

Field identification of the Savanna Nightjar *Caprimulgus affinis* and the Sykes's Nightjar *Caprimulgus mahrattensis*: A cryptic challenge

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Abstract

Difficulties in field identification of Savanna Nightjar *Caprimulgus affinis* and Sykes's Nightjar *C. mahrattensis* has not been well-appreciated. Using an analysis of images from the field, I demonstrate that their identification is not straightforward and require careful study of a number of features that are often not visible in photographs. Juveniles of both species are especially difficult to identify and both species show variation in juvenile plumages. The pattern of the wing and tail are especially important for identification and sexing the birds in the field.

Introduction

A perched, silent nightjar *Caprimulgus* sp. is one of the difficult identification challenges! Most nightjars have cryptic plumage and are well camouflaged with their surroundings. Being crepuscular and nocturnal, nightjar species are usually not seen during the daytime hours. Hence, the field identification of nightjars is tough and confusing for many birdwatchers.

The Sykes's Nightjar *C. mahrattensis* is a less studied species. It was presumed to be “wintering widely in W India, occasionally reaching environs of Delhi, N Madhya [Pradesh] and Bombay [=Mumbai]” (Rasmussen & Anderton 2012). However, it is now known that the Sykes's Nightjar breeds within Indian limits, with breeding recorded from Gujarat (Tiwari & Dadu 2010; Ganpule et al. 2022), and Punjab (Devare 2003), and breeding suspected in Rajasthan (Sangha et al. 2023). The Savanna Nightjar *C. affinis* is widely distributed and a resident in most parts of the country. Rasmussen & Anderton (2012) considered it to be a winter visitor to southern India but it is not entirely true as it's known to breed there (Mathew 2000) and certain populations are year round (eBird 2026). I discuss here the field identification and separation of Savanna Nightjar from Sykes's Nightjar, especially in juvenile plumage, an identification problem which has escaped the attention of most reference works.

In published literature, the Sykes's Nightjar is compared with Indian Nightjar *C. asiaticus* and details of how to separate it from Indian Nightjar are explained in the main reference texts (Grimmett et al. 2011; Rasmussen & Anderton 2012), based on the perceived similarities between these species. The Eurasian Nightjar *C. europaeus* is listed as a species which has a similar song to Sykes's Nightjar (Holyoak 2001). However, given Sykes's Nightjar's similarities to Savanna Nightjar, it is surprising that comparison with the latter species has not been looked into. In photographs of both these species on 'eBird' and other websites, there are some misidentifications.

Ali & Ripley (1983) stated that the Sykes's Nightjar did not occur further east than 77°E in India, discounting two reports from Uttar Pradesh and West Bengal. It is now known that its range is quite large. Recent reports of this species from West Bengal (Manna et al. 2024) and Bangladesh (Alam et al. 2019) show that this species occurs in eastern parts of India and in Bangladesh too. More than a dozen reports are known from the eastern Indian subcontinent (eBird 2026). Thus, the range of Sykes's overlaps with the Savanna Nightjar widely and the chances of confusion between these species is likely to occur in large parts of the country, especially in north, northwestern, and eastern India. In fact, Ali & Ripley (1983) provide an example of a juvenile Savanna identified as a Sykes's in museum specimens. Thus, the details presented here will help bird watchers in separating Sykes's from Savanna Nightjar.

Taxonomy

The Sykes's Nightjar is a monotypic species, with a range from south-eastern Iran, southern Afghanistan, Pakistan, and north-western India (Cleere & Kirwan 2020) and no reported geographical variation (Holyoak 2001). The Savanna Nightjar is a polytypic species with a large range, covering South, and Southeast Asia. Recent studies have suggested splitting the Savanna complex into three species, the northern *C. monticolus* group (including *monticolus*, *amoyensis*, and *stictomus*), the southern *C. affinis* group (including *affinis*, *propinquus*, *undulatus*, *kasuidori*, and *timorensis*) and the Philippine *C. griseatus* (Sangster et al. 2021; Cleere & Boesman 2023). However, this proposed split into three species has not been widely accepted but the Chirruping Nightjar *C. griseatus* from the Philippines is treated as a distinct species while the northern and southern groups are currently retained under *C. affinis* (AviList Core Team 2025; Clements et al. 2025). In India, *C. a. monticolus* is the only subspecies which occurs (Sangster et al. 2021).

Methods and observations

Both the Savanna Nightjar and Sykes's Nightjar are widespread in Gujarat, my study site. I found a roost of Savanna near Morbi, Gujarat (22.827°N, 70.945°E) in August 2008. This roosting site often had eight to ten birds roosting in a small area. I observed their behaviour over two years and the results were published earlier (Ganpule 2010). I continued studying the birds in and around this area and found two more roosts around Morbi, each containing c.10–15 individuals. Observations were made all round the year and more than 100 individuals, in different plumages, have been carefully

studied over the last 17 years. I specifically searched for and photographed juvenile birds, which are seen during the monsoon season from June to September. When flushed, I attempted to photograph the birds in flight. This is quite challenging as these birds flush only when approached very close and after taking a short and erratic flight, dive back to the ground, making it difficult to take good flight photographs.

