

# Status of 'Fork-tailed Swift' *Apus pacificus* complex in India

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A species formerly known as Fork-tailed Swift (*Apus pacificus* complex) has been split into the following four species by Leader (2011) (range statements adapted from Chantler et al. 2015):

## Pacific Swift *A. pacificus* (Latham, 1801)

Breeds in Siberia eastwards to Kamchatka and Japan, and southwards to China, Taiwan, and presumably the Batan and Babuyan Islands of the Philippines; winters in Malaysia, Indonesia, the Philippines, Melanesia, Australia, and possibly north-eastern India. This species also includes the subspecies *kurodae* Domaniewski 1933 [= *kanoi* Yamashima 1942].

## Salim Ali's Swift *A. salimalii*<sup>1</sup> Lack, 1958

Breeds in eastern Tibetan Plateau and adjacent China (western Sichuan); winter range unknown.

## Blyth's Swift *A. leuconyx* (Blyth, 1845)

Breeds in the Murree Hills in Pakistan, eastwards through the outer Himalayas and the Assam Hills; winters in the Indian Subcontinent.

## Cook's Swift *A. cooki* (Harington, 1913)

Breeds in South-east Asia; winters southwards to northern peninsular Thailand.

While the presence of Blyth's Swift in India is well-established, as a resident from the Western Himalayas till north-eastern India, and wintering in much of the Indian Subcontinent (Rasmussen & Anderton 2012), the status of the other three species is still unclear. This is largely due to the complex systematic history of this group that resulted in incongruent range statements by different authorities.

Vaurie (1959) treated the Tibetan-breeding Salim Ali's Swift as a synonym of *kanoi*. This treatment was followed by the regional authorities (Abdulali 1972; Ali & Ripley 1987; Rasmussen

& Anderton 2005), until Leader (2011) established Salim Ali's Swift as a full species and *kanoi* as a junior synonym of *kurodae*. Rasmussen & Anderton (2012) and Chantler et al. (2015) have followed this and the former reference now considers Salim Ali's Swift as of hypothetical occurrence in northern Arunachal Pradesh. However, Howard & Moore 4th edition (Dickinson & Renssen 2013), while recognising *salimalii* only as a distinct subspecies, still use *kanoi* over *kurodae*, suspecting that the type of *kurodae* could represent *pacificus sensu stricto*.

Päckert et al. (2012) found Cook's Swift to be genetically closer to the Dark-rumped Swift *A. acuticauda* of Khasi Hills, north-eastern India. Leader (2011) also noted the strong morphological resemblance of these two species but refrained from placing Cook's Swift outside of the Fork-tailed Swift complex. Based on these studies, Howard & Moore 4th edition treat Cook's Swift as a subspecies of the Dark-rumped Swift.

Both eBird/Clements (Clements et al. 2019) and IOC (Gill & Donker 2019) accepted the four-way split in Leader (2011), while BirdLife International/IBW (del Hoyo & Collar 2014) did not. Hence, the Indian Bird Checklist (Praveen et al. 2019) that earlier ran on a consensus model between all three taxonomies, retained them under one species; this has been recently split following their consensus with eBird/Clements and IOC (Praveen et al. 2020).

Here we assess evidence and establish the existence of five definitive Pacific Swift specimens from India, while showing that there is no evidence for the presence of Salim Ali's Swift or Cook's Swift.

## Pacific Swift

A. O. Hume reported a specimen of the Pacific Swift collected from Dilkhushah, Cachar, Assam, in December 1877 (Hume 1880). He additionally reported a few observations of this species from Manipur, without making any mention of the more likely Blyth's Swift (Hume 1888). In the latter paper, he also mentioned a Cachar specimen (presumably the 1877 one) as well as another specimen from Sadiya, Assam. In fact, in the catalogue of the Natural History Museum (hereinafter, NHM), London, Salvin & Hartert (1892) listed specimens from both, Sadiya (a male & a

<sup>1</sup> Spelt incorrectly as *salimali* in Leader et al. (2011), Dickinson & Renssen (2013), and del Hoyo & Collar (2014).

