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Bombay Natural History Society
Hornbill House, Dr Sálim Ali Chowk, S.B. Singh Road, Mumbai 400 001, Maharashtra, India.
Tel.: (91-22) 22821811; Fax: (91-22) 22837615; E-mail: info@bnhs.org; Website: www.bnhs.org

STATUS OF FINN'S WEAVER IN INDIA: PAST & PRESENT - Rajat Bhargava

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Rajat Bhargava

BOMBAY NATURAL HISTORY SOCIETY

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**Research and Photography**
**by**
**Rajat Bhargava, Ph.D**

**Project Advisor**

**Dr Deepak Apte**


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For more information contact:
Dr Rajat Bhargava
E-mail: r.bhargava@bnhs.org / rajat_avi@hotmail.com
Phone: 9837122373
or
Bombay Natural History Society
Hornbill House, Dr Salim Ali Chowk, S.B. Singh Road,
Mumbai 400 001, Maharashtra, India.
Tel.: (91-22) 22821811; Fax: (91-22) 22837615
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# FOREWORD

**Dr Deepak Apte**,
Director, BNHS

On September 15, 2017, BNHS celebrated its 134 years in the service of India's natural history. In August 2015, when I took over as BNHS Director, I had an arduous task of not only strengthening its research and conservation work, but also maintaining the dignity and stature of this prestigious organisation that was more than a century old. Two challenging yet cherishable years have gone by. My mission is to continue and expand the research and conservation opportunities at BNHS.

As a new head of an extremely old and reputed organisation, my 'retrospective' thoughts provoked me to develop an Illustrated Timeline for BNHS. Glancing over the Society's achievements over the decades, I had little doubt in my estimation of BNHS as primarily a bird conservation and research organisation, with Dr Sálim Ali and Indian ornithology occurring synonymously with each other. One important species on the BNHS timeline was Finn's Weaver *Ploceus megarhynchus* that was re-discovered in 1959 by Dr Sálim Ali in Kumaon terai after a gap of 60 years.

The IUCN, along with BirdLife International, regularly updates and releases a list of globally threatened species. With nearly 188 species already included in the threatened category, out of over 1,250 species found in India, I felt the need to assess how many endemics with a significant population in India are on the priority list of BNHS Endangered Species Programme. It came as a surprise to me when Dr Rajat Bhargava, our Senior Ornithologist, pointed out that Finn's Weaver, an endemic species to India and Nepal, had garnered no update on its conservation status in India despite being included in the IUCN Red List since 1988.

We subsequently commissioned a study under Sálim Ali Conservation Fund to assess the population status of Finn's Weaver. This monograph tries to fill the gap over the years for this little-known species. Rajat's passion for Finn's Weaver and his exemplary skills in obtaining valuable data from traditional bird trapping communities has resulted in locating three new sites in non-protected areas of north India, stressing the need for additional protection of the species and better conservation strategies. I hope that Dr Sálim Ali's legacy at BNHS continues to live on with more such reports in the coming years.

# PREFACE

In June 2016, a field visit to Assam and Arunachal Pradesh with Dr Deepak Apte, Director BNHS, Dr Girish Jathar, my fellow BNHS ornithologist and Peter Lobo, a noted bird expert turned out to be a blessing in disguise. It paved the way for a new project idea centering on an extremely elusive species – the Finn's Weaver *Ploceus megarhynchus*.

The Finn's Weaver's habitat is spread across Indian terai. Given that there is so little written about this elusive species, I was curious to know about its distribution in the northeast, particularly the well-protected National Parks of Assam. Peter Lobo, who is one of the leading guides to the birds of the Northeast, lamented that there are "less than 500, probably not more than 300 Finn's Weavers in the entire Northeast." Following a discussion over the massive decline of Finn's Weaver over the years, we decided to bring out a status report on this species on priority basis.

My tryst with Finn's Weaver began in 1985, in the backyard of my home in Meerut, where a clan of Baheliyas, a traditional Hindu community who eked out a living by trapping and selling birds, resided. Seventy kilometres north of Delhi, in Uttar Pradesh, Meerut used to be an important bird export centre prior to the blanket ban on domestic trade and trapping of wild native birds in 1990–91. For me, it was an unforgettable experience learning from the Baheliyas who had an unparalleled field knowledge about birds. At one time, the Baheliyas had a footprint all over the terai, including the Himalayan foothills and Gangetic plains, with around 32,000 families involved in bird trapping and 191 licensed dealers and trappers in Uttar Pradesh/Uttarakhand alone (Bhargava 2014).

Some of the Baheliyas in my neighbourhood infrequently caught and brought Finn's Weaver from the *Khadhar* areas (floodplains) of Haridwar, Muzaffarnagar and Meerut districts. My interest in Finn's Weaver began in 1985, when as an aviculturist, I kept this species for almost two-three years. Later in 1991, when I joined a Master's programme in Wildlife Science at Aligarh Muslim University, I was appalled to know from my ornithology teacher Dr Asad R. Rahmani how rare this species was, when he was evaluating/updating the IUCN Red List status for 1994. Purely for academic interest, over the next two years, I collected all existing literature on Finn's Weaver.

I was most intrigued to read about Dr. Sálim Ali's two fruitless searches in 1934 and 1954 for this elusive species in the Kumaon terai, before he actually re-discovered the bird in the wild in 1959. Interestingly, the species was well described to science based on specimens obtained from bird markets since 1901. What really gave me the confidence to work on this bird was my access to old bird traders who transported this species from Uttar Pradesh/Uttarakhand to Kolkata and Mumbai bird markets (from where it was reported by Frank Finn and later by Humayun Abdulali). The publication of Finn's Weaver reported from Hastinapur Wildlife Sanctuary in Meerut by Y.M. Rai in 1979 was another anecdote that kept me in search of this species around my district.

During the 1980s, right next to my house, I used to regularly observe Finn's Weaver (up to 40–50 birds each year) that were brought to Meerut along with other weaver birds to be sold to bird exporters. Most of these birds were brought from Udham Singh Nagar by Rampur-based sub-dealers, and a few birds were caught around Hastinapur in Meerut. In the summer months, munias were caught in thousands across north India from their roost sites once they had attained their full colourful adult plumage. Often, weaver birds in their breeding plumage were also trapped in funnel nets as they communally roosted with the munias in similar habitats. Apart from transporting the birds to Meerut, the Rampur dealers regularly sent Finn's Weaver to Kolkata's Hogg market for export via Bareilly, and some birds were sent to Mumbai's Crawford Market from Meerut for local sales.

I started my field surveys on this species from 1997, when I re-visited all areas in Udham Singh Nagar (currently in Uttarakhand state) mentioned by Dr Sálim Ali (Ali and Crook 1959). I was successful in locating this species in the area after a gap of almost 40 years after Dr Sálim Ali's rediscovery (Bhargava 2000). Again in 2002 and 2003, on an IBA/BNHS funded study, I visited areas of Uttarakhand and Uttar Pradesh where the species still existed in fair numbers. I also made additional visits to Manas and Kaziranga National Parks (Bhargava 2004). What really alarmed me was that during my recent visits (post 2012) to Udham Singh Nagar, I failed to locate nesting birds. One of their main habitats, Rudrapur and its surrounding blocks, had been converted into concrete jungle after the carving of Uttarakhand state from Uttar Pradesh, driving out the birds.

Dr Asad R. Rahmani in his book *Threatened Birds of India – Their Conservation Requirements* acknowledges me as an expert on Finn's Weaver species. I must humbly acknowledge that I totally owe my familiarity with this species to the traditional bird trapping community, who gave me unconditional directions for surveying several historical or present locations of this bird. The low awareness about this species among birdwatchers, policy makers and locals is a challenge when it comes to framing conservation policies to prevent its extinction. This report tries to address the lacuna.

Rajat Bhargava, Ph.D.
Senior Scientist (Ornithology)
Bombay Natural History Society, Mumbai.

# ACKNOWLEDGMENTS

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Lastly, I owe a special thanks to all the former bird trappers of Uttarakhand and Uttar Pradesh who freely shared their experiences with me.

# Dr Sálim Ali - a Finn's Weaver fan

Before embarking on a report of my Finn's Weaver study, I consider it befitting to dedicate a small section on the Sálim Ali connection to the bird species. Sálim Ali re-discovered the bird in the wild in 1959, 60 years after the bird species was last reported.

On the occasion of Dr Sálim Ali's seventy-fifth birthday on November 12, 1971, the Bombay Natural History Society decided to bring out a Festschrift issue of the *Journal of Bombay Natural History Society* (*JBNHS*). Talking about it in his famous memoir *The Fall of a Sparrow*, Sálim Ali mentions how Dillon Ripley "amiably accepted the editorship. To a somewhat over-generous Introduction to the Festschrift… Ripley added in lighter vein a 'poetasterical' panegyric of his own make which cannot be allowed to escape immortalization." The festschrift was later published by Oxford University Press as a book, *A Bundle of Feathers*.

Ripley's 'panegyric' highlights Sálim Ali's concern for Finn's Weaver.

*From the Wakhan and the Rann*
*To Point Calimere and Kandy*
*In monsoon rain or sun,*
*In dak bungalow or dandy,*
*Wherever there are birds*
*You will hear the reverent words:*
*Oh Sálim's our hero, Sálim the man*
*Whose knowledge is always on tap.*
*The terror of wrens, Finn's Baya fan,*
*A truly remarkable chap.*
*So ho for the Wedgebilled Wren*
*And hey for the tragopan hen;*
*So ho for the tweet tweettseep*
*And hey for the leopard's cheep.*
*Let's squeak like Blewitt's Owl*
*And honk like water fowl*
*As through thicket, bog and heather*
*We hunt for Hume's stray feather.*
*Oh Sálim's our hero, Sálim the man*
*Whose knowledge is always on tap.*
*The terror of wrens, Finn's Baya fan,*
*A truly remarkable chap.*
*For our part we know all his knowledge will glow*
*For ages to come, his lamp will shine out.*
*His birthday we sing while pheasants all crow*
*And birds of all kinds join in tuneful shout.*
*Nor Hodgson nor Baker knows more about life*
*Nor Coltart nor Inglis have weathered the strife*
*About bird lore and bird song with steadier light*
*That our hero whose birthday we welcome tonight.*
*Oh Sálim's our hero, Sálim the man*
*Whose knowledge is always on tap.*
*The terror of wrens, Finn's Baya fan,*
*A truly remarkable chap.*

Reproduced from Sálim Ali's autobiography *The Fall of a Sparrow* (1985) ■

# EXECUTIVE SUMMARY

Of the four species of weaverbirds found in India, the Finn's Weaver *Ploceus megarhynchus* is the least known. The species was rediscovered in Kumaon terai in 1959 after two fruitless searches by Dr Sálim Ali in 1934 and in 1954. It is a globally threatened species, listed as Vulnerable by BirdLife International. Distributed very locally in the lower terai from the plains to 1300 m, it is an endemic bird of India and Nepal with two recognised subspecies – *Ploceus m. megarhynchus* found in Uttar Pradesh, Uttarakhand and western Nepal, and *Ploceus m. salimalii,* distributed in West Bengal and Assam.

Finn's Weaver inhabits the pure terai country with marshes and strands of tall wet grasses sparsely dotted with isolated trees (especially *Bombax ceiba* used for nesting) and occasionally interspersed with patches of rice and sugarcane fields. Finn's Weaver, measuring 17 cm, is larger than the other three Indian weaver birds. It is a large-billed, heavy-legged and long-tailed weaver bird species. Finn's Weaver also differs from other native weavers by the fact that females of this species, like the males, acquire a distinct yellow breeding nuptial plumage but are less bright than the male. Unlike the three Indian weaver species that normally have suspended nests slung from branches or fine twigs, the nests of Finn's Weaver are large globular structures, untidily but firmly woven with entrance on one side near the top.

While BirdLife International (2001) mentions 17 locations of Finn's Weaver in India based on records from 1866–2000**,** BNHS' study of this species up to 2017 has notched up the site number to 47. The survey results over the last five visits between 2012–2017 reveal that the Finn's Weaver is currently present in only nine of the 47 locations. Of the nine locations where it is currently sighted, three are new locations identified during the one-year BNHS survey carried out in 2016–2017. The three locations, identified based on information provided by former bird trappers, include Haripura Dam in Uttarakhand, and Harewali Dam and Bhagwanpur Raini in Uttar Pradesh. Repeat surveys in and around Udham Singh Nagar district have shown a decline from 220 birds and 268 nests in 14 colonies in 2002 to 35 birds and 11 nests in one colony in 2017. Depending on whether nests or individuals are used as the key metric, this shows a decline of 84.1–95.8% over 15 years. BNHS estimates a global population of less than 1,000 Finn's Weaver, with an estimate of about 500 adult birds in India.

This species has a small, rapidly declining and severely fragmented population due to reclamation of most natural grasslands over the last 70 years combined with drastic change in land use pattern in most non-protected sites. The prime area of Rudrapur in Udham Singh Nagar district, which hosted one of the world's best Finn's Weaver populations almost a decade ago, is now transformed into the State Industrial Development Corporation of Uttarakhand Limited (SIDCUL) along with government offices, secretariat, five-star hotel, malls and residential colonies. Industrial effluents polluting swamps, monoculture plantations of commercial trees, increasing livestock population and over-exploitation of local grasslands are all causes of concern.

BNHS recommends that the state governments should formulate, draft and implement a 'state-specific Finn's Weaver Recovery plan' for restoring the existing grassland habitats. The central government should initiate a full-fledged study on Finn's Weaver ecology, current status and threats. Finding solution to crow predation in nesting sites, along with conservation breeding of Finn's Weaver, is extremely crucial. This species should be immediately uplisted from its Vulnerable status to Critically Endangered category. A campaign to highlight the plight of Finn's Weaver at the local, national and international levels is needed through media support.

# Etymology: History of Finn's Weaver 'discovery and re-discovery' in India (and Nepal)

One hundred and fifty-one years ago, in December 1866, Finn's Weaver *Ploceus megarhynchus* was first discovered from India by Allan Octavian Hume based on two specimens of a previously undescribed weaver bird (in winter plumage), obtained from birds in trade (Hume 1869, BirdLife International 2001).

Hume, called by Dr Sálim Ali as 'Father' of Indian Ornithology', was a Scottish civil servant and founder of the Indian National Congress. In his original description (Hume 1869) he wrote: "Also a new *Ploceus,* which I got in the terai, much larger than any of our Indian species; and though closely resembling *P. baya,* it is nearly double the weight of that bird, with a bill fully half as large again. Dr Jerdon agrees with me that this is a new species, at any rate to our Indian avifauna; and I name it provisionally PLOCEUS MEGARHYNCHUS."

Hume, on account of its strikingly massive bill, named it *Ploceus megarhynchus*. In Greek *megas* means great or large and *rhunkhos* means the bill. The *terai* habitat in 'Kaladingee' or 'Kaldoongee' (now spelt as 'Kaladhunghi') is referred to as the 'Type locality' for Finn's Weaver by Baker (1926).

Hume maintained that his specimens differed from females and non-breeding males of the eastern race of Baya Weaver *Ploceus philippinus* found in Sikkim terai, East Bengal and Burma, not only by being larger and darker but also by having more rufescent tone in the entire plumage. However, some workers (Baker 1894–1901, Inglis 1896–1902) referred to Hume's discovery as Eastern Baya Weaver *P. p. burmanicus* (Ali and Crook 1959). This caused considerable confusion about the distribution of *P. megarhynchus*.

Thirty-three years after Hume found two specimens in winter plumage (either both females or both males or a pair) in 1899, Frank Finn, the then Deputy Superintendent of the Indian Museum, Kolkata (formerly Calcutta) obtained two live male weaver birds in yellow breeding plumage from Mr. W. Rutledge of Entally. Mr. Rutledge, a live animal trader from Kolkata with over forty years experience, had never previously seen this kind of a bird prior to procuring two specimens from Nainital.

Finn considered these two birds as undescribed form of *Ploceus* and gave the name *Ploceus rutledgii* Finn, 1899 after his supplier, and briefly diagnosed the species as similar to the male of ***P.*** *baya* in breeding plumage, but easily distinguishable by the larger size and the entirely yellow under surface (Finn 1901).

As time passed, these weavers in breeding plumage Finn had kept alive in captivity began to change in colour (non-breeding plumage), and in this form they resembled the corresponding phase of Baya Weaver. Their colour was however darker and more uniform than the Baya Weaver, and closely corresponded with that of Hume's bird. Finn noticed that their great size was a point of resemblance to ***P.*** *megarhynchus* and concluded that Hume's *megarhynchus* individuals are a good and valid species, easily distinguishable from all other Indian forms of *Ploceus* by the yellow colouration when in summer plumage, and to a less extent by their more uniformly "stinted" winter dress (Finn 1901). The species was named as Finn's Baya based on Frank Finn's discovery of the weaver in breeding plumage.

Curiously enough, during the next 60-odd years, prior to Sálim Ali's re-discovery of the bird species in Kumaon terai in 1959, practically nothing further was added to the knowledge of this species with an exception of the finding of a breeding colony in Bhutan duars (O'Donel 1916). In 1912, H.V. O'Donel found a breeding colony of Finn's Weaver in Hasimara, Jalpaiguri District of West Bengal; however it was suspected that these birds were nothing more than *P. p. burmanicus*. Ali (1935) stated quite categorically that "it is now certain that O'Donel's breeding colony of the Duars was not of this species but of *P. philippinus burmanicus*". However, this certainty faded and the records were later re-accepted as Finn's Weaver (Abdulali 1952; Ali and Crook 1959).

Some birds from time to time appeared in Kolkata and Mumbai bird markets, which were later examined by Humayun Abdulali (Abdulali 1952, 1954) but still nothing was known about the exact locations of Finn's Weaver in the wild. The mystery continued to surround this species so much that it was listed as a rare and vanishing Indian species whose export, dead or alive, was totally prohibited (Ali & Crook 1959).

Considering the unsatisfactory state of knowledge of Finn's Weaver, Dr Sálim Ali felt that that a well-organised effort should be made to discover the species in its natural habitat, and collect fresh breeding specimens and data on its ecology and habits. A special expedition to Kaladhungi in 1934 to rediscover Finn's Baya failed. Dr Sálim Ali and his team were unable to locate this bird or procure any workable clue concerning the whereabouts of this species (Ali 1935).

In September 1954, Sálim Ali, with Mr. Horace Alexander, made one more fruitless quest around terai; the

same year in June, Mr. Alexander had presumably seen 12–15 birds around Bilaspur (Rampur District, Uttar Pradesh). Ali and Crook (1959) mention "Since then correspondence with various residents in the Rampur area had only elicited diffuse vicarious information concerning this species, but all the same it was encouraging that at least professional bird catchers did distinguish a larger '*Pahari Baya*' from the Common, Striated, and the Blackthroated species inhabiting the same area, which confirmed the fact that the bird did exist in the locality."

In 1959, Sálim Ali and John Hurrell Crook made a third expedition to Rampur and Haldwani districts of Kumaon in Uttarakhand state between July 10 and August 8 when Finn's Weaver was finally re-discovered breeding in the wild around Rudrapur (Udham Singh Nagar) and its surrounding areas (Ali and Crook 1959). They concluded that during their investigation, they first discovered the bird's true habitat by accident due to prior lack of knowledge about Finn's Weaver's ecology and habits. They mentioned that the rediscovery of the species so far had been hampered by the false impression of its habitat as being Kaladhungi (type locality), ever since it was first described in 1869. The species is actually restricted to vast swampy grasslands of the terai at lower elevations and not Kaladhungi that lies in the forested portion of Kumaon (Ali and Crook 1959). Following the breeding population in Kumaon, the species was then studied for three years between 1961–63 by V.C. Ambedkar under the direction and active participation of Sálim Ali.

More breeding colonies of Finn's Weaver were discovered near Kolkata, West Bengal in 1967 and in 1976 in Darrang district in Assam and in Meerut, Uttar Pradesh in 1979 (Saha 1967; 1976; Rai 1979). This species has also been sighted and reported breeding from some protected areas of Assam in the recent years (Birdlife International 2001; Choudhury 2000; Rahmani et al. 1987).

One hundred and thirty years later, in May 1996, following the bird's discovery in India in 1866, this 'once' India's endemic weaver bird was recorded from Nepal's Shuklaphanta National Park by Dr H.S. Baral, although there was a previous unconfimed sighting of this species from Nepal's another area, Koshi Tappu Wildlife Reserve in February 1993 (Fouarge 1993; Baral 1998a)

Almost about 40 years after the re-discovery of Finn's Weaver in Udham Singh Nagar by Dr Sálim Ali in 1959, I started surveying the same locations visited by him to re-evaluate the status of this elusive bird and its habitat in north India. I conducted the surveys in 1997, 1998, 1999 and 2002, along with a short survey in Assam and West Bengal in 2002 (Bhargava 2000, 2001, 2004).

I made short repeat visits to the western range of this species during the breeding season in 2012, 2013, 2014, 2016 and 2017. It appears the previously known Finn's Weaver habitats in Uttarakhand and Uttar Pradesh have now totally transformed into human dominated landscape or agricultural areas, and the species seems to have almost vanished from its former range. ■

## Finn's Weaver *Ploceus megarhynchus*

## Taxonomy

| | | |
|---|---|---|
| **Kingdom** | : | Animalia |
| **Phylum** | : | Chordata |
| **Class** | : | Aves |
| **Order** | : | Passeriformes |
| **Suborder** | : | Oscines |
| **Family** | : | Ploceidae |
| **Genus** | : | *Ploceus* |
| **Species** | : | *megarhynchus* |

**Binomial name: *Ploceus megarhynchus* Hume, 1869**
**English names**: Finn's Baya, Himalayan Weaver and Yellow Weaver.

The use of English name 'Yellow Weaver' for Finn's Weaver should be avoided as it is more commonly used for the African Golden Weaver *Ploceus subaureus,* and leads to confusion especially when searched on the internet.

**Vernacular names**: *Bada baya* and *Pahari baya* (Hindi – Uttar Pradesh/ Uttarakhand, used by bird dealers); *Baya* and *Belu* (Hindi – Uttarakhand, general for weavers); *Tookra*, *Baya sorai* (Assamese – Assam, general for weavers); *Filla* and *Babui* (Bengali – West Bengal, general for weavers); *Sunaulo topchara* (Nepali – Nepal).

## Global Conservation Status

Finn's Weaver *Ploceus megarhynchus* is a globally threatened species, listed as 'Vulnerable'; A2cd; 3cd; 4cd; C2a (i) based on the assessment carried by BirdLife International (2016), the official Red Listing Authority for birds for the IUCN Red List. For more details refer: www.iucnredlist.org/static/categories_criteria_3_1.

According to BirdLife International (2017) synopsis, this species has a small, rapidly declining and severely fragmented population as a result of the loss and degradation of terai grasslands, principally through conversion to agriculture and overgrazing. The recent disappearance of colonies from previously occupied sites supports this projected trend.

The population is estimated to be 2,500–9,999 mature individuals, based on an analysis of the records in BirdLife International (2001), suggesting that the population is unlikely to exceed 10,000 individuals and may fall well short of this. This equates to 3,750–14,999 individuals in total, rounded here to 3,500–15,000 individuals (BirdLife International 2017).

According to Inskipp et al. (2017), the Finn's Weaver is considered a "Critically Endangered" species in Nepal based on B2ab(iii) and D1 criteria, upgraded from the Global Red List status – Vulnerable.

# INTRODUCTION

India, home to 1,263 bird species (Praveen et al. 2016), has four weaver species, belonging to the family Ploceidae. Of the 124 weaver bird species recorded worldwide (del Hoyo and Collar 2016), the Black-breasted Weaver *Ploceus benghalensis,* Streaked Weaver *Ploceus manyar,* Baya Weaver *Ploceus philippinus* and Finn's Weaver *Ploceus megarhynchus* are found in the Indian subcontinent (Ali and Ripley 1983). The Baya Weaver, Streaked Weaver and Black-breasted Weaver are common Indian resident species. While the Black-breasted Weaver is endemic to the Indian Subcontinent, the Finn's Weaver is endemic to India and Nepal alone (Grimmet et al. 1998).

Weaver birds are small, rather plump and stocky sparrow-sized (≥15 cms) finch-like passerines with conical, thick bills. According to Ali and Ripley (1983), the culmen or the upper bill of weavers is curved, being longer than the base. Their tails are short and rounded having twelve rectrices. They have strong tarsus and their claws are rather long.

A typical Baya Weaver nest

Baya Weaver male in breeding plumage

A flock of weaver birds in breeding plumage near Rudrapur, Udham Singh Nagar.

Weaver birds are largely granivorous birds, with adults feeding mainly on seeds, supplemented with invertebrates, although their young are chiefly fed invertebrates. They inhabit grasslands, marshes, cultivation and very open woodland and are extremely gregarious birds in all seasons, roosting and nesting communally.

Baya Weaver nesting colony in a Peepal tree

Weaver birds in non-breeding plumage are usually seen basking in winter mornings

Renowned for their excellent nest-weaving skills, males of all weaver species weave elaborate roofed nests with entrance tunnels during the monsoon season. Their nest is a vertical oval structure woven with coarse grass strips placed in reeds, suspended from a branch or woven into branches (depending on the species) with a side opening. Rasmussen and Anderton (2012), discussing all weaver species found in the South Asian region, suggest that they are monogamous, although most Indian species are polygamous. They nest in colonies usually above water and the clutch size varies between two to four eggs.

All weaver birds have a breeding and non-breeding plumage. The male weavers acquire a distinctive breeding plumage having yellow crown, head and breast ornamentation. However during non-breeding, males are similar to the brown streaky females and immature birds; hence they have to be identified with much care.

Males of all weaver species perform wing-beating displays at nesting colonies, advertising songs to attract females. Songs are built up of various call-notes, wheezy whistles and buzzes which are similar between at least some of the species and it is hard to make out individual voices in the usual flocks. According to BirdLife International and IUCN criteria, the Finn's Weaver has been a Vulnerable species for more than two decades (Collar et al. 1994) while the other three Indian weaver species are listed as Least

Weaver birds feeding on weed plants in a Wheat field

Concern. All Indian weaver bird species are protected and listed in Schedule IV of the WildLife (Protection) Act, 1972. Although recorded in national and international bird trade, no Indian weaver species is listed in CITES (Ahmed 2014).

In areas with high density of weaver birds, some farmers consider these birds as "agricultural pests" as they extensively feed on ripening cereal crops. Sadly, what is not completely understood is the enormous help these birds extend to the cultivator by consuming a large number of insect pests or by eating weed plant seeds such as *Echinochloa colona* and *E. frumentacea* (personal observation).

# WEAVER BIRDS OF INDIA

Although the aim of this report is to highlight the plight and status of Finn's Weaver, a brief introduction to the other three Indian weaver species and their nest photographs are provided here to enable correct identification and also increase awareness among policy makers regarding conservation issues related to weaver birds in general.

| KEY TO IDENTIFICATION OF INDIAN WEAVER BIRDS | |
|---|---|
| **(Adapted from Ali and Ripley 1983)** | |
| **Breeding males only** | |
| A. Crown Yellow | |
| 1 Breast yellow or fulvous, unstreaked | |
| a. Throat dark brown | *P. phillippinus* |
| b. Throat yellow | *P. megarhynchus* |
| 2 Breast blackish brown or brown with fulvous fringes | *P. benghalensis* |
| 3 Breast fulvous streaked with black | *P. manyar* |
| | |
| **Males in winter and Females** | |
| B. Crown brown | |
| 4 Lower plumage pale fulvous | |
| c. Smaller; wing generally under 76 mm | *P. philippinus* |
| d. Larger; wing over 76 mm | *P. megarhynchus* |
| 5 Breast black or fringed with fulvous | *P. benghalensis* |
| 6 Breast fulvous streaked with black | *P. manyar* |

**Black-breasted Weaver** *Ploceus benghalensis* (14 cm): Also known as the Black-throated Weaver, it is a resident bird undertaking local movements. Distributed mainly along the northern subcontinent, from the Gangetic Plains to northeast India with scattered localities in Peninsular India, it inhabits tall, damp, seasonally flooded grasslands and reedy marshes along rivers and canals.

Males in breeding plumage have a pale bluish or pearly white beak along with lemon-yellow crown cap similar to other male weavers. They have a diagnostic broad black band across their breast contrasting with the rest of the whitish underparts. They can be differentiated from Streaked Weaver, being smaller in size, virtually unstreaked, having grey brown nape and more uniformly grey-brown rump; in contrast, Streaked Weaver has heavily streaked mantle and back (Grimmet et al. 1998). Males in non-breeding plumage, females and juveniles lack yellow on the head but always show black on breast.

