

Brown Accentor *Prunella fulvescens*, a new species for Uttarakhand, and a review of its status in the Himalaya

Puja Sharma & Gunjan Arora

Sharma, P., & Arora, G., 2021. Brown Accentor *Prunella fulvescens*, a new species for Uttarakhand, and a review of its status in the Himalaya.

Indian BIRDS 17 (3): 73–78.

Puja Sharma, A-13, New Friends Colony, New Delhi 110025, India. E-mail: pujasharma1@gmail.com [PS]

Gunjan Arora, Pocket C-9, Flat 9293, Vasant Kunj, New Delhi 110070, India. E-mail: innerconceptsindia@gmail.com [GA]

Manuscript received on 03 October 2019.

Introduction

The Brown Accentor *Prunella fulvescens* is widely distributed on open rocky, or stony alpine and subalpine slopes, and in Juniper *Juniperus* scrub, in high barren valleys. The nominate race *P. f. fulvescens* occurs from south-eastern Kazakhstan and western China eastwards to eastern Xinjiang and north-eastern Xizang, southwards to central Afghanistan, and western Himalayas eastwards to extreme northern India (Hatchwell 2020). It is considered mostly resident with local altitudinal movements in the inner Himalayas. It breeds between 3,300–5,100 m asl, probably from northern Pakistan to western Nepal, where it is found in dry rocky steppe habitat with bushes such as *Caragana*, and prefers drier regions than other accentors (Ali & Ripley 2001; Rasmussen & Anderton 2012).

We report an observation of the Brown Accentor from Bhagirathi Valley in Uttarakhand, and review its status in the Himalayas. In addition to published records of the species, and museum specimens, we analysed the eBird dataset (eBird 2021) for records from Himalayan regions in the Indian Subcontinent and update summaries of the actual distribution and range of the species in the region. To establish the migration status of the species, we compared the eBird data with records gathered by the ringing expedition in Upper Indus Valley in Ladakh by Delany et al. (1982), further emphasising that substantial influxes in autumn and winter, especially in Ladakh, suggest that at least some populations comprise migratory birds. It should be noted that eBird data, for frequency analysis, is considered only for the period 2015–2020 due to prevalence of the usage of the tool in recent years in the region. Whereas, actual records of the species, indicating the number of encounters with it (i.e., eBird checklists that report the species) is considered for all years. We restricted our frequency analysis to only those districts where the Brown Accentor has been reported, to avoid the vast number of checklists from unsuitable habitats and elevations, influencing the analysis.

Observations & Identification

On 01 March 2019, we were birding around the terraced agricultural fields at village Barsu (30.84°N, 78.60°E; 2,200 m asl) in Uttarkashi District, Uttarakhand [88]. All fields were lying fallow with mounds of cattle-dung mixed with leaf-litter, and the sowing delayed, as the ground still had hard patches of snow. Around the fields were stands of Ban-oak *Quercus oblongata*, *Rhododendron arboreum*, Indian Horse Chestnut *Aesculus indica*, or Himalayan

Alder *Alnus nepalensis*, interspersed with bushes such as Indian Barberry *Berberis lycium* and Himalayan Cherry *Prinsepia utilis*. At mid-day, it was sunny with the temperature at 5°C. In the fields were small mixed flocks of birds such as Rufous-breasted *Prunella strophiate* and Black-throated *P. atrogularis* Accentors, Himalayan Beautiful *Carpodacus pulcherrimus*, Pink-browed *C. rodochroa* and Spot-winged *C. rodopeplus* Rosefinches, and large flocks of Plain Mountain Finches *Leucosticte nemoricola*.



88. Open terraced agricultural fields with patches of snow at Barsu village.

Puja Sharma

At 1310 h, PS noticed one odd-looking accentor feeding in a field at a distance of 6 m from her. The solitary bird appeared larger than the other two *Prunella* species that were feeding nearby in twos or threes, along with Rock Buntings *Emberiza cia*, but it did not associate with them [89–92]. It showed a prominent white supercilium that was broader behind the eye, and blackish-brown mask and ear-coverts. The breast and belly showed a distinct yellowish wash. The bird was immediately identified as a Brown Accentor *P. fulvescens* based on these features. It was photographed before it flew a short distance and could not be found again at the time. Due to the strong mid-day sun, most birds had retreated to patches of shade, and it became difficult to relocate a particular individual.



