100+ eagles were counted on one day, which is the highest single day total of Steppe Eagles anyone has ever seen in Nepal. In 2012, the peak period for Steppe Eagles was late October through the first half of November – see Figure 2 on the next page. Note that in both years, most of the Steppe Eagles we saw were older birds, particularly adults, and not first-year (juvenile) birds. Could young birds be taking a different route than older birds, or migrating later in the season? Is there a possible population crash going on?

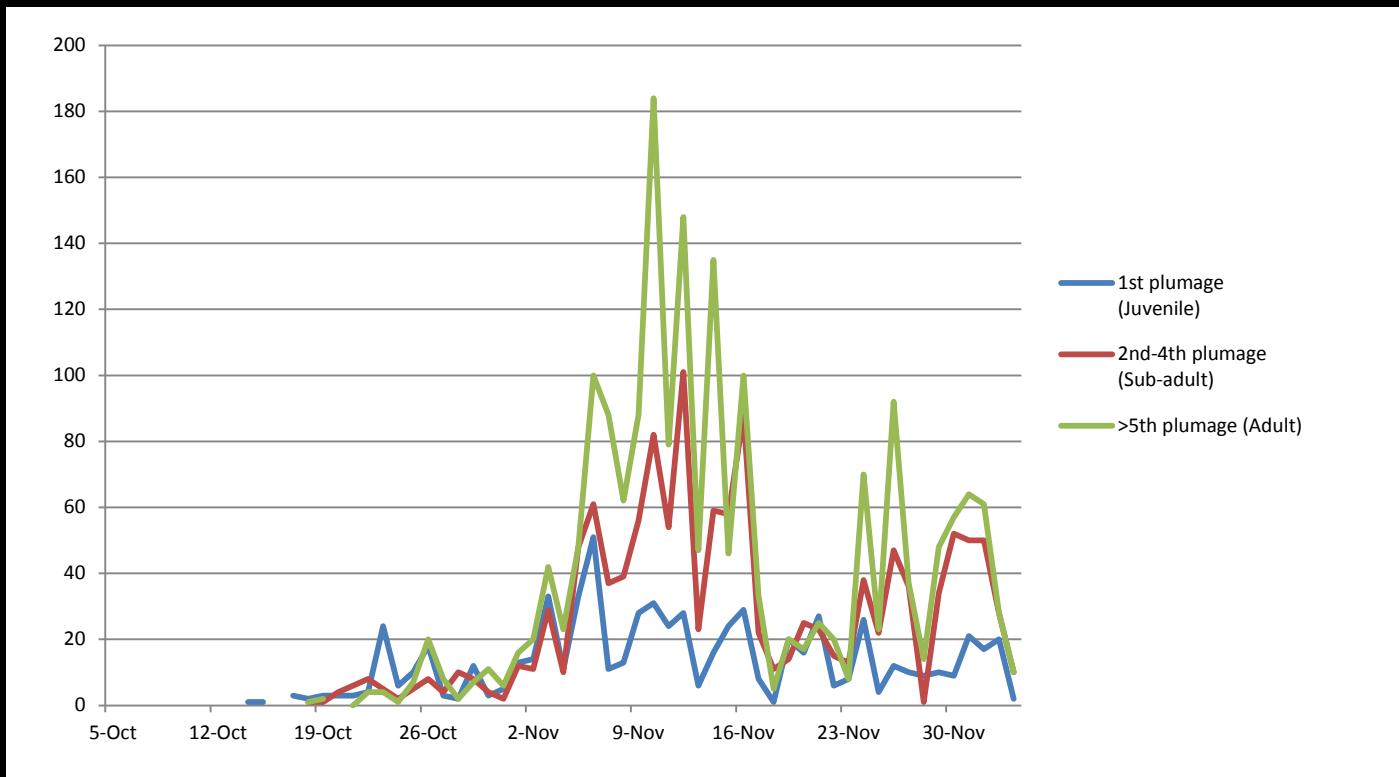


Figure 2. Age ratios of Steppe Eagles counted on migration from early October through early December 2012.
Data © Tulsi Subedi 2012.

In both 2012 and 2013, most Steppe Eagles were seen in the afternoon, and in both years, the 2-3pm (14h00-15h00) time frame was the peak hour to see migration through the season. This likely has to do with the way clouds build over the nearby Annapurna Range, so that the eagles shift their migration to the south, particularly if there is a light to moderate wind from the northeast.