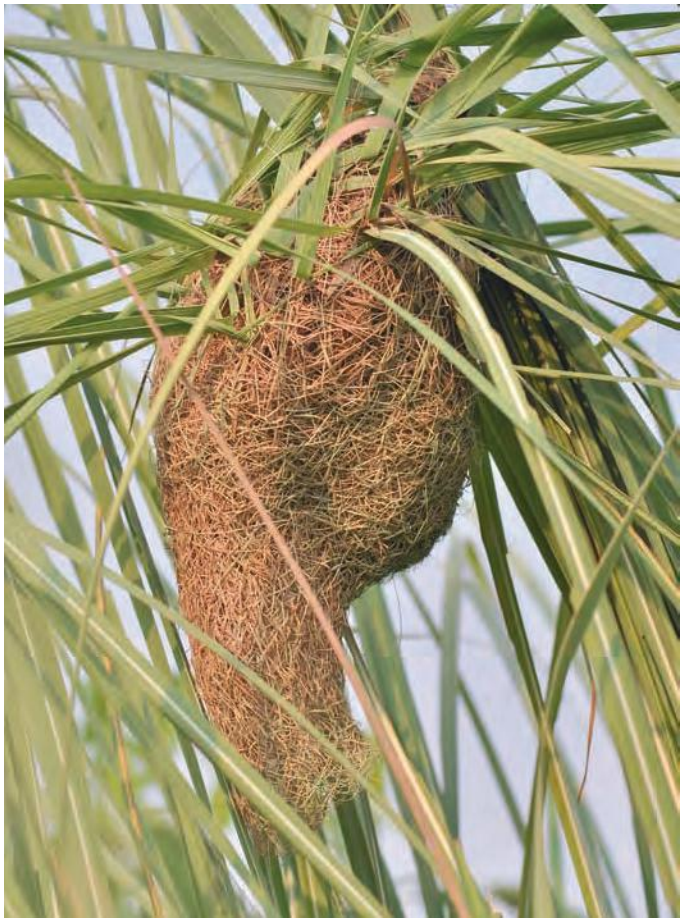
Black-breasted Weaver breeds between June and September in *Saccharum* grasses or reeds in small scattered clusters. Their nests are quite similar to those of the Baya Weaver but instead of hanging by a long thin neck, the top dome of the nest is interwoven into a number of standing reed stems and there is a vertical entrance tube.

Black-breasted Weaver
(male in breeding plumage)

Black-breasted Weaver (female)

This gregarious species can be seen all year round in well-irrigated cultivated crop fields in association with other weavers and are often seen flying into their colonies uttering a soft chit-chit call during summer. According to Ali and Ripley (1983), the male's soft, barely audible breeding song *tsi tsi tsi tsisik tsisik tsik tsik* sounds like the chirping of a cricket or short, subdued squeaks of an unoiled bicycle wheel which serves as an advertisement during their courtship behaviour.

**Streaked Weaver** *Ploceus manyar* (15 cm): A resident bird, distributed in most of the sub-Himalayan region from Indus Valley to Brahmaputra Plains, and also in highly scattered localities in much of Peninsular India. It is locally abundant in reedy



Black-breasted Weaver nest
in *Saccharum* spp. grass

Streaked Weaver
(male in breeding plumage)

Streaked Weaver (female)

wetlands, especially with elephant grass. In winters it feeds chiefly on the flowering heads of *Phragmites* reeds, *Typha* bulrushes and *Saccharum* grasses by clinging to the upright stems. It roosts communally in reedbeds with other weaverbirds.

Streaked Weaver males in breeding plumage have golden-yellow crown, in contrast to their dark brown sides of head and throat. They can be distinguished

Streaked Weaver nests in *Typha* reed bed

from Black-breasted and Baya Weaver by their heavily streaked breast and flanks and brownish-black beak. Males in non-breeding plumage, females and juvenile are typically with boldly streaked throat, breast and flanks usually sufficient to separate this species from other Indian weaver birds.

They breed from February onwards to October, varying locally, nesting dependent on rainfall and suitable growth of bulrushes (Craig 2010). Their small nests, usually dispersed two to three metres apart over a wide area in small scattered colonies which are often inter-mixed with Black-breasted Weaver colonies, are built on *Typha* stands growing in water. These nests appear to be rather untidy woven balls, directly interwoven into standing reed stems lacking the long thin neck with short entrance tunnels as in the nests of the Baya Weaver.

Their 'advertising song' is very much like the Baya Weaver, and their calls are generally more sibilant and musical chirps. According to Grimmet et al. (1998), their song is a "soft, continuous trill, *see- see- see- see- see- see*, ending in an *o-cheee*, also a *tre tre cherrer cherrer*; call is loud *chirt, chirt*."

**Baya Weaver** *Ploceus philippinus* (15 cm): Also known as Indian or Common Baya, it is a widespread and common resident bird, undertaking seasonal movements. It is found in plains and hills up to 1200 m in the Himalaya, locally up to 1000 m in the peninsular hills. It inhabits grasslands and scrubs with scattered trees in open areas with water, mangroves and is comparatively less restricted to marshy areas than the other weavers.

Baya Weaver male in breeding plumage has yellow crown and dark brown ear coverts and throat. It can be distinguished from other male weavers in breeding plumage from its unstreaked yellow breast and diagnostic dark-

Baya Weaver (male in breeding plumage)

Baya Weaver (female)

streaked yellow mantle and scapulars (that are absent in other weaver males). Beak is dark blackish brown. Females, juveniles and non-breeding males have brownish-buff upper parts, boldly streaked with dark brown, and buff to pale yellowish underparts which are either unstreaked or show sparse, diffuse streaking, usually on the sides of the breast and flanks.

According to Ali and Ripley (1983), there are three subspecies of Baya Weaver in India:

| Key to Subspecies | | | |
|---|---|---|---|
| A | Breast fulvous | | *P.p. burmanicus* |
| B | Breast Yellow | | |
| | 1 | Darker and browner above | *P.p. travancoreenisi* |
| | 2 | Paler | *P.p. philippinus* |

1) *P.p. philippinus* is the widespread 'Indian Baya' of northwest India.
2) *P.p. travancoreenisi,* 'Travancore Baya' of south west India, has a darker breast than the nominate.
3) *P.p. burmanicus,* 'Eastern Baya', is found from eastern Bihar and Nepal to Assam and South Asia; it is dissimilar to the nominate in most plumages. This Northeast group is rather large with a large bill and its body proportion matches the longer-tailed Finn's Baya. Hence it is important to describe this form in more plumage details.

In colouration, 'Eastern' Baya Weaver male in breeding plumage differs from the nominate race in total or by the absence of yellow on breast and no yellow on mantle. Breeding male has golden crown with usually pale grayish face and throat, broadly streaked mantle with buff (not golden) feather edges, and buff

'Eastern' Baya Weaver (male in breeding plumage)

'Eastern' Baya Weaver (female)




underparts with slightly mottled and streaked breast with sometimes a few scattered yellow feathers. Non-breeding male, female and immature are quite buffy overall, with streaked underparts and dusky cheeks and plain buff below (Rasmussen and Anderton 2012).

A gregarious and colonial nester often raising two broods, it breeds between April and October, varying locally, depending on the arrival of monsoon. Highly territorial, this is the only species with suspended pendulous retort-shaped nest usually with a very long vertical entrance tube. According to Ali and Ripley (1983) "nests grouped in colonies of maybe from a half a dozen to over 200 on a single tree". The Palm (date, palmyra, coconut or other) is the most commonly used tree although Shesham *Dalbergia*, Babool *Accacia* and Keekar *Prosopis* are some other preferred trees. The nests are suspended from pinnae of palm fronds or tips of plaints branches usually over water. A recent observation during the latest BNHS survey in 2017 was the nesting of Indian Baya on telephone and electric wires, recorded on several occasions.

The Baya Weaver has a unique breeding biology best described by Ali and Ripley (1983): "The male practices successive polygyny. He alone builds the nest; the female takes no part in the work except in scantily lining the egg chamber after she accepted the nest. In the early stages of a nesting colony the females are completely absent. When some of the nests have reached the 'helmet' stage (half-built) a party of females visits the colony to prospect for suitable nest. The birds hop from one 'helmet' to another perching on the initial ring or 'chin strap', pulling a strip here and another there, obviously examining the structure critically. All the while they are engaged in the scrutiny the owner males flutter excitedly, clinging outside the nest giving their wing-beating displays and warding off competing males. Some nests are approved by females, other rejected. Those that fail to find tenants are often cut down by the builders themselves, and successful nests, even when containing

a. 'Eastern' Baya Weaver male in breeding plumage with no yellow on mantle or on breast
b. In certain areas such as Bihar, the 'Indian' Baya Weaver *P.p. philippinus* intergrades with the 'Eastern' Baya Weaver *P.p. burmaricus*
c. 'Indian' Baya Weaver male in breeding plumage with yellow mantle and breast

eggs, often by disgruntled rivals. Once the nest is approved by her, the female softens to the owner's advances and permits, and even invites, copulation by the impetuous suitor. The act places on the chin strap and seals the pair bond as it were. The male thereafter hurries to complete the egg chamber and complete the nest for her occupation. As soon as she is settled on the eggs he commences to build a second nest close by. This passes through the same vicissitudes and a second female may be duly installed. The male may then proceed to build a third nest, and in rare cases a fourth (once even a fifth observed). In this way a single male may have two to three, sometimes four, wives and families all more or less concurrently".

Pendulous retort-shaped Baya Weaver nest with a very long vertical entrance tube

The main food is grass and weed seeds, paddy, jowar, bajra, insects, beetles, moths, caterpillars, grasshoppers and flower nectar (e.g. *Salmalia, Erythrina,*

A Baya Weaver nesting colony on a telephone wire

A typical Baya Weaver nesting colony on a Date Palm tree in north India

*Capparis*, etc.). Calls are varied sharp, metallic chirps to dry buzzy fizzy rattles, often in slow series or irregular groups. Its song is a soft *chit chit chit* followed by a drawn-out wheezy whistle, *chee-ee-ee;* call a *chit chit chit* (Ali and Ripley 1983).

# OBJECTIVE & METHODOLOGY

This monograph strives to collate existing information on Finn's Weaver and review the past and present situation of this little-known threatened species so as to highlight its conservation plight.

This report is primarily based on review and compilation of published and unpublished literature on Finn's Weaver, along with field surveys carried out intermittently between 1997 and 2017.

The surveys were mostly undertaken in the months of June and July when the bird is easily seen or heard, being extremely flamboyant and vocal during its nesting season. Special emphasis was given to photo-documenting the Finn's Weaver in all its different plumages even during non-breeding season to aid identification and draw differences with the other Indian weaver birds that co-exist in the same areas.

During the initial surveys between 1997 and 2014, I spent a total of 139 days searching for this species in the states of Uttarakhand, Uttar Pradesh, West Bengal and Assam. I visited most areas mentioned by previous ornithologists and also new sites based on information received from different sources.

During the one-year extensive survey in Uttar Pradesh and Uttarakhand between June 2016 and July 2017, I visited all the previous areas at least once. I spent a total of 88 days, including a one-day field visit to Shuklaphanta in Nepal, in July 2017. Three extensive trips were made to look for this species covering approximately 3,000 km with an average of 1,000 km per survey. In addition, several trips of two to three days covering 100–200 km distance were undertaken, with Meerut as the base point. In total, 227 days were covered over a period of 21 years looking for this bird (see Table below).

| Year | Number of days spent in field | | | | | Total numbers of days / year |
|---|---|---|---|---|---|---|
| | Uttarakhand | Uttar Pradesh | West Bengal | Assam | Delhi / Haryana | |
| 1997 | 5 | 7 | | | 1 | 13 |
| 1998 | 7 | 5 | | | 1 | 13 |
| 1999 | 10 | 6 | | | 2 | 18 |
| 2001 | | | | 2 | | 2 |
| 2002 | 18 | 12 | | 3 | | 33 |
| 2003 | 4 | 3 | 3 | 4 | | 14 |
| 2012 | 8 | 4 | | | | 12 |
| 2013 | 5 | 3 | | | | 8 |
| 2014 | 14 | 5 | 3 | 4 | | 26 |
| Initial intermittent surveys – Total numbers of days spent in the field between 1997 and 2014 | | | | | | 139 |
| 2016 | 21 | 16 | 2 | | 2 | 41 |
| 2017 | 27 | 18 | | | 2 | 47 |
| One year survey – Total number of days spent between June 2016 and July 2017 | | | | | | 88 |
| Total number of days spent for Finn's Weaver survey between 1997 to 2017 | | | | | | 227 |

Field visits were made from 05.30 to 10.30 in the morning and 14.30 to 18.30 in the evening either on two- or four-wheeled vehicles or on foot. A party of two to three people searched the areas around village tracks and close to the dams with suitable wet grassland habitats. Observations were prolonged from morning to afternoon, if there were sightings or if the weather was cloudy.

Project volunteers Dr Esther Wullschleger and Bruno Schattin, along with Meerut Forest Department staff, undertaking Finn's Weaver survey at Hastinapur Wildlife Sanctuary in 2016

In addition to field surveys, 20 interviews were conducted with members of former bird trapping communities in Finn's Weaver areas over the years. These detailed interviews, though unstructured most of the time, helped to locate new site records of this species between Meerut–Bareilly–Udham Singh circuit (within a range of 300 km), Meerut–Haridwar (140 km) and Meerut–Kalagarh (150 km) and validate the research findings.

An informal meeting held in Meerut in 2010 with Uttar Pradesh's Baheliya bird trappers, to discuss their livelihood and other related issues after ban on wild bird trapping

# FIELD CHARACTERS

Finn's Weaver, measuring 17 cm, is larger than the other three Indian weaver birds. It is a large-billed, heavy-legged and long-tailed weaver bird species. The tail is rounded and almost fan-shaped.

Finn's Weaver male in breeding plumage

There are slight differences regarding the actual size of the Finn's Weaver in the books available on Indian weavers. A key identification point highlighted is to compare and determine the size variation among the weavers that may be seen all together in the field at the same time, for instance in terai (Crook 1963).

Ali and Ripley (1983) in their *Handbook of Birds of India and Pakistan* mention the size of all four Indian weaver birds as 15 cm. Similarly, Craig (2010) in *Handbook of the Birds of the World* describes the size of all Indian weavers as 15 cm. Rasmussen and Anderton (2012) mention the size of Finn's Weaver as 16 cm, and all other weavers as 15 cm. Grimmet et al. (1998) most appropriately writes the size of Finn's Weaver as 17 cm, Baya Weaver as 15 cm and Black-breasted and Streaked Weaver as 14 cm. My own measurements of the live specimens match with Finn's measurement of the Finn's Weaver, with length 17 cm or 6.5 inches, bill from gape 0.8 inches, wing about 3 inches, tail 2.1 inches and tarsus 0.96 inches (Finn 1901).

Finn's Weaver differs from other native weavers by the fact that females of this species, like the males, are seasonally dimorphic. Females acquire a distinct yellow breeding summer dress (nuptial plumage), but are less bright than the male (Ali and Crook 1959). It is useful to reiterate that other Indian weaver females retain the same colour plumages during breeding and non-breeding (eclipse) phases.

Finn's Weaver female in breeding plumage

Finn's Weaver adult in non-breeding plumage

The 'Eastern' Baya *P. p. burmanicus* has slightly larger body proportions and bill than the nominate Baya Weaver. It seems that there is real difficulty in distinguishing the Eastern Finn's Weaver *Ploceus megarhynchus salimalii* in non-breeding plumage with the sympatric *P. p. burmanicus* found in eastern India. Also there is paucity of detailed identification photographs of Eastern Finn's Weaver in non-breeding plumage.

As Finn's Weaver has many plumages, the present report will provide a detailed description of age/sex/season-related plumage differences based on Ali and Ripley (1983) and Ali and Crook (1959).

'Eastern' Baya Weaver male acquiring breeding plumage

**Male (adult) breeding:** Above, head and nape bright yellow with contrasting dark brown ear coverts (auriculars). Back and upper parts dark brown, broadly streaked. Yellow rump and upper tail coverts. Below, from chin to vent, including flanks, bright golden yellow (richer and deeper than in the Baya Weaver). Beginning of a dark brown pectoral collar or broken breast-band on the sides of the neck. In some cases, the brown breast-band is complete and well defined.


Finn's Weaver adult male in breeding plumage

Iris is orange brown; beak blackish horn coloured, paler at base; legs and feet brownish flesh coloured.

**Female (adult) breeding:** Above, head and nape pale canary yellow, or brownish heavily suffused with yellow. Rest of under parts rich brown, streaked darker. Below, pale canary yellow or yellowish white. No breast markings.

Iris orange brown, duller than in adult male; bill, upper mandible horny brown, lower pale flesh, brownish at tip; legs and feet brownish flesh coloured.



Finn's Weaver female in breeding plumage

Finn's Weaver males in their first (fresh) breeding plumage

**First year male in breeding season:** It is more or less like the female in breeding plumage but has slightly more of yellow shine. It also lacks the dark brown collar or breast band on neck sides. It can be distinguished in the hand by its smaller overall proportions, slenderer bill and tarsus in comparison to the breeding females.

Iris hazel/orange brown; bill horny brown, paler (whitish) at the base and chin; legs and feet brownish flesh.

**Non-breeding adult male and female:** Both sexes in non-breeding are very dull grayish brown, with darker mantle, scapulars and tertials (owing to narrower pale edges). Head pale with no supercilium, and plain brown cheek grading to whitish throat. Median coverts have squarer dark centres than in the Baya, and fresh tertials have dark broader centres.

They are quite similar to Baya Weaver and can be distinguished only by their somewhat larger size, darker colouration and larger bill. Definite field identification is however not always possible.

Finn's Weaver adult in non-breeding plumage

**Juveniles:** They resemble non-breeding adults, but have more buffy underparts.

Baya Weaver juveniles. Finn's Weaver and Baya Weaver juveniles are difficult to differentiate in the field

**Finn's Weaver Subspecies**

Finn's Weaver has been recognised as two races (Grimmet et al. 1998) or two subspecies – one found in the north and other in NE India with slight plumage difference (Ali and Ripley 1983; Abdulali 1960):

> Finn's Weaver *Ploceus megarhynchus megarhynchus* Hume, 1869 (Western population found in Uttar Pradesh / Uttarakhand/ Nepal)
>
> Eastern Finn's Weaver *Ploceus megarhynchus salimalii* Abdulali, 1960 (Eastern population found in West Bengal / Assam)

According to Ali and Ripley's (1983) *Handbook of the birds of India and Pakistan*: PLOCEUS MEGARHYNCHUS Hume – Key to Subspecies

> Under tail-coverts white..... *Ploceus m. megarhynchus*
> Under tail-coverts yellow..... *Ploceus m. salimalii*

The key identification point given in the above table is incorrect, or it seems to have been exchanged with the matching subspecies as far as field observations and photo examination reveal. In fact, the description given by Ali and Ripley (1983) suggest that the breeding males of *P. m. salimalii* differ from nominate *P. m. megarhynchus* by having a pure yellow head, less yellow on rump, and white under tail coverts and sometimes a white belly. As per Ali and Crook (1959) and Ali and Ripley (1983), the breeding males of *P. m. megarhynchus* are "Below, from chin to vent, including flanks, bright golden yellow."

Dr Saraswathy Unnithan, former scientist in-charge of BNHS bird collection, clearly mentions in her catalogue no. 39 on Ploceinae and Estrilidinae that "The key in the HANDBOOK (Vol. 10, p.93) separating the two races seems to be incorrect" (Unnithan 2001).

According to the *Handbook of the Birds of the World* "Race *salimalii* is like nominate, but male breeding usually has more solid sepia-brown mask from lores to ear-converts, browner rump, and distinctively paler belly and undertail-coverts" (Craig 2010).


Eastern Finn's Weaver male in breeding plumage

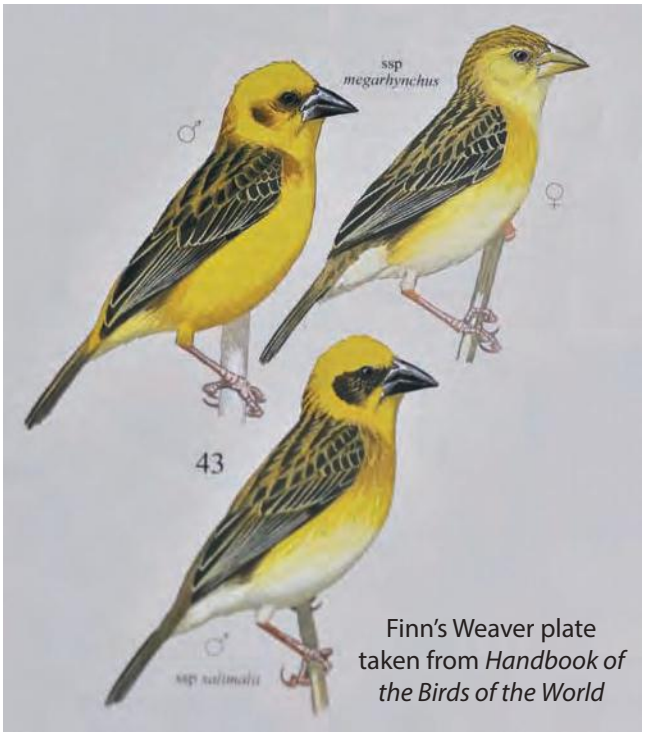

Eastern Finn's Weaver female

There also seems another inaccuracy in the colour description of female subspecies according to Ali and Ripley (1983). They mention about *P. m. salimalii:* "females entirely yellow from chin to under tail coverts" and from chin to upper belly in nominate *P. m. megarhynchus*. However, according to my photographs and field observation, the *P. m. megarhynchus* females are entirely yellow from chin to under tail coverts, "contradictory" to Ali and Ripley (1983) description in their *Handbook*.

Finn's Weaver female (nominate) in breeding plumage

Abdulali's (1960) description about western females of the nominate subspecies *P. m. megarhynchus* fully supports my observations. He mentions: "All are yellow from chin to under tail-coverts though paler than in the male and of varying intensity."

The illustration of the female of nominate subspecies of Finn's Weaver given in the *Handbook of the Birds of the World* is a total mismatch to the actual breeding female colour of *P. m. megarhynchus* (or even non-breeding female) in the field. At first glance, this 'female' illustration appears like the 'Baya Weaver male' switching over from its non-breeding plumage to breeding plumage (Bhargava 2000).




Finn's Weaver plate taken from *Handbook of the Birds of the World*

Although this illustration slightly matches with the *P. m. megarhynchus* female's description given in Ali and Ripley (1983) in their *Handbook of the Birds of India and Pakistan*, the head colouration and marking shown

Baya Weaver male acquiring breeding plumage. There is no dark brown throat colouration at this stage, hence may be confused for a Finn's Weaver

in addition to the beak colouration of Finn's Weaver is unlike a breeding Finn's Weaver nominate female.

Abdulali (1960) mentions an interesting record: "the significance of the prominent brown collar across the upper breast, completely visible only in one cage bird dated 20th August 1960 but traces of which are visible in all the males in yellow – apparently it disappears in off plumage".

Traces of these bands are visible in females of both Finn's Weaver subspecies. He points out that Dr Sálim Ali during his observation in Udham Singh Nagar failed to see individuals with such complete collars and the data available suggest that this occurs either sporadically in a few individuals or is acquired after breeding. I also happened to observe and photograph one similar specimen.

BNHS COLLECTION

Finn's Weaver male in breeding plumage with prominent brown collar in BNHS collection

Finn's Weaver male in breeding plumage with prominent brown collar recorded after a gap of 57 years during a survey in Uttar Pradesh in 2017

According to Unnithan (2001), out of the 23 skins of *P. m. megarhynchus* present at BNHS consisting of 13 males, nine females and one unsexed, six are from Kolkata market, six from Crawford market in Mumbai, six from Bilaspur, (Uttar Pradesh) three from Rudarpur, (Uttarakhand), one from Bombay zoo and one from Agia, Goalpara, Assam.

Finn's Weaver specimens in BNHS collection

In addition to nominate subspecies specimens, BNHS has six more specimens of *P. m. salimalii* – three males and three females. Out of these, three are from Bhutan Duars, two from Rajabhatkhawa, one from Hasimara – all in West Bengal.

The BNHS specimens throw up some interesting questions: are there really two subspecies with slight plumage differences? How come the Agia (Assam) specimen found from the distribution area of *P. m. salimalii* in Assam is of *P. m. megarhynchus* subspecies of western terai ? Or is it a mistaken assumption?

From the few available pictures of Eastern Finn's Weaver males, photographed in breeding plumage at Kaziranga National Park on April 16, 2012 by Adesh Shivkar, a birder with Nature India Tours, published in OBC (Oriental Bird Club) images, the rump colour is clearly yellow, very similar to the nominate subspecies. According to Rasmussen and Anderton (2012) *P. m. salimalii* breeding male has brown rump.

Eastern Finn's Weaver male photographed in Kaziranga National Park by Adesh Shivkar

Eastern Finn's Weaver male photographed in Kaziranga National Park by Adesh Shivkar. Note the yellow rump

Adesh Shivkar in his tour report clearly pointed out that the eastern subspecies *P. m. salimalii* males in breeding plumage should have brown rump, not yellow seen in his photographed birds (https://mynaturestories.wordpress.com/2012/04/22/finns-weaver-a-significant-sighting-2/#jp-carousel-187).

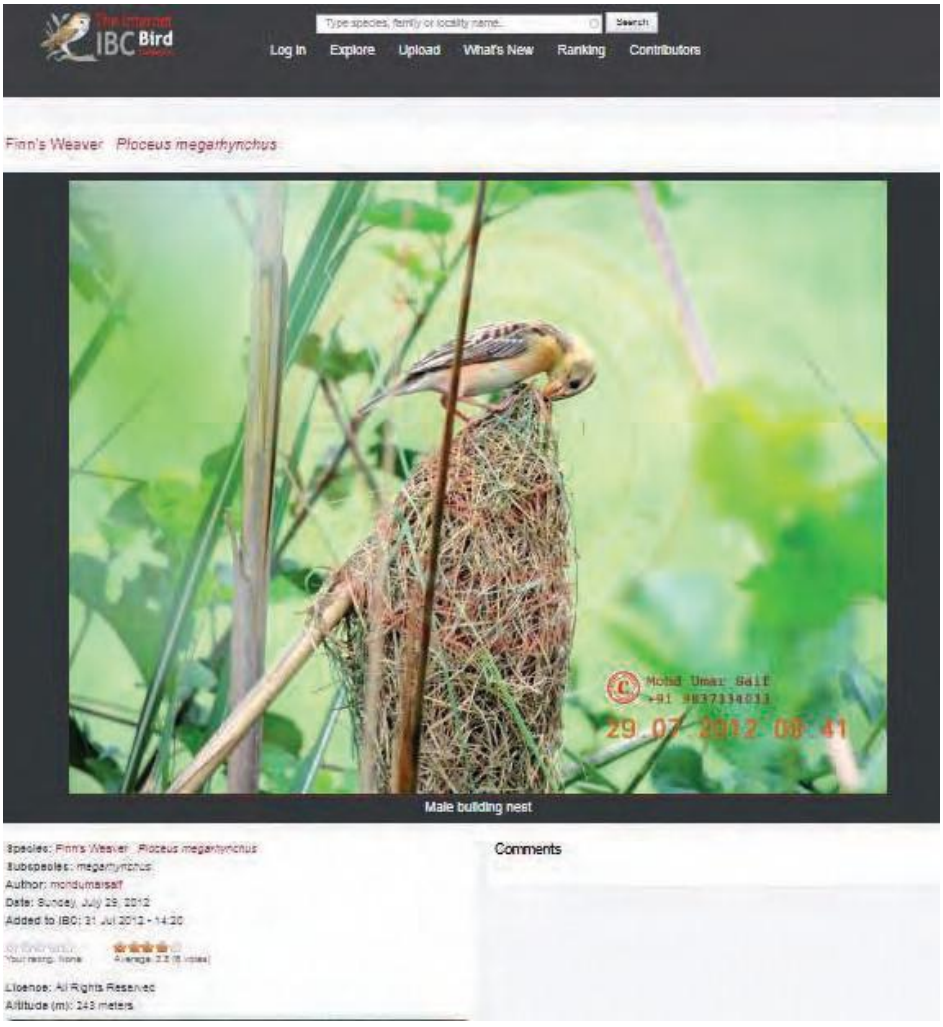
This 'confusion' in rump colour calls for more verification through either close-up photos or examination of Eastern Finn's Weaver specimens from the Assam sub-population throughout their breeding season – a need clearly felt while writing this report. From just a few pictures of both the races, it is difficult to comment on the colour differences in the rump and undertail coverts. From recent pictures of the bird species from Kaziranga and Udham Singh Nagar, the colour differences in the two subspecies are hardly visible. The female belly colour difference by earlier workers also needs to be verified with more field photographs in the future.

Finn's Weaver male acquiring breeding plumage

Unless both subspecies are studied in captivity for two breeding seasons, these comparative sub-species' difference may look complex. What needs to be really observed is the 'pre-nuptial moult (in-between phase)' plumage difference during the 'transformation month'. Which means in one year period, Finn's Weaver moults twice: once while attaining nuptial plumage from eclipse plumage in April–May and then while transforming back to eclipse from nuptial in October–November. During the two months of intermediate moulting phase over a year, the bird species of both sexes and subspecies may have various degrees of yellow or brown on their rumps, undertail coverts and belly. This personal observation may be purely an assumption that can only be fine-tuned or predicted with detailed studies with captured specimens of both subspecies.