89. Brown Accentor - feeding in a fallow field next to a stack of bamboo canes used in cultivation of the kidney bean crop.



90. Brown Accentor - feeding alone with a flock of Black-throated Accentors behind.



91. Brown Accentor - when alarmed, it would freeze and crouch low on the ground.



92. Brown Accentor - upperparts and tail.

At 1515 h, high bird activity was observed in a fallow field (10 m x 4 m), enclosed by a stone wall and scattered with rocks and hard snow in one corner. The Brown Accentor was finally spotted in this field, feeding by itself, and was presumed to be the same bird sighted two hours earlier. A bundle of bamboo canes *Himalayacalamus falconeri* and *Thamnocalamus spathiflorus* stacked in the field suggested that kidney bean *Phaseolus vulgaris* had comprised the last crop. This field was adjacent to the main village path, which was fairly busy with regular movement of people or livestock. Despite a thorough search, no other individuals of the species were found in the area.

The Brown Accentor foraged mostly near the shaded patch of snow in the field. It moved with short hops on the ground while probing meticulously for food items, and often flicked its tail. The bird was observed for the next three hours, during which period it seldom moved away from this favoured spot. It was rather tolerant and allowed prolonged observations. It was not as shy as the other two accentors feeding there, the latter taking flight for cover at the slightest disturbance or noise. In contrast, the Brown Accentor would freeze by crouching low on the ground, with its beak tilted upwards and would resume feeding as soon as the disturbance passed [93]. At 1810 h, the temperature dropped to near freezing. Some shepherds startled the bird and it finally retreated, nervously alighting on top of a stonewall adjoining the field, continuously flicking its tail. It eventually flew and disappeared into nearby bushes from which Streaked Laughingthrushes *Trochalopteron lineatum* and Rufous Sibilas *Heterophasia capistrata* uttered their roosting calls. Most birds feeding in this field retreated to roost at least 10–15 min., before the Brown Accentor, which was the last to go.



93. Brown Accentor - prominent broad white supercilium and upperparts while feeding.

There are no historical records, or museum specimens, of Brown Accentor from Uttarakhand (Mohan & Sondhi 2017), however, one record from Gangotri National Park on 27 July 2017 is listed in the provisional records dataset on eBird (Singh 2017). Gurprit Singh (*in litt.*, message dated 21 August 2019) shared his photograph of an adult bird feeding on the ground. He had photographed it at Sumla (31.36°N, 79.13°E; 4,576 m asl) in Jadh Ganga Valley, an area with limited access to civilians. With only two records of the species for the state, it is likely to be a very rare or vagrant visitor in Uttarakhand. However, since it is confined to high-altitude terrain in summer, it may

be overlooked due to the relative lack of access to suitable habitats, and therefore it is difficult to know the full range of its distribution. Moreover, the habitat preference of the species is for relatively open rocky or stony slopes in low rainfall mountainous regions, adapted to cold montane desert (Roberts 1992). Thus, our winter record from fallow agricultural fields, surrounded by moist ban-oak and rhododendron forest, departs from its typical habitat-type.

Discussion

In the Indian Subcontinent the species occurs mainly in the western Himalaya, from Pakistan eastwards to Nepal, but also occurs further east in Sikkim in winter, is a vagrant to Bhutan (Grimmett et al. 2019), and has been reported southwards to the Mashelakh Range, near Quetta in Pakistan (Roberts 1975).

The month-wise records of the species on eBird, from the Himalayan regions, are shown in Table 1. The numbers in the paper indicate number of encounters with the species (i.e. eBird checklists), not individual number of birds, unless otherwise stated. We consider April–August as its breeding season, and remaining period as its non-breeding season.