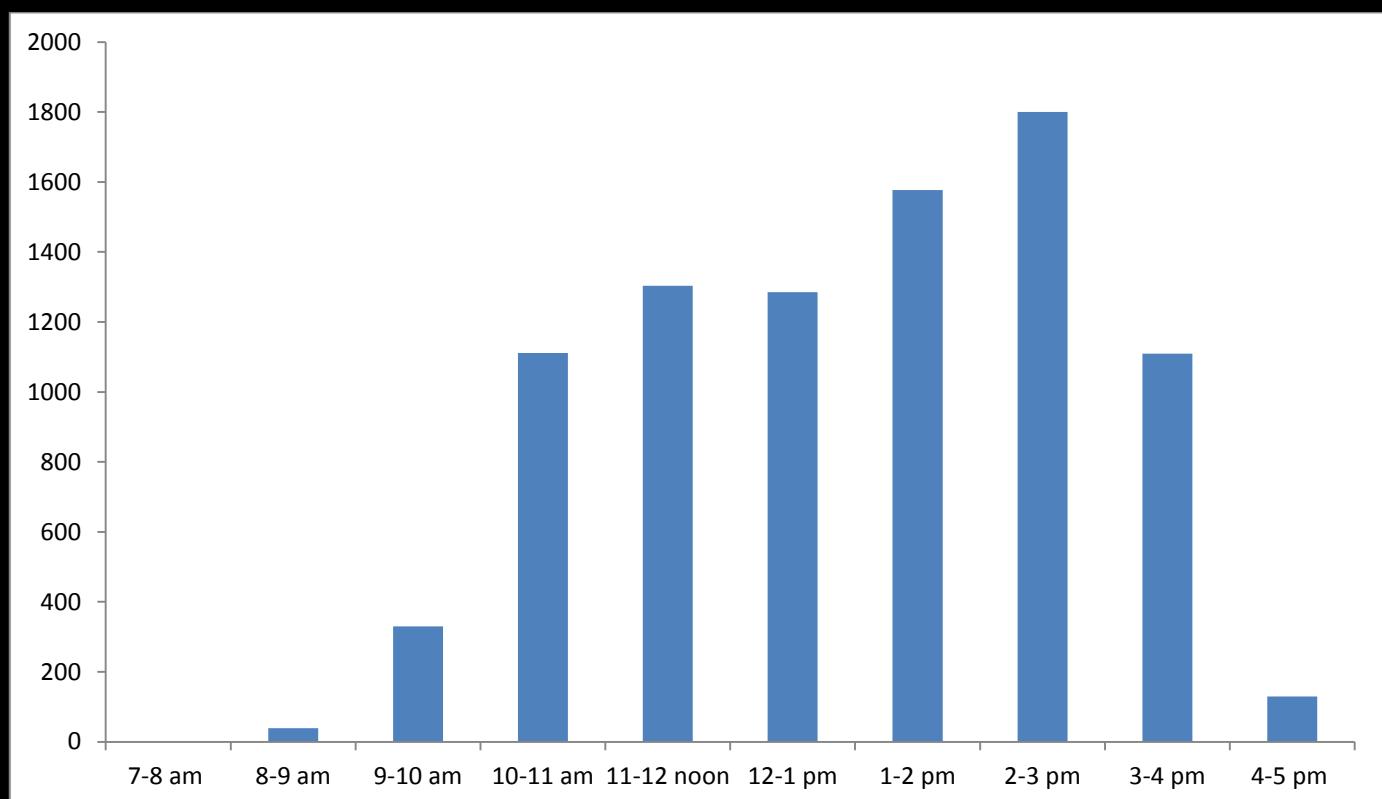


Figure 3. The number of migrating Steppe Eagles counted per hour in Autumn 2013 at the Thoolakharka Watch site in Nepal. Data © Tulsi Subedi 2013.

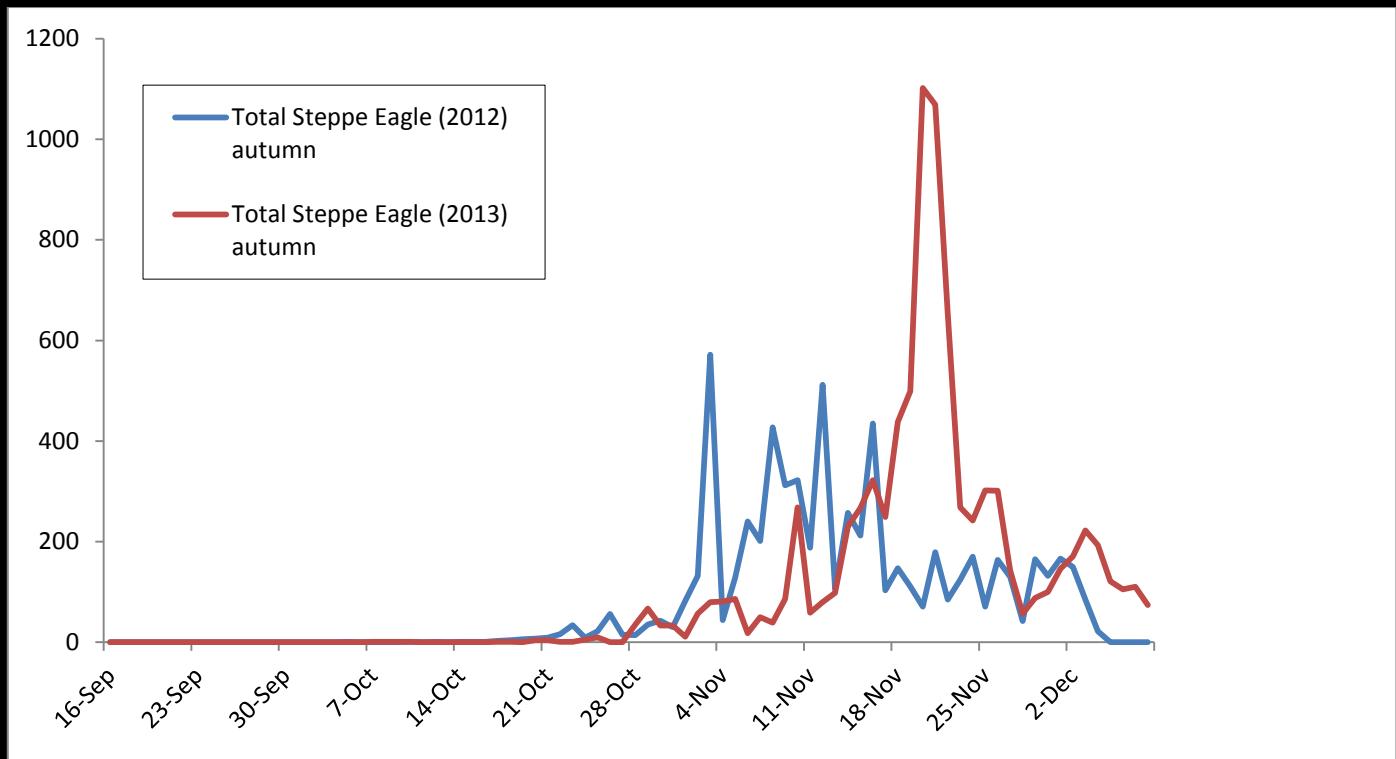


Figure 4. Timing of Steppe Eagle Migration in Autumn 2012 compared to Autumn 2013
Data © Tulsi Subedi 2013.



Juvenile (hatch-year) Steppe Eagle photographed on 12 November by Tulsi Subedi

For detailed information on Steppe Eagle migration in Nepal and central/southeast Asia, see:

DeCandido, R., Gurung, S., Subedi, T. and Allen. D. 2013. The east-west migration of Steppe Eagle *Aquila nipalensis* in Nepal and India. *BirdingASIA* 19: 18-25.

Available for free download: <https://www.dropbox.com/s/0al8s85789crbq1/Nepal.SteppeEagle.BirdingASIA.2013.pdf>

OTHER eagles seen on migration this year include Booted Eagle, Greater Spotted Eagle, White-tailed Eagle, Imperial Eagle, Pallas's Eagle and Golden Eagle. Imperial Eagle and White-tailed Eagle are new records for the watch site though in prior studies in this region in the 1980s, these eagles were reported as migrants. We were often thrilled to watch display flights of Black Eagles and Mountain Hawk-eagles. On many occasions Bonelli's Eagles were observed chasing Himalayan Vultures, and sometimes even Steppe Eagles. These interactions provided wonderful opportunities for the photographers. See photos page 11, top.



Booted Eagle, juvenile; photographed 22 November

Bonelli's Eagle, juvenile; photographed 6 November



Black Eagle - talons, adult; 6 November



Black Eagle, adult; 20 November



Golden Eagle, juvenile; 1 November – *all photos rdc*



Left. Sub-adult (2nd year?) Bonelli's Eagle interacting with a juvenile Himalayan Vulture on 11 November;
Right. Two Sub-adult (2nd year?) Bonelli's Eagles interacting with each other also on 11 November.