In *A Photographic Field Guide to the Birds of India, Pakistan, Nepal, Bhutan, Sri Lanka and Bangladesh* (Grewal et al. 2016), the picture depicting Finn's Weaver female seems to be that of an 'Eastern' Baya female. The same picture is also hosted on OBC image gallery, clicked on June 1, 2008 at Joka, Kolkata. If indeed it is a Finn's Weaver female, it should have acquired some yellow by June. It cannot also be an adult weaver in non-breeding plumage since by June the Finn's Weaver male and female both acquire most of their nuptial plumage colouration. Glancing through the available photos of Finn's Weaver on various natural history websites, one inaccuracy that becomes apparent is identification of Baya Weaver (in pre-nuptial moult) that is acquiring yellow plumage as Finn's Weaver (Bhargava 2000). For instance, looking at the Finn's Weaver profile in the online version of the *Handbook of the Birds of the World* (www.hbw.com/species/finns-weaver-ploceus-megarhynchus, viewed on October 3, 2017) there is a single photo given in their image gallery. The "supposedly" *P. m. megarhynchus* photo taken in Uttar Pradesh is of Baya Weaver. Similarly some more pictures hosted on the OBC image gallery as *P.m. salimalii* need confirmation.

'Eastern' Baya female or Eastern Finn's Weaver female? Picture taken at Joka wetland in Kolkata by Kshounish Sankar Ray referred to as Eastern Finn's Weaver female




Baya Weaver depicted as Finn's Weaver in the Internet Bird Collection website. Picture taken near Samli, Uttar Pradesh by Mohd Umar Saif.

The photographer, Mohd Umar Saif, is a researcher with the Himalayan Institute for Environment, Ecology and Development (HIFEED). When I met him in Samli in July 2017, Saif informed me that he had worked on a project on the Breeding Ecology of Finn's Weaver from April 2011 to March 2014 with an aim to understand the breeding behaviour of Finn's Weaver and its conservation. From his published photograph it was evident that he had wrongly identified Baya Weaver as Finn's Weaver all through his project period. The nest structure and colouration of the bird in the photograph clearly suggests that it is a Baya Weaver. Saif's project progress report in HIFEED's annual report 2012–2013 mentions that "... high definition video recorded more than 10,000 hours. Bird calls and songs recorded for spectrographic analysis. June to September birds are engaged in nesting activity, 400 individual activity recorded, sadly all females refused mating and not a single egg found in nests."

These instances of misidentification clearly uphold the need of the hour to correct previous anomalies in the studies concerning the little-known and fast-vanishing bird species.

# ECOLOGY

**Habitat**

Finn's Weaver is a bird of pure terai country with marshes and strands of tall wet grasses (particularly *Saccharum bengalense, Saccharum arundinaceum*, *Phragmites karka, Arundo donax* which are seasonally inundated), sparsely dotted with isolated trees used for nesting such as Silk Cotton (Semal) *Bombax ceiba (*or *Salmalia malabarica)* and Shisham *Dalbergia sissoo*, and occasionally interspersed with patches of rice and sugarcane fields (Ali and Crook 1959; Bhargava 2000).

In Nepal terai, the Finn's Weaver occurs in similar habitat; it has been found in grasslands dominated by *Saccharum* and *Phragmites karka* with scattered trees and termitaria (Baral 1998a). Finn's Weaver also nests in reeds like *Phragmites* and reed-mace *Typha* in wetlands (Ali and Crook 1959).

BirdLife International (2001) mentions that in northeast India, breeding colonies have been found in "'a vast area of grass more or less intermixed with scrub' (Baker 1922–1930), 'thatch land [=grassland] with small trees' (Inglis 1951–1969), nesting in scattered *Erythrina* trees growing in a grassy area (Abdulali 1961), and nesting in reed marshes (Saha 1967, Ambedkar 1968)."

A typical habitat of Finn's Weaver in Udham Singh Nagar, Uttarakhand

**Flocking, Food and Feeding**

Ali and Crook (1959) write "The species is at all time gregarious while moving in flocks about the grassland, feeding in company and coming to the colonies and departments there from in well integrated groups". They also observed that Finn's Weaver would often descend on cart-tracks and even on asphalted roads to pick up grains spilt during transport. On the ground, Finn's Weavers walk efficiently well; moving at a great speed, they seem as if they are hopping. Since 2004, I have occasionally watched this behavior around Rudrapur. Presently, there is so much construction and vehicular movement around Sálim Ali's survey sites that this behavior is almost impossible to record around Rudrapur.

A flock of male Finn's Weaver in search of a nesting tree

This species feeds primarily on rice grain, small seeds and insects (Ali and Ripley 1983). They are often seen foraging in ploughed fields or semi-ripe paddy. Finn's Weaver is particularly fond of Hemp *Cannabis sativa* seeds. In distribution areas of Finn's Weaver in Uttar Pradesh and Uttarakhand, I have observed mixed-sex groups regularly feeding in large stands of Hemp during summer (Bhargava 2000). During my repeated surveys, I saw that the Finn's and other weavers are especially fond of ripening grass seeds *Echinochloa colona* and *Echinochloa frumentacea* growing as weed in rice fields.

I observed a very interesting feeding behavior during my field surveys in Udham Singh Nagar: in large rice fields spread over acres during the feeding hours in the morning and evening, the Finn's Weaver would watch flock movements of Scaly-breasted Munia *Lonchura punctulata*, an associate species, from their nesting colonies or roost sites. Once the flocks of munias started circling and descending to feed on ripening grass seeds spread patchily

Finn's Weaver female feeding on Paddy in Udham Singh Nagar, Uttarakhand

Finn's Weaver males feeding on Hemp. Picture taken in Harewali Dam, Uttar Pradesh in 2017

in between paddy fields, Finn's Weavers would collectively reach such patches and feed rapaciously on grass pinnacle, irritably chasing the near-by munias one by one. They also sometimes moved with a huge flock of other weaver species. I have also observed Finn's Weaver feeding on Pearl Millet *Pennisetum glaucam* and Maize *Zea mays,* and found them more often feeding on insects on the millet or Maize spike rather than the grain. The parents were often seen returning from such grain cultivated patches to their nests with insects in their beak (Bhargava 2000).

A flock of Scaly-breasted Munia *Lonchura punctulata*, an associate species of Finn's Weaver, foraging on weed plants in a Paddy field

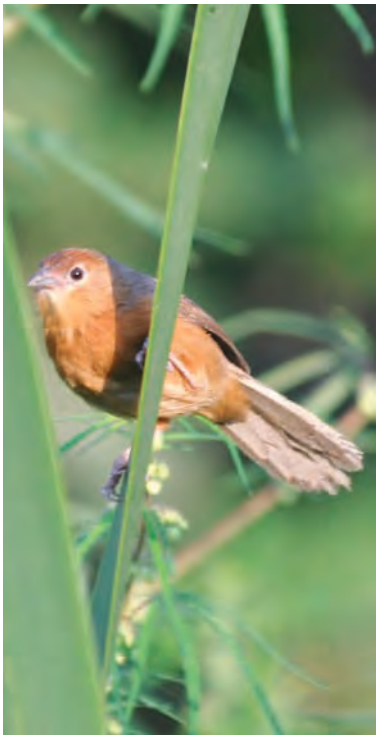
Finn's Weavers are very fond of swarming termites

The bird species also feeds on invertebrates from grasslands and sugarcane fields (Ali and Ripley 1983). During the early rainy season, especially on a 'clear day' after rains, I observed Finn's Weaver voraciously feasting on swarming termites emerging from hard ground and also on air.

**Associate species of Finn's Weaver**

Chestnut-capped Babbler
*Timalia pileata*

Yellow-bellied Prinia
*Prinia flaviventris*



Tawny-bellied Babbler
*Dumetia hyperythra*

A small abandoned nesting colony of Finn's Weaver on Silk Cotton Tree

**Breeding Season and Colony/ Nesting sites**

Ali and Crook (1959) and Ambedkar (1968) reported the breeding season of Finn's Weaver as occurring between May and September. Based on his three years of observations during the breeding seasons of 1961, 1992 and 1963 in Kumaon, Ambedkar (1968) emphasised that Finn's Weaver has two distinct breeding periods: the first from May to middle of July, the second in August and September. His records showed that in the first breeding period, the birds built their nest in tree-tops prior to the monsoon, and in the second, low down in *Typha* reed beds standing in water, after the rains have properly set in.

In the Kumaon terai, Ali and Crook (1959) recorded adults feeding the young by July 12 and suggested that breeding probably started after heavy rains in May. Ambedkar (1968), at a colony at Rudrapur, recorded that most eggs hatched between 18 and 24 August, 1961. He also recorded feeding of the young on September 3, 1961. Saha (1967) recorded complete nests and nests under construction at a colony in West Bengal on 17 July and at a second colony three weeks later.

In the early breeding season, the birds nest in trees (Ali and Crook 1959; Saha 1967; Bhargava 2000). Nesting has been recorded on certain tree species that are associated with grasslands, sometimes above areas flooded during the monsoon at about 8–20 m off the ground (Ali and Crook 1959; Bhargava 2000). Ali and Crook (1959) observed that colonies may occur in loose groups with wide areas of open country between them. While most colonies are usually away from human habitation, Ambedkar (1968) found a single breeding colony in the centre of a village in 1961. I also recorded a breeding colony inside GB Pant University campus during 2003.

The most prominently and regularly used nesting trees include Silk Cotton *Bombax ceiba* (Ali and Crook 1959, Barua and Sharma 1999, Bhargava 2000) and Shisham *Dalbergia sissoo* (Ali and Crook 1959, Bhargava 2000). The preference for smaller Silk Cotton Trees is perhaps because they provide the nesting birds some degree of protection from terrestrial predators by virtue of their spiny trunks and branches. In very few cases, other nesting trees include Banayan *Ficus bengalensis* (Ambedkar 1968), *Erythrina* (Abdulali 1961), Mango *Mangifera indica*, Flame of the Forest *Butea monosperma* (BirdLife 2001, pers. observation in Shuklaphanta, Nepal), Udal *Sterculia villosa* (Malvika Onial pers comm. 2017).

Small Silk Cotton Trees are most preferred by Finn's Weaver for nesting

Ali and Crook (1959) clearly mention "many of the colonies were situated near water in land which after heavy rain is mostly flooded." My initial surveys between the years 1997 to 1999 in Udham Singh Nagar indicated this common feature – a water inlet underneath every tree nesting colony of Finn's Weaver (Bhargava 2000). During a one-day visit to Shuklaphanta in July 2017, I saw three nesting colonies on trees with a water pond next to it. My recent surveys in the earlier nesting sites in Udham Singh Nagar with a small number of last remaining trees among degraded grassland had no water sources underneath. Although most of these areas are now congested with fast-growing human habitations, the lack of water source seems to be the main deterrent for the birds to nest in previously used nesting sites.

A nesting colony of Finn's Weaver on Shisham Tree

Habitat destruction in many previous Finn's Weaver nesting sites has reduced this species to a severely fragmented small population

Ever-expanding agriculture has reclaimed many grasslands in the terai habitat, once home to Finn's Weaver

A water inlet near a nesting colony provides an ideal breeding habitat for Finn's Weaver

During my multiple observations over the last six years on the western population breeding around Rudrapur, I have realised that although breeding of Finn's Weavers may start pre-monsoon on tree-tops during May, the nesting sites selected by the handful of remaining Finn's Weaver are now certainly around irrigated lands, unlike two decades back when nesting was mostly dependent on natural water sources including large or small nalahs in the midst of grass patches with trees.

Artificial irrigation water for Paddy may act as water source to nesting weaver birds

The farmers in most cultivation areas around Rudarpur told me that they traditionally harvested a single paddy crop irrigated with rain water or occasionally two, with good prolonged rains. In the current situation, large cultivation lands are increasingly leased on contract /rent for three or more years to 'highly mechanized and commercialised agriculturists' from other states for whom three yields of paddy crops with really good artificial irrigation is a common element. My pre-monsoon observations on a small nesting Finn's Weaver population on tree-tops for a long period suggests that the nesting dates in May are now synchronised with rice sowing exercise aided with tube well irrigation around Rudrapur.

Paddy crop is now cultivated three times a year through artificial irrigation in most Finn's Weaver habitats in Udham Singh Nagar

Apart from the nesting tree with water (flowing or stored) beneath, there are several other criteria for Finn's Weaver to choose a nesting location. The presence of grasses for nest building is absolutely necessary without which they cannot nest even if there is a preferred tree, water source and paddy cultivation. This means birds actually narrowed in on sites centered around extensive paddy cultivation but more importantly, sites with small wet grasslands that would facilitate roosting, escaping predation and easy access to grasses for nest building. Small strands of *Saccharum* grasses around crop fields may fulfill some nest building requirement but the weaver needs patches of tall wet grasslands in nesting vicinity mainly for roosting in the night and cover during the day. The presence of Hemp *Cannabis sativa* along the water inlet, with crop field of Maize and millet is an ideal situation. Sugarcane plantation may be a substitute for wild grasses is some cases.

Currently, wet grasslands in most non-protected are either highly exploited or are extremely patchy, making them unsuitable for nesting weaver birds

The water source beneath the nest site plays a major role as it serves several purposes. Since the pre-monsoon breeding seasons occur in the hottest and driest season in north India, the water resource provides drinking water for the birds throughout the day. After 10 in the morning until 4 in the evening, the exhausted breeding males and females would frequently come down for a minute or two to cool themselves by relaxing on the soggy sides of the water inlet. Another important factor for water requirement beneath is the assured availability of wet mud blobs that the birds carry to their nest in their beak for use in nest making.

My observations indicate that in sites selected with excellent irrigation among rice fields, nest making may start from early May, once birds have finalised a nesting tree with water supply underneath. By the third week of May, the nests are complete and with eggs. Hatching occurs in the first week or second week of June. By first or second week of July the chicks leave the nest.

However, during my earlier observations between 1997 and 2003, when there was no artificial water source beneath the nesting trees, I observed that the birds would wait for the first shower of rain and final tree selection would take place by June 25–30 depending on that year's monsoon. The breeding season would then be late by a month compared to artificial watering system targeting three-crop yield.

Hemp and tall wet grasses (an ideal Finn's Weaver habitat) are regularly weeded out by villagers or cleared for reducing mosquitoes or other land use

Black Drongo and Finn's Weaver communally nesting in a Shisham tree

There is a preference by Finn's Weaver to build their nest colonies on trees that already have a breeding pair of Black Drongo *Dicrurus macrocerus*. The drongos are extremely aware of any potential predators such as raptors and crows, which they aggressively drove away (Ali and Crook 1959). Ambedkar (1968) also recorded nesting colony of Finn's Weaver on a Banyan tree in Sultanpur village trees containing a breeding pair of Black Drongos. During most of my observations over the years, I too have observed the nesting of a pair of Black Drongo in most of the nesting trees (Bhargava 2000).

During the second breeding season post monsoon, Finn's Weaver nests in the reed beds. Ambedkar (1968) recorded a breeding colony in a patch of *Typha* in Rudrapur that had nests affixed to dead, dry stems standing in knee-deep

Finn's Weaver prefer trees with nesting Black Drongo, also locally known as *Kotwal* (policeman), as the species is extremely alert towards potential predators such as crows and Shikra

water. Saha (1967) recorded nests that were 40–90 cm above water level in reeds, standing in one metre of water at two fishponds at north Salt Lake, near Kolkata. Ali and Crook (1959) also observed the nest building activity of Finn's Weaver in reeds and rushes over standing water, "but since most of the birds concerned were first year juvenile males and these reed beds were also roost sites, it is likely the activity was no more than doodling." They noted that the nests they observed were "never complete, and may simply be the result of excessive building energy having no certain connection with definite breeding". They interpreted that while nests are certainly sometimes built in reeds it is not yet certain to what extent such sites are actually used in breeding.

During my surveys beginning 1997 onwards, 34 years after Ambedkar's study and 39 years after Sálim Ali's re-discovery, I failed to locate any breeding colony in *Typha* beds post monsoon mostly due to reclamation of wetlands hosting *Typha* and *Phragmites* grasslands or fish ponds around Rudarpur (Bhargava 2000, 2004). With acute scarcity of natural wetlands hosting wet grasslands around Rudrapur, the second breeding season may now be around larger dams holding water or seepages hosting *Typha* reeds spread over Udham Singh Nagar district.

In August 2016, some experienced bird trappers informed about an emerging Finn's Weaver colony in *Typha* bed near a dam in Bijnor district of Uttar Pradesh. However, within less than a week's time since I received this information, the colony was submerged under barrage water as the dam gates were opened to release excess rain water.

In Assam, the eastern population has been recorded breeding on *Bombax ceiba* trees in Kaziranga National Park (Barua and Sharma 1999), Manas National Park (Rahmani et al. 1987), Orang National Park (Talukdar and Sharma 1995; Choudhury 2000) and Pobitara Wildlife Sanctuary (Mirgen Barua *in litt.* 2017), but there are no recent mentions of eastern population breeding in reeds in the above locations between July and September. As the national parks and sanctuaries in Assam/ India are closed during monsoon, the probability of Finn's Weaver breeding in reeds may actually remain unnoticed and unreported.

Harewali Dam in Uttar Pradesh, a new site discovered for the Finn's Weaver in August 2016 by BNHS based on information from former bird trappers

**Nest structure**

Unlike the three Indian weaver species that normally have nest suspended or slung from branches or fine twigs (*P. phillippinus*) or from grasses or rushes (*P. benghalensis* and *P. manyar*) with vertical tubular entrances opening below, the nests of Finn's Weaver are large globular structures, untidily but firmly woven with long strips of coarse grass, and the entrance is at one side near the top. Often a porch-like projection surrounds the entrance forming a small papilla as often seen in a munia's nest (Ali and Crook 1959).

Finn's Weaver nest has entrance on one side near the top, unlike other Indian weaver species

Observations made in Kumaon terai reveal that at the onset of the breeding season, a flock of males first arrive and select a tree. They then generally strip leaves off all twigs near their nests, denuding the upper canopies of trees, thus making the nest building activity easily visible. The females, just prior to the breeding season, are usually seen in separate flocks of their own sex.

The breeding Finn's Weaver males, after selecting a nesting tree and before starting to make their nest, generally strip leaves off all twigs near their nest site, denuding the canopies of trees, making the nest building activity easily visible

It takes around a week for a flock of Finn's Weaver males to make a nesting colony, although the main nest is made in three to four days by a single male bird. The complete nest follows the initial ring stage with pouch, followed by the basic framework. Ambedkar (1968) further elaborates that the nest structures are firmly knotted to upright twigs which are often worked into a fabric and also support the body from below. Ali and Crook (1959) mention: "As the framework develops, the strands are pushed downwards and twined around supports below the building position and also to the lower rim of the initial ring itself. The chamber thus begins to bulge below the original ring ... in a rough kidney shape. As the whole structure is being fitted throughout to supporting twigs, its shape is normally somewhat irregular conforming to the disposition of the various twigs bound to the frame. Further to these movements, wet mud blobs are carried to the nest in the beak and fixed either to the sides of the fabric of the initial ring or amongst the various strands of the chamber walls." Ambedkar (1968) also recorded that the nest structures in Typha reeds are firmly knotted to upright twigs which are often worked into a fabric and also support the body from below. Ambedkar (1968) mentions that the function of adding mud-blobs within the nest remains unknown.

The females do not help the males at this stage, but their presence can be detected from the display of males (Ambedkar 1968). Ali and Crook (1959) observed the female Finn's Weaver "titivating and shaping the nest very actively during their 'inspection' visits to the colony". They mention that often a single female would give several nests this treatment.

A very interesting feature of Finn's Weaver nests is that a single male may make many composite nest units being linked together with connecting walls

Finn's Weaver nesting colony under construction

A typical Finn's Weaver colony looks like a cluster of honeycombs on a bare tree top

appearing as partial fusion of each individual unit with the other. The nest units are not inter-connected, each one being quite independent. The nests are entirely lined inside with *Typha* floss rather than just on the floor of the nest, which is more usual in Asian weavers (Ali and Crook 1959, Saha 1967, Ambedkar 1968). The Finn's Weaver nest is distinctly different from other weaver species in the Indian subcontinent although it shares certain similarities with the nest of the Asian Golden Weaver *Ploceus hypoxanthus* (Crook 1963).

Nests in reed beds are of a similar construction, loosely "knitted round a bunch of reed stems" and "cylindrical in shape, the exterior presenting various loops and sharp angles of strips of leaves" (Saha 1967, BirdLife International 2001). The nesting of Finn's Weaver in reed beds was first discovered by V.C. Ambedkar in the Kumaon terai. He observed in stands of *Typha*, the nests were lined with material from Typha inflorescences, and males often constructed second or third nest attached to the first (Ambedkar 1968). Saha (1967) reported just as the trees in the Kumaon terai were stripped of leaves, the reed bed surrounding a colony at Salt Lake were "practically devoid of leaves due to their consumption in nest-construction".

Saha (1967) remarked that the nests were so loosely constructed that gaps in the matrix sometimes allowed eggs to drop from the nests, but this was probably an unusual circumstance related to the "almost continuous heavy rains in the area for more than three days". In the Bhutan duars, nests were reported as untidy balls of grass strips, loosely and carelessly put together with no lining and fixed to the stems of grass (BirdLife international 2001) and were never found in trees.

**Polygamy, pair formation, clutch, incubation and success**

The breeding biology of Finn's Weaver resembles that of Baya Weaver. According to Ali and Crook's (1959) observations, males are successively polygamous, mating with one to four females which they concluded by "an average of 2.8 females nest to a male." Once a female selects a nest and starts to lay eggs, the male seeks another female. It would be interesting to study this behaviour with colour-marked birds. Clutch size generally varies from two to four white eggs (Ali and Crook 1959, Saha 1967) with even five egg clutch size occasionally recorded in Rudrapur (Ambedkar 1968).

As with other Indian weavers, incubation is done by the female only. It usually begins with the first egg and typically lasts 14–15 days, although periods of 13 and 16 days have also been recorded (Ambedkar 1968). Night brooding is carried by the females alone, entering the nest before sunset. Females brood the chicks for the first three or four nights after hatching but rarely thereafter (Ambedkar 1968). The young are fed mostly on insects collected by the female while the male guards the nest from predators and rivals, although in one case a male was noted collecting food from the returning female and passing it to the nestlings (Ambedkar 1968). The young remain in the nest for 12–17 days only (Ambedkar 1968). According to studies by Ambedkar (1968) in Rudrapur, out of the 79 eggs laid in one colony, 55 (69.6%) hatched and 42 young fledged (53.1%). He concludes that this high success was attributed to a safe colony, good food supply and short breeding cycle. In today's situation, this success rate is almost negligible due to unavailability of large reeds beds or escape from nesting predation by crow on tree-tops nesting sites.

**Call**

The call of Finn's Weaver is louder, harsher, and more 'nutty" than that of Baya Weaver (Ali and Crook 1959). The male song often chorused, may be rendered as *twit-twit-tit-t-t-t-t-t-trrrrr wheeze whee wee we*, sometimes followed by a high seep, seep. Calls include a *skeer, skeer, skeer* or *tseer, tseer,* in aggression. A high pitched alarm call, in flight a harsh *twit, twit,* and a twittering on take-off or landing (Rasmussen and Anderton 2012, Ali and Ripley 1983, Ali and Crook 1959).

**Movements**

No migration, local movement or post breeding dispersal has been described for Finn's Weaver. In Nepal, the species has been described as erratic and it may be a summer migrant there (Baral 1998a, BirdLife International 2001).

# THE PAST AND PRESENT DISTRIBUTION OF FINN'S WEAVER

As mentioned in the Introduction, Finn's Weaver is a resident, endemic species, found very locally in the terai belt of India and Nepal from the plains to 1,300 m (BirdLife International 2001). In India, the species occupies a disjunct distribution in the terai, with one major population of nominate subspecies, Finn's Weaver *Ploceus megarhynchus megarhynchus* Hume, in Uttar Pradesh and Uttarakhand and the other subspecies, Eastern Finn's Weaver *Ploceus megarhynchus salimalii* Abdulali, in West Bengal and Assam.

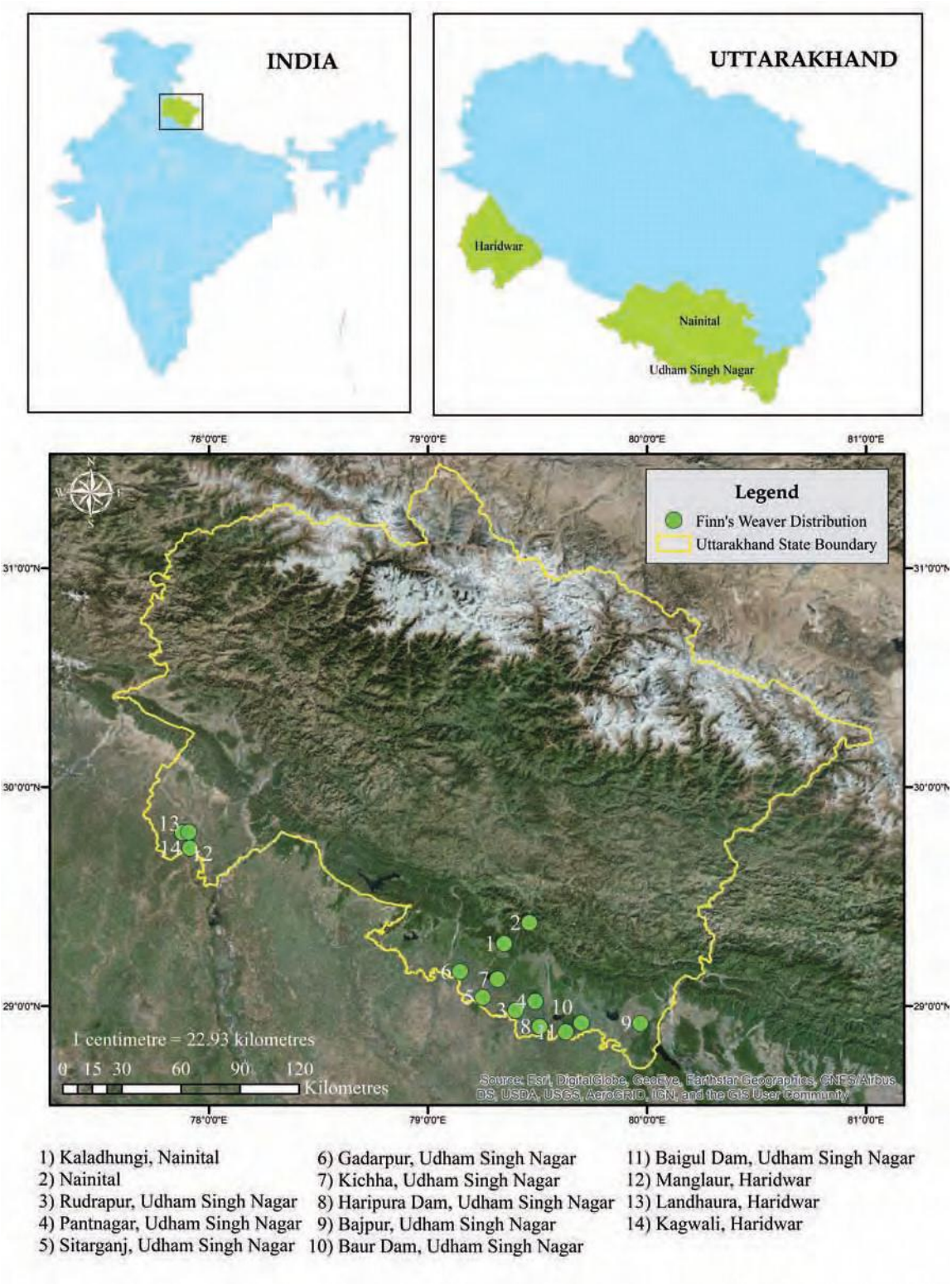
In this status report, I discuss state- and district-wise past and present sightings in detail. The updates on these locations include the absence or presence of the species and also the habitat presence or absence. New or missed out locations are included in this chapter based on my surveys from 1997 onwards and communications from experienced birders in the mentioned areas/states. Literature review confirms that there is barely any 'recent' literature or field data available on this species, especially from India.

Before I go on to the distribution of Finn's Weaver in India, it is important to mention the few political changes in the Indian states and districts which are important to understand the past and present distribution of Finn's Weaver in northern India.

On November 9, 2000, the Uttar Pradesh state was divided in two states: Uttar Pradesh and Uttarakhand. The new state Uttarakhand (initially called Uttaranchal) was India's 27th state created from the Himalayan and adjoining northwestern districts of Uttar Pradesh. The capital of Uttarakhand is Dehradun.

In 2000, based on my studies in Udham Singh Nagar (earlier under Uttar Pradesh, now included in Uttarakhand) between 1997 and 1999, I published a paper titled "A preliminary survey of the western population of Finn's Weaver in Kumaon Terai, Uttar Pradesh, Northern India (Bhargava 2000). In 2001, BirdLife International brought out a book titled *Threatened Birds of Asia*. Both these publications refer to sightings in the undivided Uttar Pradesh. In the present report, sightings are mentioned first time according to states after the segregation of Uttar Pradesh into Uttarakhand and Uttar Pradesh.