Table 1. Number of eBird checklists of Brown Accentor in Himalayan Region across all years

	Ladakh [†]	PaK [*]	JK ^{††}	Himachal	Nepal	Sikkim
January	40			2	5	
February	86	2		9	12	
March	65			9	15	
April	6	1		2	13	
May	18	1		1	3	
June	20	2		1		
July	36		3	2		
August	22	1	1	1	1	
September	17	1		1		
October	44	5	1	6	8	
November	62	9	1	3	15	
December	39	4	1	2	11	1
Totals	455	26	7	39	83	1

[†]Ladakh districts of Leh and Kargil

^{*}Pakistan administered Kashmir (Gilgit-Baltistan and Northern areas)

^{††}Jammu & Kashmir excluding Ladakh districts and Pakistan administered Kashmir

Ladakh region

Pfister (2004: 185) described the species as, 'A common resident at higher elevations throughout eastern Ladakh, it becomes rare to the west; in summer it frequents altitudes usually above 4100 m, descending in winter to valley floor, appearing commonly around *Hippophae*-set plains.' Whereas, Osmaston (1927) estimated the ratio of Robin Accentors *P. rubeculoides* to Brown Accentors as 50 to 1 and considered the latter comparatively rare in Ladakh. Based on museum specimens and accepted eBird records and, given that the breeding season is from April or May to August (Ali & Ripley 2001; Hatchwell 2020), the likely breeding range in Ladakh extends from the Thalam Buti River near Sasoma in Nubra Valley

(35.00°N) (Vaurie 1972; RMNH 2019) southwards to Tsomoriri (32.80°N) (Bharathi 2018), and from Hundurmaan near Kargil (76.12°E) (Khan 2019), eastwards to Hanle (79.00°E) (Anoop 2018). Thus, the species is not only sparsely distributed, but also breeds in small numbers in Ladakh. There are several records of birds carrying food, and of juveniles, proving that the species breeds in this area. However, the numbers are small during these months (April–August); an average of 1–2 per report (from a total of 102 checklists), with a maximum of 18 including juveniles seen on 28 August 2000 in Tsomoriri (Faustino 2000). In contrast, the numbers recorded outside this period (September–March) are much higher, with a total of 418+ recorded in February from 86 checklists, and 220+ in November from 62 checklists, suggesting a sizeable influx of non-breeding visitors from outside the area.

Migration in Ladakh region

Analysing the eBird data for frequency and species totals (Table 2; Fig. 1) indicates clear peaks in the non-breeding season (September–March). These figures are amplified by the 1980 records gathered by Delany et al. (1982: 86): 'This was, with Guldenstadt's (sic) Redstart, the most numerous species in the Tikse plantation in October and November and we ringed a total of 680 birds. There were only two records in September, with three on 26th and two which were caught on 29th. After 1 October numbers quickly built up and by the 9th the day-total exceeded 100 birds. At least 200 were present on 14 and 15 October, and between 80 and 120 were estimated each day thereafter until the end of the month. In November numbers dropped a little, day-totals being between 50 and 100, the most common total being 60, which we recorded on eight days.' According to their ringing totals, Brown Accentors outnumbered Robin Accentors by 73 to 1 during the same period, so this sheer scale of passage indicates that a considerable proportion of the Brown Accentors moving through the Upper Indus Valley in autumn are likely to originate from areas outside of Ladakh.

Table 2. Frequency of reporting of Brown Accentor in the Himalayan region. Sample size (# complete checklists) in brackets

	Ladakh [†]	PaK [*]	Himachal	JK ^{††}	Nepal
January	0.22 (101)	0 (3)	0.02 (47)	0 (40)	0 (56)
February	0.28 (225)	0.33 (6)	0.07 (134)	0 (136)	0.14 (14)
March	0.23 (215)	0 (4)	0.06 (158)	0 (99)	0 (70)
April	0.03 (197)	0 (5)	0.03 (80)	0 (114)	0.04 (138)
May	0.04 (307)	0 (23)	0 (170)	0 (101)	0 (98)
June	0.03 (384)	0 (10)	0 (216)	0 (95)	0 (58)
July	0.04 (546)	0 (15)	0.01 (180)	0.02 (105)	0 (8)
August	0.02 (470)	0.06 (16)	0.01 (104)	0.01 (73)	0 (9)
September	0.05 (313)	0.13 (8)	0 (39)	0 (51)	0 (13)
October	0.09 (294)	0.25 (12)	0.04 (140)	0 (119)	0 (92)
November	0.15 (246)	0.86 (7)	0.02 (197)	0.01 (144)	0.03 (165)
December	0.27 (128)	0.3 (10)	0.01 (122)	0.01 (113)	0.01 (159)

