

## Globally threatened Sunda Blue Flycatcher *Cyornis caerulatus*: synthesis of global records and recent records from Sumatra

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The Sunda Blue Flycatcher (or Large-billed Blue Flycatcher) *Cyornis caerulatus* is endemic to Borneo and Sumatra and classified as globally Vulnerable (BirdLife International 2011). Its ecology remains poorly known, although it is characterised as an insectivorous lowland rainforest specialist occupying the mid-strata, usually recorded up to 500 m asl (BirdLife International 2001, Myers 2009). There are also suggestions that it is generally uncommon, rather patchily distributed, with a strong preference for primary forest habitat and highly sensitive to forest disturbance such as logging and fragmentation (Lambert 1992, BirdLife International 2001, Slik & van Balen 2005). Current records are heavily clustered in Borneo (particularly north Borneo), with only six published records from Sumatra, of which only two are post-1930 (BirdLife International 2001). Here we synthesise records of the Sumatran subspecies *C. c. albiventer*, including field reports from conservation/forestry organisations and birdwatchers, as well as records from museum collections. We also report on six recent records of this species from fieldwork in southern Sumatra.

Fieldwork was conducted in the Harapan Rainforest ecosystem restoration site, which spans the border between Jambi and South Sumatra provinces. It is the first ecosystem restoration concession in Indonesia and covers 98,554 ha of post-logging secondary lowland rainforest (Burung Indonesia, Royal Society for Protection of Birds and BirdLife International 2010). Previous logging activities have left a mosaic of secondary forest habitats in different stages of regeneration.

Surveys took place in 2008 and 2010, and focused on recording birds of different secondary forest habitats within Harapan. Surveys were conducted using point counts and mist-netting, and followed standard protocols for these methods (Bibby *et al.* 2000, Buckland *et al.* 2001). Between June and August 2008, 165 mist-netting hours (over 15 days) with 200 metres of nets, plus 120 points along transects, were used to sample birds across three locations. Between March

and November 2010, 231 points along transects were surveyed across another three locations (some points were revisited, resulting in 387 total point counts). In December 2010, 198 mist-netting hours (over 18 days) with 360 metres of nets were completed across two locations. While some of these survey locations were near each other, none overlapped. In all cases, points along transects were spaced at least 200 m apart, mist-nets were set up in a continuous line, and any parallel net lines were spaced at least 130 m apart. Captured birds were ringed and measured according to standard procedures (Redfern & Clark 2001).

The vegetation structure of points along transects and mist-netting locations was measured according to established protocols (BBIRD 2008). Vegetation measurements were recorded in 5 m radius circular plots centred on each transect point and mist-net pole location. The following measurements were taken: canopy height and cover; understorey density (measured as the percentage of a 50 × 50 cm plate held 2 m vertically above the ground at the plot centre that was covered by understorey vegetation, as observed from four directions 10 m away); leaf-litter depth; ground cover (measured as the percentage of ground covered by vegetation at 0–50 cm above ground); and the number of trees in four size classes (diameter at breast height [dbh] < 8 cm, 8–23 cm, 23–38 cm, and ≥ 38 cm) within 10 m of the plot centre.

A search for published, unpublished and museum specimen records of *C. caerulatus* resulted in many records from Borneo (data not shown). The vast majority of these came from the Malaysian state of Sabah in north Borneo, particularly Danum Valley Conservation Area and neighbouring areas. However, we could find only 11 records of the subspecies *albiventer*, which is restricted to Sumatra (Table 1). These include five museum records (on seven specimens) collected before 1920, out of more than 70 specimens of *C. caerulatus* collected in many museums; and six observation records, with only one record out of 40 birdwatching trip reports from Sumatra. Additionally, this

**Table 1.** Records of Sunda Blue Flycatcher *Cyornis caerulatus* from Sumatra. IBA = Important Bird Area; ZMA = Zoological Museum Amsterdam.

Location	Year	Details	Source
Batangkuis, North Sumatra	1915	One specimen, adult male. Collected at 3°37'2" N 98°48'2" E in April. Currently in ZMA	BirdLife International 2001; ZMA 2011
Muara Kiawai, Ophir, North Sumatra	1913–1917	Possibly one specimen	BirdLife International 2001
Sungai Tasik, Langkat, North Sumatra	1919	Three specimens, all adult male. Collected at 3°49'2" N 98°15'2" E between October and December. Currently in ZMA.	BirdLife International 2001; ZMA 2011
Palembang Residency, South Sumatra	1920	One specimen, adult male. Collected at c.2°–4°S 103°–106°E. Currently in ZMA.	ZMA 2011
Bukit Ketji, South Sumatra	1920	One specimen, adult female. Collected at 4°44'2" S 104°11'2" E. (Probably a miswriting of 'Bukit Kecil'.) Currently in ZMA.	ZMA 2011
Way Kambas National Park, Lampung	1989	One pair, observation in June	BirdLife International 2001
Gunung Kerinci, Kerinci Seblat National Park, Bengkulu	1991	One male observation, in June, 'at lowest forest'. (Note: probably not at Gunung Kerinci but lowland areas of the national park.)	BirdLife International 2001
Sungai Bukit Batu, Riau	1992	One observation in lowland peat swamp forest	Nick Brickle pers. comm. 2009
Kerinci Seblat National Park, Bengkulu	2006	One observation, probably in Tapan Road lowland forest area of the park	Hutchinson 2006
Andalas Merapi Timber Logging Concession, Solok Selatan, West Sumatra	2008	One observation record of four individuals	Kemp 2008
Palembang, South Sumatra	No date	–	BirdLife International 2001
Bukit Bahar – Tajau Pecah, Jambi	–	In the species list for this IBA	Burung Indonesia 2011a
Bukit Baling, Riau	–	In the species list for this IBA	Burung Indonesia 2011b
Hutan Batang Toru Blok Barat, North Sumatra	–	In the species list for this forest site	Tropical Forest Conservation Action 2011
Kerinci Seblat National Park, Bengkulu, Jambi, South Sumatra, West Sumatra	–	In the species list for this IBA. More records may be retrieved from the field notes of the local bird guide Subandi.	Burung Indonesia 2011c; Subandi pers. comm. 2010