The Sykes's Nightjar is also seen widely in Gujarat, especially in Saurashtra and Kachchh. Observations of Sykes's were made in Banni, and in Greater- and Little Rann of Kachchh (in Kachchh district), at Nal Sarovar Bird Sanctuary, and around Velavadar National Park. Though not as common as the Savanna Nightjar, more than 30 individuals, including juveniles, were seen over the past seven years. I also studied photographs of both nightjars posted on 'eBird', 'iNaturalist', Facebook, and other social media. As a group, nightjars are difficult to illustrate and the finer identification features are often tough to discern from illustrations. With the advent of modern cameras and good lenses, clear photographs of nightjars taken in daylight are now available online and are extremely useful in identification. Hence, these were referred to for understanding finer plumage details.

No museum specimens were checked for this study but nightjar species are sometimes found as road kills in Gujarat due to their habit of perching on village roads in the late evening and at night. I have inspected two Savanna and one Sykes's which were found as road kills near Morbi and in Little Rann of Kachchh respectively. I did not attempt to measure these birds but rather, only inspected these specimens to verify their identification. For this study, birds which did not have adult plumage were considered to be juveniles; I did not attempt to try and understand the difference between juvenile and immature plumage.

The photographs used for this paper were mostly taken during the day, in sunlight, so that the correct plumage features can be ascertained. Photographs of nightjars taken at night often do not show the correct plumage tones since the camera settings or use of artificial light or flash distorts the colours. Two photographs of adults of both species taken at night are given here to illustrate the difficulties in assessing the plumage in such photographs [1, 2]; compare plumage with photos taken during the day presented here in this paper. Hence, a conscious effort was made to mainly use photographs taken during the day to represent true plumage details. Captions are added to all photographs explaining the important identification features.



[1, 2] Adult Savanna Nightjar (top) from Greater Rann of Kachchh, Gujarat in September 2024 and adult Sykes's Nightjar (bottom) from Desert National Park, Rajasthan in August 2025. Both photographs taken at night, with artificial light. Note how the plumage looks under artificial light and the colour tones can be misleading. However, the wing covert pattern is helpful in identification. Most nightjar photographs are taken at night, due to which the finer plumage details cannot be appreciated. Photos: Nirav Bhatt

Keys to nightjar identification

Nightjar observations are often made at night and many times, only brief views are obtained or the bird is perched in such a way that it is difficult to observe it properly. Hence, to properly identify a Savanna/Syke's Nightjar in the field, the following features need to be noted, seen well or photographed:

- 1) Face pattern: For details of moustachial stripe, throat patch and crown stripe or markings
- 2) Nuchal collar: The presence or absence of nuchal collar and its colour if present
- 3) Scapulars: Pattern of scapulars
- 4) Wings and tail: The presence or absence of spots on outer primaries and outer tail feathers
- 5) Wing coverts: For pattern, shape and colour of markings
- 6) Underparts: The pattern of the underparts (often difficult to see on perched nightjars – only the throat and upper breast is mainly visible most of the times)

It should be noted that birds in moult or birds in worn plumage may look different from birds in fresh plumage. Feather wear affects the plumage colour and such worn birds often look dull. Thus, it is important to check the state of plumage. Juvenile nightjars often have a somewhat different plumage from adults and hence, it is also necessary to age the birds for correct identification. Though sexual dimorphism is not stark in both these species, there are differences in the wing and tail pattern between the sexes, and minor differences in body plumage. Hence, observations of wing and tail can be useful in sexing individuals in the field. Most birders depend on calls at night for identification. They are diagnostic, however, in the non-breeding season, nightjars usually remain silent or are less vocal compared to the breeding season!

Results

The details for identification and separation of the Savanna Nightjar from the Sykes's Nightjar are as follows:

Size: The adult Savanna is larger and bulkier than Sykes's. Though it is difficult to judge the size of a single perched bird, with experience, the size difference between these two species is apparent. This size difference is apparent in juveniles as well, with juvenile Savanna being bigger than juvenile Sykes's.

This difference in size in these species in adults is also supported by measurements (Table 1) on museum specimens based on Abdulali (1972) and Ali & Ripley (1983). In addition, Rasmussen & Anderton (2012) provide the total length of Savanna to be 215–240 mm while length of Sykes's as 195–215 mm. Hence, there is hardly any overlap in the sizes of two species. Hence, with some experience, it would be possible to appreciate this size difference in the field as well. Measurements for juveniles are not available and the impression of size difference stated here is based on my own field experience.

Table 1: Wing lengths for Savanna Nightjar and Sykes's Nightjar (in mm.)

	Male	Female
Savanna Nightjar	188–210 (n=14) * 181–205 (n=17) #	179–195 (n=12) * 179–202 (n=23) #
Sykes's Nightjar	164–178 (n=11) (including one juv.) * 157–173 (male and female) #	161–168 (n=5) *

Plumage: In general, the adult Savanna Nightjar has grey-brown plumage, with pale orange or pale rufous stripe on scapulars, forming a distinct 'V'. It has pale orange or rufous spots on the wing-coverts, which become whitish with wear. Adult male is greyish-brown while female is paler and browner above, showing more rufous in plumage. However, it is difficult to sex individuals if seen perched. On the underparts, the female shows more barring than the male. The adult Sykes's Nightjar has a pale greyish to sandy-grey plumage, lacking distinct markings on the scapulars, or having weak black-and-buff scapulars. The wings coverts are sandy buff to pale sandy or occasionally a very pale rufous, with a mottled pattern, compared to the neat and distinct spots shown by Savanna. The wing coverts often show thin black horizontal stripes or markings mixed with pale yellow or buff (are vermiculated), adding to its cryptic plumage. The underparts show thin barring. In general, the plumage in Savanna is darker, with more neatly marked wing coverts, than in Sykes's. Photos of adults of both species are given here to demonstrate their identification features, including birds in fresh and worn plumages [3–11].