Adult Mountain Hawk-eagle photographed 18 November
all photos rdc

Falcons

Late September through early November 2013 was the best time to see falcon diversity at our Thoolakharka watch site. Altogether six falcon species were seen on migration including the globally endangered Saker Falcon *Falco cherrug*. The latter half of the October is the best time to see small flocks of Amur Falcon *Falco amurensis* – the peak date was 17 October (24 birds). According to recent information, the majority of Amur Falcons migrating through Nepal use a different flyway through the eastern half of the country: along the Arun River valley. These Amur Falcons move directly towards the southwest to meet the Indian Ocean, and continue on to Africa. In Nepal, no one knows the best place to see Amur Falcons on migration. However, in autumn 2013, a large flock of more than 2,000 birds was observed roosting on long electric wires in Saptari district in the second week of November. (Thank You Badri Chaudhary and Hathan Chaudhary for this information!) At Thoolakharka, Lesser Kestrels *Falco naumanni* also migrate in small flocks. Other falcons observed on migration were Northern Hobby *Falco subbuteo*, Peregrine Falcon *Falco peregrinus* ssp. *calidus* and Common Kestrel *Falco tinnunculus*. The local, resident Peregrine Falcons we see are ssp. *peregrinator* – see photos below. This year we counted a total of 721 falcons which is almost twice as many as last year (362). The increase in number could be the favorable weather and winds that brought more dragonflies past the watch site on which Amur Falcons, Northern Bobbies and Lesser Kestrels feed.



Juvenile female Peregrine Falcon (ssp. *peregrinator*) – a local resident near Thoolakharka, Nepal;

both images by rdc

Vultures

Of the nine vulture species found on the Indian sub-continent, eight species have been seen at our Thoolakharka watch site in 2012-2013. We consider individuals of five species to be migratory: White-rumped Vulture, Egyptian Vulture, Cinereous (Black) Vulture, Griffon Vulture and Himalayan Vulture. Three other species (Bearded Vulture; Red-headed Vulture; Slender-billed Vulture) we considered to be strictly resident in the region. In autumn 2013, the most common species seen (89% of all migrating vultures) was the Himalayan Vulture with 2,215 individuals counted. Figure 5 below shows their migration through the season with the latter half of November through early December being the peak period. However, from late October through November, we saw flocks of resident Himalayan Vultures every day. Throughout autumn 2013 Himalayan Vultures, and individuals of all vulture species (eg., Bearded Vulture; Red-headed Vulture; White-rumped Vulture), came very close to us – and became the favorite birds for most people to watch. See accompanying photos on the following pages. The vast majority of the migrating Himalayan Vultures we saw were younger birds – by November most adults are starting to breed and remain close to their nest sites in the highlands. By comparison, in November-December, juveniles and sub-adults are migrating from the highlands (as well as China and Mongolia) to the western lowlands – called the terai – of Nepal.

According to Figure 6 (next page), most of the vultures (of all species) we saw on migration were observed from 11am through 3pm (11h00 – 15h00). Compared to the pattern of Steppe Eagle migration (Figure 3, page 8), a greater percentage of vultures passed us earlier in the day. However for both eagles and vultures, the 2-3pm (14h00 – 15h00) time frame was the peak hour of migration. There are several possible explanations for these differences: (a) Vultures and Steppe Eagles might be roosting in very different places overnight, and vultures are able to begin their movements earlier in the day. For example, vultures might be roosting in the highlands and are not as dependent on thermal lift in the morning as the eagles, who might be roosting at lower elevations; (b) the majority of the Steppe Eagles are roosting overnight much further to our east than the vultures, and it takes these eagles several hours longer than the vultures to pass by us in the mid-afternoon; (c) much of the eagle migration in the morning is in the highlands and we cannot see it; and as weather conditions in the highlands (2,500 meters and above) worsen from cloud build-up or other weather factors in the late morning/early afternoon, the eagles shift their migration to lower elevation, and we see them at Thoolakharka, primarily in the afternoon.

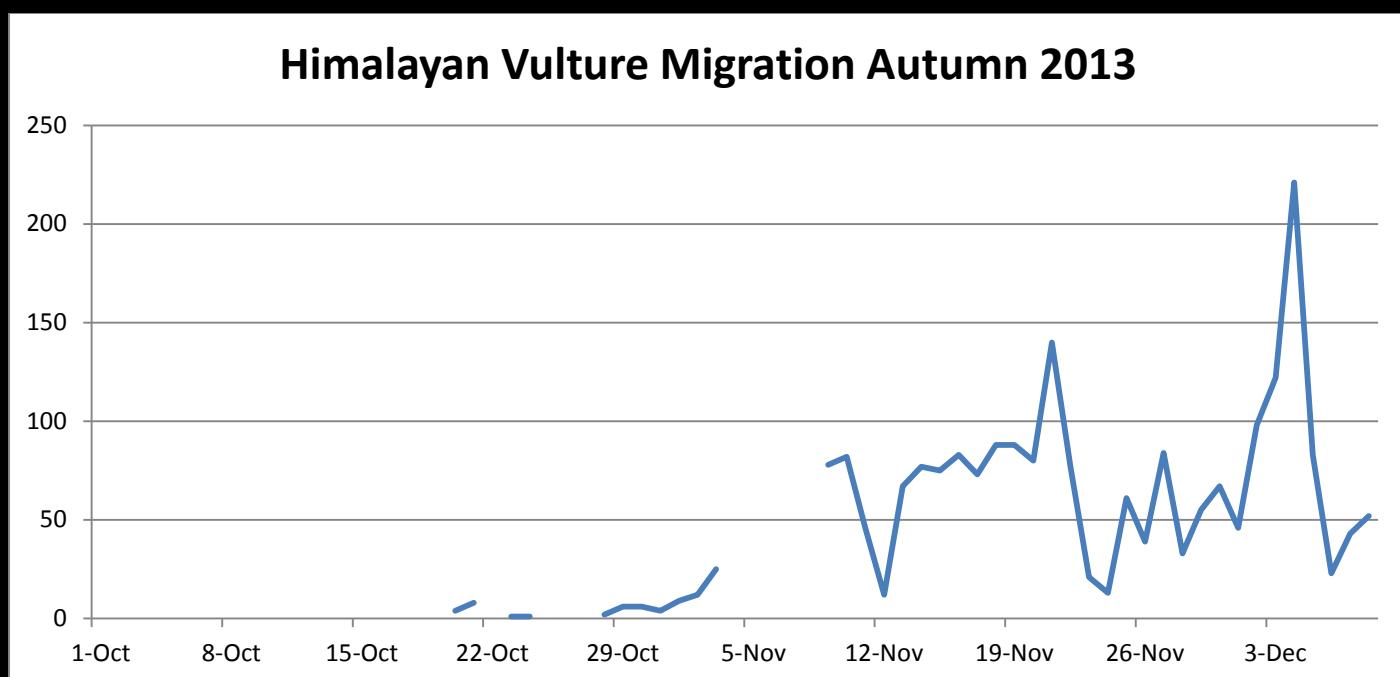


Figure 5. The number of migrating Himalayan Vultures counted per day in Autumn 2013 at the Thoolakharka Migration Watch site in Nepal. Data © Tulsi Subedi 2013.