**Table 2.** Details of *C. caerulatus* captured in mist-nets at Harapan Rainforest.

Date	Location	Sex	Age	Ring number	Wing length (mm)	Bill length (mm)	Head length (mm)	Tarsus length (mm)	Tail length (mm)	Weight (g)	Brood patch
1 July 2008	2°06'45"S 103°18'08"E 54 m asl	Male	Adult	08F100002	67.0	17.1	36.2	19	49.8	19.5	No
28 July 2008	2°07'06"S 103°18'03"E 69 m asl	Male	Adult	08F100151	69.0	13.7	35.5	16.2	60.1	16	No
12 December 2010	2°10'16"S 103°22'27"E 65 m asl	Male	Adult	02A002067	71.20	14.18	35.30	16.00	60.30	16.5	No

subspecies also appears in the species list of six forest sites (national parks, forest reserves and/or Important Bird Areas), which may or may not be redundant with existing museum/observation records (Table 1).

We obtained six records of *C. c. albiventer* during our fieldwork in Harapan: two were from point count surveys, three were mist-netted, and one was a casual observation. All records were in forest that was regenerating following selective logging. One bird was heard but not seen at a transect point on 18 July 2008 at 95 m asl (2°11'26.2"S 103°09'43.4"E). On 19 April 2010, another calling bird, a male, was seen at a point count station on flat ground at 51 m elevation (2°09'15.1"S 103°21'24.7"E). This bird was perched 7 m above the ground and about 14 m from a 5 m-wide stream. The individual casually observed was a female on 1 May 2008, perching about 3 m above the ground, 30 m from a 3 m-wide stream.

Two male birds were mist-netted from one location in July 2008, out of a total of 454 captures over the field season (0.4% of total capture). The first individual was caught about 40 m from a 3 m-wide forest stream. A third male bird was netted from a different location in December 2010, out of a total of 223 captures (again 0.4% of total capture). This bird was captured about 25 m from a tiny forest stream. Further details of captured birds are given in Table 2.

Together, our records suggest that the species may have an affinity with forest near streams, although it was previously suggested it may be avoiding forest along rivers (del Hoyo *et al.* 2006). Areas where *C. caerulatus* was recorded had last been commercially logged about 30 years ago, but were being disturbed by illegal small-scale logging activities. The resulting habitat was early-regeneration secondary forest characterised by a low closed canopy (typically 10–15 m, mean = 12.0 m), a dense understorey (75%), and a predominance of young saplings (mean of 26.3 trees of dbh < 8 cm; 7.4 of 8 ≥ dbh < 23 cm; 0.9 of 23 ≥ dbh < 38 cm; and 0.1 of dbh ≥ 38 cm).

The vast majority of records of *C. caerulatus* come from Borneo, notably a handful of 'hotspot' locations in the Malaysian state of Sabah. It has previously been suggested that this pattern may be due to a patchy and low-density distribution of the species in Kalimantan and Sumatra (BirdLife International 2001). However, we think it likely that the pattern is at least partly due to field survey and birdwatching effort, which is much higher in suitable lowland habitat in Borneo, particularly in Danum Valley. Our surveys and others (Slik & van Balen 2005, Ansell *et al.* 2010) suggest that *C. caerulatus* occurs at relatively low densities, even in undisturbed forest. However, one mist-netting study found it to be reasonably frequent in primary forest in Sabah (10 birds out of 406 total bird captures: Lambert 1992).