[3] Adult male Savanna Nightjar. Note the white patch on throat side and the extensive white in tail visible on the underside of the tail, a helpful feature to identify this bird as a male. The markings on the wing coverts are rufous brown and the scapular stripe is partially visible; barred underparts. Photo taken in late evening. This individual is in worn plumage. April 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[4] Adult female Savanna Nightjar. The lack of white in tail and absence of white throat patch indicates female. Note the distinct rufous-orange stripe on scapulars and the prominent rufous-orange markings on wing coverts. Scattered black marks on the head and rufous on nuchal collar is evident. Many Savanna Nightjars look quite rufous in freshly moulted plumage like this. This photo was erroneously labelled as a male in Ganpule (2010). November 2008, near Morbi, Gujarat. Photo: Prasad Ganpule



[5, 6] Adult Savanna Nightjars in worn plumage, male on top/left and female on bottom/right. Note the off-white (vis-a-vis pale rufous) markings on the wing coverts in both birds. The pale 'V' on the scapulars is faded in the bird on right/bottom, which is a female while the bird on top/left shows white throat patch and whitish edge of

outer tail feather is visible, indicating a male. Birds in worn plumage lack the prominent rufous markings on wing coverts and scapulars seen in [4]. Such worn plumaged birds are seen in May-June, during the breeding season. Top: June 2024 and Bottom: May 2025, both near Morbi, Gujarat. Both Photos: Prasad Ganpule.



[7] Adult male Sykes's Nightjar. The small white throat patch and the white tail spots indicate this as a male. Lack of any prominent scapular pattern is typical of this species. The wing coverts show pale buff spots with black horizontal stripes. A hint of pale buff nuchal collar is visible. May 2018, Velavadar National Park, Gujarat. Photo: Falguna Shah



[8] Adult female Sykes's Nightjar. The tail corners and partially visible wing spots are buffish, which indicates a female. This individual was seen brooding its chicks. Similar to male but lacks distinct white throat patch and pattern on wing coverts is neater, with buffish-yellow colour. The underparts show fine barring. April 2025, Velavadar National Park, Gujarat. Photo: Manoj Dholakia



[9] Adult Sykes's Nightjar, probably a female. This individual is in worn plumage. The plumage looks faded, with the wing covert markings dull and many feathers looking abraded. This could be a female, as two chicks are visible below its body. Tail and wing markings not seen. The scapulars do not show any markings while nuchal collar is not apparent. Some barring on chest is visible. June 2025, Velavadar National Park, Gujarat. Photo: Prasad Ganpule



[10, 11] Adult Sykes's Nightjars. Note that the plumage in these individuals looks greyish rather than the usual yellowish-buff, and wing covert markings are not pale buff or yellowish but rather, more greyish than buff. Some pale yellowish markings on lower mantle and buffish nuchal collar apparent in the top bird. Wing and tail pattern cannot be seen and hence it is difficult to sex this individual. The bottom bird is more greyish than sandy-buff but some typical wing covert markings are visible. The tail corners are white, indicating a male. Top – March 2025, Little Rann of Kachchh, Gujarat. Photo: Prasad Ganpule and Bottom – April 2025, Velavadar National Park, Gujarat. Photo: Kandarp Andharia

In the Savanna Nightjar, juveniles lack the distinct 'V' on the scapulars and the overall plumage is grey-brown. However, some individuals are paler grey-brown with rufous edges on upperparts. Often there are no clear distinguishing marks in young birds. However, the overall plumage is mottled, with only faint rufous or buff spots on the wing coverts. But some individuals may even lack those spots. Thus, the overall effect is often of a featureless, dark grey-brown bird. The underparts are pale buffy, and show fine barring. The variation in juvenile plumage of Savanna is rather extensive but a few photographs are given here to demonstrate a few of the variations. [12–17].



[12] A typical juvenile Savanna Nightjar. Note the overall dark grey-brown plumage. There are scattered black-and-rufous markings on the wing coverts and mantle. It lacks the rufous 'V' on scapulars seen in adults. The head is largely unmarked but the forehead is paler. August 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[13] Juvenile Savanna Nightjar. This individual has a rufous cast to plumage and largely lacks the rufous markings on wing coverts. There are scattered black markings on the scapulars and it shows a hint of nuchal collar. The head is largely unmarked. This is likely a fresh juvenile and based on the partially visible rufous spots on wings, a female. June 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[14] Juvenile Savanna Nightjar. This bird shows only scattered black markings on the wing coverts and mantle. Some barring is visible on the breast. The crown is somewhat paler than the mantle. Overall, shows paler greyish-brown plumage. August 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[15] Juvenile Savanna Nightjar. A paler individual, greyish in plumage. Shows only a few rufous markings on the wing coverts. Lacks the pale 'V' on scapulars, indicating juvenile plumage. Note that it shows a largely unmarked plumage though some typical rufous markings on wing coverts are visible near the alula. The whitish markings on the wings could be due to feather wear. 31 May 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[16] Juvenile Savanna Nightjar. Not as dark as normal juvenile birds, with scattered black-and-rufous markings on wing coverts and mantle. Shows a hint of nuchal collar. Note that such birds can be mistaken for juvenile Sykes's Nightjar but the rufous markings on wing coverts, larger size, and tail pattern is useful in identification. August 2024, near Morbi, Gujarat. Photo: Prasad Ganpule