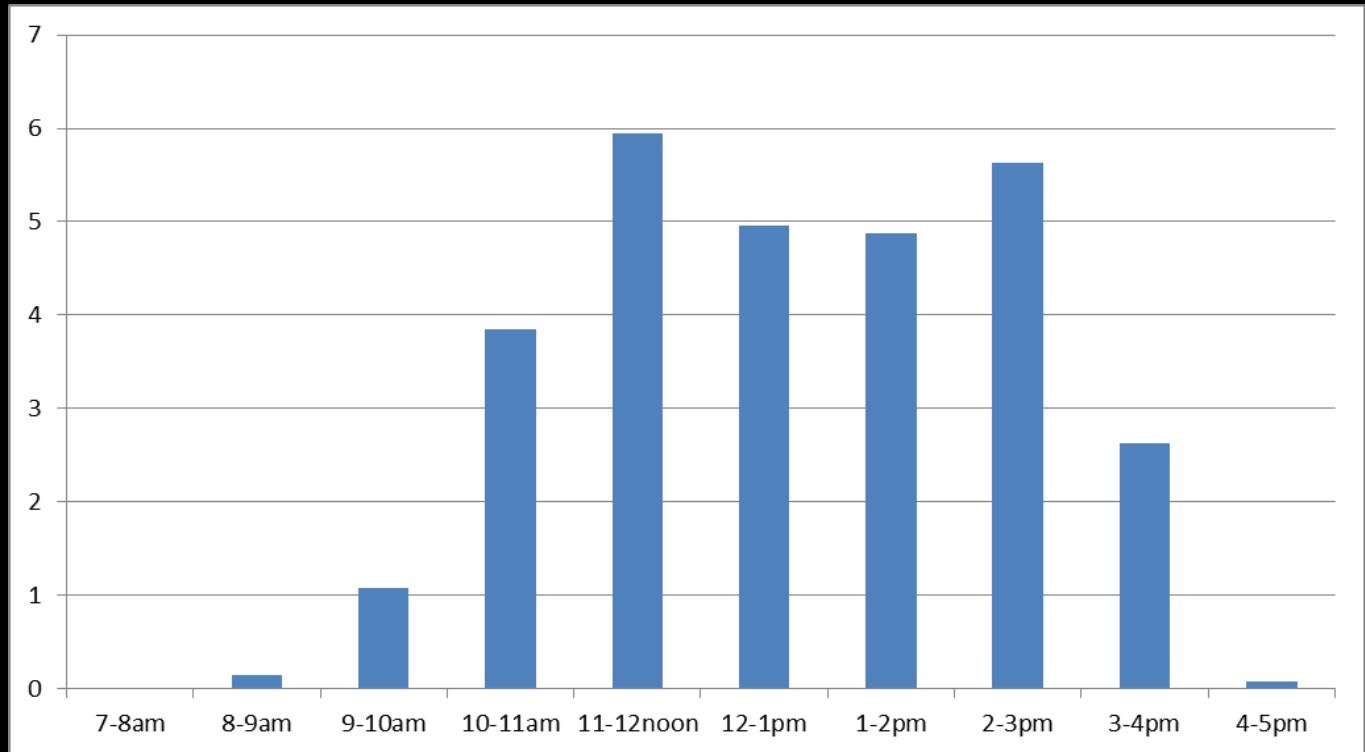


Figure 6. The average number of *all* Vultures counted per hour during autumn 2013.
Data © Tulsi Subedi 2013



Sub-adult Himalayan Vulture photographed on 19 November – rdc



Adult Himalayan Vulture photographed on 8 December by Tulsi Subedi



Adult Himalayan Vulture photographed on 12 November – rdc



Adult Himalayan Vulture photographed on 11 November; *all images rdc*



Sub-adult Himalayan Vulture photographed on 11 November

Several times per week we had resident Bearded Vultures not more than a stone's throw away – sometimes carrying bones. We usually saw them in pairs flying just over the hills, closely examining our area for leftover food scraps; on two occasions Bearded Vultures landed and flew off with something. We primarily saw adults (cover photo and photo page 17 bottom), but occasionally younger ones (photo top page 20). Red-headed Vultures passed close to us as well – we could see the dark eyes of the females and the yellow eyes of the males (photo bottom p. 20). Red-headed Vultures are rare breeders in Nepal, but a few nests were discovered approximately 30km from Pokhara by our friend Krishna Mani Baral and others. This year we also saw Slender-billed Vulture for the first time – see the photo on the following page. This is perhaps the rarest vulture species in the world. The accompanying photos on this and the following two pages tell the story. It is possible to get full-frame images of some of the vultures with a 400mm lens.



Left. Adult Slender-billed Vulture photographed on 11 November;
Right. Sub-adult Red-headed Vulture (probable female) photographed on 30 October.



Bearded Vulture (adult), also known as the Lammergeier photographed on 16 November 2013
all photos rdc



Left. Sub-adult Egyptian Vulture photographed on 30 October;
Right. Juvenile Egyptian Vulture photographed on 30 October.



Adult Egyptian Vulture photographed on 30 October
all photos rdc



Left. Adult Griffon Vulture photographed on 17 November;
Right. Adult White-rumped Vulture photographed on 13 November.