female), and Cachar, and another from Bhutan. Blanford (1895) and Baker (1926) used these notes from Hume to include Assam, Cachar, and Manipur in its range, while Baker also added that this bird arrives in India in September and leaves by March or early April—suggesting a winter migration to north-eastern India. Ali & Ripley (1987) also documented its status as ‘a winter migrant or wanderer to Assam, Nagaland, Manipur and Mizo (?)’, which was largely followed by Chantler et al. (2015). The source for including Nagaland in its winter range is unknown. Dickinson & Remsen (2013) listed Assam in the range of *kanoi* (they do not recognise *kurodae*), and this might again be based on the specimens in the Bombay Natural History Society (hereinafter, BNHS), catalogued by Abdulali (1972). Chantler et al. (2015) also included Assam in the range of *kurodae*; possibly based on the same source. However, the occurrence of the Pacific Swift in southern Asia remains to be proven (Rasmussen & Anderton 2012).

While browsing VertNet (<http://portal.vertnet.org/>), PJ found a Yale Peabody Museum specimen listed as ‘Pacific Swift (YPM ORN 42636)’, which was collected by Archibald M. Primrose at Dwarbund, Cachar, Assam on 06 September 1897. Following PJ’s enquiry, KZ provided measurements and photographs of this specimen and considered it to be attributable to a Pacific Swift. PJL reviewed the measurements and photographs and concurred with this identification.

Both, wing (179 mm), and tail (76 mm) measurements of the specimen clearly eliminate the smaller Blyth’s Swift (Table

1) being 09 mm and 03 mm longer respectively than any Blyth’s Swift morphometrical measurements detailed by Leader (2011). The throat pattern [123] is inconsistent with that of Salim Ali’s Swift, which is described by Leader (2011) as being a well-defined narrow off-white strip on the centre of the throat; narrowest at base of bill where it tapers to a neat point and not extending onto the upper breast. Cook’s Swift can be readily eliminated by the large rump patch [124], brownish, rather than blackish, upperparts [124] and underparts, and the lack of broad, well defined pure white fringes on the underparts [123]. As such, we are convinced that the specimen is indeed that of a Pacific Swift. We note that the collection date, early September [125], is entirely consistent with a bird on southward migration.

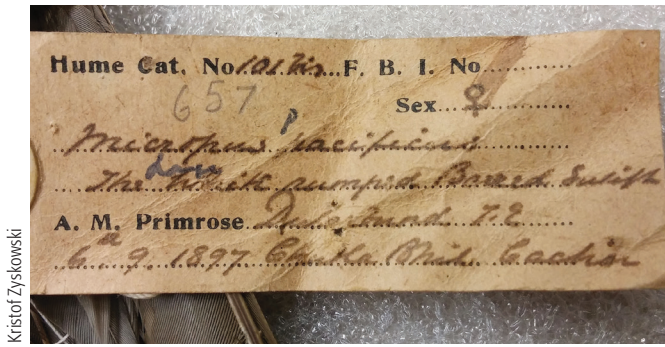
**Table 1.** Wing (maximum chord) and tail lengths of member taxa of the Pacific Swift complex (from Leader 2011).

Taxon	Wing length (mm)	Tail length (mm)
<i>pacificus</i>	170–190	64–83
<i>salimalii</i>	177–183	72–85
<i>leuconyx</i>	151–170	61–73
<i>cooki</i>	162–181.5	65–82



**123–124.** Dorsal and ventral views of YPM 42637 along with Pacific & Blyth’s Swifts. Skins from left to right: YPM 42636: Blyth’s Swift. India, Uttar Pradesh; YPM 42636: The specimen of interest. India, Assam, Dwarbund; YPM 15294: Pacific Swift. Russia, Siberia; YPM 49431: Pacific Swift. Japan, Izu Islands, Mikura-jima.





125. Close up of YPM 42636 label.

One of the referees brought to our attention the presence of four specimens in the BNHS listed as *Apus pacificus kanoi* (Abdulali 1972). PJ contacted RK who examined all four specimens and circulated the photographs and measurements. Interestingly, these were also collected by A. M. Primrose, from Golaghat, Assam, in August–September 1920. PJL reviewed the measurements and photographs and identified all of them as Pacific Swifts.