[†]Ladakh districts of Leh and Kargil

^{*}Pakistan administered Kashmir (Gilgit-Baltistan and Northern areas)

^{††}Jammu & Kashmir excluding Ladakh districts and Pakistan administered Kashmir

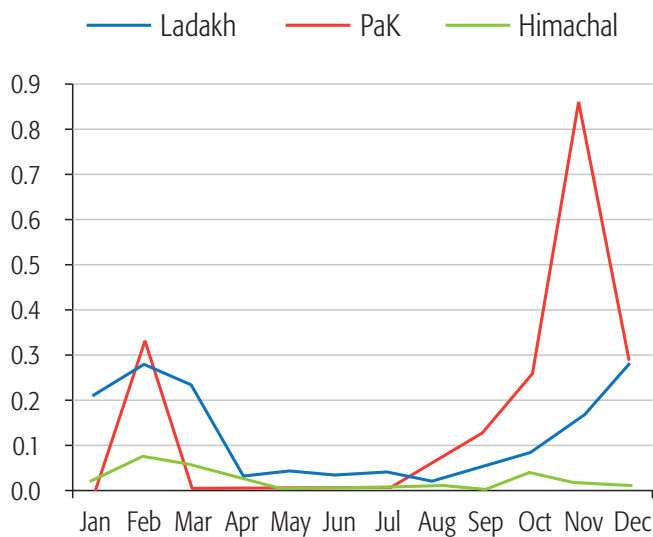


Fig. 1. Reporting frequency of Brown Accentor in Ladakh, Pakistan-administered Kashmir, and the high-altitude districts of Himachal Pradesh.

It is not clear where these birds originate given that the nominate subspecies (the one known from Ladakh) is described as rare to the northwards in China (Cheng 1987) and as only breeding in small numbers in Pakistan in the west (Roberts 1992). The nominate race is described as common in Central Asia from Afghanistan through Tajikistan and Kyrgyzstan to south Kazakhstan (Ayé et al. 2012), so perhaps this is the most likely origin. However, Hatchwell (2020) described it as a resident and local altitudinal migrant with little evidence that the non-breeding range differs substantially from the summer range, so this winter influx into Ladakh requires further investigation.

Himachal Pradesh

The few records available for the region suggest that the species is mainly a scarce passage migrant and winter visitor, and also probably a rare breeder in suitable habitats. Based on accepted eBird records, there are only seven checklists from the breeding season, all from the Lahaul & Spiti District, except one from Kinnaur District from April. There are 32 checklists from non-breeding season, all from the former district, except five from the latter. There is only one historical specimen of the species from the region, collected on 10 October 1936 from Dartsi [= Darcha] (32.67°N, 77.21°E) in Lahaul & Spiti District by Walter N. Koelz (Marien 1951).

Himachal Pradesh (Lahaul & Spiti & Kinnaur)	Breeding	Non-breeding
# Records	7	32
Total Complete Checklists	750	837

Jammu & Kashmir

A total of seven eBird checklists from the region, including four from the breeding season, all from July–August, suggest that the Brown Accentor is, probably, a rare breeder in suitable habitats, mainly in Ganderbal and Kishtwar districts, and likely to be a very rare winter visitor or passage migrant in other areas (Srinagar, Bandipore, Baramulla). However, these figures may not represent the true picture due to lack of coverage or access in the region.

Jammu & Kashmir (5 districts)	Breeding	Non-breeding
# Records	4	3
Total Complete Checklists	488	702

Pakistan-administered Kashmir

Roberts (1992) described it as widespread and numerous as a winter visitor in Gilgit and Baltistan. He found a bird feeding young on the Khunjerab Pass and considered that it bred in small numbers throughout northern Gilgit, northern Hunza, and around the higher elevations of Baltistan. He also encountered them in February in small, scattered flocks of four to six birds throughout the Upper Indus and Shyok valleys in Baltistan, where it was found to be the commonest accentor, and likewise in Gilgit as plentiful in late December. Recent records include a day maximum of 50 birds seen in November 2016 at Borit Lake (Shah 2016). Of a total 26 eBird checklists, 21 are from the non-breeding season, with only five in the breeding season, suggesting it as a common winter visitor in the region, as also noted by Roberts (1992).