## Distribution of Finn's Weaver across Uttarakhand




1) Kaladhungi, Nainital
2) Nainital
3) Rudrapur, Udham Singh Nagar
4) Pantnagar, Udham Singh Nagar
5) Sitarganj, Udham Singh Nagar
6) Gadarpur, Udham Singh Nagar
7) Kichha, Udham Singh Nagar
8) Haripura Dam, Udham Singh Nagar
9) Bajpur, Udham Singh Nagar
10) Baur Dam, Udham Singh Nagar
11) Baigul Dam, Udham Singh Nagar
12) Manglaur, Haridwar
13) Landhaura, Haridwar
14) Kagwali, Haridwar

# DISTRIBUTION OF FINN'S WEAVER *PLOCEUS MEGARHYNCHUS MEGARHYNCHUS* HUME

## UTTARAKHAND

Out of the 13 districts of Uttarakhand, Finn's Weaver is known from three districts: Nainital, Udham Singh Nagar and Haridwar.

### Nainital

In the original paragraph written by Hume on Finn's Weaver (Hume 1869), he mentions only 'Terai' from where he got his foremost two specimens in December 1866. In other literature, these specimens are mentioned from Kaladhungi (Type locality), below Nainital. These specimens are now housed in the British Museum of Natural History (BirdLife International 2001).

Kaladhungi is a town and a nagar panchayat in Nainital district. As the present Udham Singh Nagar district was initially part of Nainital district and actually below Nainital, the specimens from Kaladhungi are undisputedly and 'simply' from the former Nainital district. Previous searches by Dr Sálim Ali show no Finn's Weaver from Kaladhungi. In June 2002, I visited this place and did not see any Finn's Weaver or mico-level habitat for this bird. Also, there were no Finn's Weaver or its habitat in the district headquarter Nainital, which is a popular hill station. From this, we can conclude that Finn's Weaver is only hypothetically known to occur in Nainital.

### Udham Singh Nagar

As mentioned earlier, the new state of Uttarakhand is composed of 13 districts and is broadly divided into two divisions, Garhwal and Kumaon. Udham Singh Nagar (USN) located in the terai region is a district in Uttarakhand state and falls under the Kumaon division.

USN was previously part of Nainital district, from which it was segregated in 1995. In some earlier publications mentioned, the origin of Finn's Weaver specimens in trade was told to be from Nainital, which technically stands correct as USN was formally part of Nainital district.

USN is bounded by Nainital district on the north, Uttar Pradesh state on the west and south side, and shares international boundary with Nepal on the east. USN district consists of seven tehsils or blocks namely: Bajpur, Gadarpur, Jaspur, Kashipur, Kichha, Khatima and Sitarganj.

#### Rudrapur

The best known and studied breeding population of Finn's Weaver in the world is known from Rudrapur, the district headquarters of USN. Ambedkar

(1968) selected Rudrapur as the base of his study "as the town stands in the midst of terai". He visited various villages "all situated within a radius of fifteen miles of Rudrapur". In 1961, between July 1 to August 20, he found 21 breeding colonies of Finn's Weaver on trees, and the total number of nests counted were about 800. Ambedkar also mentions about "one extraordinary nesting colony observed right in the centre of Sultanpur village, about six miles from Rudrapur on the Rudrapur-Ghadarpur road seen on July 14, 1961."

In 1962, end of July, he located an active colony in reed bed half an acre in the area adjacent to a fish culture pond about one mile from Rudrapur. He observed similar colonies in the vicinity of Rudrapur in 1962 and 1963, in reeds beds once the rains had set in.

Ali and Crook (1959) recorded two colonies on trees found 1.5 and 7 km respectively from Rudrapur on the Bazpur road. They also mention colonies extending a mile north of Rudrapur on the Nainital Road.

Almost 40 years after Ali and Crook's (1959) encounter with the Finn's Weaver around Rudrapur, and subsequent studies on the bird species between 1961 to 1963 (Ambedkar 1968), I surveyed all the areas around Rudrapur, recorded and visited by the earlier workers (Bhargava 2000, 2001, 2004). Hardly any information is available about the bird species from these areas after 1963, except for a record of 70 Finn's Weaver seen around Rudrapur in September 1984 by B F King, an international ornithologist (BirdLife International 2001).

A look at the geography of Rudrapur shows the four directional connectivity of this place. It lies in the centre of NH 87 starting from Rampur and going up to Nainital. Further, NH 74, starting from Bareilly and going up to Haridwar, passes through Rudrapur, connecting major tehsils of Udham Singh Nagar district. The major former distribution of Finn's Weaver in the north actually rests along the two highways since the birds were previously found between Haridwar and Bareilly and Rampur and Nainital.

I conducted my first preliminary surveys in USN between 1997 and 1999, and located a population of about 110 Finn's Weaver and 100 nests during their breeding season mainly around Rudrapur and other two tehsils of USN district in 1999 (Bhargava 2000, 2001).

During my first short survey in the last week of August 1997 around Rudrapur, I was unable to locate any bird or nests around Rudrapur. On my second visit to Rudrapur from July 28 to August 1, 1998, I was able to find an abandoned nesting colony of 15–20 nests on *Bombax ceiba* tree on the Rudrapur-Nainital Road.

During my third visit to USN, between June 24 to July 2, 1999, I located three breeding colonies with a total of 70–80 birds and 70 nests. Two colonies were about three km on the main Rudrapur-Nainital road, and another 30 km from the first two sites. This area consisted of totally degraded grassland. Nesting activity was in full swing with more than two-third of the nests completed. On June 30 at 11.55 a.m., this colony was completely raided by six crows, because of which the birds deserted the site (Bhargava 2000).

I revisited these sites after a gap of two years and conducted a detailed search for this species around Rudrapur and other districts between June 3 to 8, 2002 (Bhargava 2004). On the Rudrapur-Nainital road, I successfully located four nesting colonies with a total of 116 nests and a minimum of 119 birds, all within a 15 km distance from Rudrapur. Three colonies were located at a farthest distance of 5 km and another colony just 2 km from Rudrapur on Rudrapur-Nainital Highway. All the nesting colonies were on *Bombax ceiba* trees with heights ranging between 8–30 metres.

Extensive Finn's Weaver nesting colonies around Rudrapur were not an uncommon sight at least two decades ago

Nesting trees such as this in Udham Singh Nagar were hardly seen during our extensive search in the last five years

The nearest colony was a kilometre from Rudrapur township, and was less than 500 m from the roadside, having 54 fully made nests. A minimum of 48 birds with at least 10 females were recorded here. Breeding was in full swing, evident from several birds bringing food from all directions. This was probably the best site I had seen during all my visits around Rudrapur. In 1984, B.F. King had counted 70 birds in this location (BirdLife International 2001), while Ali and Crook (1959) and Ambedkar (1968) had recorded 200–800 nests on this road.

In the last decade, most nesting Finn's Weaver sites around Rudrapur have transformed into human-dominated sites

The second colony had 29 completed nests and two half-made ones. Nearly 40 Finn's Weaver with minimum nine females were recorded during my observations. Breeding was in full swing and chick calls were prominently heard in this colony which was located on a mere 6–8 m small *Bombax ceiba* tree. There were prominent water outlets beneath the trees.

At the third location in a tree of similar height, there were 17 semi-made nests with only one bird present and no breeding. The tree had no Black Drongo nest, which was otherwise present at the other two nesting colonies. The colony seemed like it had been raided by predators such as crows or abandoned after breeding, which was unlikely since breeding was on in the other locations. The fourth colony on Rudrapur-Pantnagar road had 14 nests and a minimum of 30 Finn's Weaver along with a nesting pair of Black Drongo.

Although a few trees exist in some locations, there is no grass or micro-habitat available for Finn's Weaver to nest

I also visited the reed bed area near Rudrapur adjacent to a fish culture pond on Rudrapur-Phoolbagh road where Ambedkar (1968) had observed nesting of Finn's Weaver in reed beds. I could not locate any Finn's Weaver as most of this area had changed, with only dormant fish ponds seen everywhere. A few other weaver birds were recorded breeding on *Acacia* and *Saccharum* in spite of the area being thickly populated by humans (Bhargava 2000; 2004).

Three years after my visit in 2002, on June 19, 2005, P.M. Laad, a retired IFS officer and a keen photographer, photo-documented the Finn's Weaver breeding around Rudrapur. The same areas were later visited by Malvika Onial from Wildlife Institute of India in 2006 and 2007. At a few locations on Rudrapur-Pantnagar road, Onial observed flocks varying in numbers from 20 to 50 from April to July 2006. She observed nests at various stages of construction, which numbered over 160 in four different colonies made on *Bombax ceiba*. She also had many records of smaller flocks in the same region seen in the winter of 2006 and 2007 (Rahmani and Mohan 2013).

After my last visit to USN in 2002 for a detailed survey, I took up short surveys in Rudrapur and other USN blocks in the Finn's Weaver breeding seasons of 2012, 2013, 2014, 2016 and 2017. During my first preliminary survey in 1999, I had seen nearly 100 birds, with little effort and experience (Bhargava 2000; 2001). In 2002, my total count was a total of 220 Finn's Weaver in USN district (Bhargava 2004). Among the total birds sighted, roughly two-third were males;

Most habitats in Udham Singh Nagar are commercial hubs for various industries including paper and cardboard industries

hence the total population in this particular district could actually be more, with females around that may remain unaccounted. Also a total of 268 nests were recorded in 14 breeding colonies during this survey.

From June 29 to July 5, 2012, I recorded a maximum of 30 Finn's Weaver in two areas between Rudrapur and Pantnagar. Then again in between July 18 to 22, 2013, I recorded a maximum of 13 birds again between Rudrapur–Pantnagar–Lalkua circuit, but could not locate any active breeding colony. In between May 27, 2014 and June15, 2014, I recorded a maximum of 25 birds, including a breeding colony of 12–15 birds after extensive search.

I visited USN between June 9–14, 2016 to the survey areas around Rudrapur and surrounding block, where I had recorded this species in previous years, which resulted in a sighting of 36 Finn's Weaver in USN district. The 36 include one breeding colony of 25 birds with 17 nests on a Shisham tree on Rudrapur-Pantnagar road, seen on June 9, 2016, and another deserted colony on *Bombax ceiba* with six nests and 10–12 birds in the same vicinity.

My last survey was during the first week of June 2017, around Rudrapur and other blocks of USN. I could locate only a single nesting colony on June 4, at about 16.50 hrs (I had recorded the same colony in 2016) with about eight completed nests and four more under construction. A total of not less than 20 Finn's Weaver were present around this colony. In next twenty minutes, I witnessed the whole colony was raided by eight Jungle Crows, and they consumed at least 8–10 eggs and four chicks. In the next two days, I observed that no birds came back to the colony.

Only one nesting site was observed in a farm near Rudrapur in the last five breeding seasons. Each time the nesting resulted in failure owing to crow predation

### Pantnagar

Pantnagar is a town in USN district, famous for being the first to have an agricultural university of India, the G.B. Pant University of Agriculture and Technology established in 1960. At a distance of only 12.5 km from Rudrapur, Pantnagar University was the most ideal base for my study throughout.

During my several visits on June 4, 2002, I recorded one Finn's Weaver breeding colony inside the University campus towards the Nagla gate. I recorded a total of 25 birds (only three females) and 19 half built nests. The

Most small grassland patches are now dominated by humans in one way or the other


Once the habitat of Finn's Weaver, the land around Rudrapur is now home to large manufacturing industries

same year, I also recorded four breeding colonies in Patharchatta, Matkota and Haldi areas on the way to Rudrapur from Pantnagar. A total of 16 birds were recorded constructing their nests on four *Bombax ceiba* trees, with a minimum of 64 half and fully made nests.

During my visit between June 9–11, 2014 to Matkota, Patharchatta and the University campus, there was neither nesting colonies nor Finn's Weaver. There were only humans, agricultural farms, automobile factories and 'no wet tall grasslands'.

Most small wetland habits with wet grasses, once home to common weaver species, are now filled with human settlements

### Sitarganj

Sitarganj, a city in USN district, is geographically located between three water reservoirs – Baigul Fish Reservoir, Dhora Reservoir and Nanak Sagar Reservoir. Baigul, also known as Sukhi, is a small tributary originating from the foothills of the Himalaya. Dhora Dam, running across the river Dhora, is located near Dineshpur. Nanak Sagar Dam runs across the river Sarayu. During my preliminary surveys in 1999, an old trapper from the Rampur clan living in USN urged me to visit Sitarganj for this species especially along the Kailash, Baigul and Sukhi rivers.

A typical Finn's Weaver habitat around Sitarganj that leaves a hope that an invisible Finn's Weaver population may still exist in some pockets

During my first visit in 1999, I saw some half-made abandoned nests in Sitarganj; therefore, during my second survey in June 2002, I scanned Sitarganj area with the help of some former trappers. On June 5, 2002, we were successful in locating an active colony of Finn's weaver near Sitarganj–Khatima road, on a Shisham tree *Dalbergia sissoo* on Chikaghat, Kailash River. A total of 21 nests and 30 birds were seen in this area just beside the river. A flock of four to eight male Finn's Weaver would come to the strands of grass and return to their nests with thin strands. I was also informed by a former trapper that a sizeable population of nearly 400–500 birds were easily seen in the early eighties in this area, but we could not find more than 21 nests in a day's search. During my third visit to this area on July 7, 2013 and in June 2016 and 2017, I could not trace any colony or large grassland patches.

I was also informed by bird trappers that sometimes the Finn's Weaver is seen around Nanak Sagar Dam near Khatima. But when we visited the area in July 2016, we could not locate any Finn's Weaver as the water level was quite

There is no continuous stretch of Finn's Weaver habitat in any block of Udham Singh Nagar, but only dotted patches of grasses and Silk Cotton Trees

high. About 20 km from Khatima lies the Surai forest range, where there are chances of seeing the Finn's Weaver (Dhananjai Mohan *pers comm*. Dec 2016). We surveyed this area in June 2017, but found no weaver or large grasslands areas.

### Kichha

Kichha (Kitcha) is a small town in USN district with agriculture-based economy, and paddy cultivation as a major crop. The Tharu and Buxa tribe, once widespread in this region, is now confined to a few villages. At one time, Kichha, apart from Rudrapur, had one of the best breeding populations of Finn's Baya, according to many trappers and also evident from the micro-level habitat, which I observed during 1997. In 2002, June visit, I located one tree colony around Kichha having 41 nests and 5 birds, and no nest of Drongo.

Ali and Crook (1959) mention several nesting colonies (no numbers specified) on Lalkua–Bareilly road near Kichha seen during their July–August 1959 visit. This Lalkua–Bareilly road which actually proceeds from Bareilly to Haldwani passes through Kichha, Nagla, Pantnagar and Lalkua.

Abundant nesting colonies are a thing of the past

During my surveys in 1999, there was a major Finn's Weaver breeding colony with nearly 40 birds nesting on a 20 m tall *Bombax ceiba* tree in Nagla with approximately 20 nests, near a sewage outlet between Kichha and Haldwani. In 2002, between June 3 and 7, I again recorded two colonies in Nagla in the same site. I counted 16 birds – 11 males, five females and 21 nests. The second nesting colony was now on a small different *Bombax ceiba* tree with a total of 16 nests but no birds.

During my revisit in 2012, there were no birds in Kichha, Lalkua or Nagla areas. The nesting site in Nagla was lost to construction of a side road connecting Nagla with Rudrapur. Similarly, there was either construction work in progress

or extensive agriculture in and around Kichha where earlier nesting sites were located. In Lalkua, at present there is extensive industrialisation and human habitation.


Haripura Dam is a medium earthen embankment dam on the Bhakra River in Kichha. In 2002, I visited Haripura dam for a waterbird count during winter season. I tried to locate Finn's Weaver but did not succeed. End of 2016, a team of bird trappers informed me that they had seen a flock of about 10–12 Finn's Weavers in July 2016 around Haripura

Haripura Dam has a nesting population of a small flock of about 10–15 birds and needs more monitoring through boat surveys. The forest check post in this area deters any form of poaching

Dam. In July 2017, I surveyed the Haripura Dam area and heard several distant calls of Finn's Weaver on the opposite side of the forest check post from standing reeds. This huge patch of standing reeds seemed an ideal habitat for post monsoon breeding of Finn's Weaver. I estimate a population of about 10–15 Finn's Weaver in this area which needs confirmation and monitoring through boat surveys.

### Bajpur

This is a city in USN district with large agricultural estates owned by people who migrated from Punjab in the early 1950s. During my visit to USN for Finn's Weaver in 1997–99 and then again in 2001–2002 for surveys of 21 wetlands for waterfowl count, the trappers asked me to survey dams around USN for this

species and I came across a lot of common weaver birds in Bajpur on the way to Baur dam, also situated in USN district, but I saw no Finn's Weaver.

In July 2013, on a specific visit to Baur Dam for this species, I saw three Finn's Weaver in *Typha* reeds along with other three species of weaver birds, especially Streaked Weaver, and several munias. I could not locate any tree with nesting colony despite my two-day search around Baur Dam even though it was the breeding season. The presence of Finn's Weaver and excellent tall wet grassland gave a hint that the bird might breed during monsoon, but I could not survey the area again in August–September.

The Finn's Weaver was also seen and photographed on October 5, 2014 at Baur Dam by Dibyendu Ash, a nature photographer (posted on the Oriental Bird Club images). He saw eight to ten birds at the dam during his trip. Rajesh Panwar, a bird guide from Uttarakhand, who regularly organises birdwatching trip, in a personal communication to me said that "I have seen them [Finn's Weaver] in USN (Baur Reservoir) many times. My last sighting of these birds was in October 2016. I could not locate their nest but saw six individuals resting on Lantana Bush near Baur Reservoir" (*in litt.* March 2017). Dibyendu's photograph of a male Finn's Weaver still in yellow but starting to moult suggest that the Finn's Weaver in this area may be breeding in bulrushes in the month of August-September as suggested by Ambedkar (1968) but it is difficult to see it nesting in the *Typha*.

I was told by trappers in 2002 there are also good chances of finding this bird in Baigul Dam, situated in Bajpur, near Sitarganj. On June 6, 2002 I located one *Bombax ceiba* tree with 11 nests and 11 birds. Chicks were heard calling from beneath the tree. The broken eggshells in active colonies confirmed breeding. Rahmani and Mohan (2013) also mention nests in various stages on the Baigul River based on records by Malvika Onial during her visit in July 2006.

## Haridwar

Haridwar, a district and an ancient city of Uttarakhand, is distinguished for its religious significance. Today, Haridwar is also a fast developing industrial estate of State Industrial Development Corporation of Uttarakhand (SIDCUL). The Ganga from its source enters the Indo-Gangetic Plains of north India for the first time at Haridwar.

During the era of bird trade in India before 1990, Bahadrabad, an intermediate village panchayat situated between the towns of Haridwar and Roorkee at a distance of 11 km from Haridwar, was an important bird trapping centre. There were formerly one or two settlements of the Baheliya trappers who had migrated from Meerut. One of the old trappers Nanak Baheliya, who expired last year in Meerut, shared his experience about the presence of Finn's Weaver in various areas in Haridwar district. According to him the Finn's Weaver was present in Manglaur and Kagwali, both in Haridwar district.

### Manglaur

This a small place in Roorkee Tehsil, located less than 10 km from the Roorkee city, and about 20 km from Bahadrabad. Manglaur and another village called Landhaura at a distance of 5 km apparently housed a small population of Finn's Weaver almost two decades ago. I could not see any bird during a short visit in July 2016.

### Kagwali

This a small village hamlet in Narsan block in Roorkee Tehsil located 40 km south of Haridwar and reachable via Gurukul Narsan. Kagwali is surrounded by Deoband, Purquazi, Manglaur and Roorkee, all good munia habitats. In July, 15 2016, I visited this area and found small patches of wet tall grassland quite prominent towards the river Ganga near this village. Some wetlands are under *Singhara Trapa bispinosa* cultivation. Except for Finn's Weaver, all other weaver species were present, making their nests.

## UTTAR PRADESH

Of the 75 districts of Uttar Pradesh, the Finn's Weaver has been sighted or reported from eight districts: Bijnor, Rampur, Meerut, Gautam Budh Nagar, Muzaffarnagar, Hapur, Etawah and Gorakhpur. Among these, the main places are Bilaspur in Rampur district, and Bijnor and Meerut (Bhargava 2012, 2004, 2001, 2000; Rai 1979, 1983; Ali and Crook 1959).

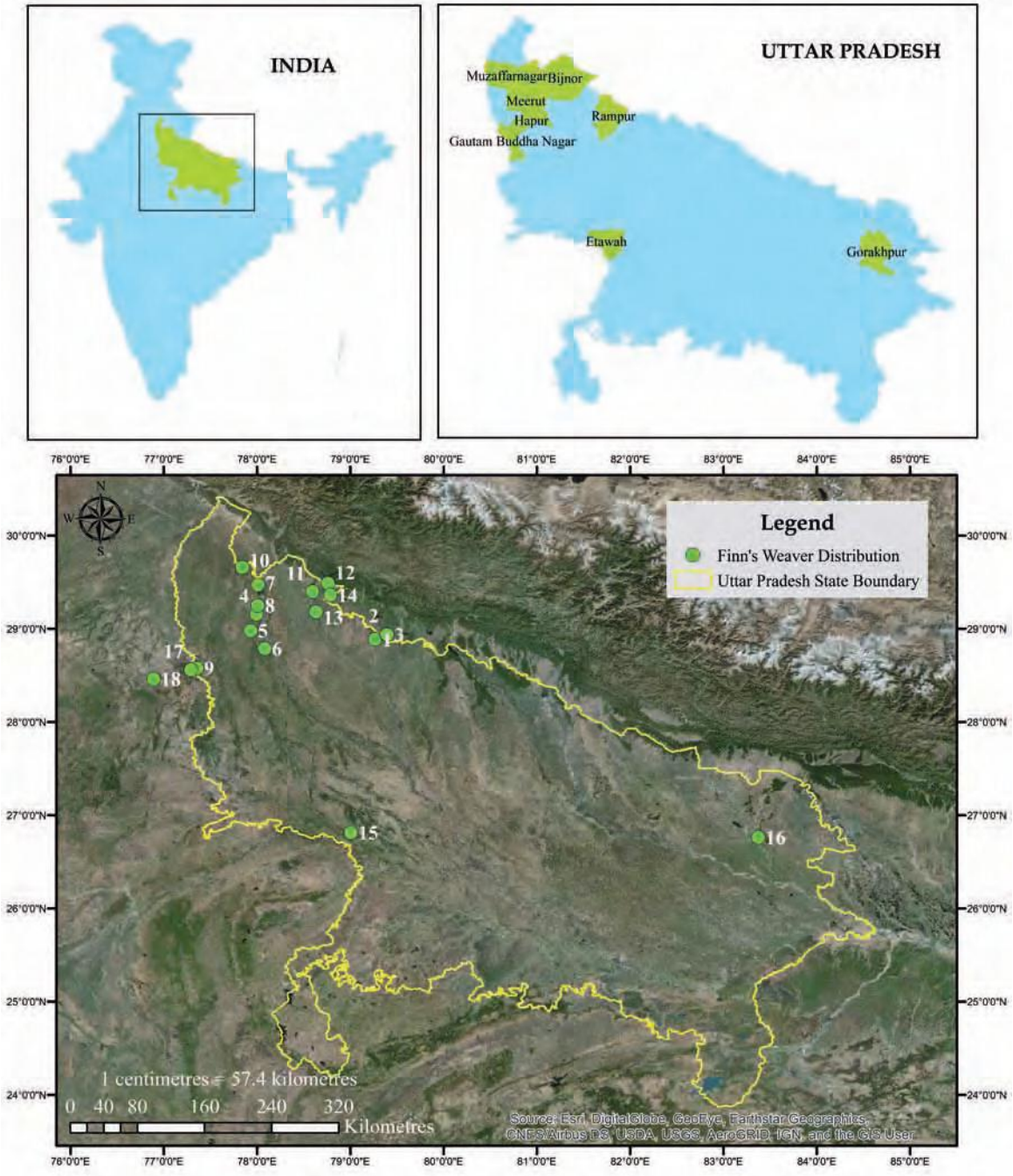
### Rampur

This district was once a very big hub of live bird export Some bird trappers of Mahagir (fisherman) clan from Rampur regularly caught this species along with the munias before the ban on bird trade in 1990. According to information gathered from some key trappers of Rampur, this species was regularly found in and around Rampur district even till a decade ago. Over the last decade, there has been negligible bird trade from this area; however former trappers I spoke to during my visit to the area in 2016–17 said that the Finn's Weaver was hardly seen here anymore.

### Bilaspur

A city in Rampur district of Uttar Pradesh, located on the Rudrapur-Nainital road approximately 20 km before Rudrapur. Ali and Crook (1959) mention the sighting of 12–15 birds in Bilaspur in June 1953. Based on their 1959 survey in this area, they wrote "the largest numbers are located along a four mile stretch of road starting just north of Bilaspur and extending to about a mile north of Rudrapur on the main Rampur to Nainital highway. Here some 20 colonies were seen, mostly of 15–20 nests each, but in few cases with many more – up to 200 nests at least in one colony." On June7, 2002, I saw 20 birds and five new nests under construction in Inderpur village, between Bilaspur and Rudrapur on the Uttarakhand–Uttar Pradesh border (Bhargava 2004). This area had a few patches of wet tall *Typha* interspersed with *Bombax cebia* trees.

## Distribution of Finn's Weaver across Uttar Pradesh




1) Bilaspur, Rampur
2) Inderpur, Bilaspur
3) Baradari, Bilaspur
4) Hastinapur, Meerut
5) Agwanpur, Meerut
6) Garhmukteshwar, Hapur
7) Sukartal Khadar, Muzaffarnagar
8) Ramraj, Muzaffarnagar
9) Morna, Muzaffarnagar
10) Purkaji, Muzaffarnagar
11) Harewali, Bijnor
12) Kalagarh, Uttar Pradesh/ Uttarakhand
13) Bhagwanpur Raini, Bijnor
14) Peeli Dam, Bijnor
15) Etawah
16) Gorakhpur
17) Okhla, Gautam Buddha Nagar/ Delhi
18) Sultanpur Bird Sanctuary, Haryana

Today the area is dominated by human habitation and extensive agriculture. In June 2017, we found no birds or nesting colony. Malvika Onial recorded a few Finn's Weaver colonies during a bird survey around Rudrapur in 2006–2007 and recorded Finn's Weaver in Baradari (*in litt.* to author, March 2017). Baradari is a small village in Bilaspur Tehsil of Rampur district. The tall wet grassland habitat along the Bilaspur Dam, depending on the available dam water, may sometimes play host to this bird. Some patches in a stretch of 40 km starting from the outskirts of Rampur to Rudrapur border "still supposedly hold a small population of less than 50 birds" according to the trapping community.

## Gautam Buddha Nagar

Gautam Buddha Nagar (GBN) is a suburban district of Uttar Pradesh. It is an important industrial centre located right next to Delhi.

### Okhla

Okhla Bird Sanctuary is situated in GBN district at the Okhla barrage over the Yamuna River in Noida, on Delhi-Uttar Pradesh state border. This sanctuary comes under the irrigation department and is under the control of Uttar Pradesh Forest Department. The sanctuary is a large lake created by damming the river inhabited by waterbirds. *Typha* and *Phragmites* reed beds are abundant, especially during the monsoon. Various development activities such as the construction of the Noida-Delhi freeway has encroached upon the prime habitat of several birds in the region.

BirdLife International (2001) reports several nests of Finn's Weaver in Okhla seen in June–July 1993 (*Oriental Bird Club Bull.* 18: 67). Record of nest-building activity of Finn's Weaver in Okhla has been a topic of discussion (Urfi 2003) among Delhi birdwatchers, who recorded this bird once. On June 1, 1993, two males were sighted building nest at Okhla by Carol Inskipp, Tim Inskipp and Bikram Grewal and again, these nests were seen by Toby Sinclair on July 9, 1993. During a revisit on July 14, the same year, Grewal observed these nests submerged under the rising barrage water level (*Oriental Bird Club Bull.* 18: 67, *Oriental Bird Club Bull* 20: 57). Thereafter, no Finn's Weaver has been sighted in this part of Okhla (Bhargava 2000).

Haris (2001) speculated that these birds could have moved down the Yamuna River from Meerut, where they were recorded 15 years back in Hastinapur Wildlife Sanctuary (Meerut district) about 115 kms from Okhla (Bhargava 2012, Rai 1979). There are some good wet grassland patches in Okhla that may be host to this species, but lack of rice cultivation or huge grasslands with increasing disturbance seems be a major hindrance.

The sighting of Finn's Weaver in Okhla and Sultanpur could be from released cagebirds, originating from the active bird market at Jama Masjid, in old Delhi. In the early 1990s, the variety of wild native species offered in Indian markets,

including Finn's Weaver, was at its peak, especially in the metropolitan cities. In 1990–91, the Government of India banned the export and domestic trade of native birds. A little-known consequence of banning wild bird export is that main bird exporters of Rampur shifted base to Delhi in 1991–92 and started focusing on domestic bird markets for their livelihood. Finn's Weaver was always a 'forte' of Rampur bird dealers 'worldwide' (pers observation).

The breeding males of Finn's Weaver were actually offered for sale in domestic markets although rarely, because of their bright yellow colouration, size and appearance like that of a Canary *Serinus canaria domestica*. These birds were often 'fraudulently' sold as substitute for exotic Canaries (Ahmed 1999). Once they changed over from their bright yellow nuptial plumage to drab colour, the buyer often felt cheated and released these birds in disappointment. The novice bird keepers do not know that some birds have dull non-breeding plumage (Ahmed 2012). The traders also sold their weaver bird stock by retailing them for merit-release (Ahmed 2000). Therefore finding a Finn's Weaver in a new place, out of its normal range, should not be considered unusual (Bhargava 2000).

