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Flamingo

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The large and small gulls (Aves: Laridae) of Gujarat

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Gujarat has a 1600 kms long coast, which is the longest of any state in India. Due to varied coastal habitats, good numbers of large and small gulls (*Laridae*) are seen here. Since the identification of some gulls is very difficult, and there are frequent taxonomic changes, there is some confusion regarding the gulls seen here. This is especially true regarding the 'large white-headed gulls' (Genus *Larus*) group. The 'large white-headed gulls' group refers to a complex of large gull species, which are challenging to identify and the taxonomic relationships within these species (and their subgroups) have been widely and vigorously debated and the authorities / reference texts do not agree on their taxonomic status even today. The taxonomy in this group is still in a state of flux and many DNA studies are being conducted by researchers in Europe and in other places. Interestingly, many times, the differences in morphological characteristics are not supported by DNA data. Due to this, there is no unanimity on the taxonomic treatment of these gulls and various authors follow different taxonomies. There are also a few other species of gulls (other than the 'large white-headed gulls') occurring here in Gujarat and in general, there is very less information regarding the gulls occurring in the state.

I present here details of the large and small gulls of Gujarat, along with notes on their status and distribution. Special attention is given to the large white-headed gulls group and the various taxa in this group are described in detail. Only adult plumages are described here as the identification of first-winter or immature gulls is very challenging and beyond the scope of this work.

The large white-headed gull group

The field identification of the large white-headed gulls is very challenging. The identification is dependent on the mantle colour, bill shape and size, state and timing of moult, amount of white on wing-tips etc. All these features need to be noted for positive identification and even then, some gulls remain unidentified.

Taxonomy: There is much confusion regarding the taxonomy of large white-headed gulls. In addition to the changes in taxonomy, there have been changes in names too, thus making identification more confusing and complex. The taxonomy of large white-headed gulls is still unresolved. This is seen even in the recent reference texts for the two common large white-headed gull taxa seen in India – Heuglin's Gull is treated as *Larus heuglini* in Grimmett *et al.* (2011), while it is treated as *Larus fuscus heuglini* (a subspecies of Lesser Black-backed Gull *Larus fuscus*) by Rasmussen & Anderton (2012). Similarly, Steppe Gull *Larus (heuglini) barabensis* is treated as

a subspecies of *L. heuglini* by Grimmett *et al.* (2011), while it is given as *L. fuscus barabensis* by Rasmussen & Anderton (2012); the latter authors treating both the common taxa occurring here in India as subspecies of Lesser Black-backed Gull. This taxonomy is based on the recommendations of Collinson *et al.* (2008), who conducted DNA studies on these taxa and recommended that Heuglin's Gull and Steppe Gull be treated as subspecies of Lesser Black-backed Gull. In the recent India checklist v3.0, both Heuglin's Gull and Steppe Gull are treated as subspecies of Lesser Black-backed Gull (Praveen *et al.* 2019). In Ali & Ripley (1981), pale mantled (with pale upperparts) gulls were assigned to *L. argentatus* and dark mantled (with dark upperparts) to *L. fuscus*. The names given in Ali & Ripley (1981) are also confusing; taxa occurring in India are referred to as 'Yellowlegged Herring Gull', 'Pinklegged Herring Gull' and 'Lesser Blackbacked Gull'. The names 'Yellowlegged Herring Gull' and 'Pinklegged Herring Gull' are no longer used for the two main taxa occurring in India as these are now referred to as either Lesser Black-backed Gull or Heuglin's Gull / Steppe Gull. Kazmierczak (2000) treated *barabensis* as a subspecies of Yellow-legged Gull (*Larus cachinnans* = Caspian Gull now) while Heuglin's Gull was treated as *Larus heuglini*, with two subspecies, *heuglini* and *taimyrensis*.

Here, the taxonomy I follow is slightly different from the recent reference texts as I have taken a more radical approach. The details of taxonomic treatment followed here are given in Table 1. While the taxonomy given here is debatable, this taxonomic view is taken by some authorities and I follow this taxonomy fully aware that many other taxonomies / authorities do not agree with this taxonomic treatment and it is likely to change in the future. For identification and description of adults, Malling Olsen & Larsson (2004) and Malling Olsen (2018) were used as the main references.

Some of the important features which need to be seen and noted for the identification of large white-headed gulls are as follows:

Judging mantle colour with Kodak grey scale: It is very important to judge the mantle colour in this group/taxa. For this, the 'Kodak grey scale' is a very useful tool. It is commonly used in gull identification. It is a luminance scale with 20, equally spaced increments (grey tones), or levels, between white and black, with 1 being white and 20 being black. It



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is especially useful in the field as the human eye is good at making accurate tonal comparisons. By placing a grey scale card and using it to see which corresponding grey tone best fits the mantle colour, an accurate Kodak grey scale shade can be obtained. The tone can be then compared with the values of the Kodak grey scale. All gulls in the large white-headed group have been assigned a Kodak grey scale value(s) and the same can then be used to determine the taxon/taxa to which it fits the best. The Kodak grey scale values for taxa occurring in Gujarat are given here, which have been taken from Malling Olsen (2018). A 1-16 or 1-20 step Kodak grey scale can be obtained online from many different websites and one such scale can be obtained from <http://www.gull-research.org/indexelements/charts.htm>.

Timing of moult: The timing of moult in large white-headed gulls is very important and useful in identification. Generally, the more northerly a gull's breeding range, the less it moults following the breeding season (Malling Olsen 2018); the author states that long distance migrant gulls moult differently to short distance migrants with long distance migrants usually moulting in the winter quarters. For the common taxa occurring in India, the Steppe Gull moults earlier than the Heuglin's Gull, with moult usually completed (p10 – the outermost primary being fully grown) by mid-January (moult is usually completed by late January to mid-March in Heuglin's Gull). The state of the moult in mid-winter gives an indication whether the gull seen is a northerly breeder or not.

Wing pattern: When seen from below (and above) in flight (in a bird with completed moult or with all flight feathers present), the shape and size of the white mirror on p10 and p9 (if present) is important for identification. In addition to the white mirrors, wing-tip tongues and the amount of black in the primaries is also important and needs to be viewed carefully. In many cases, the open wings are critically important for identification.

Taxonomic treatment of large white-headed gulls in Gujarat: As explained earlier, the taxonomy in the large white-headed gull group is still unresolved. The taxonomic treatment of large white-headed gulls I follow is given in Table 1 along with their status in Gujarat.

The taxonomy followed here is taken from the references given in Table 1. It is pertinent to note that there is considerable debate regarding the taxonomic status of Heuglin's Gull and Steppe Gull. Malling Olsen (2018) treats the Heuglin's Gull as a distinct taxon, with two subspecies, the nominate *heuglini* and *taimyrensis*. The other common taxon observed in India, the Steppe Gull, is treated as a subspecies of Caspian Gull rather than as a subspecies of Lesser Black-backed Gull by Malling Olsen (2018). Similarly, Mongolian Gull is sometimes treated as a subspecies of either Caspian Gull or Vega Gull (*Larus vegae*) or even as a distinct species *Larus mongolicus*. Detailed DNA studies are on-going and there will be some changes to the taxonomy of the large white-headed gulls in the future. Till then, the taxonomic treatment given in Table 1 is followed here.

Identification of large white-headed gulls from photographs: It is well known that judging mantle colour from photographs is often tricky as it depends on camera settings (exposure, brightness-contrast settings etc.), angle of sunlight falling on the bird, the position in which the bird is standing etc. Many times, a wrong camera setting can result in mantle colour being different in the photographs from what is seen in the bird, and could cause confusion. To get the accurate mantle colour in photographs, the gulls should be ideally photographed in good morning light (not very early morning or in the late morning), with proper exposure settings and by taking a good sample point. If possible, images of the upperwings and underwings should be obtained to see the wing pattern. Features like presence / absence of head streaking in mid-winter, bill size and shape, leg colour etc. are also important and need to be photographed. It is also necessary to point out that by mid-March to early April, most gulls start assuming breeding plumage and become white-headed. Thus, the presence / absence of head streaking is a feature which is useful only in mid-winter.

Of the following, first two gulls are the commonest large white-headed gulls seen here. A majority of the gulls seen in Gujarat will most probably be one of these two and thus both are described here in detail. The other gulls in this group are described along with their status in Gujarat.