White-rumped Vulture pursued by a Large-billed Crow on 11 November

all photos rdc

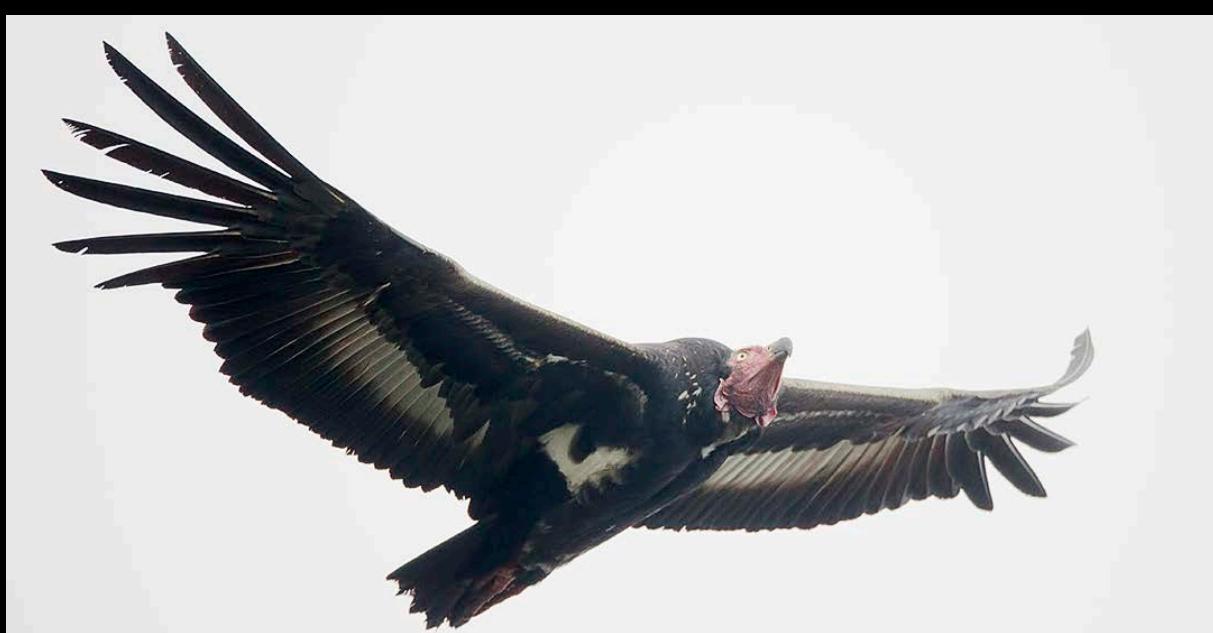


Bearded Vulture (sub-adult), also known as the Lammergeier, photographed by Tulsi Subedi on 1 December 2013



© Phuketbirdwatching.com

Himalayan Vulture photographed in early January 2014 by Ike Suriwong in Phuket (southern) **Thailand**. More than 40 Himalayan Vultures of all age groups have been seen in Thailand this year – easily the most in recorded history.



Adult male Red-headed Vulture photographed on 22 November at Thoolakharka, Nepal; *rdc*

गिरुहरु सङ्कटमा छन् ।

यिनको संरक्षण गरौं ।



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All Photos by Dr Robert DeCandido except Tulsi Subedi (Vulture) & Dr Robert DeCandido (Himalayan Vulture)

The nine vulture species found in Nepal. One species (Indian Vulture) was discovered by Tulsi Subedi and Robert DeCandido in Nepal for the first time in 2011. Nepal is the only country in the world where this many vulture species can be seen – and the only country that has a poster calling attention to its vultures. Poster designed by Himalayan Nature with photos by Robert DeCandido PhD.

Subedi, T. and DeCandido, R. 2013. Indian Vulture *Gyps indicus*: first record for Nepal. *BirdingASIA* 19: 115-116.
Available for free download: <https://www.dropbox.com/s/466wa65odjw84j/Nepal.IndianVulture.2013.pdf>

Other Birds on Migration

The most common non-raptor migrant species seen at Thoolakharka were Swallows (Barn Swallow, Streaked-throated Swallow and Red-rumped Swallow). More than 26,000 swallows were counted in 2013. Among the migrating swallows approximately 23,000 (88%) were Red-rumped Swallows. The peak date for Red-rumpeds was 27 September (5,558 birds), which was two weeks earlier than in 2012. This year swallow migration began in early September and continued until the third week of October. September is the best time to see Barn Swallows. A few big flocks of Streaked-throated Swallows were observed on the last few days of September and the first few days of October (approx., 900; total for the season approx. 1,110). Besides swallows, we also observed small numbers of Sand Martins, House Swifts, Eurasian Crag Martins, and White-throated Needletails on migration.

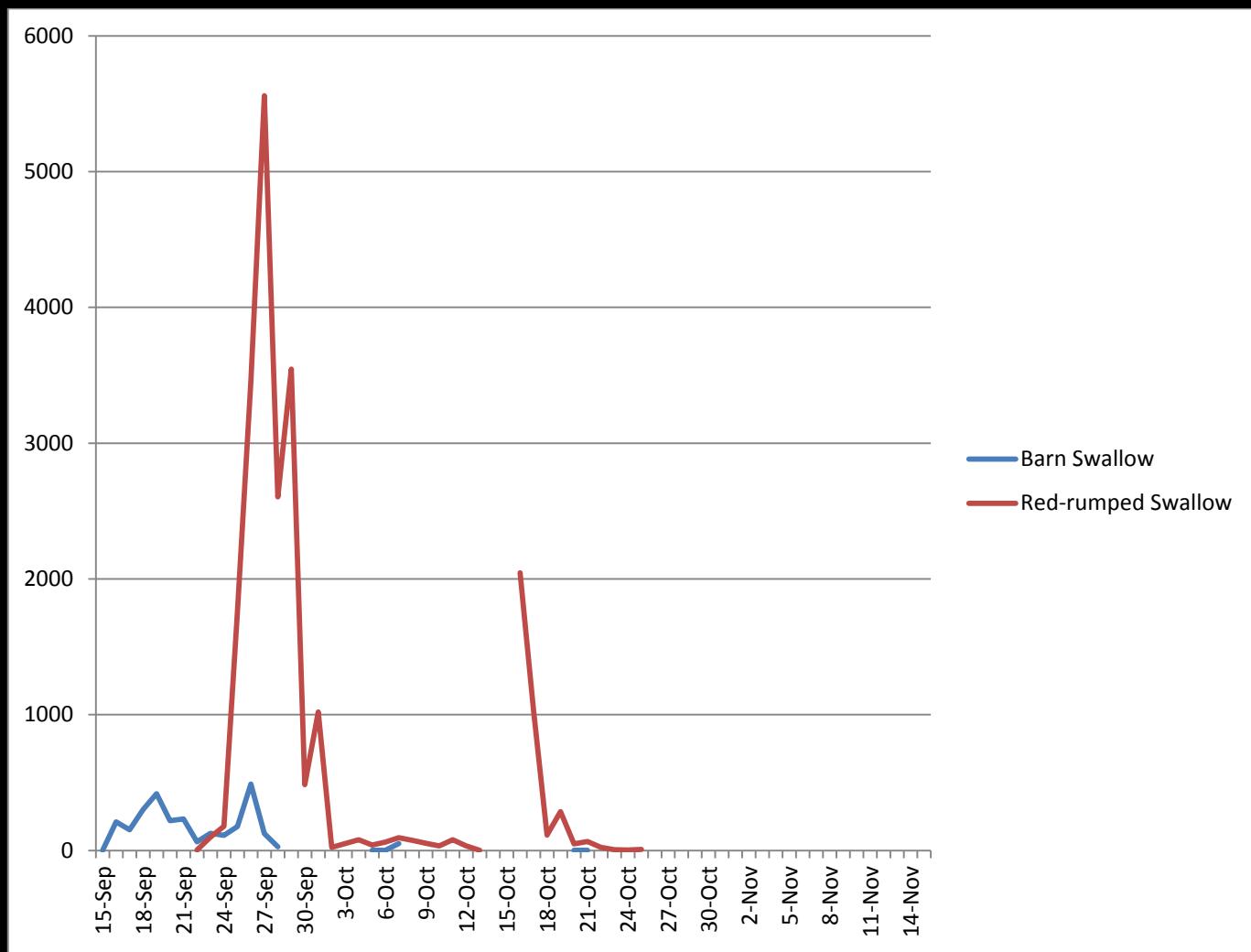


Figure 7. The total number of two swallow species counted by day during autumn 2013.
Data © Tulsi Subedi 2013