## Meerut

Until the blanket ban on wild bird trading in 1990–91 by the Government of India, Meerut was the second biggest bird export centre in the country and is home to Baheliyas (Bhargava 2012). The Finn's Weaver was one of the rare species caught by two trappers from Meerut. Based on a detailed interview with these former trappers (who are no longer alive), I got to know of some of the best places in Uttar Pradesh from where this species was repeatedly caught for at least two decades between the years 1970 to 1990.

According to their experience, it seems this species was found right from Bijnor Barrage to Garh Ganga, Garhmukteshwar, including most ranges of Hastinapur Wildlife Sanctuary and surrounding alluvial regions. The swampy marshes between Khola and Khadar fed by the Ganga and interspersed with rice and sugarcane fields were more or less ideal habitats of the Finn's Weaver.

### Hastinapur

Y.M. Rai, an avid birdwatcher of Meerut, discovered Finn's Weaver building nests atop a Sheesham tree on June 17, 1979, some 35 kms from Meerut (Rai 1979). He recorded about 28 nests in various stages of development at the edge of a vast marshland. Later in his publication he clearly mentioned that his record were from Hastinapur, where he had seen a maximum of 35 nests (Rai 1983, 1986). However, Rai did not specify the numbers of birds he had sighted in any of his publications. BirdLife International (2001) and Rahmani (2012) have mistakenly quoted his Meerut record as 28 birds instead of 28 nests.

Hastinapur is a small town in Meerut district, 35 kms from Meerut city. Located on the right bank of an old bed of the Ganga in the Doab region, the history of this place begins from the period of Mahabharata and it is known as the capital of the Kauravas of the Mahabharata fame. In Sanskrit, Hastinapur means Hastin (elephant) and puram (city), meaning the city of the elephant.

In the year 1986, Hastinapur Wildlife Sanctuary was established to conserve the Swamp Deer *Cervus duvauceli duvauceli*, the state animal of Uttar Pradesh and to conserve the fast vanishing, unique biome, locally know as Gangetic Khadar. The old bed of the Ganga, locally called Boodhi Ganga, forms the drainage system of the sanctuary. An Important Bird Area, this 2,073 square km sanctuary extends over five districts – Meerut, Bijnor, Jyoti Phule Nagar, Muzaffarnagar and Hapur (Bhargava 2012). It also includes 173 km stretch of the Ganga River. Until a few decades ago in Hastinapur WLS, Khola, the elevated alluvial deposition parallel to the western bank of the Ganga, had luxuriant forests while the Khadar – the low lying sandy bed of the ever shifting Ganga and had extensive tracts of tall wet and dry grasses.

Until 1990, trappers from Meerut reported that they used to catch 20–30 Finn's Weaver from Hastinapur each year with their base at Bahsuma village. During my several visits to Hastinapur in the last two decades, I did not find any Finn's Weaver, although all other three weaver species were common throughout (Bhargava 2000). There are still some small patches of wet tall grasslands which

Many patches of tall grasses along with extensive cultivation land around Hastinapur may still be home to the elusive Finn's Weaver

may be home to this species. The high level of disturbance mainly due to large-scale exploitation of grasses of several species and scarcity of water in some seasons seems to be a major hindrance for the survival of this species there.

### Agwanpur

Agwanpur is a small village in Parikshitgarh tehsil in Meerut district, 34 km east of Meerut. This place was once one of the best for Finn's Weaver, according to some Finn's Weaver trappers. Last year during my survey in this village, in between July and September 2016, I located two good grassland patches which seemed to be ideal for Finn's Weaver habitat. Except for the Finn's Weaver, the other three weaver species were present. The heavy dependence of villagers for grasses throughout the year is one main reason for the absence of this species. Proper surveys and habitat management could result in locating the species in this area. In the 1970s and 1980s, about 20–30 birds were brought from this area to Meerut each year.

## Hapur

Earlier known as Haripur, this district is located in western part of the Uttar Pradesh.

### Garhmukteshwar

Garhmukteshwar is a town in Hapur district. The Khadar region of this area and Garh Ganga with wide expanses of wet grasslands was home to the Finn's Weaver (Bhargava 2004). Based on two decades of visit, many of the earlier swamps have now been drained and converted into crop fields or are under *Singhara* cultivation. Many areas have extremely high levels of disturbance in terms of fishing and riverbed cultivation.

Interestingly trappers told me that Finn's Weaver in this area were mainly observed resting and roosting in *Beshram* or *Pan Patti* or *Ipomea carnea*. The catches were told to be quite irregular but the numbers caught were high in some years, up to 70–80 birds each time in a gap of three–four years. There are still chances of the bird being present in this area; repeated boat surveys along the river in the right season with help of forest department would be useful to confirm their presence.

## Muzaffarnagar

This is another district of Uttar Pradesh from where the Finn's Weaver was reported by bird trappers in the 1980s and 90s.

### Sukartal Khadar

This is a village located in Muzaffarnagar district, about 65 kms from Meerut. As the name suggests, Khadar are those low-lying areas next to a river that are prone to flooding. According to Meerut people, Finn's Weaver was infrequently brought from this area for some years around 1970s and

1980s (Bhargava 2004). The bird apparently used to breed here in the reeds of *Arundo* and *Phragmites* strands.

### Ramraj

This is a village in Jansath tehsil in Muzaffarnagar district, about 45 kms from Meerut. Finn's Weavers were caught from this area, although infrequently. With a habitat quite similar to Hastinapur, the bird was present here until the early 1990s. In some years around 1980s, 15–20 birds were trapped from this region.

### Morna

This is a small village in Muzaffarnagar district, about 75 kms from Meerut. Morna is surrounded by Jansath towards south, Purkaji towards north, Mohammedpur Deomal towards east and it is very close to Bijnor and Hastinapur. The Finn's Weaver was told to be present in a small population in all of the above mentioned areas, including Purkaji neighbouring Morna, wherever there were suitable grasslands or habitats. Over the years these places have lost most of the large stretches of grassland and

Control of extensive grass collection and other human interference may bring back the Finn's Weaver around Bijnor Barrage that still has a few dotted patches of tall wet grassland

are densely populated by humans. With most habitats now converted into agriculture fields, there stands little hope for this species in this region, as was evident during our visit to these villages in the last 20 years.

## Bijnor

Bijnor, about 70 kms from Meerut, is one of the districts in Uttar Pradesh. I was told by former trappers that the Finn's Weaver was sometimes seen in winter around Bijnor Barrage's temporary grasslands or Madhya Ganga Barrage, built on the Ganga 10 km west of Bijnor in 1984. I regularly surveyed some areas

around the dam wherever there were good strands of *Arundo*, *Typha, Phragmites* and other grasses, but have not been able to sight the Finn's Weaver so far. The fragile Khadar ecosystem is devastated by over exploitation of grasslands and overgrazing of cattle. The barrage gets a lot of waterfowl each winter but the wet grasslands are highly disturbed, but if protected they can be a good home to the weaver birds.

### Harewali

Harewali (Harevali) is a small village in Afzalgarh tehsil of Bijnor district located near the Uttar Pradesh–Uttarakhand border. Harewali, about 50 km from Bijnor and about 70 kms from Hastinapur is still home to a small breeding population of Finn's Weaver.

During BNHS survey on August 24, 2016 followed by a visit on February 18, 2017 and June 4, 2017, a population of 20–25 birds were 'discovered' for the first time at Harewali Dam. Apart from the Finn's Weaver, there is a large population of waterfowl (about 5000 or more), both resident and migratory, in this area.

In June 2016, during my extensive interview with bird trappers of western Uttar Pradesh, I was advised to survey Harewali Dam (barrage) where a team of bird trappers the same year had encountered a nesting colony of about 20 Finn's Weaver along with other weaver species and munias in that area. As the water level was told to be quite high, I was advised to visit the area after a month when the birds would have settled down to breed for the second time in the standing reeds. Harewali Dam is the first barrage (chhota bandh) of Ramganga Pariyojna, 23 kilometres downstream of Kalagarh. I was also told to survey areas in between Kalagarh Dam and Harewali Dam where there were good chances of sighting this bird.

Declaration of Harewali Barrage as a Wildlife Sanctuary will not only help the Finn's Weaver but also hundreds of migratory waterfowl that throng the area

Tall wet grasslands in Harewali Barrage are still home to the threatened Finn's Weaver

The Harewali barrage impounds the water let out by Kalagarh Dam and diverts it to the Khoh River, from where it is taken to the Upper Ganga canal system. From November 15 to June 15, the barrage gates are closed and the surrounded areas are flooded. This effectively does away with the Rabi and summer crop seasons. What is left is paddy cultivation during the Kharif season, and even that is at the mercy of the dam controllers. Often, the dam authorities do not open the dam gates till long after the scheduled June 15 date. Due to these dam activities and available water seepages, rice cultivation and rich wet grasslands are in plenty; the Finn's Weaver is present here throughout.

### Bhagwanpur Raini

This is a small village located in Budhanpur Seohara block, in Dhampur tehsil of district Bijnor, less than 5 km from Seohara. Seohara with a distance of eight kilometres from the Ramganga is situated on the Haridwar-Moradabad state highway, barely 15 km from Dhampur. In July 2016, a team of bird trappers informed me that they had located a flock of about 20 Finn's Weaver nesting on a small Shisham tree with about 10 nests in Bhagwanpur Raini village near the Ramganga canal during their visit in June that year. On July 15, 2017, I surveyed this area for almost a day and saw two female Finn's Weaver in flight with insects in their beaks but could not locate the nesting site as the river could not be crossed. The area has excellent patches of *Bombax ceiba* trees interspersed with small grasslands and water source.

### Peeli Dam

Peeli (Pili) Dam / reservoir was constructed on the Pili River in 1966. Situated near Rehar village in Afzalgarh tehsil of Bijnor district, this 15.40 km dam is an ideal habitat for migratory birds. During a waterfowl and fish survey in the winter of 2002, Dr. Hilaluddin Khan of Forest Research Institute and I recorded at least three Finn's Weaver in eclipse plumage around Peeli Dam on Lantana shrubs on January 9, 2002 (Bhargava 2004). As it was quite foggy and the birds were in non-breeding plumage along with Baya Weaver, we could not manage a good picture or do a total count of these birds.

Peeli Dam is about 20 km from Harewali Dam, and we also surveyed this place shortly for one evening in February 2017. Most of the wet grasslands were absent but there were some good patches of dry *Sacchrum* where we encountered more than 50 Baya and Black-throated Weavers along with many flocks of Red Avadavat *Amadava amandava* feeding on grass seeds. There were fair chances of the Finn's Weaver but we could not do extensive search thereafter. The local Forest Department plans to declare two areas in Bijnor – Peeli Dam and Harewali – as bird sanctuaries which could help conserve the Finn's Weaver and its habitat.

## Etawah

Finn's Weaver was also sighted near Kurra jheel (wetland) in Etawah district during the summer of 1998 (Bhargava 2000; Gopi Sundram *pers comm*. 2017). However there have been no recent records of its presence in the area and no surveys have also been undertaken to locate the bird species.

## Gorakhpur

During one of my interviews with an old bird seller of Kolkata in 2003 regarding Finn's Weaver's presence in the area, I was told that some Finn's Weaver came from Gorakhpur to the Kolkata market before the 1980s (Bhargava 2004). Abdulali (1954) mentions that when he enquired about the Finn's Weaver specimens he had purchased during his visit to Kolkata bird market, he was told that the birds came from Gorakhpur.

According to my interviews with former bird exporters, Rampur dealers could have sent the birds to Bareilly, which then went to Gorakhpur and from there to Kolkata. There is also a possibility of a wild population of Finn's Weaver in and around Gorakahpur/Kushinagar, going by the habitat found there during a survey in January 2017. Although some very old trappers from Gorakhpur have reported the presence of Finn's Weaver (Ahmed 2012), no birdwatcher or ornithologist has ever mentioned its record here so far, but considering its erratic distribution, it could have been present here at some point of time.

# DISTRIBUTION OF EASTERN FINN'S WEAVER *PLOCEUS MEGARHYNCHUS SALIMALII* ABDULALI

## WEST BENGAL

West Bengal, rightly known as the eastern bottleneck of India, stretches from the Himalaya in the north to the Bay of Bengal in the south. The narrow Terai region separates the West Bengal region from the North Bengal plains, which in turn transitions into the Ganges delta towards the south.

The Eastern Finn's Weaver is reported from at least three districts of West Bengal. Although records from this state are now historical, there are few recent reports on birding sites of this species which need conformation.

### Alipurduar

Alipurduar is a city and district headquarters in north Bengal. It is the gateway to Bhutan and northeastern states of India situated on the east bank of the river Kaljani on the Himalayan foothills.

#### Hasimara

Hasimara is a small town in Alipurduar district, near the Bhutan border. This town located in the central duars region lies between two rivers, running from north to south, draining from the lower Himalaya in Bhutan. O'Donel (1916) found a breeding colony of Finn's Weaver at Hasimara, west of Buxa Tiger Reserve on the river Torsa on June 22, 1912. Fifteen years later, Inglis (1959) secured specimens from the same locality on February 15, 1927.

Allen et al. (1996) conducted an ornithological survey in and around Buxa Tiger Reserve, but could not find this bird. I conducted a short survey in Hasimara in June 2002, but could not locate any sign of Finn's Weaver. Hasimara has an Indian Air Force Station. Biswapriya Rahut (*in litt.* to Asad Rahmani, 2016) mentions that Hasimara Airbase could be a potential habitat for the Finn's Weaver.

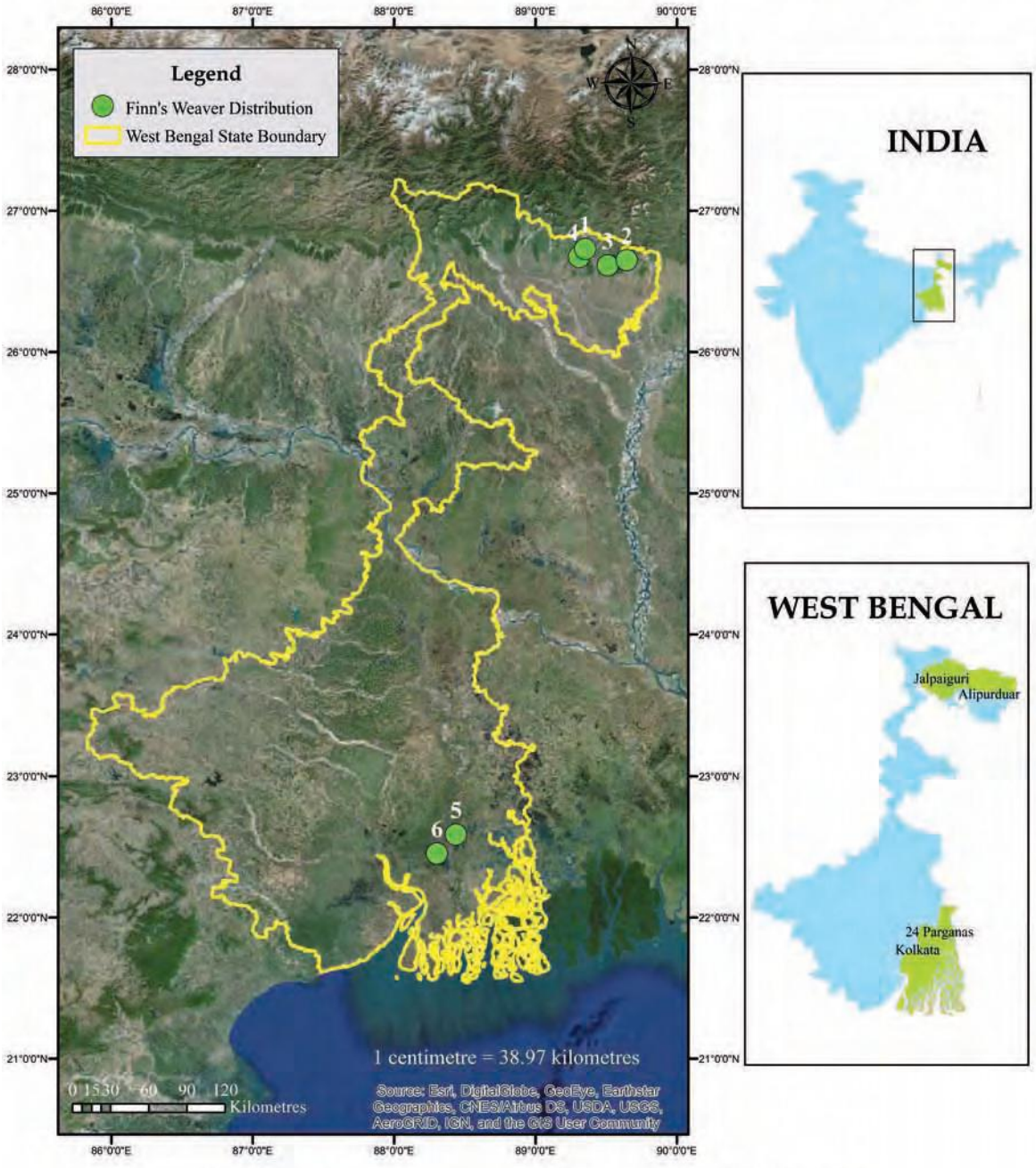
#### Rajabhatkhawa

There are two Finn's Weaver specimens in BNHS, collected in June 1925, from Rajabhatkhawa, a small town just outside the Buxa Tiger Reserve in Alipurduar district. I conducted a short survey in February 2016 in Rajabhatkhawa but could not locate any sign of Finn's Weaver.

### Jalpaiguri

Jalpaiguri is a district headquarter and a city located on the middle of vast fertile plains, the terai, south of the Himalaya, watered by innumerable rivers and rivulets rising from and flowing down the Himalaya.

## Distribution of Finn's Weaver across West Bengal




1) Hasimara, Alipurduar
2) Buxa Tiger Reserve, Alipurduar
3) Rajabhatkhawa, Alipurduar
4) Jaldapara National Park, Jalpaiguri
5) Salt Lake City, Kolkata/ 24 Parganas
6) Joka, Kolkata

### Jaldapara National Park

Formerly a wildlife sanctuary, Jaldapara National Park is situated on the foothills of the Eastern Himalaya in Jalpaiguri district. Located in the flood plains of the river Torsa, it has large tracts of grasslands sustaining a small population of the One-horned Rhinoceros *Rhinoceros unicornis*. The habitat consists mainly of riverine forests, along with about 20–30% of the area with patches of tall, wet grassland of the Indo-Gangetic plains with grass species such as *Saccharum narenga*, *S. arundinaceum*, *S. spontaneum*, *S. bengalense* and *Arundo donax*.

In January 1987, Turin et al. (1987) recorded 65 Finn's Weaver in Jaldapara National Park. Rahmani (2016) recently suggested "Apparently there is no authentic recent record of the species in northern West Bengal though the existence of the species cannot be ruled out in and around Jaldapara. Outside the park area, the villages around Salkumar remain a potential habitat and so does the Hasimara Airbase…" (Biswapriya Rahut, *in litt*. to Asad Rahmani, 2016). Salkumar Forest village is located in Jalpaiguri district about 75 km away from Jalpaiguri. According to latest information from Sumit K. Sen (*in litt*., to author 2017), West Bengal's leading ornithologist: To the best of my knowledge, no reports about the bird species from North Bengal either. It is possible that a small population exists, but it is a hard bird to track down unless found accidentally as the preferred nesting locations are often extremely difficult to approach in the breeding season."

## Kolkata

Kolkata is the capital of West Bengal. Spread roughly north–south along the east bank of the River Hooghly, it lies within the lower Ganges Delta of eastern India. Much of the city was originally a wetland that was reclaimed over the decades to accommodate a burgeoning population. The remaining undeveloped areas, known as the East Kolkata Wetlands, were designated a wetland of international importance by the Ramsar Convention. Historically, Kolkata was an important market for Finn's Weaver. Humayun Abdulali writes about buying Finn's Baya "which were being sold in some numbers" (Abdulali 1952).

### Salt Lake

Located near Kolkata, its marshy, shallow salt water lakes have been reclaimed to develop an auxiliary township. During the year 1966, Saha (1967) recorded a breeding colony of Finn's Weaver between April and August at Salt Lake. In June 2003, I visited Salt Lake to find the whereabouts of the species. I could neither locate the bird nor gather any information as the whole area is now a residential colony. I also could not get any information about the presence of this bird species in the wild from any of the bird trappers. The birds reported in Kolkata could also be owing to escapees from the cage

bird trade (Bhargava 2004, BirdLife 2001, Saha 1967). According to Sumit K. Sen (*in litt.*, to author 2017), "I had observed some birds in Salt Lake area in 2002–2003 that structurally resembled Finn's, but that could not be established. I understand that ZSI has a collection of records from Salt Lake area dating back to the 1960s. There have been no confirmed subsequent sightings from lower Bengal since 2009".

### Joka Wetland

Joka is a semi-urban area at the edges of south west Kolkata and is better known for the Indian Institute of Management, Calcutta (IIMC). Just behind IIMC and to the east of the arterial Diamond Harbour Road on NH117 lies a small tract of grassland and wetland. Rahmani (2012) mentions a record of about 20 Finn's Weaver possibly breeding at Joka Wetland in June–July 2008.


SAJAL BAR / OBC IMAGES

A photograph on OBC website of a male weaver bird taken at Joka Wetland, labelled as 'Eastern Finn's Weaver'. The same picture was also published as eastern subspecies in *Banglar Pakhpakhali* (Vol-I)

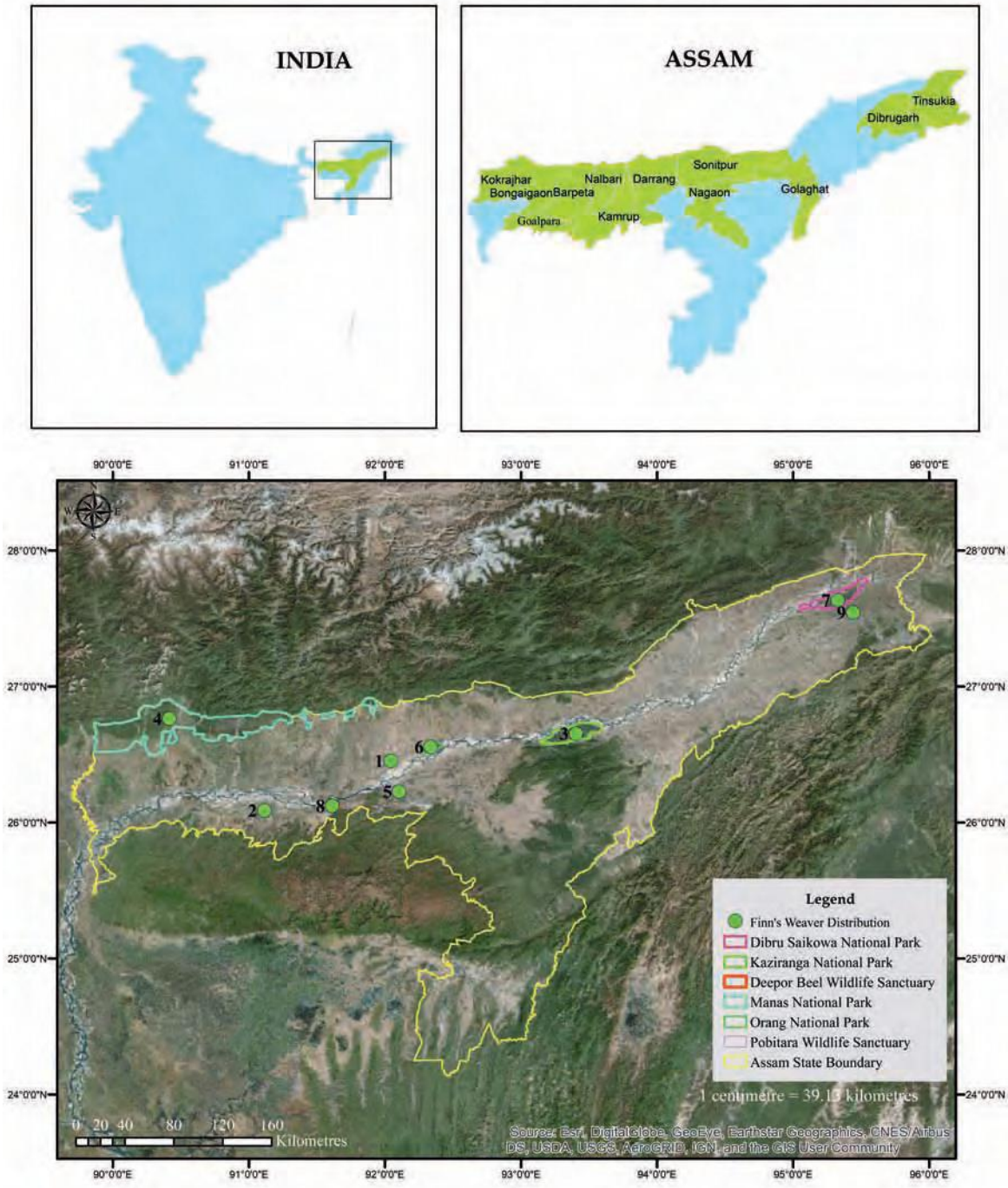
Sumit K. Sen (*in litt.* to author in 2017) mentions: "I am aware of the presence of Finn's Weaver from the Joka area based on observations made in 2008 and 2009. In both years, a small flock, about 6–8 birds attempted to nest in an *Acacia* tree in the wetlands. But the nests (typical eastern Finn structure) were abandoned before completion. Some images were captured at that time and posted in the Oriental Bird Club (OBC) Image Gallery. It is very hard to identify Finn's out of breeding season as they are very similar to *burmanicus* baya."

A look at the pictures of 'supposedly' Finn's Weaver taken at Joka, in Kolkata during 2008 and posted on OBC images seems to be the Eastern Baya Weaver *P. p. burmanicus*. A recent book in Bengali, *Banglar Pakhpakhali,* (Vol-I) on the birds of West Bengal by Baidya et al. (2017), published the same male picture as *P._m._salimalii*.

## ASSAM

A state in northeastern India, located south of the eastern Himalaya. Assam comprises three parts: the Brahmaputra Valley, the Barak Valley and the hilly areas. Assam is a state dominated by the river Brahmaputra which is an ever-changing river due to the fury of annual floods. Erosion, sand deposition and avulsion form new river islands and channels, while old ones disappear or are reduced. This state has some of the finest protected areas of India such as the Kaziranga National Park and Manas National Park, both of which are World Heritage Sites. There have been regular sightings of Finn's Weaver in protected areas of Assam. eBird has mentioned nine sight records of Finn's Weaver between 2013 and 2016, all of them are from Assam.

## Distribution of Finn's Weaver across Assam




1) Dharamjhuligarg, Darrang
2) Agia, Goalpara
3) Kaziranga National Park
4) Manas National Park
5) Pobitara Wildlife Sanctuary
6) Orang or Rajiv Gandhi National Park
7) Dibru-Saikhowa National Park
8) Deepor Beel Wildlife Sanctuary
9) Shantipur, Tinsukia

### Darrang

On June 5, 1975, Saha (1976) recorded a breeding colony of 35 adult Finn's Weaver with 24 nests in Darrang district, near Dharamjuligarh area, 100 km north of Rangia Railway Station. There have been no recent records from this region.

### Goalpara

Goalpara is a district located on the bank of the river Brahmaputra, situated 134 km west of Guwahati. BirdLife International (2001) gives an account of Finn's Weaver specimens collected from Goalpara, now housed in various museums across the world as follows: A male specimen housed in BNHS was collected in March 1910 from Ronikata camp, Goalpara. There were several specimens of Eastern Finn's Weaver collected from Agia – a village located in Goalpara district. These include 11 specimens collected in May 1950, now housed in American Museum of Natural History (AMNH), Field Museum of Natural History (FMNH), Loss Angeles Country Museum of Art (LACM) and Museum of Zoology (UMMZ); Five specimens collected in March 1952, present in LACM and UMMZ; and two males in June 1953 housed in UMMZ; one male specimen in BNHS, collected in May 1926, but listed under *P. m. megarynchus* instead of *P. m. salimalii* according to (Unnithan 2001) and one untraced specimen from Hariwar (?) tea estate.

### Kaziranga National Park

An Important Bird Area, it is a globally famous park for the Indian One-horned Rhinoceros. Located in the floodplains of the river Brahmaputra, it is spread over Nagaon, Golaghat and Sonitpur districts of central Assam. The significant part of Kaziranga habitat consists of grasslands, wetlands and Tropical Wet Evergreen Forest. The main grass species consists of *Phragmites karka*, *Arundo donax*, *Imperata cylindrica* and *Saccharum* sp.

Looking at the sightings of this species for the last two decades in India, it is evident that except for Nepal's Shuklaphanta National Park regularly hosting the western subspecies of Finn's Weaver, Kaziranga is the only place where the Eastern Finn's Weaver (sub-species) can be regularly sighted.

BirdLife International (2001) mentions regular sighting of this species from Kaziranga National park: 10 birds in February 1994; some birds seen again on April 10, 1994 and further two individuals on April 18, 1998.