Table 1: Taxonomic treatment and status of large white-headed gulls in Gujarat

Sr No	Common name	Scientific name	Reference used for taxonomy	Status in Gujarat
1	Heuglin's Gull	<i>Larus heuglini</i>	Malling Olsen (2018)	Common winter migrant
2	Steppe Gull	<i>Larus fuscus barabensis</i>	Rasmussen & Anderton (2012)	Common winter migrant
3	Caspian Gull	<i>Larus cachinnans</i>	Malling Olsen (2018)	Rare winter migrant
4	Taimyr Gull	<i>Larus taimyrensis</i>	Van Dijk <i>et al.</i> (2011)	Rare winter migrant
5	Mongolian Gull	<i>Larus (vegae) mongolicus</i>	Malling Olsen (2018)	Vagrant
6	Baltic Gull	<i>Larus fuscus fuscus</i>	Malling Olsen (2018)	Hypothetical

Heuglin's Gull

In Gujarat, this is the gull with the darkest mantle (upperpart) colour (Kodak grey scale 8-13). It has a dark grey mantle with black wing tips and is normally the darkest gull here – clearly darker than either Steppe Gull or Caspian Gull. It is quite heavy billed and is usually heavily streaked on the nape in the winter, with some streaking also on the head. In flight, it has only a small white spot on the outermost primary (p10), and sometimes, a small spot on the next outermost primary (p9). The wings tips are thus extensively black. An arctic breeder, this is a late moulting gull and completes its moult by January to mid-March. Thus, in mid-winter, it is in moult, with the primaries still growing. After March, the moult is usually completed and the head becomes white as it starts acquiring breeding plumage.



Pankaj Maheria

Note dark grey upperparts contrasting with wing-tips. Strong bill. This individual is beginning to moult into breeding plumage but note few streaks on nape, with head white. April 2017, Mandvi Kachchh

Heuglin's Gull is a common winter migrant to Gujarat. It is seen in coastal areas of Kachchh and Saurashtra fairly commonly and is present in most coastal parts of the state. It is also seen around fishing villages and on beaches. It is frequently seen in large groups, especially in coastal fishing villages like Okha and around coastal areas of cities like Porbandar and Veraval.

Steppe Gull

It has greyish upperparts (Kodak grey scale 7-8.5), which are paler grey than Heuglin's Gull. It has a relatively thinner bill and appears smaller than a Heuglin's Gull. It has very little or no head streaking in the winter, making the head appear white in most adults in mid-winter. It also has a rounded head shape, which is different from Heuglin's Gull. In winter, the bill is multi-coloured, with extensive black markings, red gonyes and

greenish tinge. In flight, it is distinctive with extensive black in wings with white spot on p10, and frequently on p9. Black primary markings often reach p3 or p2. It is early moulting than Heuglin's Gull, with most birds completing their moult by December. A pale mantled gull in Gujarat with a white and rounded head (without streaking) in the winter will most probably be a Steppe Gull.



Prasad Ganpule

Note white head without streaking, rounded head shape and paler grey upperparts than Heuglin's Gull. Note slender and '4 coloured' bill. February 2016, Porbandar, Gujarat

Steppe Gull is also a common winter migrant to Gujarat. Its habits are similar to Heuglin's Gull and it is seen in coastal areas in the winter almost all over the state.

In addition to the two large white-headed gulls described here which are common, there are other taxa which occur in Gujarat, as either rare winter visitors or vagrants. However, the identification is many times extremely difficult and it is not possible to identify some individuals with certainty.

Caspian Gull

This is a very pale mantled gull occurring here (Kodak grey scale 4-6.5). It has pale grey upperparts, which are much paler than Steppe Gull. It has a long, straight bill which is thinner, a 'pear-shaped' head with a sloping forehead, and a 'beady' eye (which is placed higher on the head). It is usually white headed in the winter though some individuals may show slight streaking on the nape. In flight, it has very less black in the wing tips, with large white mirrors on the two outermost primaries (p10 and p9), with long, grey 'tongues' on the outer primaries. These 'tongues' are grey areas on the primaries, which restrict the black in the wings to a small line. Hence, it is very distinct in flight. In India, it is thought that the eastern populations of Caspian Gulls are seen and these have more black in the wing-tips compared to the western populations. Even in these individuals, the wing-pattern is quite distinctive and it is possible to separate such birds from Steppe Gulls

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if seen well. It is an early moulting Gull, with moult usually completed by October or early November.



Prasad Ganpule

Note very pale grey upperparts, slender and long bill. This individual had typical wing pattern of Caspian Gull with long grey 'tongues' on outer primaries and white mirrors on p10 and p9. January 2015, Little Rann of Kachchh.

The status of Caspian Gull in India is interesting. It was given as 'uncertain' in Grimmett *et al.* (2011) and as 'hypothetical' in Rasmussen & Anderton (2012). The Caspian Gull was included in the India checklist (Praveen *et al.* 2016) based on records from Gujarat (Ganpule 2015). Based on my personal observations, I have noted that the Caspian Gull is a rare winter migrant to Gujarat. It is noted in small numbers in Okha and in other areas of Gujarat – mainly in the coastal areas of Saurashtra and Kachchh. Some Caspian Gull-type individuals have also been noted in Nal Sarovar / Gosabara, near Porbandar, too (*pers. observation*). Thus, it can be said that the Caspian Gull is a rare winter migrant to Gujarat.

Taimyr Gull

The Taimyr Gull has greyish upperparts (Kodak grey scale 6-9), which look pale grey and the mantle colour is paler than Heuglin's Gull but similar to Steppe Gull. In winter, it has more extensive head streaking than in Heuglin's Gull, which is densest and broadest on the hind-neck, but often covering the entire head as fine greyish-brown streaks (Malling Olsen 2018). The head is flatter and beak is dull yellow in the winter. It is a late moulting Gull, with moult completed by late February or March. In flight, it has a white mirror on p10 with mirror on p9 also present and white primary tips are generally broader than in Heuglin's Gull.

For Gujarat, the Taimyr Gull is a rare but regular winter migrant, with sightings from Okha, near Dwarka, and also from Porbandar (Ganpule 2016a). It could be more widespread but is probably overlooked amongst flocks of Steppe Gulls and Heuglin's Gulls here.

There is some uncertainty regarding the taxonomic status of Taimyr Gull. This is discussed in detail in Ganpule (2016a),



Prasad Ganpule

Note grey upperparts with fine streaking on head; more prominent streaking on nape. This bird is moulting, with p8 being longest, in the second week of January, indicating its northern origin. Upperparts much paler than Heuglin's Gull and late moulting with heavy head streaking separates it from Steppe Gull. January 2014, Okha, Gujarat.

wherein Taimyr Gull was treated as a subspecies of the Lesser Black-backed Gull as per taxonomy followed in the India Checklist. Van Dijk *et al.* (2011) suggested that the Taimyr Gull represented a distinct population with a measurable degree of genetic differentiation. But, no new genetic data was presented to refute the recommendations of Collinson *et al.* (2008). I choose to follow the taxonomy as per van Dijk *et al.* (2011), treating the Taimyr Gull as a distinct taxon till more data is available.

Mongolian Gull

The Mongolian Gull has pale grey upperparts (Kodak grey scale 5-6). It has a rounded or pear-shaped, smallish-looking head, with flat fore-crown and heavy, parallel-edged bill. It is a large and heavy gull, with large-chested, broad-necked and large-billed appearance. In flight, though wing pattern is somewhat variable, it usually has large white mirrors on p9-p10. The wing-tip is among the darkest of Asian taxa, with seven (ranging from six to nine) outermost primaries showing black. In winter, the head is white, with at most very faint, narrow dark streaks on hind-neck and sometimes on the crown. The bill is duller. More details about the Mongolian Gull can be obtained from Yésou (2001).

For Gujarat, the Mongolian Gull is thought to be a vagrant. There are photos of gulls attributable to this taxon from Jamnagar, Okha and Nal Sarovar. See photo by Kothalia (2011) on the OBI website and also given here, which shows an adult gull which was identified as a 'putative' Mongolian Gull by Klaus Malling Olsen. Another photo by R. B. Balar on the OBI



Aseem Kothiala

Note very pale grey upperparts, heavy and parallel-edged bill. Also note the bulky look with deep, broad chest. A 'putative' Mongolian Gull. Near Jamnagar, December 2011.

website from Nal Sarovar is also thought to be a probable Mongolian Gull. I have seen probable Mongolian Gull-type birds twice in Okha. However, in all these photos, it is almost impossible to confirm the identification without trapping and measuring the birds or by DNA analysis since the Mongolian Gull is quite similar to the eastern Caspian Gull. Since birds typical of Mongolian Gull (and different from typical Caspian Gulls) have been noted here, it can be considered to be a vagrant to Gujarat pending further study.

Baltic Gull

The Baltic Gull has velvety black upperparts, with at most only a very slight contrast with darker wing-tips (Kodak grey scale 13-17) or with upperparts the same colour as wings. It has much darker upperparts than Heuglin's Gull. It is a delicate-looking gull, and looks smaller than Heuglin's Gull with a smaller head, thinner bill and has longer wings and shorter legs. In winter, the head is only faintly streaked, with the streaking strongest on hindneck. In flight, it usually shows a small white mirror on p10 only while very few have it on p9. The eye is yellow, often with dark spotting. It is a late moulting gull, finishing moult in its winter quarters by March.



Bengt Nyman (Source: Wiki Commons)

Note very dark, almost blackish upperparts, with slender bill and long hind parts. Upperparts are 'velvety' black with very little or no contrast with wing-tips, and overall, it has a 'streamlined' look. April 2018, Sweden.