Raptors of Nepal Blog (Tulsi Subedi): <http://raptorsofnepal.blogspot.com/>

Portfolio of Images of the Raptors of Nepal (Robert DeCandido): http://photo.net/photodb/folder?folder_id=1021128

Acknowledgements

This second season year of study was possible due to the joint effort of many people and organizations. We thank Sharad Singh, Director of Himalayan Nature for his support to develop this project. We thank our friends, Dr. Hem Sagar Baral, senior ornithologist of Nepal, and Dr. Keith Bildstein, Director of Hawk Mountain Sanctuary USA for their encouragement and advice. Carol and Tim Inskip, as well as Martti Siponen and Henk Smit provided books and literature which are very useful for identifying migrants we are not familiar with. Thanks also to the **Brooklyn Bird Club of NYC, USA** for sending us books as well! Mohammed Syafiq Sivakumaran helped us with mapping possible routes that migrants follow in this part of Nepal. Dr. Jeffery Lincer keeps providing ideas and suggestions for how we can maximize our research time in the field. Brian Williams, Director of the Red Panda Network (2012), and the Malaysian Nature Society (2013) transported essential research equipment to Nepal. Idea Wild supplied scientific equipment, including a weather meter, and we appreciate their support. Hawk Mountain Sanctuary of the USA donated a spotting scope for use in this study. The Nagao Natural Environment Foundation, Japan and National Birds of Prey Trust, UK provided financial support to conduct this study, as well as equipment we use daily – and it would be impossible to do this research without their help. Tulsi Subedi wishes to thank his wife Kamala (Bhattarai) Subedi, for her love and encouragement – and his young son, Pernis, too! At the watch site, we thank the “elder statesman” Surya Bahadur Gurung and his family. Krishna Mani Baral took many photos of us, and has been an inspiration in encouraging our knowledge of Nepalese vultures. Wakako Matushita and Vanessa Zembal helped us count raptors in 2012; in 2013, Martti Siponen along with Annika and Antero Lindholm (all of Finland!) contributed their time, equipment and considerable knowledge to making us better raptor watchers. We thank also teams from Malaysia, Thailand and Singapore – too many good people to list here – space does not permit...our apologies and Thanks! Thanks also to Deborah Allen, Raju Acharya, and Anand Chaudhary. Finally, we thank Nirmal and Man Prasad Gurung, owners of the Sunrise Restaurant (50 meters from where we count raptors) for allowing us to use their chairs, and for many wonderful meals and cups of tea their small restaurant provided.

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Citation of this report: Subedi, T. and DeCandido R. (2014). *Year II: Raptor migration summary for autumn 2013, central Nepal.* 28pp. Available on-line: <https://www.dropbox.com/s/dhp1cklnou4rova/2013.FinalReport.Nepal4.pdf>



Some of the many Raptor Watchers from Autumn 2013 gathered after dinner at the Australian Camp restaurant. See the coats, hats and mittens? Take note! This photo was taken approximately 22 November 2013 at 7:30pm.

Photo by Tang Tuck Hock of Malaysia

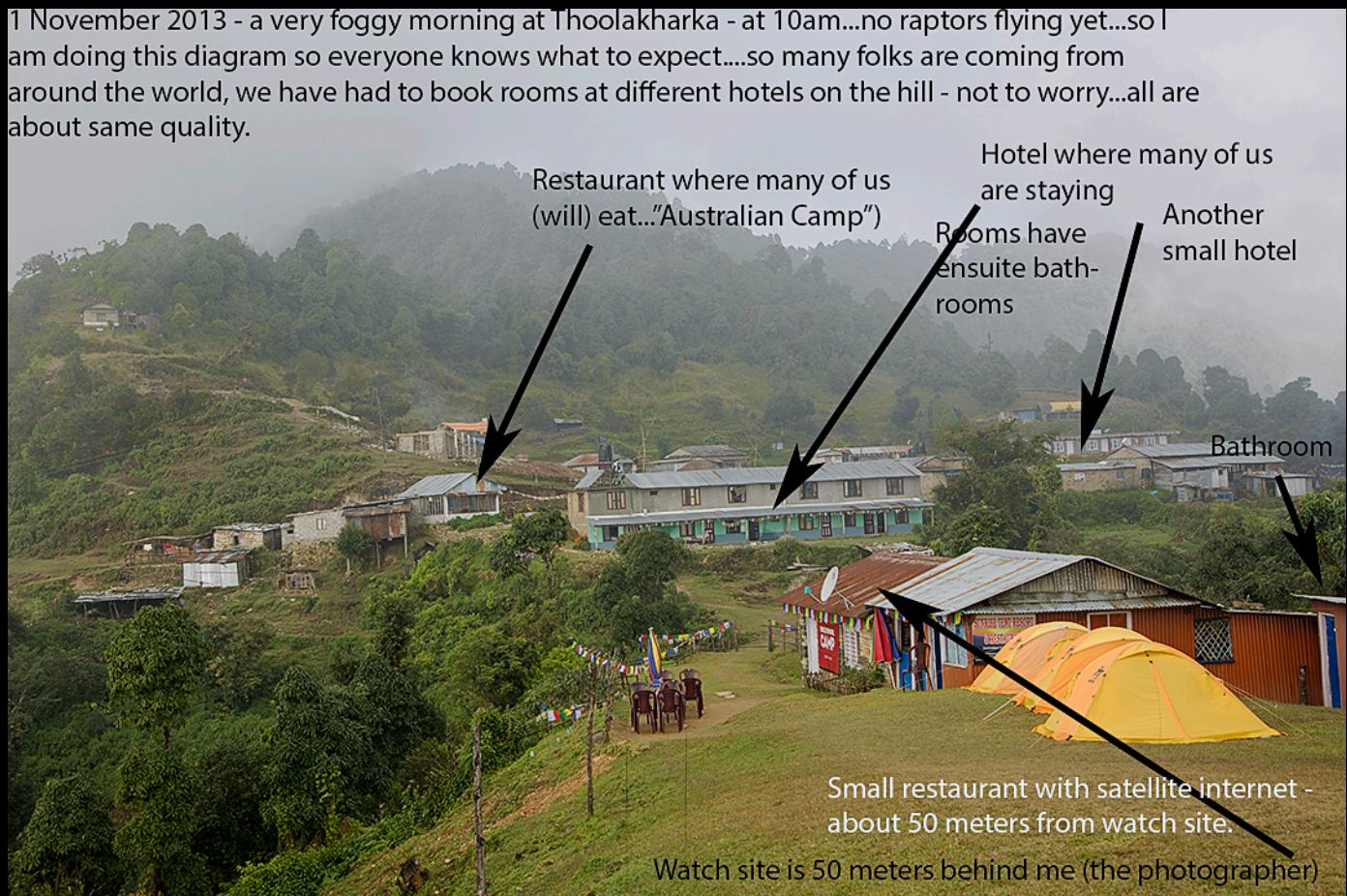
Directions to the Raptor Watch Site in Nepal