Barua and Sharma (1999) recorded 30–40 nests on a *Bombax ceiba* tree (undated) at Bahu Beel in Baguri Range. I also saw about 20 totally degraded abandoned nests around this location on January 2, 2001, but during a repeat survey in April 2002, in Kohra and Barjuri areas, I was unable to see any Finn's Weaver or nest. During my four days trip to Kaziranga, I saw two Finn's Weaver in non-breeding plumage on February 25, 2014 in Burapahar range. Last year

A flock of Finn's Weaver in a typical grassland habitat in Kaziranga National Park. This is the best protected area in India for the Eastern Finn's Weaver. Picture taken in April 2017 by Rofikul Islam, a well-known bird guide from Assam

on February 18, 2016, Rokiful Islam, a nature guide, saw and photographed two Finn's Weaver in non-breeding plumage in Kaziranga (*per comm.* June 2016).

eBird has mentioned five recent records from Kaziranga National Park with a maximum sighting of six birds in 2013 and 2015. Rahmani (2016) in his latest report 'Conservation of Threatened Grassland Birds of the Brahmaputra Floodplains' (2016) mentions about Finn's Weaver's breeding/presence in Kaziranga: "During our current surveys we found it in Kaziranga (very small population)." The report does not however mention the number of indiviuals or nests sighted during the one-year survey.

On April 16, 2012, Adesh Shivkar of Nature India Tours recorded a flock of 12 Finn's Weaver in which there were at least four males in nuptial plumage (*in litt.* to author March 2017). On February 25, 2014, I saw three Finn's Weaver in non-breeding plumage along with Baya weaver in Baguri range.

On March 15, 2017, Peter Lobo along with a group of international birdwatchers sighted a large flock of nearly 40–50 Finn's Weaver in central and western range of Kaziranga National Park (*pers comm.* March 18, 2017). With this recent sighting of such a big flock, there seems to be a sizeable population in this protected area of Assam.

As the Kaziranga National Park remains officially closed between May 1 and October 31 each year, the main breeding period of Finn's Weaver, there are hardly any records of nest counts or information about active breeding colonies in the park.

### Manas National Park

A World Heritage Site and an IBA, Manas Tiger Reserve has an area of 500 sq. km, spread among five Assam districts: Kokrajhar, Chirang, Baksa, Udalguri and Darrang. Located in the Himalayan foothills, it is contiguous with the Royal Manas National Park in Bhutan and is famous for its Elephants and Pygmy Hog *Porcula salvania*. The river Manas, with its distributaries, flows through the park. The terrain in Manas with gently sloping plains is typical of the bhabar and terai areas of northern India. Manas has extensive alluvial grasslands in the western part of the Park, comprising many grass species, and a variety of tree and shrub species. The grasslands cover almost 50% of the Park (Rahmani 2016).

Rahmani et al. (1987) were the first to report this species from Manas National Park found during their Bengal Florican survey. On May 26 and 27, 2003, I surveyed selected sites in Manas National Park along with Dr Bibhuti Lahkar of Aranayak. We conducted a line transect along the river Manas with the help of the forest boat, covering a stretch of nearly 40 km, searching for birds or nests on both sides of the river. We also conducted

road transects in Bhuyanpara, Bahbari, Buraburijhar and Latajhar areas. Although rains had set in, we could not locate any Finn's Weaver or any nesting colonies.

We extensively searched the Kasindoha and Mahaut camp areas where Dr Bibhuti Lahkar had sighted three Finn's Weaver in June 2002. These areas had excellent habitat for this species having grasslands dominated by *Saccharun spontaneum*, *Imperata* and *Narenga* species interspersed with *Bombax ceiba* trees, but we could not see any birds or nesting colony during this visit.

Choudhury (2006b) found it very rare in Manas National Park. He saw a few nests on a tall Silk Cotton tree north of Bansbari in May 2006. Rahmani and Choudhury (2012) mention nests from eastern part of Manas National Park, near Kokilabari in December 2009. Rahmani (2016) mentions very small breeding population from Manas (numbers or sight records unspecified). There are only two recent record from Manas - three birds sighted on March 1 2015 by David Stanton (in litt. to eBird) and one Finn's Weaver male acquiring breeding plumage recorded from Bhuyanpara range on April 4 2017 (Bibhuti Lahkar *pers comm*. April 25, 2017)

### Pobitora Wildlife Sanctuary

An IBA located in Morigoan district, it is famous for having the highest density of One-horned Rhinocerous in the world. With a population of more than 100 rhinos in a small area of 40 sq. km, the habitat comprises alluvial grasslands with hilly forests. According to Barua (1998), about 72% of Pobitora consists of wet savannah with *Arundo donax*, *Erianthus ravennae*, *Phragmites karka*, *Imperata cylindrica*, and *Saccharum* spp. Pobitora was a traditional grazing reserve, where the villagers used to graze their livestock. Crop fields are present all around this small reserve. Mirgen Barua of Assam Forest Department, during his field posting at Pobitara Wildlife Sanctuary between 1996 and 2001, recorded Finn's Weaver breeding in Pobitara (Mirgen Barua *pers comm* 2003; Bhargava 2004). There is only one recent record of two birds sighted on August 2, 2015 at Pobitara (Dhruba Saikia, M. Mathew and Mewa Singh *in litt.* to eBird). Rahmani et al. (2016) also mention unconfirmed reports of Finn's Weaver in Pobitara in their recent book *Important Bird and Biodiversity Areas of India.*

### Orang or Rajiv Gandhi National Park

This is an IBA, located on the north bank of the river Brahmaputra in the Darrang and Sonitpur districts. Orang was earlier a pure alluvial grassland, probably maintained by grazing and fire by villagers and was upgraded to a Wildlife Sanctuary in 1985, and then to National Park in 1999. This 78.81 sq. km Park is an important habitat of the Indian One-horned Rhinoceros. More than 60% of the Park is under grasses such as *Arundo donax*, *Imperata cylindrica*, *Saccharum* spp., *Cynodon dactylon*, *Phragmites karka*, and *Andropogon* spp.

Talukdar and Sharma (1995) and Choudhury (2000) report Finn's Weaver from this park. Rahmani (2016) suggests thorough targeted surveys of the whole Orang National Park to find the breeding sites of Finn's Weaver.

### Dibru-Saikhowa National Park

An IBA, this park is spread in Tinsukia and Dibrugarh districts. Located on the floodplains of the river Brahmaputra, it forms a large complex of grassland-forest-wetland mosaic. Choudhury (2006a) reported "compact flocks" sighted between Torali and Kolomy in Dibru-Saikhowa National Park during June 1993, also indicating possible breeding of Finn's Weaver in the area. Rahmani, during his recent survey pertaining to the threatened grassland birds of the Brahmaputra Floodplains, suggested the presence of this species from Dhangori chapori near Dibru-Saikhowa, but did not see any individual (Asad Rahmani *pers comm*. April 10, 2017).

### Deepor Beel Bird Sanctuary

An IBA, located in Kamrup district, on the southern bank of the Brahmaputra River, it is one of the largest of many such lakes or 'beels' in lower Assam. This wetland, also a Ramsar site, it covers an area of about 900 ha with one side surrounded by forest, with *Bombax ceiba* being the dominant tree species. Most of the surrounding areas are under rice cultivation.

There has been a fairly new recent record of seven Finn's Weaver sighted at Deepor Beel on March 3 2016 by Divya Mudappa and Jaydev Mandal (*in litt* to eBird) and again on March 10 2016 by Kalyan Varma, Pritam Bohora and Jaydev Mandal (*in litt.* to eBird).

### Tinsukia

Rahmani during his recent survey on the threatened grassland birds of the Brahmaputra Floodplains recorded the presence of Finn's Weaver in Shantipur (undated, no numbers specified). This record was suggested by a volunteer and should be treated as unconfirmed until further confirmation (Asad Rahmani *pers comm*. April 10, 2017). Shantipur is a village in Sadiya Tehsil of Tinsukia district and is 27 km from the district headquarter Tinsukia.

# CAUSES FOR DECLINE

This chapter looks at the prevailing threats to Finn's Weaver and reasons for their decline in India, particularly in the north terai region. BirdLife International (2001) summarises that the "Finn's Weaver is threatened primarily by extensive habitat loss and degradation in the terai and in northeast India, and additionally by capture for the live-bird trade (Ahmed 1997, Bhargava 2000)." Based on information collected and compiled from various sources, in addition to my field visits in search of Finn's Weaver, I discuss in detail the threats and probable reasons for the decline of the bird species, especially in the terai regions of Uttarakhand and Uttar Pradesh. As there are almost no studies in Assam and West Bengal on this species and only records of a few sightings now and then, there is not much recent information about the threats (if any).

### Habitat loss over the last 50 years in Indian terai

The best population of Finn's Weaver was re-discovered, studied and surveyed in the state of Uttarakhand (Ali and Crook 1959, Ambedkar 1968, Bhargava 2000, 2004, Ahmed 2012). A surprising but important fact is that almost all the records of the Finn's Weaver in Uttarakhand come from outside protected areas with little or no protection (Bhargava 2000, Rahmani and Mohan 2013). Although the species "was listed as 'very common' in Corbett National Park (Lamba 1987; also Anon 1993a), but this is presumably an assumption made on the basis of nearby historical records; therefore the record is not treated as confirmed" (BirdLife International 2001).

The largest known population of western Finn's Weaver had a restricted distribution in Kumaon terai (Bhargava 2000). Past surveys by earlier researchers suggests that the species was "not at all rare and uncommon in this locality" (Ali and Crook 1959). After 60 years, the area has largely been converted to agricultural or industrial lands that are directly related to the decline of Finn's Weaver. The main threat to this species emerged owing to increased anthropogenic pressures and livestock (Bhargava 2000). Studies by Ambedkar (1968) from 1961–63 were carried out within a 15-mile radius of Rudrapur, and a good population of Finn's Weaver was found.

Having sold their land to factories, the local tribals are now forced to take up alternative jobs

Udham Singh Nagar district measures 3,358 sq. km and, as mentioned earlier, is comprised of seven blocks with Rudrapur as the district headquarters. An article in *The Hindustan Times* newspaper published in 1998, titled "A journey from obscurity to prosperity" written by Utpal Parashar highlights the success of Udham Singh Nagar. The article suggests how the terai changed over the years: "In the past 50 years, Udham Singh Nagar has emerged as the most

prosperous district in Uttar Pradesh with nearly 200 rice mills, six sugar mills and nearly 400 big and small industrial units. This district is perhaps the only district in India where there is a tremendous progress in the field of agriculture and industry. This area was brought under Nainital by the British in 1901 where Tharu and Buxa tribals were the only inhabitants and used to eke out a living doing jhoom cultivation. In the early fifties, Hindu and Sikh refugees who had fled from Pakistan after the partition were allotted plots as a rehabilitation programme. Burmese nationals also came to this area. Later, families of freedom fighters were allotted plots in this area. In the seventies and eighties after the separation of Bangladesh and the rise of terrorism in Punjab, the area witnessed further influx of people."

In November 2000, when the state of Uttarakhand was carved out of Uttar Pradesh, Udham Singh Nagar district became major centre of modern industrial development, particularly Rudrapur (Bhargava 2004). Following the formation of a new state, Narayan Dutt Tewari, the then chief minister set up the State Industrial Development Corporation of Uttarakhand Limited (SIDCUL), a government enterprise for promoting industries, and developed industrial estates at Pantnagar, Sitarganj and Haridwar. According to the media reports in 2004, 397 plots were sold at Rudrapur to set up industrial units. It was reported that over $2 billion was pumped by the government in the Pantnagar Integrated Industrial Estate on the outskirts of Rudrapur. The sugarcane and paddy fields have given way to pre-fabricated industrial structures. The list of buyers includes top companies like Ashok Leyland with 175 acres set up, Tata Motors, Bajaj Auto, Escorts, Voltas, Britannia, Nestle, Parle Biscuits, HCL, Hewlett-Packard, Dabur, Kores India providing employment to over 44,000 people (*Rediff.com. 16 December 2006*). Our current surveys show that most of the previous nesting sites of Finn's Weaver around Rudrapur are now totally converted into industries sites, government offices, secretariat, five-star hotel, malls and residential colonies.

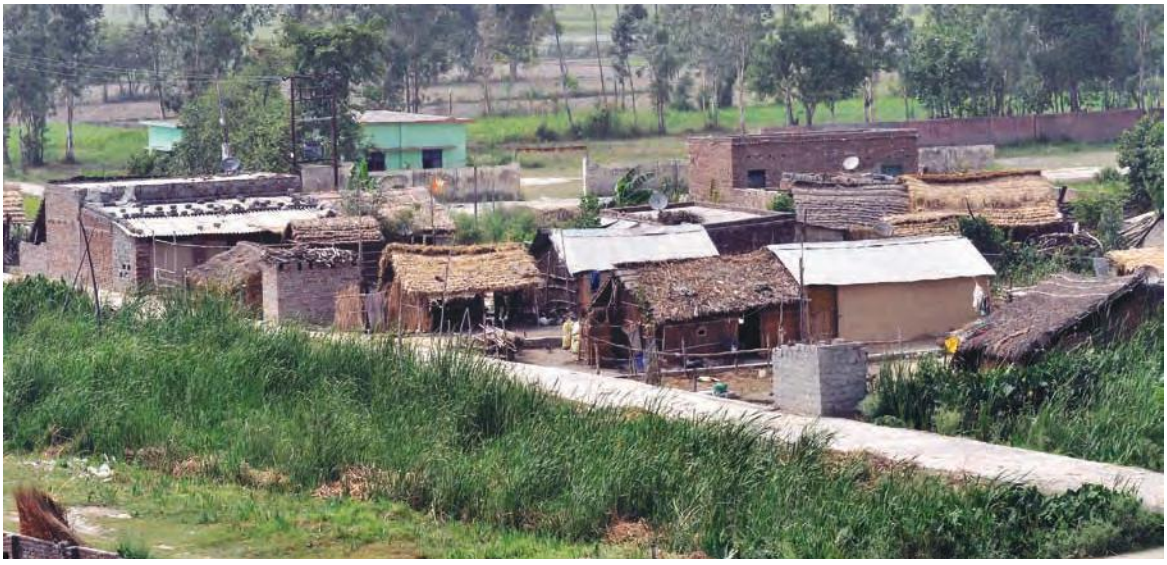
Rudrapur, once home to Finn's Weaver, is now a major industrial centre.
A few Silk Cotton trees are the only remaining sign of this species' habitat


The present SIDCUL site in Rudrapur was once the best known breeding site of the western population of Finn's Weaver in Uttarakhand

In a nutshell, the drastic changes in land use pattern in Udham Singh Nagar district has certainly played a part in the massive decline of the bird species, as most natural grasslands have been reclaimed over the last 70 years. The absence of nesting colonies of Finn's Weaver had become evident by the late sixties. Ambedkar (1968) for example wrote that he had recorded a nesting colony of Finn's Weaver in a *Ficus bengalensis* tree in the centre of Sultanpur village in 1961; the same tree simultaneously had nests of Baya, Pied myna *Sturnus contra* and Black Drongo. He visited the same area in the breeding season of 1968 where, except for Finn's Weaver, all other "tenants" were nesting. Ambedkar (1968) suggest that "the absence of Finn's Baya is due to the absence of elephant grass from the surrounding area which is now under cultivation."

The nest building grass is one limiting factor in the field, but suitable trees for nesting such as *Bombax ceiba* may be completely absent in many areas in current north India terai. Surveys show that extensive monoculture plantations of commercial trees especially *Populus* and *Eucalyptus citridora* are now widespread throughout the area. In some sites where Finn's Weaver was recorded nesting in 1999 and 2003, polluted industrial effluents from cardboard and other industries were seen percolating into swampy areas with no weaver birds, munias and drongos at all. The highly toxic water may be a deterrent; more investigation of the water quality, which may be killing the birds, is necessary.

During our 2002 survey, construction activities were seen gaining prominence in the Finn's Weaver habitat



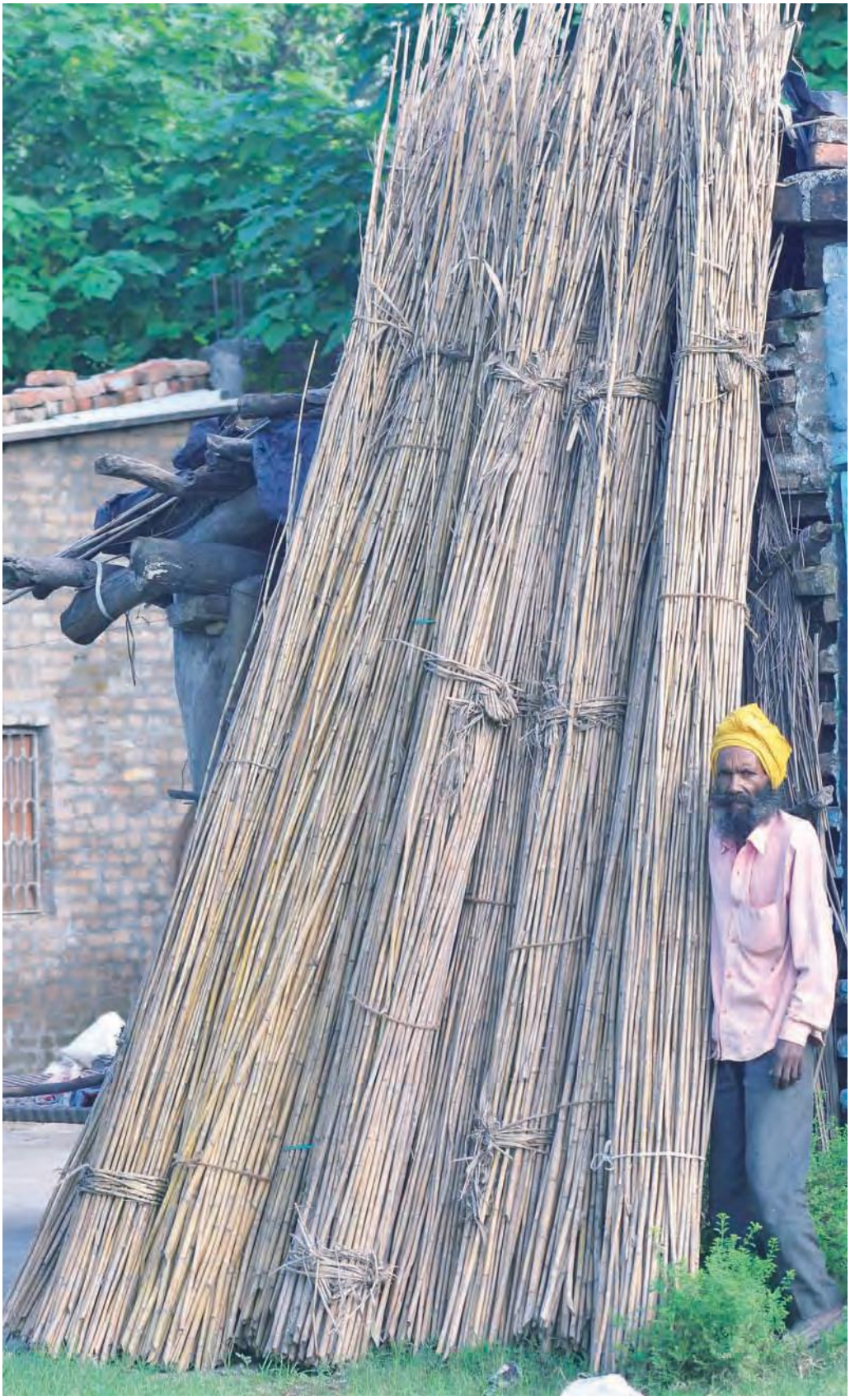
Large scale monoculture plantation along with heavy use of pesticide and habitat alteration have led to the massive decline of Finn's Weaver in north India

The increasing livestock population and the dependence on local grasslands is a cause for concern. The rainy season after the dry summer months initiates growth of several local grasses, which are quickly harvested or auctioned for domestic use and fodder. The dependence of farmers on grasses may lead to direct competition with and disturbance to weavers.

The collection of mature grasses such as *Typha*, *Arundo donax* and *Phragmites karka* for thatching and fencing just before the rains coincide with the second breeding period of Finn's Weaver in *Typha* grasses. Sometimes the farmers burn large dried grasses patches to get new shoot for their livestock, causing the birds to lose their traditional nesting sites. Most of the sites surveyed revealed only degraded patches of *Typha, Imperata* and *Saccharum* mostly near the fringes of water bodies, railway tracks, crop fields or good commercially grown fodder grasses that were regularly harvested.

My detailed interviews with a very old and experienced former bird trapper of Meerut revealed a very interesting fact that once a roosting or breeding colony in tall wet grassland is disturbed, "the Finn's Weaver leaves that area, although the other three weaver species return back to their previous site even after funnel netting" (Late Nanak Baheliya *per comm*. 2012). Nanak further

Exploitation of natural grasslands at an unsustainable level has caused the local extinction of this species in most known locations



Commercial harvest of tall grasses during the breeding season is a major disturbance for most grassland birds, including the weaver birds

Nanak Baheliya, a former bird trapper generously shared his last 30 years of field experience about Finn's Weaver; he passed away in early 2017

elaborated that the Finn's Weavers do not come back to the same roost site if disturbed and, as a precaution, they roost in different sites on different nights. Ambedkar (1968) wrote a similar fact that "one of the basic differences in breeding biology of Finn's Baya from that of other Indian weaver birds seems to be that if the nests of Finn's Baya are removed, then they abandon the colony site and move elsewhere, whereas other weavers, even after repeated destruction of the nest, build again and again at the same site." These facts are evident enough to show that this species is not tolerant to human disturbance and actually prefer to roost in large stands of tall grasses in standing water. Until a decade ago, the tall grasses in and around Hastinapur Wildlife Sanctuary were exploited day and night for the paper and cardboard industry. The decline of Finn's Weaver from this excellent habitat was also due to this massive destruction of grasses by local mafia (Raju 1998), a practice told to have completely stopped.

Awareness among local villagers about the importance of grasses for Finn's Weaver conservation needs to be urgently addressed in areas hosting the bird species

The loss or reclamation of many natural wetlands with strands of huge *Typha* and other mixed grasses has directly contributed to the decline of Finn's Weaver population as Finn's Weaver require large tracts of undisturbed wet tall grasses for breeding. In many areas over the years, I have witnessed the removal of naturalised small wet grasslands around villages to prevent the spread of mosquitoes or for fish cultivation. This leaves little scope for the birds to breed.

With the reclamation of many naturalised wet grasslands in north India and simultaneous construction of dams, the Finn's Weaver got adapted to wet grassland habitat created by canal seepages near the dams in Uttar Pradesh and Uttarakhand. Also when water level is extremely low, a lot of wet tall grasses appear in this standing dam water. It was the bird trappers that suggested me to survey such areas especially during the second breeding season of Finn's Weaver in *Typha* and *Phragmites* strands. Even though I found places near dams hosting a small population of Finn's Weaver, the fear in most of such stands is the submergence of the nesting colonies when dam gates are opened to prevent overflow from rain water or rising flood water. Nesting in dam water will need further observations to judge the success rate of such colonies.

An important wild plant growing during peak summers around grasslands and crop land is the Hemp *Cannabis sativa*. The Finn's Weaver, especially the males, are fond of this plant seeds which they consume in large quantities. The flowering and seeding of this plant happen to synchronise with the onset of Finn's Weaver breeding season. Systematic collection of this plant leaves for the '*bhang thekas*' – government-auctioned bhang selling shops – is also becoming a problem for the birds. Collection of leaves by locals for self-consumption in *bidis* or for making holy drink from bhang during *Shivratri* is prominent in summers. Elimination of this plant by farmers is a matter of concern in breeding areas; this collection not only disturbs the birds but takes away a very vital food component. A bad consequence of regular eradication of Hemp around crop fields and wetland edges is the widespread natural replacement of more noxious weed *Parthenium* or Congress grass / Carrot Grass which is not preferred by most birds.

### Predation by crows on nesting colonies

Ali and Ripley (1959), based on their observations in Kumaon terai, wrote a very interesting observation on mobbing behavior of Finn's Weaver. They saw that the male Finn's Weavers at colonies with eggs and young sometimes perform mobbing attacks on human intruders, resembling the behaviour of Black Drongo nesting on the same tree. They commented that this "behaviour was not observed towards birds such as crows, so admirably driven away by the drongos". Ali and Crook (1959) observed that five out of seven nesting colonies were located in trees containing a breeding pair of Black Drongo. Finn's Weaver apparently accrue certain benefits from this association as drongos


Harvest of Hemp in the immediate vicinity of Finn's Weaver nesting locations needs to be completely stopped to boost successful breeding and prevent the spread of Parthenium

Predation of nesting colonies by crows is a crucial factor for the decline in Finn's Weaver population, which cannot be further ignored if this species need to be prevented from extinction

are extremely alert to all approaching birds and aggressively drive away most birds such as raptors and crows, while leaving the weavers unmolested (Ali and Crook 1959; Ambedkar 1968). Ambedkar (1968) observed that Finn's Weaver nest sites on *Typha* reeds are more protective than the ones on tree-tops, as crows find it difficult to stand on *Typha* stems which are too thin to grasp. He first mentioned that the crows were driven by the male Finn's Weaver as they attempted to enter the colony. Later he observed "in August 1963 a mixed party of House Crows *Corvus splendens* and Jungle Crows *C. levaillantii* raided a colony, which was situated on a *Shesham* tree. They made repeated attempts to enter the colony, and finally one crow managed to pull out a nestling about eight days old through the entrance of a nest."

In my initial surveys, I observed both House Crow *Corvus splendens* and Jungle Crow *C. levaillantii* making several attempts to prey on this nesting colony although Finn's Weaver males would get together and mob away the crows. However on June 30, 1999, I witnessed a party of six House Crows raiding a nesting colony. Four semi-grown chicks were eaten by them along with several eggs. Within half an hour, the whole colony was totally attacked. A bird or two would come for a few seconds to inspect and then leave the nest. On my next day visit again to this site, I saw the breeding colony was totally deserted (Bhargava 2000).

In my survey of the last five years, I have come across more abandoned colonies in peak breeding season, which probably were abandoned due to crow raids. BirdLife International (2001) mentions that Finn's weaver colonies appear and disappear unpredictably. I feel that the reason is quite simple – crow raids. On June 4, 2017, I located a breeding colony of 10 nests at 16.49

House Crows feeding on a Finn's Weaver chick

hrs. Within 15 minutes of my observation I witnessed the whole colony being raided by eight Jungle Crows and all eggs and chicks were eaten. The nesting birds could not defend their family from crows nor could the Black Drongo pair succeed in chasing the crow flock from attacking.

The rising population of crows (related to development pressures with simultaneous increase of garbage and human habitations) and their impact through nest predation on breeding localities especially at treetops could be the reason for unsuccessful breeding in several instances (Bhargava 2000, 2004).

The eggs and nestling present in the globular nest of Finn's Weaver on treetops are more easily accessible to predators like crow. The other three species of Indian weaver birds have suspended tube-like nest which may be harder to raid than that of Finn's Weaver, leading to proportionately increased rates of predation (Bhargava 2000). Finn's Weaver is more similar in habits to Asian Golden Weaver *P. hypoxanthus* and African *Quelea* genus (Ali and Crook 1959; Crook 1963) which still have thousands of birds nesting together. It seems that the numbers of Finn's Weavers are less and crows are more. In this situation the reproduction and survival of Finn's Weaver due to crows is at stake.

Red-billed Quelea *Quelea quelea*

Asian Golden Weaver
*P. hypoxanthus*

Escalating crow population in Finn's Weaver areas owing to increase in garbage is a cause for concern

### The impact of bird trade on Finn's Weaver

The Finn's Weaver has been a subject of bird-trade since 1901 (Finn 1901, Abdulali 1954, Ali and Crook 1959, Inskipp 1977, Ahmed et al. 1996, Ahmed 1997, 1999, 2012 and 2014), and the trend continues unabated, even though the species remains unknown to most ornithologists and birdwatchers. Most of the former and present trappers report that this species was never 'intentionally' targeted by them, and most of birds of this species in trade were a by-catch that gets occasionally caught at common roost sites in tall grasses and sugarcane shared by other species of weaverbirds and munias (Bhargava 2000). This case seems largely true, as evinced from my interviews with trappers during my research; only exceptions may have been 2–3 trappers from Meerut and Rampur, who specialised in trapping the Finn's Weaver in particular until the early 1900s when bird trapping was a legal profession.

There are some hidden facts about the past and present Finn's Weaver trade that needs to be presented in the right perspective to save this species. Until 1990–91, when the trade in native birds was legal and export of birds was allowed, the traditional trappers of 1970s and 1980s told me to 'respect this species' that fetched them about INR 3–5 per bird compared to INR 0.5–1 for other weavers. The former exporters shipped this bird at a price of USD 3–5 per bird or INR 50–80. Local retail price by dealers was INR 50 to 500 for a pair as a substitute for Canary. Please note that Inskipp (1977) and Ali and Crook (1959) mentioned that looking at the rarity and endemic status of this bird, the Government of India ceased the export quota of this species, before they actually banned all bird export and local trade. Twenty years ago, when there was a scarcity of domesticated exotic birds such as Canary and their availability in the Indian bird markets, there was a high demand for rare Indian birds such as Finn's Weaver, which were supposedly sold as exotics (Ahmed 1999) at high prices. Now with little ease, reasonable money along with increasing awareness and species identification due to internet facility on legal, domesticated and exotic species, hobbyists and traders prefer to trade and keep exotic birds rather than wild Indian birds. This automatically curtails the demand for species such as Finn's Weaver which is quite hard and expensive to obtain or breed.