[17] Juvenile Savanna Nightjar. A dark bird, lacking any distinctive marking on the upperparts! Note that the plumage looks quite dark grey-brown, with some mottling. The barring on the breast is visible. The head looks paler than the mantle, with scattered blackish streaks. Juveniles with such plumage are fairly common. August 2024, near Morbi, Gujarat. Photo: Dimple and Maulik Varu

In the Sykes's Nightjar, juveniles too lack any distinguishing marks but the overall plumage is paler and sandy-grey, which is usually much paler than the plumage shown by any juvenile Savanna Nightjar. The wing coverts are mottled, with fine blackish stripes on sandy-grey ground colour, lacking any discernible pattern. The underparts are creamy buff, with fine barring. Some photographs of juvenile Sykes's are presented here [18–21]. Though both these species can lack any distinguishing marks and can look featureless, subtle plumage features are useful in identification. Sykes's has a pale yellow, pale buff or pale greyish-yellow or buffy-yellow overall plumage compared to a darker grey-brownish plumage in Savanna. Further, the mottling and vermiculation on the wing coverts show a pale yellowish or buff colour while in a Savanna, a pale rufous colour is often visible or the markings can be grey-brownish.



[18] Juvenile Sykes's Nightjar. A recently fledged bird. Note the overall sandy-greyish plumage, lacking any distinguishing markings. The tail is not fully grown yet and this bird was flying only short distances. Note that there are only few blackish markings on wing coverts. 29 March 2025, Little Rann of Kachchh, Gujarat. Photo: Prasad Ganpule



[19] Juvenile Sykes's Nightjar. A recently fledged bird. Note the fluffy plumage, indicating juvenile. Except for a few blackish feathers on the crown and scapulars, the plumage is mottled, lacking any prominent plumage features. March 2025, Little Rann of Kachchh, Gujarat. Photo: Prasad Ganpule



[20] Juvenile Sykes's Nightjar. A darker individual but note the buffish wash and pale mottling to wing covert feathers. The crown is paler than the mantle, and the tail feathers show buffish sides. Note the black markings on the mantle, similar to markings seen in Savanna Nightjar. But the overall paler plumage, buffish underparts and the lack of pale rufous markings on wing coverts is useful in identification. July 2021, Palghar, Maharashtra. Photo: Ashish Babre



[21] Sykes's Nightjar chicks at nest. The two chicks seen here had not left the nest but note that juvenile-type plumage has already been acquired. The plumage is sandy-grey, lacking any distinguishing marks. Savanna Nightjar chicks are much darker and more rufous. These chicks were very well camouflaged with the soil colour in the Rann. Since at this age the chicks are looked after by the parents, the identification is easy. March 2025, Little Rann of Kachchh, Gujarat. Photo: Nirav Bhatt

It is difficult to sex the birds in juvenile plumages in both these species unless seen well in flight. The plumage in juveniles is often fluffy and more variegated, which is also helpful in ageing the birds.

Face pattern: In the adult Savanna Nightjar, the crown is grey-brown, with scattered pale rufous and black spots. However, in worn plumage, it may only show blackish streaks [22]. The male shows a small white patch on throat side while the female shows a buffy throat patch. However, this throat patch is often not visible when the bird is perched. It usually shows a hint of rufous nuchal collar, though there is much individual variation. In Sykes's Nightjar, the crown shows scattered dark markings, which are usually diamond-shaped but these can be irregularly shaped [23]. The male has a whitish spot on throat side, often obscured due to posture, and shows weak pale rufous or sandy nuchal collar. The female is similar, showing a buffy spot on throat side and a relatively weaker nuchal collar.



[22] Face pattern of an adult Savanna Nightjar in worn plumage. Some blackish streaks are present on the crown. This individual shows a distinct pale rufous nuchal collar. June 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[23] Face pattern of adult Sykes's Nightjar. This front view clearly shows the irregular, black markings on the crown. The crown is pale buffish and this bird shows a hint of pale nuchal collar. Nightjars are often found perched in this position, making it difficult to see other plumage features though the typical wing covert markings are visible. November 2013, Nal Sarovar Bird Sanctuary, Gujarat. Photo: Devvratsinh Mori

In the juvenile Savanna Nightjar, the head is mottled, with no distinguishing marks but few individuals show incomplete, pale rufous nuchal collar. In the Sykes's Nightjar too, the head is usually featureless, with sparse and scattered black, diamond-shaped or irregular markings on the crown. The overall colour is paler sandy or sandy-buff in Sykes's.

Wing and tail pattern: The adult male Savanna Nightjar has white spots on four outer primaries (P7–P10) and mainly white two outer rectrices (R5–R4) [24]. The entire two outer rectrices are white, with dark tip. The female also has four spots on primaries, mainly buffish or pale rufous but in very worn plumage, in May and June, it can show whitish spots tinged with rufous. The tail is banded buff and brown in female, with mostly buffy edges, thereby lacking any white in tail. The female is more extensively barred on the underparts than the male, which is often visible in flight [25].