**Table 2.** Wing (maximum chord) and tail lengths of the four specimens in the BNHS Coll

Specimens	Wing length (mm)	Tail length (mm)	Date of Collection
11578 (♂)	175	86	02 September
11579 (♀)	176	77	01 September
11580 (♀)	167	72	11 August
11581 (♀)	170	80	01 September

Both, wing (167–176 mm), and tail (72–86 mm) measurements of these BNHS specimens (Table 2) eliminate the smaller Blyth's Swift (Table 1). The throat patterns [126] are inconsistent with that of Salim Ali's Swift as described in Leader (2011). All the females (11579–11581) have a large rump patch that eliminates Cook's Swift; the male specimen (11578) has smudged rump feathers but the discernible white feathers tend towards a larger rump patch [127]. In addition, all specimens have dark brownish (vs., blackish) upperparts and underparts, and

also lack the broad, well-defined pure white fringes of the Cook's [126]. Hence, all these features are consistent with a Pacific Swift, and the collection dates, in mid-August and early September, are again consistent with its southward migration pattern.

During his study, PJJ found all (n=12) specimens from India and the Himalayas in NHM to be Blyth's Swifts; while the specimens from north-eastern India and Bhutan, of the catalog of Salvin & Hartert (1892), were missing. However, PJ contacted HvG and a renewed search was initiated, and he was able to locate the male specimen (NHM 1887.8.1.177). It had been collected in Sadiya (c.100–150 m asl), Assam by J. Cockburn on 20 June 1877 (NHM has other specimens by the same collector from April–December 1877). Alex Bond kindly measured the wing chord (188 mm) and tail length (83 mm); it was impossible to measure the tail fork depth of this specimen accurately.

The specimen is large and hence either a Pacific or a Salim Ali's Swift. However, the date, location, and altitude of collection are anomalous for either, as they fall within the expected zone of Blyth's Swift. The plumage is also confusing: the upperparts are dark, like a Salim Ali's Swift, while the throat pattern fits a Pacific Swift. We prefer to leave this specimen unidentified until we examine it in more detail.



**128-129.** Dorsal and ventral views of presumed Pacific Swifts (NHM 1887.8.1.177) from Sadiya, Assam.



**126-127.** Dorsal and ventral views of four Pacific Swifts (BNHS 11578-11581), from left to right, along with a Blyth's Swift (BNHS 18905, Himachal Pradesh, India) at the extreme left.

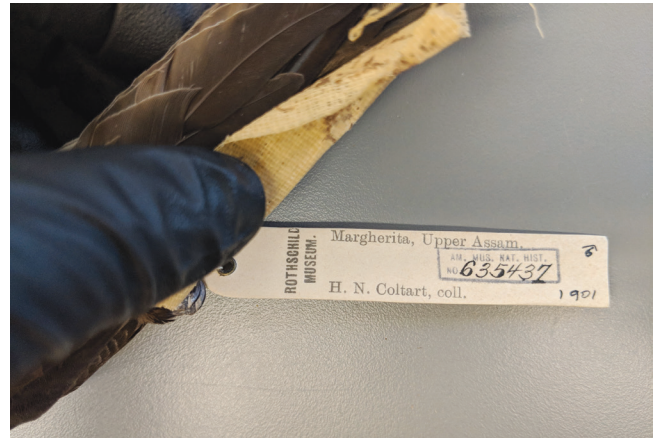


### Salim Ali's Swift

Rasmussen & Anderton (2012) treat this as hypothetical in the Tibetan facies of north-eastern India. However, there are no claims as yet of this taxon from anywhere within Indian limits. The few Assam specimens that were reportedly identified as this taxon (Rasmussen & Anderton 2012) are the ones in the BNHS collection (Abdulali 1972), which we have now established as Pacific Swifts. The northernmost records of Blyth's Swift are from Sela Pass, Medog, and Mayodiya Pass in Arunachal Pradesh while the available images from Arunachal Pradesh, in public forums, are consistent with Blyth's Swift (eBird 2020). The nearest records with images of Salim Ali's Swift are from much further north, in central China, and away from the north-eastern edge of the Tibetan Plateau (eBird 2020). Frank Ludlow collected a few males in Molo, China (Ludlow 1936), which lies just north of the Silom Valley across the McMahon Line and, hence, this bird is quite possibly on the Indian side of the border. It is worth noting that there are now no extant winter records of Salim Ali's Swift.