The Baltic Gull is a long distance migrant, breeding in the Baltic Sea and wintering mainly in East Africa. A recent record of a Baltic Gull from Goa was the first record of this taxon from India (Williams & Gottschling 2018). Though no sighting has been reported from Gujarat yet, it is possible that it could be a vagrant here and is overlooked amongst Heuglin's Gulls. Bird watchers should be aware of the possibility of occurrence of Baltic Gull here and any gull with very dark or blackish upperparts, not contrasting with wing-tips, should be seen closely and photographed.

Other gulls occurring in Gujarat

In addition to the large white-headed gulls described here, there are other species of gulls which occur in the state. The taxonomy of these gulls is not complicated, even though there have been minor changes in a few of these species. At the species level, these gulls are fairly stable and there have been no major changes in taxonomy of these gulls in the past few years. The details of these gulls are given in Table 2.

Table 2: Other gulls in Gujarat

Sr No	Common name	Scientific name	Status in Gujarat
1	Pallas's Gull	<i>Ichthyaetus ichthyaetus</i>	Common winter migrant
2	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Common winter migrant
3	Brown-headed Gull	<i>Chroicocephalus brunnicephalus</i>	Common winter migrant
4	Slender-billed Gull	<i>Chroicocephalus genei</i>	Resident and common winter migrant
5	Mew Gull	<i>Larus canus</i>	Vagrant
6	Little Gull	<i>Hydrocoloeus minutus</i>	Vagrant
7	Black-legged Kittiwake	<i>Rissa tridactyla</i>	Vagrant
8	Sooty Gull	<i>Ichthyaetus hemprichii</i>	Hypothetical

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Pallas's Gull

Previously known as the Great Black-headed Gull (*Larus ichthyaetus*) (Ali & Ripley 1981), but now treated as *Ichthyaetus ichthyaetus*, it can be identified by its large size and black mask in breeding plumage. The bill is large and black tipped, while in breeding, white eye-crescents contrast with black hood. In non-breeding plumage, the black mask on the face is variable, and some adults are almost plain white, with black restricted to the ear coverts. It has pale grey upperparts (Kodak grey scale 4-5). In flight, black wing-tip pattern is distinct, with very less black in wings and white mirrors on p10 and p9.



Note the black eye-mask, multi-coloured bill and the pale upperparts. Both these gulls are moulting out of breeding plumage and the variation can be seen. October 2017, Little Rann of Kachchh.

Pallas's Gull is a common winter visitor to Gujarat, and fairly common in coastal areas as well as in inland water bodies. Most birders are familiar with the Pallas's Gull and so there are many records / photos from almost all parts of the state.

Black-headed Gull

Adult in breeding plumage has dark brown hood, finishing higher on hindneck than in congeners. Upperparts are grey and bill is dark maroon, similar in colour to the head and



Note the dark ear-spot, with shading across head. The upperparts are pale grey. Note that the 'white flash' on the primaries is visible even when it is perched. The bill is dark red and slender. February 2016, Porbandar.

narrow white eye-crescents do not join at the rear of eye. In winter, head is white with dark ear-spot and variable dark bars/shading across crown and neck; bill and legs are bright red. In flight, it has grey upperwing with white leading edge, black trailing edge to outerwing with 'white flash' on primaries and black on wing-tips (when seen from above).

The Black-headed Gull is a common winter migrant to Gujarat and seen all over the state in coastal areas as well as in inland lakes and rivers.

Brown-headed Gull

Adult in breeding plumage has grey upperparts, brown hood, broad white eye crescents and black-tipped dark red bill. In winter, it has white head with dark ear spot (which is usually



Note the white head with dark ear spot, bright red and black-tipped bill. The outer-wing shows white mirrors on p10 and p9, which is different from Black-headed Gull and Slender-billed Gull. Also note white flash on outer primaries but with black wing-tip and mirrors. The bill is dark red with black tip. February 2016, Porbandar.

larger than in Black-headed Gull) and deep pink legs. In flight, it has black wing-tips with white mirrors on p9 and p10, secondaries and inner primaries are grey while outer primaries and their coverts are white. This wing pattern, with mirrors on p10 and p9 is different from Black-headed Gull and Slender-billed Gull and is helpful in identification of adult birds.

The Brown-headed Gull is a common winter migrant to Gujarat and seen all over the state in coastal areas as well as in inland lakes and rivers.

Slender-billed Gull

In breeding plumage, has white head, underbody (may show variable rosy tinge), coverts and tail. Upperparts are pale grey; whitish eyes (but can show darker spots in eyes – *pers. observation*), black bill and red orbital ring. In winter, head is white but may show faint ear spot, red to dark red bill, which is longer than in Black-headed Gull, and red (or yellowish) legs. In

flight, it has white outer primaries with dark trailing edge and underwing with darker primaries. It is similar to Black-headed Gull but has a different head shape, bill size and shape is also indicative while structurally, it is different.



Prasad Ganpule

Note the slender neck and long and slender bill, which is dark red. Note very faint dark ear spot. The upperparts are pale grey. Note that this individual has a slightly darker and pale yellowish eye. February 2015, near Morbi.

The Slender-billed Gull is resident and local migrant, as well as a winter visitor to Gujarat. It breeds in colonies near Charakla salt pans, Dwarka, in the summer. I have noted up to 100 nests in this area, usually in May. This is a regular breeding location for the species and nesting has been observed here each year for the past several years, with 80-100 nests observed in the area. (Maulik Varu, *pers. comm.*). It may be breeding in other suitable habitats in the state but further study is required as there have been no reports of breeding in other locations in Gujarat. In the winter, the Slender-billed Gull is rather widespread, and is seen in suitable locations almost all over the state.

Mew Gull

Also known as Common Gull, the subspecies of Mew Gull occurring in our region is *L. c. heinei*. It is a small gull with smoky grey upperparts (Kodak grey scale 4.5-9). The adult in breeding plumage has a slim, bright yellow bill and dark eyes which look large on head, yellow legs and white head. In winter, head and underparts are white, with variable streaking on hindneck. In flight, it has black wing-tips with broad white mirrors on p10 and p9 and has prominent white trailing edge to wing. Though similar to Black-legged Kittiwake, the wing-tip pattern is distinctive.

The Mew Gull is a vagrant to Gujarat. There have been a few records from the state in the winter; from Nava Bandar near Una in January 2006 (Malling Olsen 2019) and from Bhuj, Kachchh (Eaton 2013). Interestingly, Adriaens & Gibbins



Prasad Ganpule

Note the small and short bill, fine streaks on head with darker streaks on nape. The upperparts are pale grey. The hindparts are longish with white underbody. October 2015, Little Rann of Kachchh.

(2016) show a specimen of Mew Gull from western India, with the location on the map matching to Gujarat. The specimen is in the Natural History Museum, Tring (Peter Adriaens, *in litt.* by email). However, on checking the specimen, it was noted that it had been collected in Iraq, and not India, and the authors had made a mistake in attributing this specimen for India (Hein Van Grouw, *in litt.*, email dated 8 August 2019).

I have seen and photographed a Mew Gull from Little Rann of Kachchh in October 2015. Though there was some doubt initially regarding the identification, it was confirmed as a Mew Gull by Klaus Malling Olsen and Kjeld Tommy Pedersen. Thus, three records of Mew Gull are known from Gujarat. As suggested in Malling Olsen (2019), the Mew Gull could be a regular winter visitor to Gujarat and needs to be looked out for in flocks of other gulls.

Little Gull

The Little Gull is the smallest gull to occur here, and is only just slightly larger than marsh terns (*Chlidonias* sp. like Whiskered Tern *Chlidonias hybrida*). The upperparts are pale grey (Kodak grey scale 4-5.5). In summer (breeding plumage), it has a black hood with bright red legs. In winter, the head is white with a dark cap and ear spot, and the legs are duller. In flight, the wing pattern is striking; dark grey to blackish underwing coverts, black underside of flight feathers and pale grey upperwing with a white trailing edge. It lacks any black on upper wings and thus, in flight, the alternating black underwing and grey upperwing is noticeable.

The Little Gull is a winter vagrant to Gujarat. There have been reports from coastal parts of Kachchh and Saurashtra (Ganpule 2016b). Most of the individuals seen here have been first-winter or immature individuals based on the descriptions



Stanislav Harvančík

Note the dark ear covert spot with shading on head. The underwings are blackish and upperwings are grey, which present a striking contrast when in flight. Also note thin black bill and large dark eye. April 2017, Czech Republic.

provided. It is likely that in these plumages, it could be confused with the similar Black-legged Kittiwake. But, a few of the reports are likely to be correct and the Little Gull could be a rare vagrant to our region. However, there have been no photo records of the species from Gujarat so far. Bird watchers are urged to look for the Little Gull in the state.

Black-legged Kittiwake

It is a medium sized gull, larger than the Little Gull. The upperparts are grey (Kodak grey scale 6-7), with the extreme wing-tip being entirely black (described as 'dipped-in-ink'), which looks striking against a pale background. The legs are



Michelle & Peter Wong

Note the thin and pale yellow bill, the dark ear cover spot and shading across nape. Note the dark 'dipped-in-ink' wing-tips (lacking any mirrors). March 2018, Japan.

quite short and the bill is thin and greenish-yellow. In breeding plumage, the head is entirely white while in non-breeding

(winter), a grey ear spot is seen and there is grey shading on the hindneck. In flight, the black wing-tips are striking and do not have any white 'mirrors'.