[24] Adult male Savanna Nightjar in flight. The white spots on four outermost primaries are prominent. Even when the tail is not fanned, the white edges of the tail feathers are often visible, as can be seen here, and this individual can be identified as a male. The white throat spot and the buffish scapular stripes can be seen from this angle. May 2025, near Morbi, Gujarat. Photo: Prasad Ganpule



[25] Adult female Savanna Nightjar in flight. The spots on the four outermost primaries are pale rufous rather than white. Note the barring on underparts and the lack of white throat patch. Also lacks white in tail, and in combination with other features, can be identified as a female in worn plumage, with some primaries abraded. June 2025, near Morbi, Gujarat. Photo: Prasad Ganpule

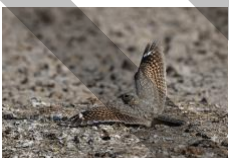
In comparison, the male Sykes's Nightjar has large, rounded white spots on the outer primaries but only the tail corners have broad, white spots (lacking the all-white tail of male Savanna Nightjar). Though both these species show white spots on outer primaries, Sykes's has relatively larger, more elongated white spots. In Sykes's, the female has smaller white spots, often fulvous tinged, compared to the white spots in male. However, many female Sykes's show white spots rather than buffish spots on the primaries [26–29]. Some male Sykes's show prominent white spots on four outer primaries (P7–P10) as can be seen in the photo of the wing given here [30] but usually three white spots on primaries are common.



[26, 27] Dorsal views of male (top) and female (bottom) Sykes's Nightjar. Both were road kills. The male shows large white spots on three outer primaries, and a small spot on P7. The two outer tail feathers have white spots distally. In comparison, the female has smaller pale rufous spots on two outer primaries, with small buff spot on P8. The tail spots are pale rufous and only partially visible. Photo of female is taken at night. Top: January 2025, Banni, Kachchh, Gujarat. Photo: Jaysukh Parekh 'Suman'. Bottom: November 2013, Little Rann of Kachchh, Gujarat. Photo: Nirav Bhatt



[28] Adult male Sykes's Nightjar in flight. Shows large white spots on three outer primaries, with small pale buffish spot on P7. The tail is closed, due to which the distal white tail spots are not visible. The white throat patch is partially seen and the wing covert markings are typical of this species. June 2025, Nal Sarovar Bird Sanctuary, Gujarat. Photo: Ishaan Lalbhai



[29] Adult female Sykes's Nightjar. The wing pattern of this female is different from the male, with only two whitish spots on the outer primaries and a buffish spot on P8. The spots on tail are not seen and the outer tail feather seems barred. Lacks white throat patch. This bird was on a nest, incubating eggs and this was a broken-wing display. March 2025, Little Rann of Kachchh, Gujarat. Photo: Prasad Ganpule



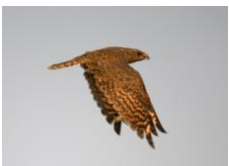
[30] Left wing of a road kill Sykes's Nightjar. Note that this individual has prominent white spots on four outer primaries (P7–P10). The outer edge of the outermost primary (P10) shows some white along with large white spots on inner and outer vane of P7. This type of wing pattern, with prominent spots on P7 is unusual. November 2013, Little Rann of Kachchh, Gujarat, Photo: Nirav Bhatt

Nightjars have ten rectrices, with R5 being the outermost tail feather. The tail pattern is different in both species; the male Savanna Nightjar has all-white two outer pairs of rectrices with a dark tip compared to two outer tail feathers having white spots distally in the male Sykes's Nightjar. The female Sykes's has pale rufous or fulvous tinged spots in tail, similar to the male, or may lack tail spots while female Savanna lacks white in tail feathers and often has buffy edges.

In juvenile Savanna Nightjars, females have rufous spots on wings while males have white spots in the wing (which are usually smaller than in adults) and some white in outer tail feathers [31–34]. The number of spots varies; I have noted individuals with two or three whitish or pale rufous / buffish spots but three smaller spots are common. I noted a few (*c.*5 out of *c.*25) individuals with white on P8–P10, but with P7 having pale rufous or rufous-tinged whitish spot [35]. Such birds lacked white in tail and were thus sexed as females as juvenile males are known to show some white in outermost tail feather (R5). The identification as female for such birds could not be confirmed beyond doubt as I did not handle the birds and it could be missing its outermost tail feathers. The outermost tail feathers are white in juvenile male and distinctive if visible in flight.