### Cook's Swift

There are no published claims of Cook's Swift from South Asia. However, PJ found a specimen on VertNet at the American Museum of Natural History that is listed as Cook's Swift (hereinafter, AMNH SKIN 635437), taken in Margherita, Assam, by Henry N. Coltart on 30 April 1901 [130-131]. PJ contacted BB, who photographed this specimen in AMNH. Unfortunately, the specimen itself was not prepared well, nor is it now in a great condition, and it is difficult to see all the distinguishing characters. As the neck seems laterally compressed, an accurate representation of the throat patch is not possible, and the ventral feathers are hidden by the wings.



Both: Bentley Bird

130-131. AMNH 635437 labels.



Both: Bentley Bird

132-134. Dorsal, ventral and lateral views of AMNH 635437.

PJL reviewed the photographs and found this specimen to be entirely consistent with a Blyth's Swift; most notably with regards to the upperparts that show a brown crown and nape, which contrast with the black mantle [132], and brown-toned underparts lacking the blackish upperparts and underparts and broad, well defined pure white fringes on the underparts typical of Cook's Swift [133].

### A note on the taxonomy

The four-way split of the Fork-tailed Swift, as proposed in Leader (2011), has not found unanimous acceptance. Howard & Moore 4th edition did not accept this revision. del Hoyo & Collar (2014)

stated that an independent review of the 'material' could not determine the itemized distinguishing characters of the involved species, while others involved averages. The Blyth's Swift's tendency to use the nests of other birds remain equivocal. They recommended further documentation including clear differences in voice. Unfortunately, del Hoyo & Collar (2014) did not detail the methodology of their independent review, and therefore it is unclear if it comprised a systematic assessment of both, measurements, and plumage. In this context we note the comment in Leader (2011): 'when both measurements and plumages are assessed, *pacificus*, *salimali*, *cooki* and *leuconyx* all satisfy the diagnosability requirements of the Phylogenetic

Species Concept.' To date, there is no new molecular evidence to assess the status of Blyth's or Salim Ali's Swift as suggested in Päckert et al. (2012). Clearly, further research into the complex is required but we are of the view that the taxonomic treatment proposed in Leader (2011) remains preferable to treating the complex as a single, polytypic species. In fact, the DNA-based study of Päckert et al. (2012) has already demonstrated that the complex is not monophyletic, with Cook's Swift being more closely related to the Dark-rumped Swift than to nominate Pacific Swift, as suggested by Leader (2011).

## Conclusion

In summary, two taxa from this species complex occur in India, Blyth's Swift and Pacific Swift; the former is common and widespread along the Himalayas, north-eastern India, and much of peninsular India during winter, while the latter is known from five old specimens, but is, quite likely, overlooked on migration. Cook's Swift is possible in southern Mizoram or along the Patkai Hills; Salim Ali's Swift, on the Tibetan facies of Arunachal Pradesh. Regional birders and photographers should be watchful of these as well.