The Black-legged Kittiwake is a vagrant to Gujarat with only one record from Mandvi, Kachchh (Mehta 2018). This record was of an adult in non-breeding plumage, which was surprising as almost all previous records from India were of juvenile or immature birds. In juvenile plumage, it is quite similar to Little Gull and also Mew Gull. The identification is difficult and careful observation is needed to separate it from these species. It is possible that more intensive bird watching in the coastal areas of the state could result in further sightings of the Black-legged Kittiwake in the future.

Sooty Gull

The Sooty Gull is a dark plumaged gull, with blackish-brown hood and upper breast, white underparts and dark brown upperparts. The bill is long and yellow or greenish-yellow with black subterminal band and red tip. The legs are long and yellow, often showing a greenish tinge. In flight, the wings are dark with white trailing edge. The Sooty Gull is slightly paler in the winter but is rather similar all round the year.



Franco Baresi (Source: Wiki Commons)

Note the long bill with black and red tip, the dark brownish head and upperparts. The neck and breast are paler brown. The rest of the underparts are white. The eyelid is narrow and white above eye. Oman 2014.

For Gujarat, the status of Sooty Gull is interesting. In the latest Gujarat checklist, it was treated as hypothetical (Ganpule 2016b). There are no records from coastal areas of the state but a few records from the Arabian Sea, off the Kachchh coast, are known. Ali & Ripley (1981) state that though it is seen commonly in Karachi, Pakistan, which is quite near to Gujarat, surprisingly, there have been no reports from the Gujarat coast. The Sooty Gull winters in coastal areas of Pakistan, very near to the Gujarat. Thus, it is quite possible that the Sooty Gull could occur here in the state, especially in coastal areas of Kachchh, and needs to be looked out for.

Discussion

Due to the frequent changes in names and taxonomy, and the general difficulty in identifying gulls in the large white-headed gull group, there has been less interest in watching gulls here in Gujarat. Bird watchers do not scan gull flocks in detail to check the odd looking gull. This has led to a paucity of information regarding the various taxa wintering here. In the recent years in Gujarat, a detailed study of gulls in Okha was conducted by Buchheim (2006), wherein the author observed Heuglin's Gulls, Steppe Gulls and a few other gulls, which were left unidentified, but speculated to be belonging or attributable to *taimyrensis*, *birulai* or *vegae*. A study was conducted again in Okha on the presumed Taimyr Gulls and it was noted that in addition to the Taimyr Gulls, some gulls seen in Okha and described in Ganpule (2016a) were similar to Vega Gull or were likely to be Taimyr Gull x Vega Gull hybrid. But, Vega Gull is not known to winter in India and also, without genetic studies, it would be impossible to confirm and hence, were kept unidentified or attributed to Taimyr Gull. Further research can help in the identification of these gulls seen in Okha and described in Ganpule (2016a).

Other than these two papers, there have been no major studies on gulls conducted in Gujarat recently and there have been no publications in birding journals or magazines on the large white-headed gulls group here. Identification of single, out-of-range bird in the large white-headed gull group, of taxa which are not known to occur in India, would be very difficult if seen here. In this respect, I have seen a Heuglin's Gull-type bird near Dwarka, which was in adult plumage and had a completed moult in the first week of November and had pale eyes. The moult timing in this individual was almost three months earlier than a normal Heuglin's Gull. The moult timing and plumage would fit a Lesser Black-backed Gull of the subspecies *graellsii/intermedius*. Based on the location, it was identified as a Heuglin's Gull. However, identification and separation of *graellsii/intermedius* Lesser Black-backed Gull from Heuglin's Gull outside its breeding range is often impossible. This is one of the great challenges in gull ID and even if *graellsii/intermedius* would occur here (which is quite unlikely), it would not be possible to identify these with certainty without trapping / DNA analysis. Thus, if taxa other than those described here are seen in the state, or the country, careful observations and also good photographs would be needed for identification. It would be prudent to state here that in spite of best efforts, some gulls will remain unidentified as there are many features which are overlapping in these taxa. Identification and separation in first-winter plumages is especially challenging. Also, only the basic plumage descriptions are provided here and there is some variation

even in adult birds of these taxa and hence, careful observation is usually needed, and even then, some birds are notoriously difficult to identify.

Regarding the other species of gulls occurring here, there is some data on their status and distribution, especially of Pallas's Gull and Black-headed Gull / Brown-headed Gull / Slender-billed Gull. These are relatively easy to identify and are seen in almost all parts of the state. The other three vagrant species – the Mew Gull, Little Gull and Black-legged Kittiwake, are known to occur in the state and the Mew Gull and Black-legged Kittiwake have been photographed here. It is quite possible that the Little Gull could also be seen and photographed in Gujarat in the near future as the increasing number of birders and the access to digital cameras has led to a more people photographing birds in various parts of the state. It is best if bird watchers familiarize themselves with the first-winter and immature plumages of Mew Gull, Little Gull and Black-legged Kittiwake since vagrancy is more likely in first-winter or immature birds rather than in adults.

In this regard, the Sooty Gull is also a likely candidate for addition to the Gujarat checklist in the future. Other gull species like Franklin's Gull (*Leucophaeus pipixcan*), Sabine's Gull (*Xema sabini*) and White-eyed Gull (*Ichthyophaga leucophthalmus*) have been noted in India and are included in the India checklist v3.0 (Praveen *et al.* 2019). With long distance migrant gulls, incidences of vagrancy are high and it is always possible that such species could turn up in the least expected locations! So, photographing the odd-looking or smaller-sized gull in gull flocks is very important as it could be one of the rarer species. But, always remember to take a large number of good photographs, from different angles (and in flight) of gulls which look different in the field.

It is hoped that this paper will lead to bird watchers becoming more aware of the various gull taxa occurring in the state and more attention will be given to the gulls here. Gujarat, with its long coastline and suitable habitats, is an ideal place for gull-watching and we should take advantage of our location to watch gulls here and increase our knowledge of these birds.

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Notes on the breeding of Black Bittern *Dupetor flavicollis* near Nal Sarovar Bird Sanctuary

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The Black Bittern (*Dupetor flavicollis*) is one of the largest resident bittern species (Family: Ardeidae) in the Indian Subcontinent. The taxonomic status of the Black Bittern is uncertain. It was treated as *Dupetor flavicollis* by Grimmett *et al.* (2011), and put in the monospecific genus *Dupetor*, while recent authorities like Martínez-Vilalta *et al.* (2019) treat it as a part of the genus *Ixobrychus*, in which other bittern species are placed. I follow the taxonomy as per Grimmett *et al.* (2011).

The Black Bittern has blackish upperparts, with yellow malar and sides of neck and dark streaking on underparts; the female is similar, with browner upperparts and chestnut-streaked underparts. The Black Bittern is resident and partly migratory,

and is thinly and patchily distributed throughout the better watered parts of the Indian Subcontinent from Sindh, in Pakistan, to Assam, West Bengal and beyond; it is said to be fairly common in South-west India in Kerala, Karnataka etc. (Ali & Ripley 1981). For Gujarat, Ali (1954) did not record this species in the state. It was seen and confirmed to be breeding around Pariej Tank near Tarapur, Kheda district, in 1990, along with Cinnamon Bittern (*Ixobrychus cinnamomeus*) and Yellow Bittern (*Ixobrychus sinensis*) (Khacher 1996, Mukherjee *et al.* 2002). In the recent Gujarat checklist, the Black Bittern was stated to be 'uncommon to rare monsoon breeding migrant with isolated records from many parts of the state' (Ganpule 2016). A recent study by Patel *et al.* (2018) further confirmed

that the Black Bittern was breeding in some parts of south Gujarat fairly regularly; two chicks were observed in first week of June and juveniles were observed in October. There have been many recent sightings of Black Bittern from the state reported in the social media and also on birding websites.

Little is known about the breeding biology of the Black Bittern in India. It is said to nest from June to September, during the southwest monsoon; the incubation period is not known (Ali & Ripley 1981, Martínez-Vilalta *et al.* 2019). In general, the breeding biology of the Black Bittern has not been studied in detail. Here, I present notes and new information on the breeding biology of Black Bittern in Gujarat, based on a study conducted near the Nal Sarovar Bird Sanctuary.

Study Area

A total of four nests were found at a large pond near Kayla village, near Nal Sarovar Bird Sanctuary, in Ahmedabad district. The nesting was in reed beds. This study was conducted at an unprotected, manmade pond, with reeds of about 8-10 feet height, spread over 12 acres. The nesting was away from human habitation. The surrounding area had a few more small ponds with water (of about 1 to 2 acres size). These ponds were used daily by the local fishermen for fishing. In the winter and summer seasons, the farmers used the water for farming. The approximate annual rainfall of the area is about 600 mm – 800 mm (weather radar). The minimum water depth is about 1.5 mts and the maximum is 4 mts.