[31] Juvenile male Savanna Nightjar in flight. The white outer tail feathers are clearly seen here and the white spots on four outer primaries are evident. The white throat patch is also visible. Such birds can be easily identified as males. June 2020, near Morbi, Gujarat. Photo: Prasad Ganpule



[32] [33] [34] Juvenile female Savanna Nightjars in flight showing variation in primary pattern. The top bird shows three rufous spots while the middle bird only shows some irregular spots on the outer primaries and the bottom shows three spots though the markings on P8 are smaller. All can be sexed as females based on rufous spots on primaries and lack of white outer tail feathers. The top and middle birds are likely fresh juveniles. Top – June 2025, Middle – August 2024, Bottom – August 2025, all near Morbi, Gujarat. All Photos: Prasad Ganpule



[35] Juvenile female? Savanna Nightjar in flight. The bird in this photograph shows three whitish primary spots with rufous edges (P8–P10) but P7 has pale rufous spot. It lacks white in tail and was sexed as a female. The lack of ‘V’ on scapulars makes it a juvenile. However, identification as a female requires further confirmation. June 2025, near Morbi, Gujarat. Photo: Prasad Ganpule

Juvenile male Sykes’s Nightjars have small white spots on wings while the females have small rufous or buffish spots. There are usually two spots on the wings in juvenile plumaged birds [36]. My observations of juvenile Sykes’s were limited to around six or seven individuals and I could photograph only one in flight. Table 2 lists identification features of Savanna and Sykes’s Nightjars.



[36] Juvenile Sykes’s Nightjar in flight. This bird could fly short distances and shows only two small white spots on the outer primaries. Note that the white distal tail spots are apparent. A recently fledged juvenile. March 2025, Little Rann of Kachchh, Gujarat. Photo: Prasad Ganpule

Table 2: Identification features of Savanna and Sykes’s Nightjars

Age	Sex	Species	Pattern of outer primaries	Pattern of outer tail feathers (R4–R5)	Pattern of scapulars	Pattern of wing coverts
Adult	♂	Savanna	Four white spots (P7–P10)	Entirely white with small dark tip	Shows distinct pale orange or pale rufous ‘V’ becoming whitish with wear	Distinct pale orange or pale rufous markings becoming whitish with wear
		Sykes’s	Three white spots but can sometimes show four white spots (P7 or P8–P10)	Barred with large distal white spots	Lacks distinct pattern, same as mantle	Pale buff or pale yellowish markings often bordered blackish
	♀	Savanna	Four pale rufous to whitish spots (P7–P10)	Banded buff and brown, lacks white in tail	Shows distinct pale orange or pale rufous ‘V’ becoming whitish with wear	Distinct pale orange or pale rufous markings becoming whitish with wear
		Sykes’s	Two to three whitish to pale rufous spots (P8 or P9–P10)	Barred with large distal pale rufous spots (sometimes can show entirely barred tail lacking spots)	Lacks distinct pattern, same as mantle	Pale buff or pale yellowish markings often bordered blackish
Juvenile	♂	Savanna	Three to four white spots (P7 or P8 – P10)	Entirely white with small dark tip	Mottled, lacks any distinct pattern and same as mantle	Lacks distinct markings, mottled rufous and brown
		Sykes’s	Two (sometimes three) whitish spots – smaller than in adults (P8 or P9–P10)	Barred with large distal white spots	Lacks distinct pattern, same as mantle	Lacks distinct markings, mottled with pale buff, pale yellow or pale brownish
	♀	Savanna	Variable, with two to four pale rufous spots, which can be small in size (P7 / P8 / P9–P10)	Banded buff and brown, lacks white in tail	Mottled, lacks distinct pattern but is usually more rufous than juv ♂ and same as mantle	Lacks distinct markings, mottled rufous and brown
		Sykes’s	Two (sometimes three) pale rufous spots, smaller than in adults (P8 or P9–P10)	Barred with large distal pale rufous spots (sometimes can show entirely barred tail lacking spots)	Lacks distinct pattern, same as mantle	Lacks distinct markings, mottled with pale buff, pale yellow or pale brownish

Voice: The call of the Savanna Nightjar is a loud ‘chweek’, which is quite far-carrying. When approached closer than 1.5 m, roosting flock of birds get alarmed and the closest bird to the intruder utters a soft ‘chukp’ call. All the other closely roosting birds fly off with a chuckle, that sounds like a soft ‘chukp’. I heard the call of the Sykes’s Nightjar only once during my study in February 2013 in Greater Rann of Kachchh, Gujarat. This call, uttered in flight, can be described as a soft ‘chuk’. The song is described as a continuous churring (Roberts & King 2005). Voice is a reliable and diagnostic identification characteristic for both these species. However, it should be noted that there is only one recording of Sykes’s call on ‘eBird’ and an additional two samples on ‘xeno-canto’ (Xeno Canto 2026). Hence, recordings of call/song of Sykes’s are scarce, with just two recordings from India.

Behaviour and habitat: Both these species prefer to perch mainly on the ground and are well camouflaged with their surroundings. However, the Savanna Nightjar is sometimes seen perched on trees, electric or telephone lines, and on poles when active. The Sykes’s Nightjar is more selective

and mainly perches on the ground though it is known to quite rarely perch on trees. Sykes's prefers sandy and arid or semi-arid habitat, while Savanna is seen in a wide variety of habitats, but with a preference for stony areas in scrub or fallow lands in Saurashtra. This habitat choice seems to be largely based on camouflage of its plumage with the surroundings.

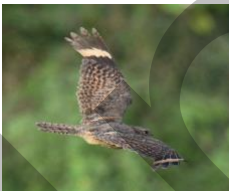
Moult: Adult nightjars have a single complete moult each year after breeding (Holyoak 2001). Adult Savanna Nightjars are seen in active moult in July and August. I have seen and photographed many adult Savanna in moult in these months [37–41]. Similarly, Sykes's Nightjar adults also moult after breeding, though I was able to see only a few birds in active moult in Gujarat in May and June. A photograph of an adult in moult from Nalsarovar Bird Sanctuary is posted on 'eBird' (Kapdi 2025) while bird shown in [9] is in body moult.