Pakistan-administered Kashmir	Breeding	Non-breeding
# Records	5	21
Total Complete Checklists	69	50

Pakistan

Roberts (1992) reported it as a winter visitor around the lower valleys of Chitral, though Perreau (1910: 911) compared it with two other accentor species that occur in Chitral, the Alpine *P. collaris* and the Black-throated, stating that it was 'Not quite so common, arrives a little later [than November], departing earlier [than March] and keeps a bit higher [than 4,500–6,000 feet], not seen in April, ...'. Roberts (1975) found only one individual on 30 March 1974 in the Mashelakh Range near Quetta at 6,000 feet (1,828 m asl), and stated that it is generally encountered above 10,000 feet (3,048 m asl) in northern areas; however, there are no recent records from the northern areas of Pakistan in eBird. There are six accepted eBird checklists, all from the non-breeding season, in the southern areas—the Margalla Hills, Kharian, and Khaira Galli and Bhurban areas near Murree Hills, without any supporting photographs or descriptions. Given that these records are not substantiated and are close to Islamabad to the south-west, it is suggested that they all be treated as unconfirmed. However, these few records suggest that it is likely to be very rare or vagrant in Pakistan outside the northern regions of the Indus Valley.

Nepal

Fleming et al. (1979) considered the species to be a common resident, and Inskipp et al. (2016) described it as a fairly common resident in north-western Nepal, and uncommon or rare further eastwards. However, these summaries are oversimplified. There are a total of 83 checklists that report the species in the region: 66 are from the non-breeding season and 17 from the breeding season (including 13 for April) (Fig. 2). Of these, on the westward side, records from Pashchimanchal alone figure in 72 checklists: 52 are for Mustang followed by 18 from Manang,