Methodology

I studied four breeding pairs of Black Bitterns near Kayla village. This study was carried out from 25 June 2018 to 11 September 2018, in order to know the breeding biology of the species. Special attention was given to ascertain the incubation period and feeding habits, prey items and prey delivery rate, and breeding success. I also monitored the species for aspects of parental care. To evaluate the selection of prey, I identified prey brought to the nest by the adult Black Bitterns. A single nest was studied in detail (Nest N1) and monitored by using one auto motion sensor camera (Cuddeback Long Range IR Model E2) fixed near the nest. The camera was fixed at a distance of 1.5 – 2.0 mts from the nest. Three other nests were directly observed and data was collected by visual observations and photographs (nests A1, A2 and A3 – see Table 1).

Regular observations were taken from the auto motion sensor camera. Photographs were taken with DSLR camera and lens (Body: Canon 7D & Lens: Sigma 150 - 600 mm sports version and Canon 100 – 400 mm). Direct observations were made with binoculars (Nikon: 10x50 Aculon A211). One breeding pair was observed from laying of eggs till the chick left the nest and the total period of observation was 79 days, for a total of around 1896 hrs of observation (nest N1 – see Table 1). The nest measurements were taken with the help of Vernier calipers and other instruments. To avoid disturbing the adult birds, this was done when the adult birds had left the nest and was completed as quickly as possible. No egg measurements were taken to avoid disturbance to the nesting birds. All the



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standard rules, protocols and principles for nesting birds / breeding studies were followed.

I also used a meter tape (1 cm – 50 cm), tap scale (1-150 cm), steel scale (graduated up to 1 mm), GPS (Garmin Etrex - 20X) and camouflage hide during the study period for taking measurements and locations. The area was visited every day during the breeding season and once a week during the non-breeding season. More than 48000 photographs from the trap camera, 1300 photographs from DSLR camera and 900 photographs from a compact point and shoot camera were taken. Approximately 50200 photographs were studied and compiled (with micro analysis) with the help of the 'Excel' spreadsheet program.

Results

Nest site selection & nest activities



The nest was in medium-sized reed beds, with less height of the nest platform from the water level. The details of the four nests, like height, width, nest measurements etc. are given in Table 1. The birds used leaves and reeds (both dry and green) as nesting materials. The nesting materials were available within 100 mts of the nest and were brought to the nest as and when required and also for repairing of the nest. Such

nest repairing behaviour was observed up to end of breeding season as the adults continued repairing the nest as needed.

Eggs, incubation & hatching



In Nest N1, three small-sized white eggs, with a bluish or pinkish tinge and darkish patches were laid. The eggs were laid by the female in the last week of June. In the other nests (A1, A2 and A3), eggs were laid in the last week of June and first week of July. The summarized data, including date on which eggs were laid, incubation period and hatching date is given in Table 3. The female laid the eggs at two-day intervals, but incubation typically began at clutch completion.

During the incubation period, both adults were seen changing duties at the nest for feeding, with both sexes sharing the incubation duties. The parents never left the eggs unattended in the nest, except for a few seconds to a few minutes during the changing of duty. Both the parents incubated the eggs continuously, even at night. The male spent more time incubating at night than the female, while during the day, the female was seen incubating more. Usually, at night, one parent bird was on incubation duty while the other parent bird stayed near the nesting site. The majority of incubation was

Table 1: Details of four nests of Black Bitterns in the study area

Particulars	Measurements			
	Nest N1	Nest A1	Nest A2	Nest A3
Height of nest	5.56 cm	7.81 cm	6.53 cm	7.52 cm
Width of nest	17 cm	18.52 cm	17.56 cm	17.43 cm
Length of reeds	Smallest - 1.27 cm. Longest - 36.57 cm	Smallest - 36.57 cm. Longest - 54.86 cm	Smallest - 1.52 cm Longest - 48.76 cm	Smallest - 1.27 cm Longest - 48.76 cm
Number of lateral reeds branches	42-44	48-51	47-50	41-43
Height above the water surface	86.36 cm	71.12 cm	55.88 cm	66.04 cm
Water depth	76.2 cm	97.53 cm	85.34 cm	54.86 cm
Distance from open water	15 mts	18 mts	12 mts	14 mts
Distance from terrestrial habitat	5 mts	8 mts	12 mts	6 mts
Width of the reed belt	150 mts	145 mts	130 mts	145 mts
Height of the reed belt	3.2 mts	2.6 mts	2.5 mts	2.6 mts
Temperature during the study	30° C to 34° C	30° C to 34° C	30° C to 34° C	30° C to 34° C
Distance of nest from road	600 mts	700 mts	450 mts	800 mts
Distance of nest from pathway	45 mts	65 mts	48 mts	68 mts
Depth of nest	19.24 mm	20.13 mm	18.25 mm	19.34 mm

Table 2: Details of other avian species near the nests

List of bird species observed near the nest area during the study (in 79 days)	Little Cormorant (<i>Phalacrocorax niger</i>) Indian Cormorant (<i>Phalacrocorax fuscicollis</i>) Little Grebe (<i>Tachybaptus ruficollis</i>) Painted Stork (<i>Mycteria leucocephala</i>) Asian Openbill (<i>Anastomus oscitans</i>) Woolly-necked Stork (<i>Ciconia episcopus</i>) Little Bittern (<i>Ixobrychus minutus</i>) Yellow Bittern (<i>Ixobrychus sinensis</i>) Cinnamon Bittern (<i>Ixobrychus cinnamomeus</i>) Indian Pond Heron (<i>Ardeola grayii</i>) Grey Heron (<i>Ardea cinerea</i>) Little Egret (<i>Egretta garzetta</i>) Shikra (<i>Accipiter badius</i>) Black-shoulder Kite (<i>Elanus caeruleus</i>) Osprey (<i>Pandion haliaetus</i>) Black Kite (<i>Milvus migrans</i>) Eurasian Marsh Harrier (<i>Circus aeruginosus</i>) Ruddy-breasted Crake (<i>Porzana fusca</i>) White-breasted Waterhen (<i>Amauornis phoenicurus</i>) Purple Swampphen (<i>Porphyrio porphyrio</i>) Common Moorhen (<i>Gallinula chloropus</i>) Eurasian Coot (<i>Fulica atra</i>) Steppe Gull <i>Larus (heuglini) barabensis</i> Caspian Tern (<i>Hydroprogne caspia</i>) River Tern (<i>Sterna aurantia</i>) Whiskered Tern (<i>Chlidonias hybrida</i>) White-winged Tern (<i>Chlidonias leucopterus</i>) House Crow (<i>Corvus splendens</i>) Clamorous Reed Warbler (<i>Acrocephalus stentoreus</i>) Red Avadavat (<i>Amandava amandava</i>) Tricoloured Munia (<i>Lonchura Malacca</i>) Indian Silverbill (<i>Euodice malabarica</i>) Black-breasted Weaver (<i>Ploceus bengalensis</i>)
Predator species (avian and reptile) within the nest environment during the study (in 79 days)	Avian Eurasian March Harrier (<i>Circus aeruginosus</i>) Shikra (<i>Accipiter badius</i>) Black-winged Kite (<i>Elanus caeruleus</i>) Black Kite (<i>Milvus migrans</i>) Reptile Cobra (<i>Naja naja</i>) Checkered Keelback (<i>Xenochrophis piscator</i>) Rat Snake (<i>Ptyas mucosa</i>) Common Indian Monitor (<i>Varanus bengalensis</i>)
Avian species which were regularly seen perching in the area surrounding the nest	Yellow Bittern (<i>Ixobrychus sinensis</i>) Cinnamon bittern (<i>Ixobrychus cinnamomeus</i>) Black-breasted Weaver (<i>Ploceus bengalensis</i>) Tricoloured Munia (<i>Lonchura Malacca</i>) Purple Swampphen (<i>Porphyrio porphyrio</i>)

done by the male compared to the female. This conclusion was derived on the basis of trap camera data. During changeovers in incubation, the parent bird slightly rotated the egg and changed the position of the egg with the help of beak and feet, before settling down for incubation.

The incubation period was around 23 to 25 days. I kept a tight vigil on the nest during the last week of incubation, to observe the behaviour of the adult birds and to see the egg-hatching. In nest N1, a small crack/hole was observed in one egg in the late afternoon (on the 25th day) and the chick came out completely from the egg on the next morning, with the whole process taking almost 14 hours. During this period, the parent birds did not incubate the other eggs and only covered the eggs partially for the chick to hatch easily.

Feeding behaviour, feeding frequency and parental care

It was very surprising to note that only one type of food item – different sized fish – was recorded during the study period.