Aviculture experience of traditional trappers as shared with me reveal that the Finn's Weaver is very pugnacious and vocal in captivity and needs to be transported separately in big spaced cages from capture site to holding areas which was taken care when the bird had a price. Even if one or two are caught from far-flung grasslands, transporting them, along with munia species, in secrecy will cost more to the trappers than the money they may fetch through sale; the bird species with a large bill will injure (blind) and kill many munias if kept with them, and its inter-species fighting calls may attract trouble. This is also true for other weavers that make noise in case they have to be transported long distances from the site of capture to trade location. Hence most of the weaver birds are now released as soon as they are caught at the trapping sites. Nevertheless, in many areas of Uttar Pradesh where the wild birds occur openly, mainly Baya Weaver and Black-breasted Weavers appear for sale in bird markets from time to time (Ahmed 2014). But in the last 8–10 years, no Finn's Weaver has appeared in any Indian bird market pointing their numbers have truly dwindled.

The traditional bird trappers informed me of a dozen-odd people in some remote khadhar grassland areas, mainly involved in fishing, hunting and brewing illicit liquor, who occasionally trap weavers birds for their own consumption. They sometimes trap several species from roost sites during night and drown the weavers and other birds to avoid the attention of enforcement officials or villagers. While illegal trade of Finn's Weaver has been one of the main causes for the decline of the bird species over the decades, currently it is the loss of habitat owing to industrialisation and the subsequent rise in crow population that has taken a toll on their numbers. Any attempt at the conservation of the species first requires a strong resolve to check industrialisation and crow menace.

Weaver birds are occasionally captured for pet, food and merit release trade

# RESULTS AND DISCUSSION

BirdLife International (2001) has reviewed and summarised 18 locations for Finn's Weaver based on old records from 1866 to 2000 for a period of 135 years covering Uttar Pradesh-Uttarakhand, northwest Nepal and duars of north West Bengal and Assam. Of these 18 records, 17 are from India, and one from Shuklaphanta National Park in Nepal. Further, BirdLife International has mapped these records into three categories based on the year of sighting(s).

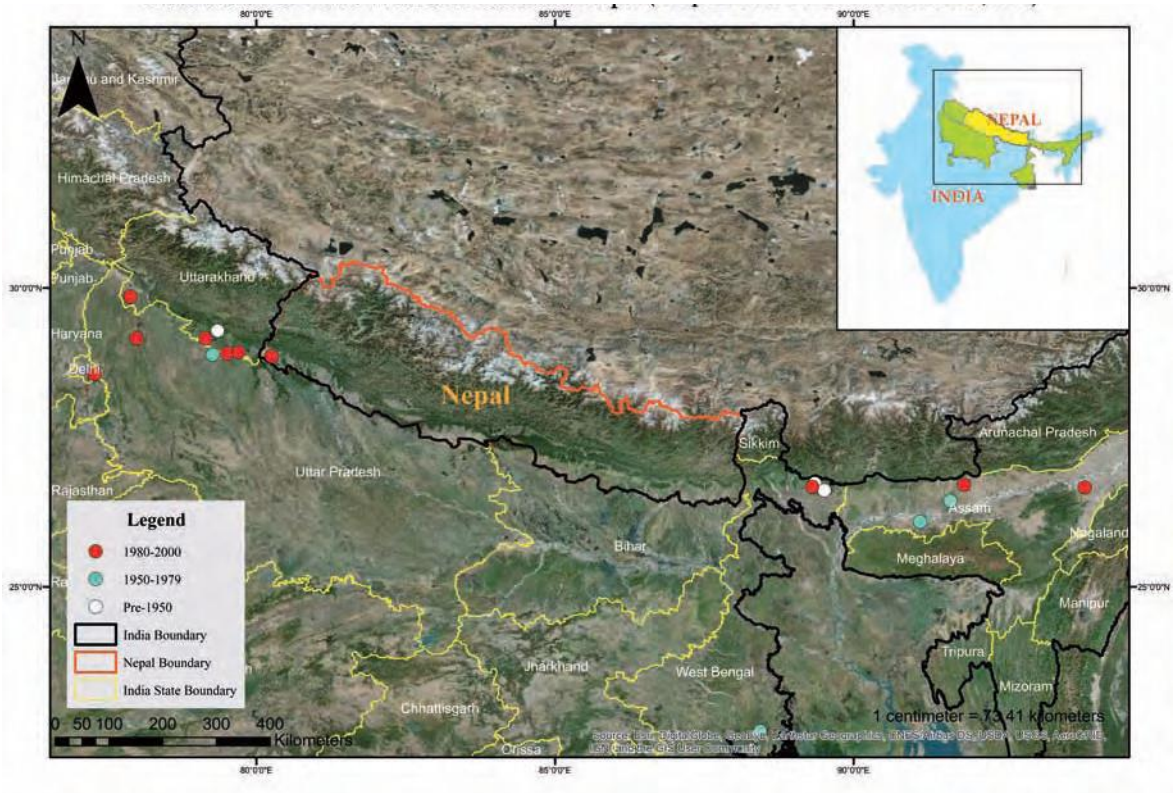
**Historical (pre–1950):** Four records – Kaladhungi, Hasimara, Rajabhatkhawa and Goalpara.

**Fairly recent (1950–1979):** Four records – Bilaspur, Salt Lake, Agia and Rangia.

**Recent (1980–2000):** Nine records – Okhla, Roorkee, Hastinapur Wildlife Sanctuary, Bazpur, Kichha, Sitarganj, Jaldapara Wildlife Sanctuary, Manas National Park and Kaziranga National Park.

Of these 17 location records, five are from Uttarakhand, three from Uttar Pradesh, four from West Bengal and five from Assam. While the 17 locations are based on records from 1866–2000**,** my study of the Finn's Weaver up to 2017 has notched up the site number to 47. An assessment of the records from these 47 locations, from 1866 to 2017, clearly demonstrate how the Finn's Weaver sites have declined over the years, especially over the last decade. The site

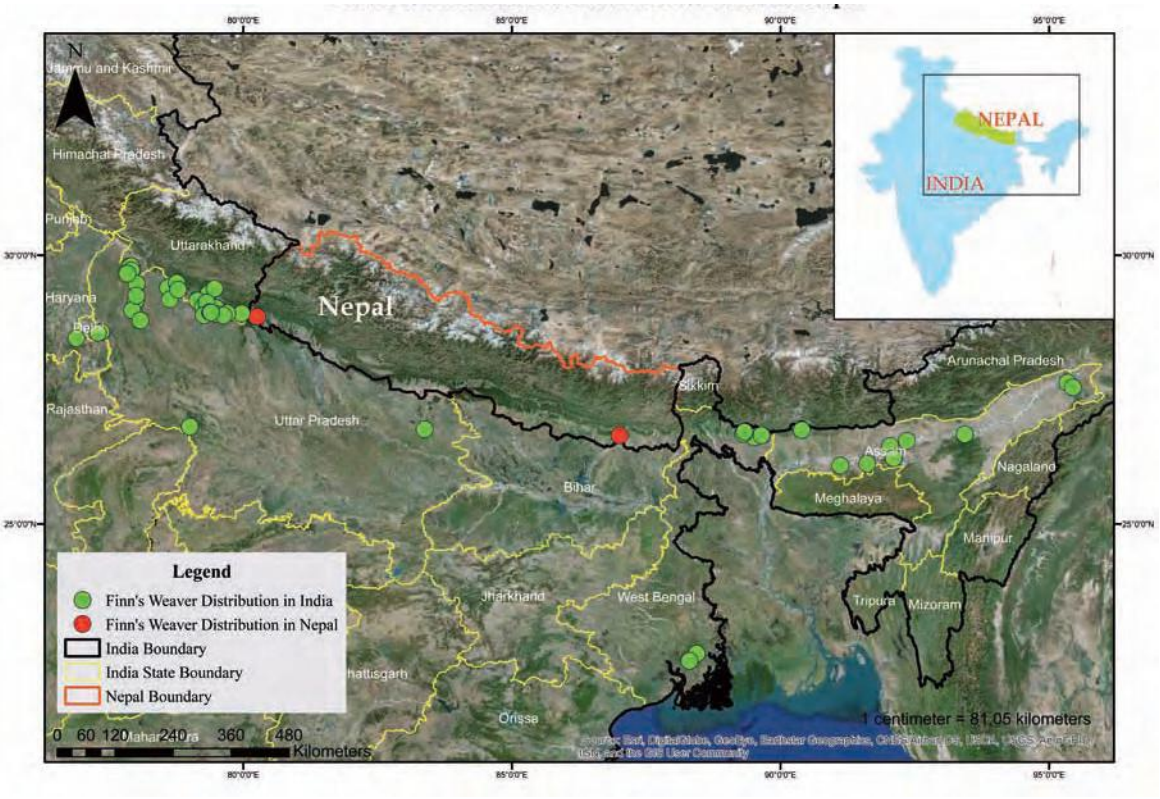
**Distribution of Finn's Weaver in India and Nepal (Adapted from BirdLife International, 2001)**



records with the data of birds, their nesting or breeding colonies seen during various surveys by me and other ornithologists are tabulated in Appendix I.

The breakup of these 47 past and present localities across the Indian terai shows a total of fourteen locations of Finn's Weaver in Uttarakhand; sixteen locations in Uttar Pradesh (including Okhla Bird Sanctuary); seven in West Bengal; nine in Assam; and one in Haryana.

**Distribution of Finn's Weaver across India and Nepal**




A look at the survey results over the last five visits between 2012–2017 reveal that the Finn's Weaver is currently present in only nine of the 47 locations. It was recorded only from three out of the 14 locations in Uttarakhand, two out of the 16 locations in Uttar Pradesh, four out of the nine locations in Assam, and no records from the seven known locations in West Bengal or the one location in Haryana.

Of the nine locations where Finn's Weaver is currently sighted, three are new locations identified during the one-year BNHS survey carried out in 2016–2017. The three locations, identified based on information provided by former bird trappers, include Haripura Dam in Uttarakhand, and Harewali Dam and Bhagwanpur Raini in Uttar Pradesh.

Out of these nine locations, the western subspecies *Ploceus m. megarhynchus* was recorded from five areas, all of which are non-protected. The eastern

subspecies *Ploceus m. salimalii* is presently found in four protected areas in the Northeast.

A detailed analysis indicates that the years from 1997 to 2011 were good for the bird species as it was reported from 15 out of the 47 locations. During this period, the Finn's Weaver was present in six of the 14 locations in Uttarakhand; three of the 16 locations in Uttar Pradesh; two of the six locations in West Bengal and four of the nine locations in Assam. Out of these 15 locations, the western subspecies was present in nine non-protected areas in north terai and the eastern population in four protected areas of Assam.

An analysis of the studies from 1959 when the species was re-discovered by Dr. Sálim Ali to 1996 shows that the species was known from five localities of Uttarakhand, 10 localities of Uttar Pradesh, three localities of West Bengal, six localities of Assam and one locality of Haryana – totalling up to 25 localities.

It is noteworthy to mention that the low numbers of localities does not indicate that the species was in a small range. It is just that the proper habitat was not known or the search was not so extensive all over the Indian terai. To further substantiate this fact, in the gap of 92 years between 1866 (when it was first known to science from specimens) and 1958 (before it was re-discovered in the wild), the Finn's Weaver was assumed to be present in only two localities in Uttarakhand and four localities in West Bengal.

Over the last 60 years after the species' re-discovery in 1959, the best known and studied population of Finn's Weaver in India was in Uttarakhand, especially around Udham Singh Nagar–Rudrapur block. In fact, to discuss the decline of Finn's Weaver population in India over the years, the only available and comparative data is from Udham Singh Nagar region. All other reported sightings across Indian terai, except for repeated sightings at Kaziranga National Park, are mainly single records.

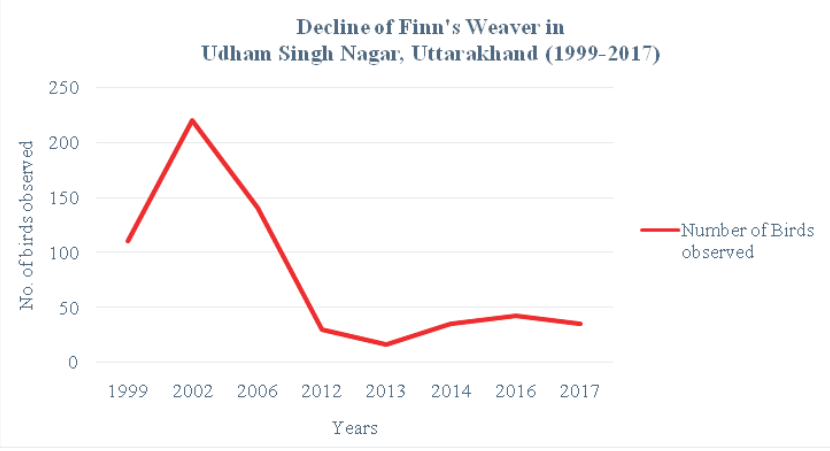
Ambedkar (1968) found 21 breeding colonies of Finn's Weaver and recorded about 800 nests in 1961. In 1999, I recorded a total of 110 birds and 70 nests in five breeding colonies. My maximum sightings of Finn's Weaver was in the year 2002, when I counted about 220 Finn's Weaver with 268 nests in 14 big and small colonies in Udham Singh Nagar district. Malvika Onial in 2006 recorded 160 nests in four colonies from these areas and saw flocks of 20–50 birds (flock numbers unspecified).

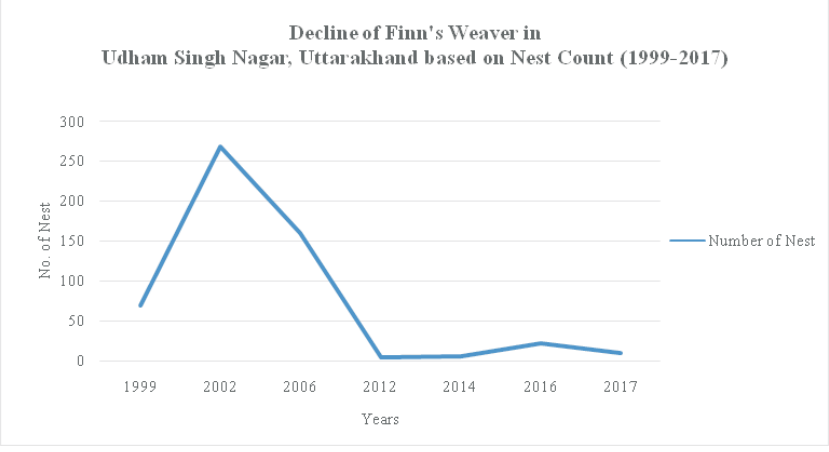
During the last five visits in Uttarakhand since 2012, I have located a total of 30 birds and five nests in two trees in 2012, 16 birds and no nests in 2013, and 25 birds and seven nests in 2014 – the same year ten birds were seen by

Dibyendu Ash – all records within USN. In 2016, I recorded only 36 birds and 23 nests; six birds were seen the same year by Rajesh Pawar. In 2017, I recorded 30–35 birds with 11 nests in two locations despite many days of search and covering more areas than in my earlier surveys (see table below).

| Year of survey | No. of birds recorded in Uttarakhand | No. of nest seen | Total no. of colonies | Observer |
|---|---|---|---|---|
| 1961 | Locally very common | 800 | 21 | VCA |
| 1999 | 110 | 70 | 5 | RB |
| 2002 | 220 | 268 | 14 | RB |
| 2006 | Flocks of 20–50 | 160 | 4 | MO |
| 2012 | 30 | 5 | 1 | RB |
| 2013 | 16 | - | - | RB |
| 2014 | 25 +10 | 7 | 1 | RB, DA |
| 2016 | 36 +6 | 23 | 1 | RB, RP |
| 2017 | 30–35 | 11 | 2 | RB |

Repeat surveys in and around Udham Singh Nagar District, have shown a decline from 220 birds and 268 nests in 14 colonies in 2002 (Bhargava 2004) to 35 birds and 11 nests in 2017. Depending on whether nests or individuals are used as the key metric, this shows a decline of 84.1–95.8% over 15 years.



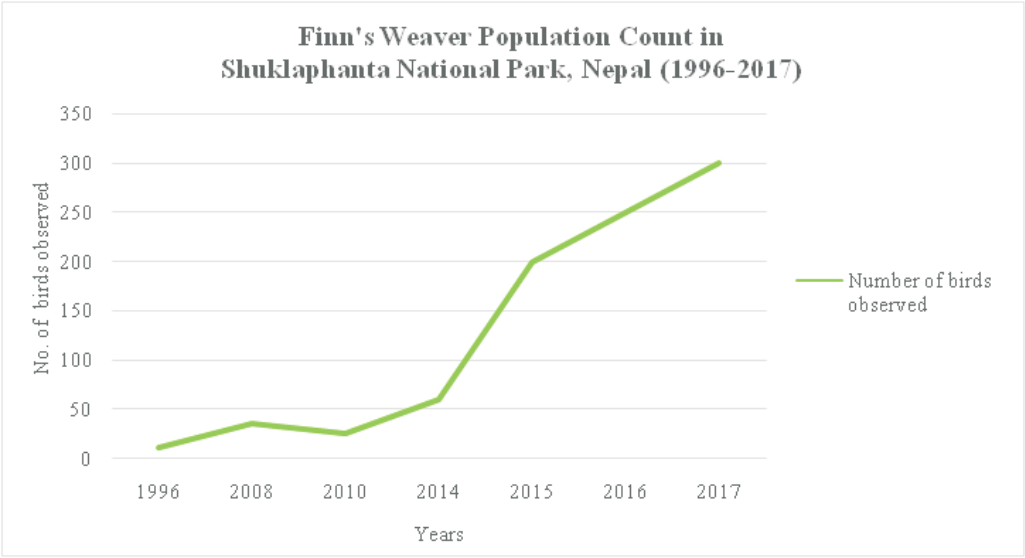



The eastern race has disappeared from Jaldapara National Park**,** and there is no idea of any existing Finn's Weaver population in West Bengal over the last five years. In Assam it has been mostly seen in Kaziranga and Manas National Parks. The population estimate for eastern subspecies *Ploceus megarhynchus salimalii* is less than 300 Finn's Weaver in north-east India (Peter Lobo, pers comm. 2016). Despite the species presence in protected areas such as in Kaziranga in Assam, the population has always been seen in comparatively low numbers (Bhargava 2004).

I estimate a current overall population of less than 200 birds in Uttarakhand (around Udham Singh Nagar) and Uttar Pradesh together. In Uttar Pradesh, after a gap of almost 15 years, I recorded two news sites of Finn's Weaver, which together had 25–30 birds. In the Northeast, I estimate a current population of about 300 birds. Peter Lobo corroborates my estimate that not more than 300 birds exist. In all, not more than 500 Finn's Weaver would be present in the three states put together.

**A look at the Nepal scenario**

Finn's Weaver, once endemic to India, now has a wider range extension in the terai, occurring in the two Wildlife Reserves of Nepal – Shuklaphanta National Park (Baral 1998a,b) barely 100 km from Udham Singh Nagar and Kosi Tapu Wild Reserve (Fouarge 1993; Choudhary et al. 2003, Giri 2007). The founder population Finn's Weaver population at Shuklaphanta has most probably migrated from the Indian terai and is now significantly increasingly in number (Jyotendra Thakuri *pers comm.* 2017).

One of the main reasons for their increased presence in the adjoining Nepal's Shuklaphanta is the protected wet and dry grasslands, with almost no disturbances. The habitat, which is being well managed for the Bengal Florican *Houbaropsis bengalensis,* is also benefiting the Finn's Weaver. In between the core area of the Shuklaphanta grasslands, there is an elephant holding camp with two elephants. These elephants, on an average, are fed 30 kg paddy per day. One important reason for the Finn's Weaver's continued presence at Shuklaphanta is the availability of this paddy as an 'unintentional bait' for the birds.

A look at Nepal's Finn's Weaver population based on the available records for the last two decades indicates how the Finn's Weaver population has increased over the years. Eleven birds were first seen in Shuklaphanta in May 1996 (Baral 1998a; Giri and Chaudhary 1996). A flock of 36 birds and 20 nests were found there in May 2008 (Baral et al. 2008) and a total of 25 birds were counted in May 2010 (Baral et al. 2010). About 60 individuals were seen in Shuklaphanta in June 2014 (Jyotendra Thakuri in Inskipp et al. 2016) and nearly 200 in May 2015 in the southeastern corner of Shuklaphanta grasslands (Badri Chaudhary personal communication to Hem Sagar Baral 2017). Ongoing work on this species in Nepal by Jyotendra Thakuri (in prep) suggests that there were about 300 birds in 2017 and about 250 in 2016. The available figures suggest that the population sees an increase in summer, perhaps from the adjoining Indian Territory (Carol Inskipp and Hem Sagar Baral in litt. 2017).

JYOTENDRA THAKURI

Finn's Weaver feeding on Paddy at Shuklaphanta grassland in Nepal

| Year of sighting | Number of Finn's Weaver recorded in Nepal | Source |
|---|---|---|
| 1996 | 11 | HSB |
| 2008 | 36 | HSB |
| 2010 | 25 | HSB |
| 2014 | 60 | JT |
| 2015 | 200 | BC |
| 2016 | ≥ 250 | Inskipp et al. 2016, JT |
| 2017 | About 300 | JT (in prep) |

The only other Nepal site where the species has been recorded is Koshi Tappu Wildlife Reserve in the far east. After an unconfirmed report in February 1993 (Fouarge 1993), the species was confirmed from the reserve in October 2002 when a flock of eight was seen at Koshi Camp (Choudhary et al. 2003; Giri and Choudhary 2002). Two Finn's Weavers were again recorded at Koshi in December 2007 (Giri 2007), but no later records are known. The two Nepal localities are very far apart, one being in the far east and the other in the far west; so if birds occur at Koshi Tappu regularly in the near future, the two populations would be severely fragmented. In the light of the above findings, the most promising areas for exploring this species's population in India would be the grasslands of Lugga Bugga Nature Reserve adjoining Shuklaphanta National Park as well as grasslands/marshes along the Mahakali/ Sharada River (Carol Inskipp and Hem Sagar Baral in litt. 2017).

The elephant camp site at Shuklaphanta National Park in Nepal is the best area to see the Finn's Weaver

During my visit to Cambodia in April 2017 for a workshop on Bengal Florican and grassland management, organised by Wildlife Conservation Society (WCS), I had a chance to meet Simon Mahood, Senior Technical Advisor of WCS, and discuss in detail the current status of Finn's Weaver. Simon, an expert on grassland birds and also experienced with IUCN evaluation process, helped me to interpret the IUCN criteria for Finn's Weaver as follows:

Finn's Weaver is currently classified as Vulnerable under criteria A2cd, A3cd and A4cd because, based on reduction in the area of occupancy, extent of occurrence, quality of habitat and the level of exploitation, it was estimated to be declining at an average rate of 30% over the last three generations or 10 years (whichever is longer). It was also thought to classify as Vulnerable under criteria C2a(i) because its population size was estimated to be fewer than 10,000 mature (breeding) individuals with no one sub-population greater in size than 1,000 mature individuals, and the overall population was undergoing a continuing decline.

However, based on recent surveys, it would be more appropriate to classify the species as Critically Endangered under criteria A2abd, A3abd and A4abd. Based on data from the last two decades, Finn's Weaver is thought to be undergoing a decline (based on direct observations of populations, an index of abundance generated from one focal population, and the level of exploitation) of at least 80% over the last three generations or 10 years (whichever is longer). This decline is ongoing covering the past, present and future.

Under criterion C, recent research indicate that Finn's Weaver only meets the criteria for Endangered status because its population is less than 2,500 mature individuals (but more than 250) and is undergoing a continued decline. However, it is the highest criteria met that decides the status of a species, and Finn's Weaver meets the criteria for Critically Endangered under criterion A (as already detailed).

The global population of Finn's Weaver may be much less than 1000 mature individuals and rapidly declining as shown by various studies. This species should be immediately considered to be uplisted as Critically Threatened from its present Vulnerable category to enable it to get greater conservation attention.

The BirdLife International's Global Species Programme continually collates up-to-date information on Globally Threatened Birds from the published literature and from a worldwide network of experts. This is used to evaluate the status of each species using the IUCN Red List categories and criteria. In BirdLife International's Globally Threatened Bird Forums, BNHS has urged for a revision to the Finn's Weaver's global threat status, from its current Vulnerable to Critically Endangered or at least Endangered. The species is now in a process of evaluation as per Red List criteria based on the current information.

The text reproduced below was first published by BirdLife International as part of the 2017 Red List update to enable potential reassessment of Finn's Weaver as part of the 2018 Red List update (http://www.birdlife.org/globally-threatened-bird-forums/2017/09/finns-weaver-ploceus-megarhynchus-revise-global-threat-status/) and the reassessment result is still awaited.

**Criterion A** – New information from Udham Singh Nagar shows declines of 78.3–85.5% over 3 generations as a result of habitat loss and trapping for live bird trade. If this may be considered a general trend across the entire range of the species, then this would mean that the global decline in this species is at the borderline of Endangered and Critically Endangered under criteria A2, A3 and A4. However, it should be noted that the eastern population 'has always been seen in comparatively low numbers' (R. Bhargava *in litt.* to BirdLife International 2017) and so declines there over the most recent 3 generations potentially may not have been at as high a rate as the western subpopulation, or at the least are far more difficult to decipher.

**Criterion B** – No new information. Extent of Occurrence = 649,000km$^2$; AOO – not measured. The species does not approach the threshold for Vulnerable under this criterion.

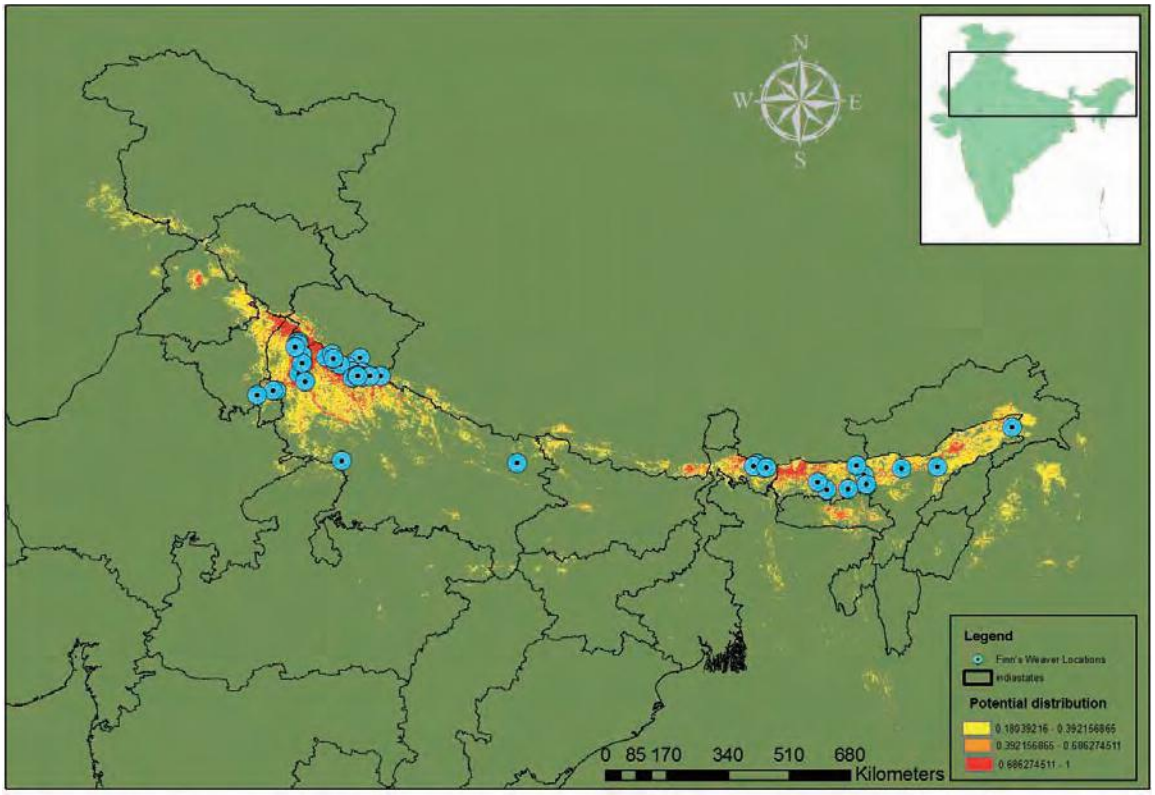
**Criterion C** – At the very least, the population size estimate requires moving to a lower band, probably 250–2,499 mature individuals. Combined with the fact that the minimum size of each subpopulation is potentially as low as 200 mature individuals, this implies that the species may warrant listing as Endangered under criterion C2a(i).

**Criterion D** – If the population size is considered to fall below 1,000 mature individuals, then it would warrant listing as Vulnerable under this criterion.