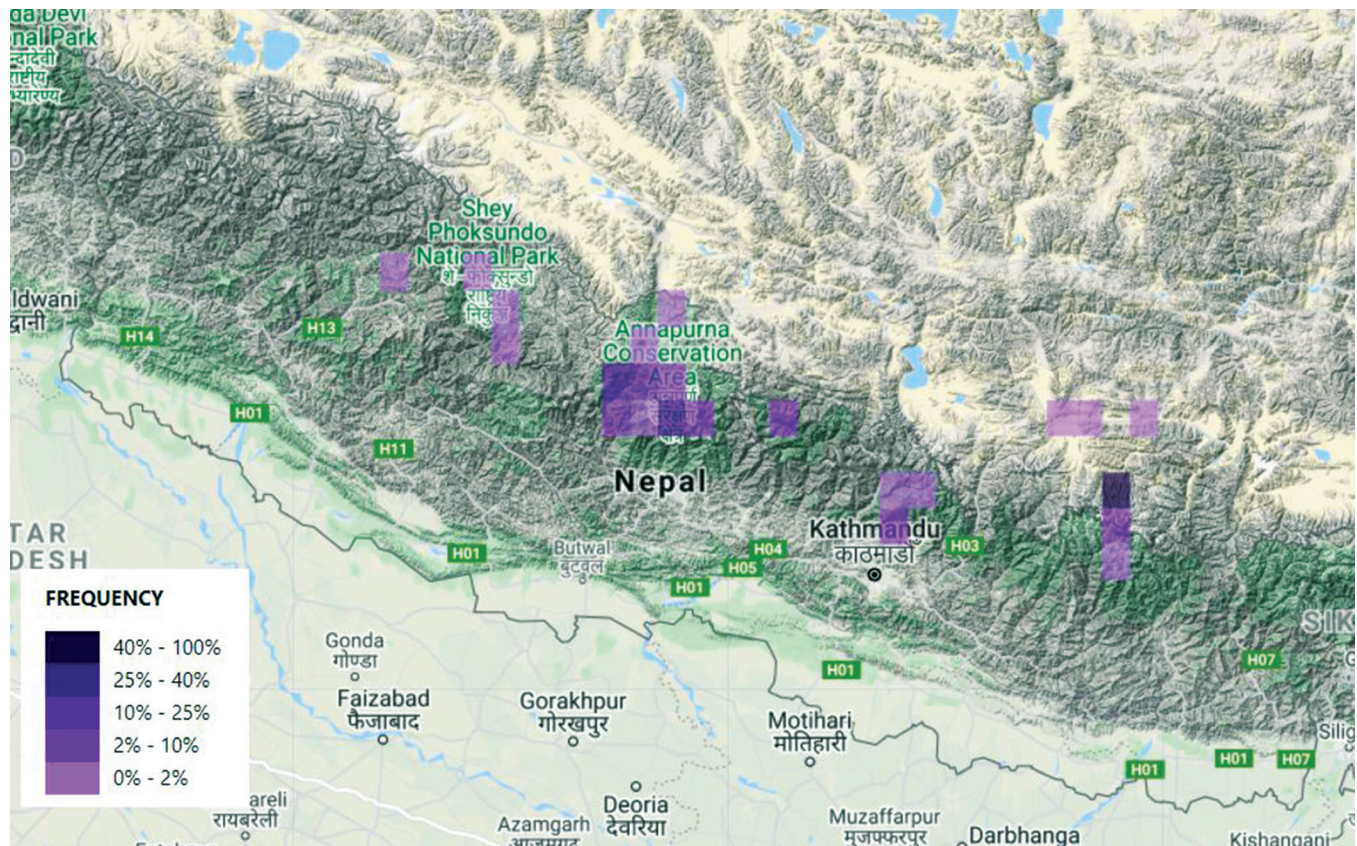


Fig. 2. Distribution of the Brown Accentor in Nepal during September–March (eBird)

and one each from the Gorkha and Myagdi regions. Much farther eastwards there are only two reports from Sagarmatha National Park (Inskipp et al. 2016). Thus, most records are concentrated in the west with 44 (of 66 checklists) from the non-breeding season, suggesting large numbers in winter. However, the number of complete checklists from Nepal, during 2015–2020 is insufficient for a frequency analysis.

In Mustang, a specimen was collected in December 1949 (Rand & Fleming 1957); high numbers such as day maxima of 100 was reported in January and February 1982 (Kennerley 1982; Robson 1982), and a maximum of 103 was reported in December 1984 (Andersen et al. 1986). The few breeding season records are concentrated in north-western Nepal: In westernmost Humla in the Limi Valley (Inskipp et al. 2016), in Mustang, including fledglings in June in Dolpa (Martens & Eck 1995), and a single record for Shey Phoksundo National Park. In summary, it breeds in the extreme north-west, and probably as far as Manang, but is a rare winter visitor eastwards of there, with very few records.

Sikkim & Bhutan

There are only three non-breeding season records further eastwards, suggesting it is very rare or vagrant in winter, in these regions. These include photographic records: from Gurudongmar Lake in Sikkim in December 2018 (Pramanick 2018), and from Shaba, Paro Dzongkhag in Bhutan in March 2015 (Chojur 2015).

Conclusion

del Hoyo & Collar (2016) suggested that while some birds descend below the tree-line in winter, many remain on the breeding grounds throughout the year, and that there is little evidence that the non-breeding range of the species differs substantially from the summer range. Our overview of the current status, and records of the species in north-western India, and Nepal, indicates that there is a considerable influx of birds in winter, compared with summer when the numbers are generally small. Recent works (Ali & Ripley 2001; Pfister 2004; Rasmussen & Anderton 2012; Hatchwell 2020) seem to have overlooked the findings of the ringing and migration studies by Delany et al. (1982) in the Upper Indus Valley flyway in Ladakh, which provides substantial evidence of influxes in winter. The sheer numbers of Brown Accentors that use the *Hippophae*-dominated scrub habitat of the Upper Indus Valley in winter suggest that birds come from a wide catchment, and that altitudinal migration might also involve considerable longitudinal and latitudinal components (Delany et al. 2017). However, this subject warrants further investigation.