Devratishh-Mori

The fish were identified mainly as spotted snakehead (*Channa punctata*) by expert Andrew Rao from Kolkata. Both the male

Table 3: Breeding summary of four pairs of Black Bitterns

Nest site code	Location of Nests	Date of first egg laid	Number of Eggs	Incubation period in days (taken as date on which the first egg hatched)	Date of sightings of chicks	No. of chicks hatched	Whether breeding successful? Yes/No	No. of chick(s) fledged	Reasons for failure
N1	Near Kayla village (All other nests were located around 5-9 mts from nest N1)	25 June 2018	3	25	19 July 2018 to 21 July 2018	2	Yes	1	One egg destroyed by natural causes & one chick predated by Indian monitor
A1		27 June 2018	3	23	19 July 2018 to 21 July 2018	3	Yes	1	One chick predated by Indian monitor and one juvenile dead due to natural causes
A2		2 July 2018	2	-	-	-	No	0	All eggs destroyed by natural causes or predated upon
A3		2 July 2018	3	-	-	-	No	0	All eggs predated upon by predators

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and the female were seen feeding the chicks. The parents would bring back fish and disgorge it out for the chicks. The majority of the feeding was done by the female even when the male brought food. But, the male also used to feed the chicks several times. After hatching, parents fed the chick 56 times before it left the nest. The male brought food only 16 times. Generally, both the parents brought food but the female was more active in feeding the chicks. Usually, one parent was busy with feeding the chicks, while the other roosted nearby the nest site. As soon as the chick hatched, it was fed first by the female. After that, the parents used to feed the chick regularly - not one after the other. The highest feeding frequency was observed between 08:30 - 12:45 hrs. I even recorded the Black Bittern feeding chicks during the night at around 20:45 – 22:30 hrs. Though the Black Bittern is crepuscular, the feeding of chicks in the night was somewhat unexpected. It shows that the parent birds feed the chicks late into the night.

Both parents actively brought suitable sized fish for the chicks, so that they could feed it easily. Whenever a large sized fish was brought, a considerable amount of time was spent in regurgitating it. The parents never left the chicks alone in the nest, especially during the noon, when the female was always present on the nest, providing cover and protected the chick from direct sunlight and rain by spreading its wings. The male was also observed doing this type of behaviour. Whenever any large birds/ birds of prey appeared in the sky near the nest site, immediately, the parent bird (which was on the nest), covered the chick(s) with half or full spread wings. The parents also brought water in their beak for the chick to drink. After one hatchling was predated by a common monitor lizard, the other hatchling left the nest but was seen very near the nest site. However, whenever the parents came to feed, they used a booming call to attract the chick to the nest. The chick was observed to move outside the nest, in nearby areas, as it started to grow. On 29 August 2018, at 18:30 hrs, the chick left the nest for the last time and after that, it never came back to the nest again. The chick was around 22 days old when it left the nest. I could observe the chick after it left the nest for a further 2 weeks. Both parents were feeding the chick outside the nest. I could not see the chick after this period as it did not remain in this area.

Predation of eggs and chicks

In nest N1, one egg was destroyed by natural causes during the incubation period and one chick was predated by an Indian Monitor, although there were other potential predators like House Crow and Shikra in the vicinity. This was recorded in the motion sensor camera. In the other nests (A1, A2 & A3), the eggs or young had disappeared and eggshells or nestling remains were found. I observed that one hatchling



Dewratsinh Mori



Dewratsinh Mori

and four eggs were predated and one egg was destroyed by natural causes. In nest A1, one juvenile died due to natural causes. The summary for all the four nests is given in Table 3.

Discussion

The Black Bittern is a not well studied species in India. In general, bitterns are crepuscular and active during dawn and dusk; during the day time, they sit silently in Typha or reed beds and are so well camouflaged that they are difficult to detect. This seems to be one of the main reasons for the lack of sightings and paucity of information regarding their breeding biology. The secretive lifestyle of the Black Bittern has prevented people from studying it and so almost no information is available regarding its breeding biology. It is extremely difficult to study the Black Bittern without highly special, technologically advanced equipment. I could carry out studies on the breeding of the Black Bittern only because of electronic gadgets like the auto motion sensor camera.

Ali & Ripley (1981) mention the nesting season of Black Bittern as extending from May to September, and is dependent on the southwest monsoon. This is similar to what was observed here as the eggs were laid at the end of June and in the first week of July. Martínez-Vilalta *et al.* (2019) state that normally four eggs are laid but clutch size is 3-6. Here, it was observed that clutch size was two in one nest and three in the rest of three nests. The incubation is shared by both sexes. Here, it is important to state that the incubation period of 23 days in one nest and 25 days in the second nest is being reported for the first time

for the Black Bittern. The incubation period for this species was unknown and due to this study, it can be stated that the Black Bittern has an incubation period of about 23 to 25 days. This is similar to what has been reported for other bittern species like Cinnamon Bittern and Yellow Bittern by Wells (1999) and Kulshan & Hancock (2005), who give the incubation period for these two species as 23 days and 20 days respectively. Though more studies should be conducted to know the incubation period for the Black Bittern at large.

The preferred habitat of Black Bittern is reed beds, and submerged bushes mixed with clumps of reeds and sedges. The habitat here was reed beds. The Black Bittern takes fish, frogs, lizards, crustaceans and insects (Martínez-Vilalta *et al.* 2019). Here, the diet was mainly fish. Further study, especially regarding the diet of the Black Bittern is required. It is possible that in different areas, the diet would be dependent on the prey available in the surrounding habitat. It should be noted that four nests of Black Bitterns observed here were very close to each other and would suggest communal nesting. However, more data is required to know whether the species nests communally or in small groups.

There were many potential predators surrounding the nesting site. I documented the Black Bittern eggs and chick being predated by the Common Indian Monitor. The Indian Monitor is well capable of taking small birds, eggs, chicks and larger sized injured birds. Though not unexpected, the predation of Black Bittern eggs and chick by an Indian Monitor is quite interesting and shows that the Indian Monitor is a great threat to the Black Bittern eggs and their nestlings.

This study reveals that the percentage of fledging success for the Black Bittern was two chicks from 11 eggs (from four nests), which is about 18%. This breeding success is very less and the scale in which the eggs and chick(s) are predated by the Indian Monitor and by other potential predators is very high. This is of great concern and shows that the reproductive success of the species is quite low in this area. It is necessary to know if the breeding success is low in other parts of its range or whether this is an exception. More studies, from different parts of its range, would help in getting data on the breeding of Black Bittern. Though the Black Bittern is not a threatened species, such a low breeding success would suggest that the species is facing a threat here, mainly from the Indian Monitor. A creative solution would be needed to address this problem.

Much work needs to be done regarding the Black Bittern in Gujarat. Preserving reed beds and providing a good habitat for the species to breed here, should be a top priority. There are now very few areas in which such large and undisturbed reed beds exist, especially in Saurashtra. It is quite possible that the nest site selection by the Black Bittern depends on the area

(size) of the reed beds and lack of disturbance by humans. A clear management plan needs to be worked out for the conservation of the Black Bittern in Gujarat. I have provided preliminary information regarding the breeding biology of the species. This is probably the first proper compilation of the breeding biology of the species from the Indian Subcontinent. This study also shows that technology / advanced electronic equipment can be used positively to know more about the breeding biology of a secretive bird species. However, it should be used judiciously, always keeping the welfare of the birds in mind.

Acknowledgments

I am grateful to Shri Bhavanisnji Mori, Honorary Wildlife Warden, (Surendranagar district) for continuous support and encouragement. Study would not have been possible without his guidance. I thank S. Pandit, DCF (Nal Sarovar Bird Sanctuary) and the Gujarat Forest Department for their help. I express gratitude to Prasad Ganpule, Ashok Mashru and Brian Sykes for improving the draft manuscript. I am thankful to Hiteshwarsinh Mori, Bhotu Mori, Kuldip Mori, Ramjhan Sama, Surajsinh Parmar and Kuldipsinh Parmar for the company in the field and for collecting useful information. This study would have been impossible without the great help and support of my friends Bimal Patel, Krunal Trivedi (Nature Club Surat), Viral Joshi, Pinal Patel, Andrew Rao, Kaushal Mody and Mukesh Bhatt. Finally, special thanks to Ayuwat Jearwattanakanok (Thailand) for sharing information regarding the breeding of this species.