**Criterion E** – No quantitative analysis on extinction risk has been conducted, to the best of our knowledge.

Considering this information, the species warrants uplisting to Endangered under criteria A2abcd+3bcd+4abcd; C2a(i). Further information from elsewhere in the range would be extremely beneficial in gauging the global rate of decline, to see whether the species may instead warrant listing as Critically Endangered under criteria A2abcd+3bcd+4abcd.

# Potential distribution of the Finn's Weaver in the Indian Subcontinent




Based on the data collected over the years, an attempt was made to model the potential distribution of the Finn's Weaver in the Indian terai by my colleague Dr Girsh Jathar. The model uses only presence data of a species' observed occurrence, in conjunction with the NDVI (Normalized Difference Vegetation Index – as a proxy of the vegetation cover) and the 19 bioclimatic variables (BIOCLIM) as predictor environmental variables to create niche-based models of the species' ecological requirements in the provided environmental extent (Stockwell and Nobel 1992, Stockwell and Peterson 2002). Among the available predictor variables, required to produce ecological niches for the species, we selected monthly maximum normalised difference vegetation index (NDVI) 10–day composite for the year 2013 from the SPOT VEGETATION NDVI (SpotImage/ http://proba-v.vgt.vito.be/en/product-tools, accessed in 2013, native resolution 1x1km). In addition, we used elevation, slope, aspect and the compound topographic index (CTI) from the Hydro-1K dataset (USGS 2001) and included 19 bioclimatic variables (Hijmans et al. 2005)

.

The outcome, which is a complex expert-system model, is then projected/ converted into GIS domain to create a potential distribution map of the species. MAXENT (version 3.3.3k) was used to develop all analyses reported herein, in the light of the robust nature and broad adoption of this algorithm

(Elith et al. 2006); default settings for parameters such as prevalence, regularisation multiplier and density of background sampling were used to create multiple replicate models and explore the implications of different combinations of environmental variables.

The terai landscape covers approximately 49,500 sq. km geography of Indian subcontinent, of which 30,000 sq. km is in India (Semwal 2005). The mapping results indicate that potential distribution of the Finn's Weaver, according to the modelling is about 9454 sq. km. About 19 % of the terai habitat appears suitable for the species. The distribution encompasses 30 protected Potential distribution locations of Finn's Weaver in the protected areas of the Indian Subcontinent as follows:

1. Simbalbara Wildlife Sanctuary, Himachal Pradesh
2. Rajaji National Park, Uttarakhand
3. Corbett Tiger Reserve, Uttarakhand
4. Sonanadi Wildlife Sanctuary, Uttarakhand
5. Hastinapur Wildlife Sanctuary, Uttar Pradesh
6. Kishanpur Wildlife Sanctuary, Uttar Pradesh
7. Dudhwa National Park, Uttar Pradesh
8. Katarniaghat Wildlife Sanctuary, Uttar Pradesh
9. Suheldev Wildlife Sanctuary, Uttar Pradesh
10. Sohagi Barwa Wildlife Sanctuary, Uttar Pradesh
11. Valmiki Tiger Reserve, Bihar
12. Udaypur Wildlife Sanctuary, Bihar
13. Mahananda Wildlife Sanctuary, West Bengal
14. Jaldapara Wildlife Sanctuary, West Bengal
15. Gorumara Wildlife Sanctuary, West Bengal
16. Buxa Wildlife Sanctuary, West Bengal
17. Barnadi Wildlife Sanctuary, Assam
18. Manas National Park, Assam
19. Pabitora Wildlife Sanctuary, Assam
20. Orang National Park, Assam
21. Laokhowa Wildlife Sanctuary, Assam
22. Nameri Wildlife Sanctuary, Assam
23. Sonai-Rupai National Park, Assam
24. Kaziranga National Park, Assam
25. Pabha Wildlife Sanctuary, Assam
26. Dibru-Saikowa Wildlife Sanctuary, Assam
27. D'Ering Wildlife Sanctuary, Arunachal Pradesh
28. Shuklaphanta National Park, Nepal
29. Royal Chitwan National Park, Nepal
30. Phibsoo Wildlife Sanctuary, Bhutan

# RECOMMENDATIONS

The Finn's Weaver is one of the world's rarest and globally threatened species with almost 80% population in India (Rahmani 2012). Out of the 29 states and seven Union Territories of India, the Finn's Weaver is recorded from only four states – Uttarakhand, Uttar Pradesh, West Bengal and Assam with one single insignificant record each from the state of Haryana and from Delhi (Union Territory). A reality emerging from this report and recent surveys is that most of the Finn's Weaver population from the north India terai have moved towards Nepal's protected areas due of lack of conservation and simple factors like habitat alteration, development pressure and human interference.

Finn's Weaver male in breeding plumage. Note there is no yellow on the mantle

Some recommendations for the conservation of this bird species:

**Role of state governments:**

The state governments of Uttarakhand, Uttar Pradesh, West Bengal and Assam, where the Finn's Weaver exists, through their respective Forest Departments should begin to formulate, draft and implement 'state-specific Finn's Weaver Recovery plan' to restore existing grassland habitat based on detailed field surveys.

Monitoring the existing small and fragmented Finn's Weaver populations in protected and non-protected areas as pointed in this report needs to be carried out every alternative year. This exercise can be best initiated around the breeding season from May end or first week of June when Finn's Weaver are quite conspicuously seen building their typical ball-shaped nests on tree-tops. This task can be accomplished by involving national and local NGOs with expertise in birds, ornithologists, forest guards, nature guides, and bird watchers. BNHS is committed to assist forest departments as the knowledge partner in all states, from planning and execution stages as and when the need arises.

The state of Assam apparently has the world largest population of eastern race of Finn's Weaver *Ploceus megarhynchus salimalii* Abdulali present in five protected areas. Since these protected areas are closed for visitors (mainly due to floods) from May 1 to October 31 each year, (the main breeding season of Finn's Weaver), there are no studies or population/nest count in these areas. The state government of Assam should consider giving special research permission and support to organisations and individuals interested to carry out systematic surveys to find out the status of Finn's Weaver. Rahmani and Choudhury (2012) suggest that a detailed survey of the whole Brahmaputra valley should be conducted to find out the current distribution range.

A degraded former Finn's Weaver nesting site near Rudrapur. Unfortunately there are no known protected areas in Uttarakhand having this species

The state forest departments should allot funds for such a baseline survey on the lines of the Uttarakhand Forest Department which initiated a survey on Finn's Weaver in Uttarakhand through the Wildlife Institute of India, Dehradun during the summer of 2017 (Dhananjai Mohan, IFS, *pers comm*., January 2017).

### Conservation and management of Finn's Weaver in non-protected areas

A major percentage of this bird is found outside the protected areas, in crop fields/grasslands owned privately by people or belonging to the irrigation department or revenue department with traditional user rights to local communities. Protection of this habitat for the species should be the highest conservation priority if further decline is to be prevented. Since suitable grasslands are so restricted in area and distribution, further research must be coupled with direct action to strengthen the measures which ensure their protection. In this regard, key breeding colonies and surrounding habitats should be protected (Bhargava 2000, 2004). To manage such areas for micro-level habitat management and protection of weaver birds, emphasis has to be given on initiating a dialogue with the concerned land owner(s)/ influencing them towards bird-friendly practices such as reducing extensive use of harmful pesticides or harvesting grasses.

Grass is an essential resource for the local people in the Indian terai. It is regularly harvested for fodder, thatching, rope and mat making and previously was used in large-scale paper making and cardboard industry. There is an increasing biotic pressure on terai grasslands due to escalating human and livestock populations, unsustainable levels of fodder harvesting, unplanned

To prevent further decline of grassland-dependent species, there needs to be a fair policy on grasslands from an ornithological perspective

land reclamation for cultivation, improper drainage and recycling of industrial effluents. This requires systematic management measures as suggested by several grasslands ecologists. Habitat loss in the non-protected areas cannot be allowed as it can have serious implications for the bird species. The crucial need of the hour is immediate attention to the preservation of grassland ecosystems and harbouring grassland specialist species (Bhargava 2000, 2004, Rahmani 1988, Majumdar and Brahmachari 1988, Rahmani and Qureshi 1991).

State governments especially from Uttar Pradesh and Uttarakhand need to formulate a working strategy with the irrigation department for the temporary restoration of Finn's Weaver wet grassland habitat. The purpose should be to

In dam areas hosting Finn's Weaver, such as Harewali in Uttar Pradesh, the Irrigation Department should be made aware about the species' presence and conservation

initiate a dialogue with the irrigation department to prevent nest submergence in some key points if possible and help successful breeding. This suggestion will need a lot of discussion and research with alternative flood control strategy but, if implemented, it can be a real boost to some populations. Mapping of breeding sites is important to prevent any further developmental projects coming up in Finn's Weaver landscape.

Some breeding areas with local abundance of the species such as Harewali Barrage and Bhagwanpur Raini in Uttar Pradesh, and Haripura dam in Uttarakhand can be recognised as Important Birds Areas, with more surveys by the Forest Departments in collaboration with BNHS/Birdlife International (Bhargava 2000; 2004), or declared as waterbird sanctuaries.

### Systematic research on Finn's Weaver

There is an urgent need to have a full-fledged study on Finn's Weaver ecology, current status and threats to achieve a proper baseline data on the present population status of both subspecies of Finn's Weaver in Assam, Uttarakhand, Uttar Pradesh and West Bengal (Bhargava 2000, 2004, Rahmani 2012, 2016, Rahmani and Choudhury 2012, Rahmani and Mohan 2013, Rahmani et al. 2014). There is a strong need to encourage students from various state universities and research organisations to identify this species and its conservation requirements and take up ecological research on various aspects of Finn's Weaver. BNHS can take the lead in capacity building that is required for Finn's Weaver studies and monitoring. Aim should be collection of substantial distribution data through a network of young people and field researchers at local field levels for GIS-based state and national level distribution maps. There is a need to conduct DNA studies on both subspecies to find the actual percentage of differences between the two forms. There is a need to capture, followed by subsequent release, of at least four specimens of both subspecies prior to their breeding season to study in detail the age / sex related comparative plumage differences in both subspecies. If possible, also colour-mark few nesting birds to study the sequential polygamy. The Chief Wildlife Wardens of the respective states could be requested to grant necessary permission for these studies.

### Upgradation in Finn's Weaver conservation status

The Finn's Weaver is at the brink of extinction from a global perspective, although this issue has not been much debated due to lack of significant research and data. With an population estimate of less than 1,000 mature individuals, BirdLife International, the official Red Listing Authority for birds for the IUCN (International Union for Conservation of Nature) Red List, should immediately consider uplisting the Finn's Weaver from its Vulnerable status to Critically Endangered category to garner maximum national and international conservation support (Bhargava 2004; Rahmani 2012 and 2016). It is already listed as Critically Endangered in Nepal (Inskipp et al. 2016 and 2017).

BNHS has taken up this issue with BirdLife International authorities; interested individuals, NGOs and concerned state governments should compile and send their findings to: http://www.birdlife.org/globally-threatened-bird-forums/2017/07/finns-weaver-ploceus-megarhynchus-revise-global-threat-status/to support our proposal for uplisting this species.

The Government of India through the Ministry of Environment, Forest and Climate Change (MoEFCC) should consider upgradation of the species from its present Schedule IV status of the Wildlife (Protection) Act, 1972 (as amended in 1991) to Schedule I to provide maximum possible protection and prevent any trade or exploitation of this species (Bhargava 2000). Control

of trapping should be one of the primary objectives of any conservation programme. Studies should be carried on the impact of trade on Finn's Weaver population (Ahmed 1997, 1999, 2012). Stricter enforcement and training of authorities along with the provision of alternative livelihood to traditional subsistence by bird trapping is an important socio-economic angle to Finn's Weaver conservation. Help from trappers with prior knowledge of its habits and range can be beneficial (Bhargava 2000; 2004). A conservation awareness programme targeting trappers and local people in key sites for this species should be initiated at a broader scale.

The species may also be included in CITES list (Convention on International Trade in Endangered Species of Fauna and Flora) to avoid illegal international trade with strict enforcement along its trade route (Bhargava 2000) although this measure is normally required to demonstrate that trade in a species has a confirmed international dimension (BirdLife International 2001).

### Finding solution to crow predation

My research over the years has proved that the western population of Finn's Weaver in north India terai is getting totally wiped out due to nest predation by crows. Regular eggs and chick predation is resulting in nil reproduction success or almost negligible natality combined with shrinking breeding sites (Bhargava 2000). Sometimes females are also badly injured while defending their chicks during such raids. The actual population numbers in Uttar Pradesh and Uttarakhand have fallen so low that now these severely fragmented sub-populations are unable to cope with the increasing crow population. Crows should be eliminated or controlled from breeding sites which is unlikely due to fear or outcry from animal activists, despite House Crow listed as Vermin in Wildlife (Protection) Act, 1972. Or a small population of Finn's Weaver should be translocated on an experimental basis to protected forest grasslands such as Corbett and Dudwa National Park, where the crow population is low and necessary microhabitats for breeding are available (Bhargava 2000). However this must remain a last resort and habitat protection should be a clear priority. BirdLife International (2001) mentions: "care should be taken not to mix populations of the two subspecies if translocations or reintroductions are attempted."

### Publicity awareness campaign

The Finn's Weaver is one of the least known bird species in general; influential policy makers, forest officials, birdwatchers and the general public are unaware of the habitats in different states where it is found or was previously known from. To help conserve this bird and its habitat, a multi-stakeholder state-level meeting involving village panchayat members, government officials and environmental experts is urgently required. Participation of local communities and farmers in the immediate vicinity is absolutely important to make them understand the significance of the Finn's Weaver as an indicator of the terai wet grasslands and the reasons for


A poster published by TRAFFIC India, the wildlife trade monitoring unit of WWF-India, stressing the need to prevent trade and trapping of weaver birds in India

its decline. To shape this campaign towards a two-way process and provide momentum to grassroots-level *in-situ* protection and support, development of posters, stickers, popular pamphlets, advertisements and technical literature highlighting Finn's Weaver's peculiar nest and its difference from the other weavers both in English and in regional languages should be taken up before the next breeding season.

Local, national and international media can play a positive role by highlighting the current status, habitat requirements and threats to Finn's Weaver from time to time. This will help sensitise decision makers, forest department, birdwatchers and researchers of various institutes.

## Conservation breeding

Finn's Weaver is an ideal candidate for conservation breeding as a crow-free environment does not seem possible in India. Neither is it possible to have a weaver population large enough to mob the crows during nesting (Rahmani 2012). To prevent local extinction of Western subspecies in north India terai and to boost small sub-population, a captive breeding programme by state government and forest department should be immediately considered. The Finn's Weaver is an easy cage and aviculture species for which diet is available very easily (Ahmed 1997, 2002). It readily nests in captivity and is known to have built a nest in Dr. S.C. Law's aviaries in Kolkata in 1936

(Ali and Crook 1959). According to BNHS' understanding, the best location to attempt this project would be Hastinapur Wildlife Sanctuary in Uttar Pradesh in close collaboration with and supervision of Chief Conservator of Forest (WL), Eastern Uttar Pradesh, with their command office in Meerut. Due to the continued efforts of Uttar Pradesh Forest Department and WWF-India in the last five years towards reintroduction of Gharial *Gavialis gangeticus* and increased patrolling, this species can indirectly benefit in Hastinapur Wildlife Sanctuary.

In Uttarakhand, the most ideal location will be G.B. Pant University under the supervision of West Terai Forest Division of Uttarakhand Forest Department and in collaboration with University authorities. Both areas mentioned above have had excellent population of Finn's Weaver in the past with some patches of preferred habitats still in existence. These two areas have the necessary basic administrative infrastructure and habitat; only the aviaries of minimum 50 x 30 x 20 metres need to be constructed in the right location. The MoEFCC along with Central Zoo Authority and concerned state Chief Wildlife Warden should provide permission, fund allocation and execute this project. BNHS can provide the necessary expertise required for this project as in the case of vulture breeding centres across India with state governments. To start with one such breeding programme in the initial phase, a founder population of 12 to 16 birds would be more than enough.

Such large flocks of weaver birds may soon be an uncommon sight

**APPENDIX-1**

| State | District | Locality | Date | No. of Birds Seen | No. of Nest Seen Availability | Habitat | Observer |
|---|---|---|---|---|---|---|---|
| **UTTARAKHAND** | Nainital | Kaladhungi | 1866 | Based on specimens Nainital | Not seen | Nil<br>Nil | AOH<br>BMNH |
| | Undated | From trade record | Not seen | | | | |
| | Udham Singh Nagar | Rudrapur | July - August 1959 | No. unspecified | 2 Br. Cols. | Good | SA |
| | | | July 1 - August 20 1961 | No. unspecified | 21 Br. Cols. with 800 Nests | Good | VCA |
| | | | July 26 - September 8 1962 | No. unspecified | 1 Br. Col. | Good | VCA |
| | | | September 1984 | 70 | No. unspecified | Good | BFK |
| | | | July 28 - August 1 1998 | Not seen | 15-20 | Good | RB |
| | | | June 24 - July 2 1999 | 70-80 | 3 Br. Cols. 70 Nests | Good | RB |
| | | | June 3 - 8 2002 | 119 | 4 Br. Cols. 116 Nests | Average | RB |
| | | | June 19 2005 | No. unspecified | 4 Br. Cols. | Average | PML |
| | | | April - July 2006 | Flocks of 20-50 birds | 4 Br. Cols. 160 Nests | Average | MO |
| | | | June 29 - July 5 2012 | 30 | 2 Br. Cols. 5 nests | Degraded | RB |
| | | | July 18-22 2013 | 13 | Not seen | Degraded | RB |
| | | | May 27 - June 15 2014 | 25 | 6-7 | Degraded | RB |
| | | | June 9 - 14 2016 | 36 | 23 | Degraded | RB |
| | | | June 3 - 6 2017 | 20 | 11 | Degraded | RB |
| | | Pantnagar (Patharchatta, Matkota and Haldi) | June 4 - 5 2002 | 19 | 4 Br. Cols. 64 Nest | Good | RB |
| | | Pantnagar University Campus | June 4 2002 | 25 | 19 | Average | RB |
| | | Pantnagar | June 9-11 2016 | Not seen | Not seen | Degraded | RB |
| | | Sitarganj | June 1999 | Not seen | 10-12 | Good | RB |
| | | | June 5 2002 | 30 | 21 | Good | RB |
| | | | June - July 2012,13,14,16,17 | Not seen | Not seen | Average | RB |
| | | Ghadarpur | July 2016, 17 | Not seen | Not seen | Degraded | RB |
| | | Kichha | July - August 1959 | No. unspecified | No. unspecified | Good | SA and JHC |

**APPENDIX-1** (*contd*.)

| State | District | Locality | Date | No. of Birds Seen | No. of Nest Seen Availability | Habitat | Observer |
|---|---|---|---|---|---|---|---|
| | | | August 29 1997 | Not seen | 20 | Good | RB |
| | | | June 25 1999 | 30-40 | 20 | Good | RB |
| | | | June - July 2012,13,14,16,17 | Not seen | Not seen | Degraded | RB |
| | | Nagla | June 5 2002 | 16 | 2 Br. Cols., 37 nests | Good | RB |
| | | | June - July 2012,13,14,16,17 | Not seen | Not seen | Degraded | RB |
| | | Haripura Dam | July 2016 | 10-12 | Not seen | Good | BT |
| | | | July 2017 | 10-15 (?) | Not seen | Good | RB |
| | | Baur Dam | July 2013 | 3 | Not seen | Good | RB |
| | | | October 5 2014 | 8-10 | Not seen | Good | DA |
| | | | October 2016 | 6 | Not seen | Good | RP |
| | | Baigul Dam | June 6 2002 | 11 | 11 | Good | RB |
| | | | July 2006 | No. unspecified | No. unspecified | Good | MO |
| | Haridwar | Manglaur | 1980s | No. unspecified | No. unspecified | Good | MBT |
| | | | July 14 2016 | Not seen | Not seen | Degraded | RB |
| | | Landhaura | 1980s | No. unspecified | No. unspecified | Good | MBT |
| | | | July 15 2016 | Not seen | Not seen | Degraded | RB |
| | | Kagwali | 1980s | No. unspecified | No. unspecified | Good | MBT |
| | | | July 15 2016 | Not seen | Not seen | Average | RB |
| **UTTAR PRADESH** | Rampur | Bilaspur | June 1953 | 12-15 | Not seen | Good | HA |
| | | | 1959 and one with 200 nest | No. unspecified | 20 Br. Cols. 15-20 nest eachs | Good | SA and JHC |
| | Inderpur | | June 7 2002 | 20 | 5 | Average | RB |
| | | | June 6 2017 | Not seen | Not seen | Average | RB |
| | | Baradari | 2006-2007 | No. unspecified | No. unspecified | Good | MO |
| Gautam Buddha Nagar | Okhla | | June 1 1993 | 2 | 2 | Good | CI, TI nd BG |

**APPENDIX-1** (*contd*.)

| State | District | Locality | Date | No. of Birds Seen | No. of Nest Seen Availability | Habitat | Observer |
|---|---|---|---|---|---|---|---|
| | | | May 1998-1999 | Not seen | Not seen | Average | RB |
| | | | 2016-2017 | Not seen | Not seen | Average | RB |
| | Meerut | Hastinapur | June 17 1979 | No. unspecified | 28 | Good | YMR |
| | | | 1997-1999 | Not seen | Not seen | Average | RB |
| | | | 2002-2003 | Not seen | Not seen | Average | RB |
| | | | 2012-2017 | Not seen | Not seen | Degraded | RB |
| | Agwanpur | | 1990s | 20-30 | Not seen | Good | MBT |
| | | | July-September 2016 | Not seen | Not seen | Average | RB |
| | Hapur | Garhmukteshwar | 1970-80 | 70-80 | Not seen | Good | MBT |
| | | | 1997-1999 | Not seen | Not seen | Good | RB |
| | | | June-July 2016 | Not seen | Not seen | Average | RB |
| | Muzaffarnagar | Sukartal Khadar | 1970-80s | No. unspecified | Not seen | Good | MBT |
| | | | June-July 2016 | Not seen | Not seen | Average | RB |
| | Ramraj | | 1990s | 15-20 | Not seen | Average | MBT |
| | | | June-July 2016 | Not seen | Not seen | Degraded | RB |
| | Morna | | 1970-80s | 15-20 | Not seen | Average | MBT |
| | | | June-July 2016 | Not seen | Not seen | Nil | RB |
| | | Purkaji | 1970-80s | 20-30 | Not seen | Good | MBT |
| | | | June-July 2016 | Not seen | Not seen | Nil | RB |
| | Bijnor | Harewali | August 24 2016 | 20-25 | Not seen | Good | RB |
| | | | February 18 2017 | 20-25 | Not seen | Good | RB |
| | | | June 4 2017 | 20-25 | Not seen | Good | RB |
| | Bhagwanpur Raini | | July 2016 | 20 | 10 Nests | Good | BT |
| | | | July 15 2017 | 2 | Not seen | Good | RB |

**APPENDIX-1** (*contd*.)

| State | District | Locality | Date | No. of Birds Seen | No. of Nest Seen Availability | Habitat | Observer |
|---|---|---|---|---|---|---|---|
| | Peeli Dam | | January 9 2002 | 3 | Not seen | Good | RB and HK |
| | Etawah | Kurra | 1998 | No. unspecified | Not seen | Average | GS |
| | Gorakhpur | Unknown | 1902 and 1903 | Trade records (Kolkata) | Not seen | Average | JMH |
| | | | 2003 | Trade records (Kolkata) | Not seen | Nil | RB |
| | | | January 2017 | Not seen | Not seen | Nil | RB |
| | Gurugram | Sultanpur Bird Sanctuary | 1980s | 2 | Not seen | Good | SCS and PP |
| | Alipurduar | Hasimara | June 22 1912 | No. unspecified | 1 Br. Col. | Good | OD |
| | | | February 15 1927 | No. unspecified | No. unspecified | Good | CMI |
| | Rajabhatkhawa | | June 1925 | 2 | Not seen | Good | BNHS |
| | Buxa Tiger Reserve | | 1996 | Not seen | Not seen | Average | DA*, JA, KK |
| | Jalpaiguri | Jaldapara National Park | January 1987 | 65 | Not seen | Good | RT, MH, AP |
| | Kolkata | Salt Lake City | April-August 1966 | No. unspecified | 1 Br. Col. | Good | SSS |
| | | | June 2003 | Not seen | Not seen | Nil | RB |
| | | | 2002-2003 | No. unspecified | No. unspecified | Good | SS |
| | Joka | | 2008-2009 | 6-8 | No. unspecified | Average | SB and SS |
| **ASSAM** | Darrang | Dharamjuligarh | June 5 1975 | 35 | 24 | Good | SSS |
| | Goalpara | Ronikata | March 1910 | 1 | Not seen | Good | BNHS |
| | | | May 1926 | 1 | Not seen | Good | BNHS |
| | Agia | | May 1950 | 11 | Not seen | Good | AMNH, FMNH |
| | | | March 1952 | 5 | Not seen | Good | LACM. UMMZ |
| | | | June 1953 | 1 | Not seen | Good | BNHS |

**APPENDIX-1** (*contd*.)

| State | District | Locality | Date | No. of Birds Seen | No. of Nest Seen Availability | Habitat | Observer |
|---|---|---|---|---|---|---|---|
| | Nagaon, Golaghat and Sonitpur | Kaziranga National Park | February 10 1994 | 10 | Not seen | Good | PA, UO, DZ |
| | | | April 10 1994 | No. unspecified | Not seen | Good | OBC Bull. 20 |
| | | | April 18 1998 | 2 | Not seen | Good | OBC Bull. 29 |
| | | | 1999 | No. unspecified | 30-40 | Good | MB and PS |
| | | | January 2 2001 | Not seen | 20 | Good | RB |
| | | | April 2002 | Not seen | Not seen | Good | RB |
| | | | April 16 2012 | 12 | Not seen | Good | AS |
| | | | February 25 2014 | 2 | Not seen | Good | RB |
| | | | February 18 2016 | 2 | Not seen | Good | RI |
| | | | March 15 2017 | 40-50 | Not seen | Good | PL |
| | | | March - April 2013 and 2015 | 4 - 6 | Not seen | Good | ND,CM, GT and EB |
| | Kokrajhar, Chirang, Baksa, Udalguri and Darrang | | 1987 | No. unspecified | No. unspecified | Good | ARR |
| | Manas National Park | | May 26 - 27 2003 | Not seen | Not seen | Good | RB and BL |
| | | | May 2006 | Not seen | 1 Br. Col. | Good | AC |
| | | | December 1999 | Not seen | No. unspecified | Good | AC |
| | | | March 1 2015 | 3 | Not seen | Good | DS |
| | | | April 4 2017 | 1 | Not seen | Good | BL |
| Morigoan | Pabitora Wildlife Sanctuary | | 1996 to 2001 | No. unspecified | No. unspecified | Good | MB and AC |
| | | | August 2 2015 | 2 | Not seen | Good | DS, MM and MS |
| Darrang and Sonitpur | Orang or Rajiv Gandhi National Park | | 1995 | No. unspecified | No. unspecified | Good | BNT and PS |
| | | | 2000 | No. unspecified | No. unspecified | | AC |
| Tinsukia and Dibrugarh | Dibru-Saikhowa National Park | | June 1993 | No. unspecified | No. unspecified | Good | AC |

**APPENDIX-1** (*contd*.)

| State | District | Locality | Date | No. of Birds Seen | No. of Nest Seen Availability | Habitat | Observer |
|---|---|---|---|---|---|---|---|
| Kamrup | Deepor Beel Bird Sanctuary | | | 7 | No. unspecified | Good | DM, JM, KV and PB |
| Tinsukia | Shantipur | | 2016 | No. unspecified | No. unspecified | Average | in litt, ARR |

**Observers**:

AOH - Allan Octavian Hume
BMNH - British Museum of Natural History
Museum of Zoology
SA - Sálim Ali
JHC - John Hurrell Crook
VCA - V.C. Ambedkar
BFK - B F King
RB - Rajat Bhargava
PML - P.M. Laad
MO - Malvika Onial
BT- Bird Trappers
DA - Dibyendu Ash
RP - Rajesh Panwar
MBT - Meerut Bird Trappers
HA - Horace Alexander
CI - Carol Inskipp
TI - Tim Inskipp
BG - Bikram Grewal
YMR -Y.M. Rai
HK - Hilaluddin Khan
GS - Gopi Sundram
JMH - J.M. Harper
SCS - Suresh C. Sharma
PP - Pratibha Pande
OD - O'Donel
CMI - C.M. Inglis
DA* - D. Allen
JA - J. Anderton
KK - Krys Kazmierczak
RT - R. Turin
MH - M. Heegaard
AP - A. Priemé
SSS - S. S. Saha
SS - Sumit K. Sen
SB - Sajal Bar
AMNH - American Museum of Natural History
FMNH - Field Museum of Natural History
LACM - Loss Angeles Country Museum of Art
UMMZ
PA - P. Alström
UO - U. Olsson
DZ - D. Zetterström
OBC Bull. - Oriental Bird Club Bulletin
MB - Mann Barua
PS - Pankaj Sharma
AS - Adesh Shivkar
RI - Rokiful Islam
PL - Peter Lobo

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