Information about the migration of passerines in the Himalayan region is scarce and systematic studies at several sites are needed to unravel the full nature and scale of migration through the Himalaya (Delany et al. 2017). Through the medium of this paper, we further emphasise the importance of analysing the spatio-temporal distribution of bird species to better understand the movements and migration status of inadequately

reported species in the western Himalaya, for e.g., the Grandala *Grandala coelicolor*, or species that have disjunct distributions, for e.g., the Kashmir Nuthatch *Sitta cashmirensis* and the Vinaceous Rosefinch *Carpodacus vinaceus*.

Acknowledgements

We are grateful to Tim Inskipp for the kind use of his unpublished checklists/bibliographies of Himalayan states and for his help with the distribution sections. We thank Praveen J., and an anonymous reviewer, for valuable comments on an earlier draft of this manuscript.

References

- Ali, S., & Ripley, S. D., 2001. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka* (Flowerpeckers to Buntings). 2nd ed. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press [Oxford India Paperbacks]. Vol. 10 of 10 vols. Pp. 2 ll., pp. i–xviii, 1–250, 1 l., 2 ll.
- Andersen, U., Madsen, P.-E., & Molgaard, E., 1986. *Fugleagttagelser fra Nepal - Indien/Vinteren 1984-85*. Copenhagen: Dansk Ornitologisk Forening. 23 pp. Website URL: http://himalaya.socanth.cam.ac.uk/collections/inskip/1985_012.pdf. [Accessed on 09 March 2021.]
- Anoop C. R., 2018. Website URL: <https://ebird.org/checklist/S45815202>. [Accessed on 09 March 2021.]
- Ayè, R., Schweizer, M., & Roth, T., 2012. *Birds of Central Asia: Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan*. 1st ed. Princeton and Oxford: Princeton University Press. Pp. 1–336.
- Bharathi, S., 2018. Website URL: <https://ebird.org/checklist/S49090960>. [Accessed on 09 March 2021.]
- Cheng, T.-H., 1987. *A synopsis of the avifauna of China*. 1st ed. Beijing: Hamburg and Berlin: Science Press; Paul Parey Scientific Publishers. Pp. i–xvi, 1–1222.
- Chojur, T., 2015. Bhutan Birds. Website URL: <https://www.facebook.com/photo.php?fbid=10202822730847648&set=a.10200199030136770&type=3&theater&ifg=1>. [Accessed on 04 May 2021.]
- del Hoyo, J., & Collar, N. J., 2016. *HBW and BirdLife International illustrated checklist of the birds of the world. Volume 2: Passerines*. Barcelona: Lynx Edicions. Vol. 2 of 2 vols. Pp. 1–1013.
- Delany, S., Denby, C., & Norton, J., 1982. Ornithology. In: Chadwell, C., Delany, S., Denby, C., Norton, J., Sulston, C., & White, A., (eds.). *University of Southampton Ladakh expedition 1980*. Southampton, UK: University of Southampton. Pp. 5–153.
- Delany, S., Williams, C., Sulston, C., Norton, J., & Garbutt, D., 2017. Passerine migration across the Himalayas. In: Prins, H. H. T., & Namgail, T., (eds.). *Bird migration across the Himalayas: Wetland functioning amidst mountains and glaciers*. Cambridge, UK: Cambridge University Press. Pp. 58–81.
- eBird. 2021. eBird Basic Dataset. Version: EBD_reJan-2021. Cornell Lab of Ornithology, Ithaca, New York. January 2021.
- Faustino, A., 2000. Website URL: <https://ebird.org/checklist/S68132842>. [Accessed on 09 March 2021.]
- Fleming, R. L., Sr., Fleming, R. L., Jr., & Bangdel, L. S., 1979. *Birds of Nepal With Reference to Kashmir and Sikkim*. 2nd ed. Kathmandu: Avalok Publishers. Pp. 1–358.