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Wintering of Sykes's Nightjar *Caprimulgus mahrattensis* in Vadodara

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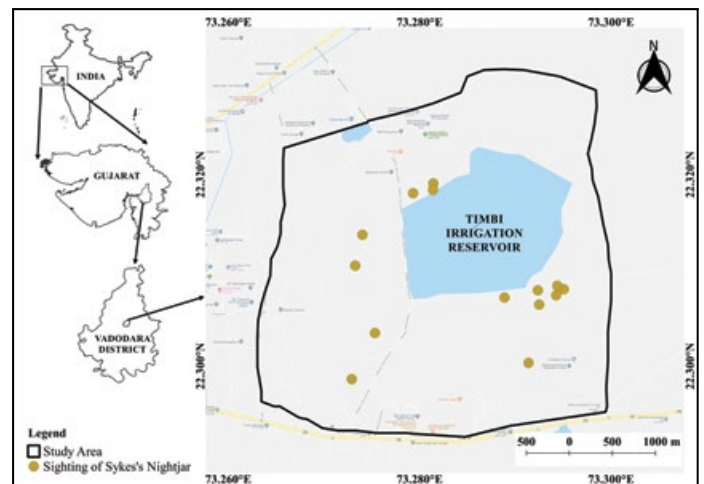
Hiren Patel

The Sykes's Nightjar (*Caprimulgus mahrattensis*) is a summer visitor to SW Afghanistan (Seistan), mostly resident in Pakistan and Mekran Coast and winter visitor from central to south and east India. It has been reported to breed from SE Iran, S Afghanistan, Pakistan and Kachchh in western India. It probably also breeds in Saurashtra, Rajasthan and parts of north Gujarat (Ali & Ripley 1983, Holyoak 2001, Cleere 2010, Grimmett *et al.* 2011, Rasmussen & Anderton 2012). This species is an uncommon winter visitor and has been recorded from different parts of Gujarat; Velavadar National Park, Little Rann of Kachchh, Great Rann of Kachchh. There are isolated records from other parts of the state (Ganpule 2016).

Owing to its extremely large range and stable population trend, this species has been listed as 'Least Concern' (Birdlife International 2016). It can be found in varied habitats such as arid and semi-deserts with scattered thorn scrub, in dry and stony scrubland, on clay or gravel plains, saltpans and stony wastelands and sandy areas with tamarisk bushes, mostly camouflaged in the midst of the sandy ground (Kazmierczak 2000, Holyoak 2001, Cleere 2010, Grimmett *et al.* 2011, Rasmussen & Anderton 2012). This small and short-tailed, sandy-grey nightjar has lightly spotted blackish-brown crown, scapulars with blackish spots and cinnamon markings, large white patches on either side of lower throat, occasionally extending across whole of throat, and irregular buff spotting on nape forming indistinct collar (Holyoak 2001, Cleere 2010, Grimmett *et al.* 2011, Rasmussen & Anderton 2012). Here we report the wintering of this species at Timbi Irrigation Reservoir, Vadodara, Gujarat.

Observations

On 3 December 2018, while surveying for mammals around Timbi Irrigation Reservoir (22° 18' 29" N, 73° 17' 42" E), at 20:12 hrs, we came across a bird, which was resting besides grass tussocks. This small bird was totally camouflaged, with upperparts having sandy colouration with light brown spots all over the body. We took some photographs, from which we identified it as a nightjar. Later, the bird was identified as a Sykes's Nightjar with the help of standard field guides such as Grimmett *et al.* (2011) and Rasmussen & Anderton (2012). The literature as well as 'eBird' data indicated this species to be new to the area and hence, an extensive search was initiated immediately. On 4 December 2018, at 19:07 hrs, we found it again, resting on a mud road in the same area. When we tried to move closer to the bird, it stood and started bobbing its head and moved away. Subsequent to this, it moved a short distance to the side of the mud road and settled down. A small video of the same was also recorded (Naria 2019).



Later, on 10 December 2018, again while surveying nightjars around Timbi, at 21:22 hrs, we saw another nightjar but at a different location. While we were observing it for some time, it suddenly flew and landed on the path somewhere ahead of its earlier location with a small moth in its beak. Within no time, it gulped the protein rich meal.

For a better understanding of the population and distribution of the Sykes's Nightjar in the area, we explored the surroundings of Timbi at night from December 2018 to February 2019. A total of 19 sightings of Sykes's Nightjar were noted in 10 visits to the area and the distribution of the species is shown in the map.

Discussion

Though an uncommon winter visitor to Gujarat (Parasharya *et al.* 2004, Ganpule 2016), this species was found to be breeding in the Greater Rann of Kachchh (Tiwari & Dadu 2010). During our surveys, a total of 25 sightings of nightjars were noted on 19 occasions. Once, we came across five individuals in one night at different locations, which indicate that the species is seen in good numbers in this area. Though some of the sightings may be of the same individual seen at different times and dates, there is no doubt that more than five birds were present in this area. The only historical record, which we found for Vadodara district, is of a specimen, a female (GS290), collected by Salim Ali on 18 November 1945 from Dabka, on the dry grassland at the edge of a jheel (Ali 1956). Ali (1956) also states that 'elsewhere not noted' in Gujarat, but observed that Hume obtained a specimen in north Gujarat between Deesa and Suigam, and who stated that it occurs in Kachchh and Saurashtra as well. Padate *et al.* (2001) did not come across the species during their survey in the Vadodara district. The sightings here, over a period of more than two months, suggest that the species is a winter visitor here. The wintering of Sykes's Nightjar in small groups around

Timbi Irrigation Reservoir of Vadodara district appears to be a hitherto unrecorded fact and adds to our knowledge regarding the distribution of the species in Gujarat.

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Sighting of Moustached Warbler *Acrocephalus melanopogon*, Marbled Duck *Marmaronetta angustirostris* and Asian Desert Warbler *Sylvia nana* at Nal Sarovar

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We present here sightings of Moustached Warbler (*Acrocephalus melanopogon*), Marbled Duck (*Marmaronetta angustirostris*) and Asian Desert Warbler (*Sylvia nana*) from the Nal Sarovar Bird Sanctuary from the winter season of 2018-2019. These sightings were made during the course of routine bird watching in the area.

Moustached Warbler

On 24 November 2018, we visited Vadla Wetland. At first, we saw a Water Rail (*Rallus aquaticus*) but it disappeared quickly into the reeds in the area. So, we were just waiting quietly for it to come out again. Meanwhile, we observed some other common birds like Bluethroat (*Luscinia calliope*) and some warblers (*Acrocephalus* sp.). There were five warblers foraging



Pankaj Maheria

at the same place. We photographed all of them and believed that these were Paddyfield Warblers (*Acrocephalus agricola*). Later, at home while inspecting the photographs on the

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computer, one warbler looked different and we suspected that it was a Moustached Warbler. We sent the photographs to Prasad Ganpule to confirm the identification. He confirmed that it was indeed a Moustached Warbler based on the broad white supercilium, blackish crown sides, streaked upperparts and long, thin blackish bill.

The Moustached Warbler is a rare winter visitor to Gujarat, with sightings from Kachchh, Saurashtra and central Gujarat; it is thought to be overlooked (Ganpule 2016). There is a recent sighting from the Little Rann of Kachchh (Ganpule 2017). So, this record from Nal Sarovar is not unexpected. However, there are very few photographic records from this region and so this sighting is noteworthy.

Marbled Duck

Due to a weak monsoon in 2018, the water level was quite low at Nal Sarovar and its peripheral areas. As a result, many water bodies had dried up and others were somewhat exposed with



very less water. On 24 December 2018, I (first author) planned a visit this area with my friends from Surat (Dr. Anand Patel, Viren Desai, Dr. Dharmesh Patel and Dr. Pragnesh Patel) for photography of Red-crested Pochard (*Netta rufina*). We reached there in the evening. We saw 8-10 pairs of Red-crested Pochards. They were foraging in the water at least 200 meters away. So, we decided to go on the other side of the water to get some good photographs. Meanwhile, we saw one duck in flight. I hastily took some photographs and believed that it was a female Red-crested Pochard. I posted the images later on the 'Oriental Birding Pix' group and it was pointed out that this was a Marbled Duck. All its features were matching with a Marbled Duck and the grey eye-mask, whitish forehead, white underwings, barred rump etc. were seen. The photographs were then uploaded on the 'Oriental Bird Images' website and the three images posted on the website show all the features of a Marbled Duck (Maheria 2018).

The Marbled Duck is a rare winter visitor to Gujarat with scattered records from the state. However, there are very few

photographic records from Gujarat and so this was a good sighting for us.

Asian Desert Warbler

On 16 March 2019, we visited Nal Sarovar in the evening. We were busy with the photography of the fascinating 'puff-and-roll' display of a Stoliczka's Bushchat (*Saxicola macrorhynchus*) in the area. After some time, we observed the presence of



one small warbler with a distinct yellow iris. It was foraging fearlessly in lower bushes besides the Stoliczka's Bushchat. It was easily identified as an Asian Desert Warbler. Generally, all of our sightings of Asian Desert Warblers were either from Little Rann of Kachchh or Greater Rann of Kachchh. Since this location is not very far from the Little Rann of Kachchh, the sighting was not very surprising. But, as far as we know, the Asian Desert Warbler has not been photographed from this area in the recent years and so this was a significant record for Nal Sarovar.

These three sightings highlight the importance of Nal Sarovar Bird Sanctuary. This area provides an important habitat for the wintering and migrant birds and even though there was very less water this year, these sightings show that Nal Sarovar remains an important area for bird watching.

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Sightings of Red-backed Shrike *Lanius collurio* and Red-tailed Shrike *Lanius phoenicuroides* near Rajkot

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Jagrut Rindani

Red-backed Shrike Imm.



Krunal Trivedi

Red-tailed Shrike Imm.