[37] Adult male Savanna Nightjar in active wing moult. Note the active primary moult, with new growing primaries. The white outer tail feathers as well as the mantle 'V' are visible. Birds in active moult are seen in July and August in Gujarat. August 2025, near Morbi, Gujarat. Photo: Pankaj Maheria



[38] & [39]: Adult female Savanna Nightjars in active wing moult, with one bird in active tail moult. The older primaries are whitish, tinged rufous. The spots on newly growing primaries look more rufous compared with the spots on worn primaries. Both birds lack white on retrices. The distinct 'V' on scapulars is seen, ageing them as adults. Both birds August 2025, near Morbi, Gujarat. Both photos: Prasad Ganpule



[40] & [41]: Adult female Savanna Nightjar in active body moult, perched and in flight. Note that this bird is in active body moult. The worn white scapulars contrast with the rufous newly grown scapulars. In flight, the scapulars on the left are rufous when compared with the worn, whitish scapulars on the right. This photo illustrates how worn feathers become whitish with wear. July 2025, near Morbi, Gujarat. Both Photos: Prasad Ganpule

I have observed many juvenile Savanna Nightjars in active post-juvenile moult [42, 43]. Based on my observations, the body moult to adult plumage is usually completed by November, and after this, it is not possible to age the birds in the field. All birds seen in the winter, after November, showed a distinct 'V' on the scapulars, indicating adult-type plumage. However, it is possible that at this age, wing and tail may be retained from juvenile plumage. I was not able to verify this as I did not trap the birds. It is easier to identify both these species in the winter as Savanna Nightjars show typical adult type plumage, with a pale 'V' on the scapulars. While I was not able to study post-juvenile moult in Sykes's Nightjars, there are photographs of Sykes's in post-juvenile moult in June from Gujarat, which is given here [44].



[42] & [43]: Juvenile Savanna Nightjars in post-juvenile moult. Both birds shown here are in active post-juvenile moult. A mix of new adult-type and juvenile feathers can be seen. The bird at the [bottom] has freshly grown scapulars and wing covert feathers while bird at the [top] is missing some tertials. Such juveniles in moult are seen in July–August. [42] in July 2021 and [43] in August 2010, both near Morbi, Gujarat. Both photos: Prasad Ganpule



[44]: Juvenile Sykes's Nightjar in post-juvenile moult. This juvenile shows a few adult-type feathers on the wing coverts and scapulars. Note that the overall plumage is still juvenile, pale sandy-grey. It lacks the prominent dark markings on the crown. June 2025, Nal Sarovar Bird Sanctuary, Gujarat. Photo: V. Neeraja

Discussion

I establish that the plumage features of Savanna and Syke's Nightjars are more similar than is currently documented in contemporary literature (Ali & Ripley 1983, Kazmierczak 2000, Cleere 2010, Grimmett et al. 2011, Rasmussen & Anderton 2012, Cleere & Kirwan 2020). Identification of all adult plumages may not be possible without a careful study of wing and tail pattern, particularly when worn plumage is involved. Juvenile Savanna and Sykes's are even more similar and yet variable. They can lack any distinct plumage markings to aid identification. Hence, identification might usually depend on overall plumage tone and size.

Wing pattern: Ali & Ripley (1983), Kazmierczak (2000), Cleere (2010), and Cleere & Kirwan (2020) have stated that white spots are present on three outer primaries in Sykes's Nightjar. Rasmussen & Anderton (2012) mention that this species has “very large, rounded white patch in outer primaries” without giving the number of primaries on which white spots are present. While it is true that most male Sykes's show white spots on three outer primaries, the wing of a male shown here in [30] shows distinct white spots on four outer primaries and is thus similar to Savanna. Another individual shown here has prominent white spots on three primaries but also has a small white spot on the fourth primary [28]. Holyoak (2001) stated that in male Sykes's, primaries P7–P10 have a white patch though this could be missing on P7 or can be suffused with rufous-buff, while on P10, white is sometimes restricted only on inner web. But, in photographs showing the wings given here, some white is present on the outer web of P10 along with a large white spot on the inner web. According to Holyoak (2001), P8–P10 of a female Syke's have mainly rufous-buff spots, though some females may show ‘much white’ spots. Roberts (1991) mentions male as well as female Sykes's as having clear white spots on three primaries, with the male sometimes showing white on outer web of a fourth primary. However, the female in [29] shows white spots only on two primaries. Thus, as I found, there are discordances between the reference texts, indicating this feature is not constant. More individuals may need to be studied to verify if these differences are age-related. It is possible that few birds, perhaps older individuals, may show prominent spots on four outer primaries as shown by the wing of the individual depicted here.

It was noted in this study that in worn plumage, usually in late May and June, adult female Savanna Nightjar shows whitish spots on wings, which may or may not be tinged rufous. This is not stated in literature. The reference texts (Rasmussen & Anderton 2012; Cleere & Boesman 2023) give adult female Savanna Nightjar as having pale rufous or buffish wing spots. State of plumage could influence colour of primary spots in both these species. Similarly, as can be seen in [6], the wing covert markings also become whitish with wear and in this worn plumage, Savanna can lack the typical rufous markings on the wing coverts, showing some pale rufous in only few wing coverts. In juvenile Savanna in fresh plumage, the female is usually more rufous overall than the male, and as seen in some photographs here, often there is a rufous cast to the plumage.