28°18.188' North and 083°49.788' East

To reach the watch site at Thoolakharka ("Tool – la – kar – ka"), you must first get to the city of Pokhara in central Nepal, about a 7 hour bus ride (\$10 USD) from the capitol city Kathmandu, or a one hour plane ride (\$90) from the national (not international) airport in Kathmandu. The info we provide below will walk you through how best to get to the raptor watch site. We recommend getting a travel book to Nepal (published by Lonely Planet or Rough Guide for example) for more info and planning your trip. If you need our help arranging things, particularly if you are part of a group, we ask that you make a significant donation to support the research that the Nepalese scientists are doing at the raptor watch site. Tulsi Subedi is very good at arranging things for groups for the best price: he knows the people on the ground who are honest and do a great job. In return, the Nepalese scientists at the raptor watch need your help: much of the equipment they use (binoculars; laptop computers; field guides) are very expensive in Nepal.

Upon arrival from your international flight in Kathmandu, and after clearing customs, it will take about 30 minutes to get your luggage. To save time here, get your Visa sticker for Nepal in your home country – not the airport in Kathmandu! If you wait until arrival, it will add 30-45 minutes to the time it normally takes to clear Customs. Once you do get past the Customs area, you will collect your luggage and head out of the airport. You will pass a small money change operation just before you exit the building (on the left) – they charge a 3% commission. Don't change money now, or if you do, just change \$10 USD: a Cab ride to town will cost about \$6 USD. If you book the hotel we recommend in Kathmandu (Tasi Dhargey Inn www.HotelTashiDhargey.com), they will send a cab to get you at no charge. If you are simply switching from the international flight to an internal flight, the terminal you need to get to is next door, a five minute walk once you exit the international airport. Note that for internal flights, the luggage allowance is considerably less than on an international flight.

1 November 2013 - a very foggy morning at Thoolakharka - at 10am...no raptors flying yet...so I am doing this diagram so everyone knows what to expect....so many folks are coming from around the world, we have had to book rooms at different hotels on the hill - not to worry...all are about same quality.



It is in Kathmandu (KTM) that we recommend you change money. You will be in the tourist area that is 100% safe, and there are money change places on every corner – no service charge and all have about the same rate. Even throughout Nepal (eg Pokhara), exchange rates are pretty much the same for the Euro and the Dollar. However, currency for certain other countries (Thai, Singapore and Malay people pay heed here), rates are significantly better in KTM. Also in KTM pick up supplies you might need (something to treat/purify water which will cost about USD 30 cents; toilet paper). If you book your hotel on-line (Hotel Tashi Dhargey!), you can also have them book bus tickets the following morning to Pokhara (about \$8 – Bob usually books two seats next to one another so he can stretch out while keeping an eye on his things.) You can pay the hotel for the tickets, or the bus company once you reach the departure area in the morning. Buses depart from 7-7:30 am depending on the company. The bus will stop for a bathroom break after an hour or two; then lunch (about \$3-\$4 but good food); and then another bathroom break in the early afternoon. Remember to drink only bottled water or hot tea when you get to Nepal. If you get stomach problems you want to go to a pharmacy and ask for **Ciprofloxacin** – but you can also bring this from your home country. The ride to Pokhara is bumpy (roads are poor), and travel is often slow, particularly leaving or entering KTM because of the number of trucks and volume of traffic. Get seats on the right side of the bus for best views. Whatever hotel you check into, make sure to ask them what time of the day hot water is most reliable...you will find out this is critical knowledge to have wherever you travel in Nepal.



View from the Raptor Watch at Thoolakharka Site looking north towards the Annapurna Mountains

Once you reach Pokhara, we recommend staying at the Blue Heaven Hotel (<http://www.hotelblueheaven.com.np/>) – you can make reservations on-line. They know Tulsi Subedi and the raptor watch at Thoolakharka, and can give good advice/help. You won't need a room with air-con and a single-bedroom will be fine (\$15 USD), even for couples. If internet is important to you, request a room on the second floor – the primary internet router in the hotel is on the first floor. (There is another router on the fifth floor, but since there is no elevator at Blue Heaven, stay as close to the main floor as possible.) We like Blue Heaven because the hot water there is pretty good (ask the people at the main desk what time(s) hot

water can be expected for a shower). When you are ready to take the cab ride to the starting point (Khare) for the trek uphill to Thoolakharka, arrange with the people at the front desk to get a vehicle for you for whatever time you want to depart. Normally a one way (small) cab ride costs about \$10-\$12 USD – it can handle two people (tight) with their luggage and some supplies. Hotel Blue Heaven has a larger vehicle – can hold up to four people in a pinch with luggage, for about \$20 one way. Whichever way you decide to travel, make sure you have the vehicle stop at the local supermarket (a very nice but pricey one) for supplies. The folks at the Hotel desk can explain this to the cab driver. What supplies will you need? Snacks (the supermarket has nice spicey trail mix type packages; alcohol such as wine or whatever...beer can be purchased up at Thoolakharka for about \$3 USD for a large bottle) and important supplies such as shampoo/toilet paper (important!) and anything else that looks interesting. Make sure you have a flashlight or some other sort of light – it gets dark early, though you may want to walk around until 9pm. On nights without a moon, it is very dark...so bring some light from home.