Ansell *et al.* (2010) showed reduced capture rates of the species in regenerating forests following selective logging (1.1% in naturally regenerating forest, 0.7% in rehabilitated regenerating forest, and 1.9% in primary forest), and noted that this species is among the top ten that contributed to avian community differences between unlogged and regenerating forest. Our mist-net capture rates, in heavily disturbed forest, were even lower. Lambert (1992) did not find this species in selectively logged forest, and Slik & van Balen (2005) found the same for fire-disturbed forest in Borneo. Most other records we found were from primary forest. However, it is worth noting that 19 of 41 capture records of *C. caerulatus* by Ansell *et al.* (2010) came from regenerating forest (about 20 years after intensive selective logging),

while all six records from our fieldwork were from early to middle-stage regenerating forest. To our knowledge, these are the only records so far from disturbed forest. This may be due to the nearby presence of small, unlogged or advanced secondary forest patches acting as refuges (Lambert 1992). Alternatively, this species may be able to persist in disturbed forest habitats, albeit at relatively low densities. More data are needed before we can safely establish the tolerance of this globally threatened species to habitat disturbances.

It is believed that *C. caerulatus* has undergone a steep population decline in Sumatra during the past few decades owing to habitat degradation and destruction, which is likely to continue given the huge pressures lowland Sumatran and Bornean forests are facing (BirdLife International 2001, FWI/GFW 2002, Sodhi *et al.* 2004). Conservation of this globally threatened species requires reliable estimates of population and greater information on its ecology—particularly its ability to persist in degraded habitats. More field data are sorely needed, particularly for Sumatra and southern Borneo. Researchers and birdwatchers should be encouraged to contribute their findings.

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## Some significant avifaunal records from Bangladesh, including first record of Black-headed Bunting *Emberiza melanocephala*

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Bangladesh is ornithologically one of the least well studied countries in Asia. This short note presents some noteworthy observations from Bangladesh between March 2008 and December 2009, including one new species for the country. These observations came from a number of surveys and opportunistic birdwatching trips to different parts of Bangladesh.

### Black Francolin *Francolinus francolinus*

Dilip Das and I observed a total of 10 individuals and found one nest of Black Francolin during 14–15 September 2009 in Kazipara (26°29'21.04"N 88°20'10.77"E), Tetulia, Panchagarh, in the far north-west of Bangladesh, along the international border with India. The habitat used by this population in Tetulia is chiefly cultivated land: a combination of maize, sugarcane and sesame fields, grasslands and patches of scrub dotted with small bamboo patches, along with tea gardens and their environs. The national status of this bird is Critically Endangered (IUCN Bangladesh 2000). Records away from this Tetulia population are limited to a female found in Modhupur forest in January 1999 and one in Sangu valley in 2006 (Thompson & Johnson 2003, Siddiqui *et al.* 2008). Presently, Kazipara in Tetulia probably holds the largest population of the species in Bangladesh.

### Woolly-necked Stork *Ciconia episcopus*

One Woolly-necked Stork was observed (and photographed) flying south-east over Jamtala Khal, Katka, Sundarbans East Wildlife Sanctuary (21°51'7.01"N 89°46'27.39"E) at a height of c.200 m at 14h28 on 10 October 2009 by Enam Talukdar, Gertrud Denzau, Helmut Denzau, Monirul Khan, Ronald Halder, Sirajul Hossain, Zamiruddin Faisal and myself. The most recent confirmed record of this stork from Bangladesh was in 1888 in Sylhet division (Siddiqui *et al.* 2008). Sight records reported by Sharif Khan from Bagerhat in 1970 and

Satkhira in 1989 (M. M. H. Khan *in litt.* 2011) were discounted as unreliable.

### Spot-bellied Eagle Owl *Bubo nipalensis*

Farhad Pavel and I observed a Spot-bellied Eagle Owl at 17h15 on 7 August 2008 in the north-eastern part (24°19'37.14"N 91°47'33.02"E) of Lawachara National Park, Srimangal, Moulvibazar. The bird's large size, deep black bars on pale white breast, and light yellow bill were the key field marks used to identify this species, which is a rare resident in Bangladesh (Siddiqui *et al.* 2008).

### Black-headed Bunting *Emberiza melanocephala*

Three Black-headed Buntings were located on 10 October 2009 at Katka, Sundarbans East Wildlife Sanctuary (21°51'13.20"N 89°46'55.45"E), by Ronald Halder, Zamiruddin Faisal and myself. The three birds were observed perching on a *Phyllanthus emblica* tree at Katka meadow for five minutes (17h00–17h05), using 10×42 binoculars. In addition, photographs were taken by each observer.

The birds exhibited a distinctive bunting profile, with longer tails and stubby, conical bills, and were immediately identified as an *Emberiza* species. Absence of a submoustachial stripe and streaking on breast, breast-sides and flanks separated the birds from the four *Emberiza* species hitherto recorded in Bangladesh—Yellow-breasted Bunting *E. aureola*, Chestnut-eared Bunting *E. fucata*, Little Bunting *E. pusilla* and Black-faced Bunting *E. spodocephala* (Rashid 1967, Husain 1979, Khan 1982, Harvey 1990, Thompson *et al.* 1993, Grimmett *et al.* 1998, IUCN Bangladesh 2000, Grewal *et al.* 2002, Thompson & Johnson 2003, Khan 2008, Siddiqui *et al.* 2008). Separation of non-breeding and female plumages of Black-headed Bunting and Red-headed Bunting *E. bruniceps* is difficult but the observers are confident that the birds were Black-headed Buntings