## References

- Abdulali, H., 1972. A catalogue of the birds in the collection of the Bombay Natural History Society-12. Apodidae and Trogonidae. *Journal of the Bombay Natural History Society* 69 (2): 378–389.
- Ali, S., & Ripley, S. D., 1987. *Compact handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. 2nd ed. Delhi: Oxford University Press. Pp. i–xlii, 1 l., 1–737, 52 ll.
- Baker, E. C. S., 1926. *The fauna of British India, including Ceylon and Burma. Birds*. 2nd ed. London: Taylor and Francis. Vol. III of 8 vols. Pp. i–xx, 1–489.
- Blanford, W. T., 1895. *The fauna of British India, including Ceylon and Burma (Birds)*. 1st ed. London; Calcutta; Bombay; Berlin: Taylor and Francis; Thacker, Spink, & Co.; Thacker & Co.; R. Friedländer & Sohn. Vol. III of 4 vols. Pp. i–xiv, 1–450.
- Chantler, P., de Juana, E. & G. M. Kirwan, G.M. 2015. Pacific Swift (*Apus pacificus*). In *Handbook of the Birds of the World Alive* (J. del Hoyo, A. Elliott, J. Sargatal, D. A. Christie, and E. de Juana, Editors). Lynx Edicions, Barcelona. Retrieved from Handbook of the Birds of the World Alive: <https://birdsoftheworld.org/bow/historic/hbw/fotswi1/1.0/introduction>. [Accessed on 3 August 2020]
- Clements, J. F., Schulenberg, T. S., Iliff, M. J., Billerman, S. M., Fredericks, T. A., Sullivan, B. L., & Wood, C. L., 2019. The eBird/Clements checklist of birds of the world: v2019. Website URL: <http://www.birds.cornell.edu/clementschecklist/download/>. [Accessed on 01 January 2020.]
- del Hoyo, J., & Collar, N. J., 2014. *HBW and BirdLife International illustrated checklist of the birds of the world. Volume 1: Non-passerines*. Barcelona: Lynx Edicions. Vol. 1 of 2 vols. Pp. 1–903.
- Dickinson, E. C., & Remsen, J. V. J., (eds.) 2013. *The Howard and Moore complete checklist of the birds of the world: 1. Non-passerines*. 4th ed. Eastbourne, UK: Aves Press. Vol. 1 of 2 vols. Pp. i–l, 1–461.
- eBird. 2020. Blyth's Swift Map. Website URL: <https://ebird.org/india/map/blyswi1>. [Accessed on 1 June 2020.]
- Gill, F., Donsker, D., & Rasmussen, P., (Eds.) 2020. IOC World Bird List (v10.2). Website URL: [https://www.worldbirdnames.org/DOI-10/master\\_ioc\\_list\\_v10.2.xlsx](https://www.worldbirdnames.org/DOI-10/master_ioc_list_v10.2.xlsx). [Accessed on 3 August 2020.]
- Hume, A. O., 1880. A second list of the birds of North-eastern Cachar. *Stray Feathers* 9 (4): 241–259.
- Hume, A. O., 1888. The birds of Manipur, Assam, Sylhet and Cachar: Detailed list of species observed in Manipur, together with notices of all other species observed in Assam, Sylhet and Cachar. *Stray Feathers* 11 (1–4): i–v, 1–353.
- Lack, D. 1958 A new race of the Whiterumped Swift. *Journal of Bombay Natural History Society* 55(1): 160–161
- Leader, P. J., 2011. Taxonomy of the Pacific Swift *Apus pacificus* Latham, 1802, complex. *Bulletin of the British Ornithologists' Club* 131 (2): 81–93.
- Päckert, M., Martens, J., Wink, M., Feigl, A., & Tietze, D. T., 2012. Molecular phylogeny of Old World swifts (Aves: Apodiformes, Apodidae, *Apus* and *Tachymarpis*) based on mitochondrial and nuclear markers. *Molecular Phylogenetics and Evolution* 63 (3): 606–616.
- Praveen J., Jayapal, R., & Pittie, A., 2019. Checklist of the birds of India (v3.1). Website: <http://www.indianbirds.in/india/> [Date of publication: 16 December, 2019].
- Praveen, J., Jayapal, R., & Pittie, A., 2020. Taxonomic updates to the checklists of birds of India, and the South Asian region—2020. *Indian BIRDS* 16 (1): 12–19
- Rasmussen, P. C., & Anderton, J. C., 2005. *Birds of South Asia: the Ripley guide: attributes and status*. 1st ed. Washington, D.C. and Barcelona: Smithsonian Institution and Lynx Edicions. Vol. 2 of 2 vols. Pp. 1–683.
- Rasmussen, P. C., & Anderton, J. C., 2012. *Birds of South Asia: the Ripley guide: attributes and status*. 2nd ed. Washington, D.C. and Barcelona: Smithsonian Institution and Lynx Edicions. Vol. 2 of 2 vols. Pp. 1–683.
- Salvin, O., & Hartert, E., 1892. *Catalogue of the Picariæ, in the Collection of the British Museum. Upupæ and Trochili, by Osbert Salvin. Coraciæ, of the Families Cypselidæ, Caprimulgidæ, Podargidæ, and Steatornithidæ, by Ernst Hartert*. London: British Museum of Natural History. Vol. XVI of 27 vols. Pp. i–xvi, 1–703.
- Vaurie, C., 1959. Systematic notes on Palearctic birds. No. 38. Alcedinidae, Meropidae, Upupidae, and Apodidae. *American Museum Novitates* 1971: 1–25.



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