Typical Room at Thoolakharka – this is at Australian Camp...approximately \$8 USD/night with en suite bathroom

Once in the taxi, you are heading to the small town of Khare (sometimes called Khande or even Kande, near another small town called Lumle), about 35 km to the northwest of Pokhara along the Pokhara-Baglung highway. It is a one hour drive through agricultural lowlands and then climbing into the foothills. At Khare (1,250m el.), you need to make the trek uphill (1-1.5 hr. walk to 2,050m). You can hire a porter to take your backpack/equipment (\$7) up the wide (three meter) “stairway” that climbs 750 meters to Thoolakharka. Snacks and supplies can be purchased at Khare (very limited selection). At Thoolakharka expect to pay about \$8/night for a private room (basic) with 1-2 single beds. Hot water (via solar panels) is good, and each room has its own bathroom (basic). However, at night there is no heat provided, so please make sure to bring warm clothes (fleece, hat and mittens are essential). Blankets on the beds are warm (good) – no worries there. Food is about \$4/meal and consists mostly of vegetables, potatoes (rice) with some chicken – quite tasty though somewhat spicy (can be adjusted upon request). You will not go hungry. Ginger Lemon tea is home-made, serving as a hot refreshing drink for cold nights *and* mornings. Electricity

(220v) is available: you can charge camera batteries and such but make sure you have the correct adapter for your plug! Your satellite phone/web access will work via your I-phone/Samsung...though there is no TV at Thoolakharka. There is (since November 2013) internet via satellite connection...not fast and sometimes not working for several hours at a time – but internet! For best places to stay up at Thoolakharka we like Australian Camp the most. If you watch this short video, their dining hall is the last building (glass windows) in the clip...and the hotel is just to its left: <http://www.youtube.com/watch?v=YHsaMq3RdMU>



Typical small hotel near the Thoolakharka Watch Site (“Australian Camp” is 100 meters away)

Again, if you are coming as a group (approx. six or more people), you should email Tulsi Subedi (Tulsi.Biologist@gmail.com) and ask him to make some arrangements for you. For example, you will need Porters to carry your stuff up the hill from Khare. Tulsi can arrange with the locals to meet you at the right time/place. For those traveling alone, we hope this information helps you get to Thoolakharka.

If you are budgeting for the trip, figure on \$20-\$25 USD per day, and you will be quite comfortable. International flights from Bangkok (Thai Air and Jet Air), Malaysia (Malaysian Airlines and Air Asia) and Singapore (Singapore Airlines) all go to Kathmandu more or less daily. If flying from North America or Europe, look to make your final connection to Nepal via India. In 2013, Turkish Air had the best prices to Kathmandu – by several hundred dollars. Flights within Nepal can be booked on-line.

We are often asked when is the best time to visit? If you prefer mild, sunny days and mild nights, the first ten days of November are best. After this time, night time temperatures begin to drop to 1-5C. By the end of November, clouds (fog) can obscure the place where we watch from – and without sunshine, temperature might not get above 13C during the day. To see Steppe Eagles, in 2012, early November (about 5-12 November) was best; in 2013, the peak time for Steppe Eagles was from 17 November to 24 November. For vultures, species such as Cinereous (Black) Vulture, Griffon Vulture and the highest number of Himalayan Vultures were most numerous in the last week of November. That being said, we saw vultures up close everyday. If you have a question about what is the best time to see a certain species, email us with your questions. For photographers, the light is best in late November: it tends to be cloudy but bright light...harsh contrasts and shadows are largely eliminated. Finally, don’t forget to see other places in Nepal: Chitwan National Park is amazing for Rhinos and the occasional Tiger. Bardia National Park is relatively quiet and not much visited, and it is also good for tigers.

Species – 2012	Total Counted	Peak Time Frame*
1. Osprey	3	15 Oct – 25 Oct (1)
2. Oriental Honey-buzzard	381	25 Oct – 31 Oct (34)
3. Black Kite	324	5 Oct – 10 Oct (18)
4. Egyptian Vulture	24	22 Sept – 30 Sept (4)
5. Griffon Vulture	85	25 Nov – 30 Nov (14)
6. Himalayan Vulture	1,270	10 Nov – 20 Nov (103)
7. Cinereous (Black) Vulture	73	20 Nov – 30 Nov (10)
8. Hen Harrier	19	30 Oct – 7 Nov (4)
9. Pallid Harrier	1	21 Oct (1)
10. Eurasian Sparrowhawk	107	5 Oct – 12 Oct (7)
11. Northern Goshawk	3	10 Oct – 5 Nov (1)
12. Common Buzzard	180	10 Oct – 25 Oct (11)
13. Long-legged Buzzard	4	5 Oct – 10 Oct (2)
14. Upland Buzzard	4	10 Nov – 15 Nov (2)
15. Steppe Eagle	6,597	3 Nov – 16 Nov (572)
16. Booted Eagle	155	20 Oct – 31 Oct (15)
17. Greater Spotted Eagle	3	7 Nov – 16 Nov (1)
18. Indian Spotted Eagle	3	15 Oct – 25 Oct (1)
19. Short-toed Eagle	2	26 Sept – 20 Oct (1)
20. Crested Serpent -eagle	26	20 Sept – 30 Sept (4)
21. Pallas's Fish-eagle	2	15 Oct – 22 Nov (1)
22. Bonelli's Eagle	13	20 Nov – 30 Nov (8)
23. Golden Eagle	7	10 Nov – 15 Nov (1)
24. Mountain Hawk-eagle	1	18 Oct (1)
25. Amur Falcon	78	25 Oct – 1 Nov (18)
26. Eurasian Kestrel	83	20 Sept – 30 Sept (8)
27. Lesser Kestrel	66	20 Oct – 30 Oct (29)
28. Eurasian Hobby	80	10 Oct – 25 Oct (6)
29. Saker Falcon	5	20 Sept – 30 Sept (3)
30. Peregrine Falcon ssp. <i>calidis</i>	29	28 Sept – 10 Oct (3)
<i>Unidentified Raptors</i>	127	-----
Total 2012	9,754	15 Sep. – 4 Dec.

Table 2. Raptor species identified and number counted at Thoolakharka (Nepal), **15 September through 4 December 2012** including unidentified raptors. *Number in parentheses in “Peak Time Frame” was the highest **daily** count within the peak migration period. The 2012 total came from daily observations made of migrants heading east to west by Tulsi Subedi, Henk Smit, Vanessa Zembal, Carol and Tim Inskip, Surya Bahadur Gurung, Robert DeCandido and others. Note: individuals of certain species such as Himalayan Griffon can be both migrants through the region and residents of the area.

Overall, the best time to see the most species in one day in autumn 2012 was in early November – but different species peaked at different times. For example, in 2012 the Amur Falcon and Lesser Kestrel migration peaked from approx. 20 October through 5 November. On the other hand, the largest movement of Steppe Eagles occurred in early to mid-November. Even in late November, the Steppe Eagle migration was strong (up to 300/day), and species such as Himalayan Vulture and Cinereous Vulture were regularly seen moving east to west past us.