- Grimmett, R., Inskipp, C., Inskipp, T., & Sherub, 2019. *Birds of Bhutan and the Eastern Himalayas*. India: Bloomsbury Publishing India Pvt. Ltd. Pp. 1–416.
- Hatchwell, B., 2020. Brown Accentor (*Prunella fulvescens*), version 1.0. In Birds of the World (J. del Hoyo, A. Elliott, J. Sargatal, D. A. Christie, & de Juana, Eds). Cornell Lab of Ornithology, Ithaca, NY, USA. Website URL: <https://birdsoftheworld.org/bow/species/broacc1/>. [Accessed on 09 March 2021.]
- Inskipp, C., Baral, H. S., Phuyal, S., Bhatt, T. R., Khatiwada, M. P., Inskipp, T., Khatiwada, A. P., Gurung, S., Singh, P. B., Murray, L., Poudyal, L., & Amin, R., 2016. *The status of Nepal's birds: The national Red List series*. London, UK: The Zoological Society of London. Vol. 6 of 6 vols. Pp. i–viii, 1–587. Website URL: <https://www.zsl.org/conservation/regions/asia/national-red-list-of-nepals-birds>. [Accessed on 09 March 2021.]
- Kennerley, P., 1982. Website URL: <https://ebird.org/checklist/S62120833>. [Accessed on 09 March 2021.]
- Khan, I. A., 2019. Website URL: <https://ebird.org/checklist/S57101672>. [Accessed on 09 March 2021.]
- Marien, D., 1951. Notes on the bird family Prunellidae in southern Eurasia. *American Museum Novitates* 1482: 1–28 (with three text-figs., and four tables).
- Martens, J., & Eck, S., 1995. Towards an ornithology of the Himalayas: systematics, ecology and vocalisations of Nepal birds. *Bonner Zoologische Monographien* 38: 1–445. Website URL: https://www.zobodat.at/pdf/Bonner-Zoologische-Monographien_38_0001-0445.pdf. [Accessed on 09 March 2021.]
- Mohan, D., & Sondhi, S., 2017. *An updated checklist and bibliography of the birds of Uttarakhand*. Dehradun, India: Uttarakhand Forest Department. Pp. i–vi, 1–98.
- Osmaston, B. B., 1927. Notes on the birds of Kashmir. Part I. *Journal of the Bombay Natural History Society* 31 (4): 975–999.
- Perreau, G. A., 1910. Notes on the birds of Chitral (October 1902 to October 1903). *Journal of the Bombay Natural History Society* 19 (4): 901–922.
- Pfister, O., 2004. *Birds and mammals of Ladakh*. 1st ed. New Delhi: Oxford University Press. Pp. i–xxvii, 1–361.
- Pramanick, S., 2018. Website URL: <https://ebird.org/checklist/S51159411>. [Accessed on 09 March 2021.]
- Rand, A. L., & Fleming, R. L., 1957. Birds from Nepal. *Fieldiana: Zoology* 41 (1): 1–218. Website URL: <https://www.biodiversitylibrary.org/item/24863#page/1/mode/1up>. [Accessed on 09 March 2021.]
- Rasmussen, P. C., & Anderton, J. C., 2012. *Birds of South Asia: the Ripley guide*. 2nd ed. Washington, D.C. and Barcelona: Smithsonian Institution and Lynx Edicions. 2 vols. Pp. 1–378; 1–683.
- RMNH. 2019. RMNH, Leiden, Netherlands, Specimens. Website URL: <https://bioportal.naturalis.nl/specimen/ZMA.AVES.44625/?term=ZMA.AVES.44625&from=0>. [Accessed on 09 March 2021.]
- Roberts, T. J., 1975. Ornithological records for Pakistan. *Journal of the Bombay Natural History Society* 72 (1): 201–204.
- Roberts, T. J., 1992. *The birds of Pakistan. Passeriformes: Pittas to Buntings*. 1st ed. Karachi: Oxford University Press. Vol. 2 of 2 vols. Pp. i–xxxvii, 1–617.
- Robson, C., 1982. Website URL: <https://ebird.org/checklist/S24791596>. [Accessed on 09 March 2021.]
- Shah, I., 2016. Website URL: <https://ebird.org/checklist/S34333652>. [Accessed on 09 March 2021.]
- Singh, G., 2017. Website URL: <https://ebird.org/view/checklist/S43106441>. [Accessed on 09 March 2021.]
- Vaurie, C., 1972. *Tibet and its birds*. 1st ed. London: H.F. & G. Witherby Ltd. Pp. i–xv, 1–407.