Juvenile plumages: Holyoak (2001) stated that young Sykes's Nightjars are paler than adults, with dark markings and white throat patches less pure and young males have white on P7–P10, differing from female in the same way as adults. Rasmussen & Anderton (2012) have given basic descriptions for juveniles of both species; the upperparts of the juvenile Savanna Nightjar are mentioned to be “very pale with uniform rufous-tinged grey upperparts finely speckled dark” while upperparts of juvenile Sykes's is described as “very pale overall, with a few tiny black speckles above”.

However, there is extensive variation in juvenile Savanna Nightjar and Sykes's Nightjar as seen from the photographs presented here and more studies are required to document the full extent of plumage in juveniles of both these species. Spots on primaries as an identification feature for both these species in juvenile plumage is probably not diagnostic. However, it is still useful in combination with the tail pattern. If the tail is seen well, then the pattern in juvenile males of both these species is diagnostic and identification becomes easier. In typical juvenile female Sykes's, the pale spots on distal part of outer tail feathers are different and separates it from juvenile female Savanna. However, if a female juvenile Sykes's does not show the typical tail spots, then identification should be concluded based on a combination of other features.

Rasmussen & Anderton (2012) mention that juvenile male has rufous-edged white spots on primaries but with white outer tail feathers. But, in individuals similar to the one depicted in [35], pale rufous spot was seen on P7 while P8–P10 were whitish but with no white on tail. If these

individuals are males, then it is possible that not all juvenile males have white outer tail feathers. For e.g., a male specimen (FTLB #088003) of Savanna (Munshi & Everett 2025) has rufous-edged whitish spots on three outer primaries and shows barred outer tail feathers (R5, R4), lacking any white. It is likely a juvenile, with only three spots on the outer primaries. Though it is sexed as a male, there is no white in the two outer tail feathers. According to Holyoak (2001), tail pattern of juvenile male is like an adult male, with white on inner webs of R4 or R5. In juvenile Savanna, males usually have three to four white spots on the primaries while females are variable, showing two to three rufous spots but sometimes, the rufous spots can be quite small, as shown in [33] here. In juvenile Sykes's, males as well as females have two to three spots, which are whitish in males and pale rufous or rufous in females. In general, juvenile Sykes's is pale buff while juvenile Savanna is darker than juvenile Sykes's, more greyish-brown or rufous-brown. In juvenile Savanna, females are generally more rufous toned than the male.

It is likely that the moult from downy, chick plumage to juvenile plumage is completed as soon as the chicks leave the nest, as some species attain juvenile plumage in the second week after hatching (Holyoak 2001). In a study in Singapore, Savanna Nightjar chicks left the nest, attaining juvenile-type plumage after *c.*16 days (Meng & Chan 2015). However, the moult from juvenile to adult plumage (the post-juvenile moult) takes longer and is more complex, and usually involves the body feathers and wing coverts but not the remiges and rectrices (Holyoak 2001). There are very few details available regarding post-juvenile moult in Sykes's Nightjars in reference texts. Hence, the observations presented here regarding moult in both these species can be used as a base for further studies.

Seasonality: Both nightjars have documented migratory patterns (Rasmussen & Anderton 2012). However, these remain poorly understood and hence using seasonality information alone for identification is not recommended. For e.g., I have observed the number of roosting Savanna Nightjars to decrease markedly in the winter, from December to March, suggesting a local movement. On the other hand, the numbers of Sykes's Nightjar increase in the winter, which points to a migratory influx. In the winter, Savanna appears to be uncommon compared to other seasons in areas like Little Rann of Kachchh and other arid and semi-desert parts of Kachchh. Sykes's is more likely to be seen in these areas than the Savanna in winter but odd individuals occur and caution is recommended.

Finally, it should be noted that another potential identification issue exists for Sykes's Nightjar. It is well known that the Sykes's Nightjar is very similar to the extralimital Egyptian Nightjar *C. aegyptius*, but since the Egyptian does not occur in India, this identification problem is overlooked in our country. Cleere (2010) and Rasmussen & Anderton (2012) illustrate Sykes's Nightjar as the main confusion species for Egyptian Nightjar. The key identification feature for Egyptian is that it lacks any white spots in wings (contra Sykes's). It would be prudent to check wing and tail pattern of all Sykes's in the extreme westernmost parts of India for a vagrant Egyptian. Since plumage is identical in these species, Egyptian could be misidentified as a Sykes's if the wing and tail pattern is not seen.

Conclusion

Separation of Sykes's Nightjar from Savanna Nightjar is quite challenging, especially in juveniles. The overall plumage, and wing and tail pattern, should be carefully studied for identification. The tail pattern is an important feature for identification in adults as well as juveniles. Though difficult to obtain, flight photographs are very useful in identification of both these species in adult plumage. However, the number of primary spots is less reliable as an identification feature in juveniles. Perched birds are often difficult to identify if the wing, wing covert, and tail pattern are not visible. It is advisable that photographs showing different features be taken for correct identification.

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