The Red-backed Shrike (*Lanius collurio*) and the Red-tailed Shrike (*Lanius phoenicuroides*) are autumn passage migrants in Gujarat (Ganpule 2016, 2017). Both these species are mainly seen in Kachchh from August-end till about first week of November, and there are isolated records of these species from Saurashtra and elsewhere in the state. Ganpule (2018) stated that the Red-tailed Shrike is an uncommon passage migrant in Kachchh and that birds in first-winter plumage are difficult to identify unless seen closely and plumage details noted.

We present here sightings of both these shrike species from Khirasara *vidi*, Rajkot.

Observations

Khirasara *vidi*, near Rajkot, is a grassland dotted with trees and bushes, which includes *Prosopis cineraria*, *Acacia* sp., *Ziziphus* sp. etc. All the shrikes were seen in the Khirasara grassland area. The birds were mostly seen perched in *Acacia* sp. in the morning hours.

Two Red-backed Shrikes were seen during September 2018 in the same area. Both individuals were seen foraging around in typical shrike-like manner, perching on bushes and coming on to the ground to catch prey. The first individual was seen on 4 September 2018 and it was a female Red-backed shrike. Later, a first-winter bird was seen on 29 September 2018. Sightings of Red-backed Shrike are given in Table 1.

Red-tailed Shrike was seen several times in the months of September & October. Sightings of Red-tailed Shrikes are given in Table 2.

Identification

The identification of first-winter shrikes is generally difficult and complicated, and so we took opinions of experts Tim Worfolk and Lars Svensson. Here, we discuss identification of one individual of each species.

Red-backed Shrike: The first -winter Red-backed Shrike can be identified by scaled upperparts, grey nape, and brownish-rufous tail. All these features were seen in this individual. It was thus identified as a first-winter Red-backed Shrike.

Red-tailed Shrike: The individual discussed here had dark grey-brown upperparts and fairly solid mask, which was similar to

Table 1: Sightings of Red-backed Shrike

Sr. No.	Date	Time	Observers	Remarks
1	4 September 2018	17:18 hrs	Akshay Trivedi, Krunal Trivedi	Adult female
2	29 September 2018	08:19 hrs	Akshay Trivedi, Krunal Trivedi, Jagrut Rindani	First-winter

Table 2: Sightings of Red-tailed Shrike

Sr. No.	Date	Time	Observers	Remarks
1	10 September 2018	18:00 hrs	Raju Karia	Adult male
2	23 September 2018	07:45 hrs	Akshay Trivedi, Krunal Trivedi	First winter
3	30 September 2018	07:40 hrs	Akshay Trivedi, Hemanya Radadiya	First winter
4	2 October 2018	10:14 hrs	Jagrut Rindani	Adult
5	10 October 2018	08:10 hrs	Akshay Trivedi, Krunal Trivedi	Adult male

Shrike....

a Brown Shrike (*Lanius cristatus*). However, the wing point/primary projection looked quite long and so, was wrong for a Brown Shrike. Also, the pattern of tertials and greater coverts is different in Brown Shrike. In Red-tailed Shrike, a sub-terminal dark line inside the pale fringes, surrounding a partly paler centre is present as was seen in this bird. Red-backed Shrike was also eliminated due to absence of barring on upperparts. The Isabelline Shrike (*Lanius isabellinus*) was easily ruled out due to brown upperparts and fairly complete black mask. Although the apparently white-sided tail seen in this bird could suggest that it might have some influence of Red-backed Shrike genes (Tim Worfolk, *in litt.* by email) but this can be confirmed only by DNA analysis. So, this was identified as a first-winter Red-tailed Shrike.

The other birds seen here were typical Red-tailed Shrikes. For the other records given in Table 2, we identified the birds as Red-tailed Shrikes using Worfolk (2000) and also sent all the photographs to experts to get the identification confirmed.

These records suggest that both these species are more widespread autumn passage migrants than the records suggest. In first-winter plumage, these shrikes are especially difficult to identify and so are possibly overlooked. But now,

with so many records of both species from areas other than Kachchh, it seems that they are regular passage migrants in Saurashtra too. There are many other areas in Rajkot District which have a habitat which is quite similar to Khirasara *vidi* and it is quite possible that these shrikes could be seen there too. Both the Red-tailed Shrike and Red-backed Shrike should be looked out for in the autumn passage migration season in such areas.

Acknowledgements

We would like to thank Prasad Ganpule for all his help. We are grateful to Tim Worfolk and Lars Svenson for their help in identification of some individuals.

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We lost our patron and a senior most birdwatcher from Gujarat Sh. Lalsinhbhai Raol on 21 July this year. A friend, philosopher and guide to many among the bird watcher fraternity of Gujarat, he had graced our society, BCSG, in the capacity of vice president and president for many years. His most important contribution to the Gujarat ornithology was a set of four books on the birds of Gujarat in his trademark, scholarly yet lucid and enjoyable Gujarati. A fatherly figure to the present generation of birdwatchers, he was loved for his humble and unassuming nature. The next issue of 'FLAMINGO Gujarat' will feature his life and work, as a tribute to this legendary birdwatcher of Gujarat.

- Editor

Short Birding Notes



Red-naped Shaheen *Falco pelegrinoides babylonicus* in Dhari, near Amreli

We went for birding to Galdhara dam, Dhari, near Amreli, on 9 December 2018 in the evening. It is a good place for seeing waterfowl, wagtails (*Motacilla* sp.), pipits (*Anthus* sp.) and birds of prey. This year, wagtails and pipits were seen in very good numbers. At around 17:00 hrs, we saw a small falcon (*Falco* sp.) perched on a rock. We initially identified it as a Peregrine Falcon (*Falco peregrinus*) of the *calidus* subspecies. It then flew away for hunting. At home, we saw our photographs and noted that this bird had pale grey-blue upperparts, rufous on crown and nape, almost unmarked underparts with faint pink wash and dark moustachial stripe. We confirmed it as a Red-naped Shaheen (*Falco pelegrinoides babylonicus*). We went there on the next day and saw it again. On 16 December 2018, we saw this bird in the evening at the same place with two other Peregrine Falcons. It was seen roosting during the daytime and at night on a telephone tower for 20 days. The Red-naped Shaheen is now quite rare in Saurashtra and this sighting from Dhari is important.

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Colour aberrant dove *Stigmatopelia* sp. in Vadodara

In November 2018, I saw and photographed a colour aberrant dove (*Stigmatopelia* sp.) in Vadodara. This individual was completely white, with pink bill and feet. The eyes were normal coloured. Since this individual was completely white, I could not identify it with certainty but it was, as per my opinion, either a Laughing Dove (*Stigmatopelia senegalensis*) or a Spotted Dove (*Stigmatopelia chinensis*) based on the longer tail and beak. As per criteria given in van Grouw (2013), the mutation in this case might be either Ino or Leucism. The identification of the correct mutation in the field is quite difficult. This individual shows how challenging it is to identify the mutation and even the species when the bird is all white and no distinguishing features are visible. [We sent the photo to Hein van Grouw, who opined that 'based on the length of the tail in comparison to the length of the primaries, I reckon it is *S. senegalensis*, but from the photo, we cannot be sure. Regarding the mutation, he said 'I reckon it is Leucism, and totally white *senegalensis* due to leucism are known in captivity. Also, if it was Ino, the eye colour would have been lighter in *senegalensis*. If the bird is *S. chinensis* and Ino, then the eye colour would have been totally different from that of the bird photographed, and so, a Leucistic *senegalensis* is the most likely identification'. We thank Hein van Grouw for all his help – Eds]

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Colour aberrant White-eared Bulbul *Pycnonotus leucotis* near Nal Sarovar

On 28 December 2018, I was birding around Aniyari village near Nal Sarovar Bird Sanctuary. At about 09:30 hrs, I saw a very unusual looking, white bird, in the bushes from a distance. As I got closer and took a few images, I realised that it was an aberrant coloured White-eared Bulbul (*Pycnonotus leucotis*). The identification was confirmed by its more bulky body, short crest, stouter bill and importantly, the prominent yellow vent was visible. This individual was seen moving around and foraging in a small group with three other White-eared Bulguls. I also happened to see this bird again in the mid-January 2019 and again in early February 2019 at the same place. It was probably a resident in that area. I could not identify the correct mutation. [We sent the photos to Hein van Grouw, who opined that 'the bird clearly has pure white feathers next to completely normal coloured feathers! This bird is, in my opinion, a typical case of Progressive Greying. It may be inheritable Leucism, but certainly not Dilution. Progressive greying, however, is the most likely cause of this bird's aberrant white feathers'. We thank Hein van Grouw for helping with the identification of the correct mutation – Eds]

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Winter sighting of Grey-bellied Cuckoo *Cacomantis passerinus* at Khijadiya, near Jamnagar

On 8 February 2019, we were birding at Khijadiya Bird Sanctuary, near Jamnagar, early in the morning. We saw two species of cuckoos; a Eurasian Cuckoo (*Cuculus canorus*) and the other was a different cuckoo. We took a few photographs and it was identified as a male Grey-bellied Cuckoo (*Cacomantis passerinus*) with grey underparts, darkish upperparts and white vent and undertail-coverts. The Grey-bellied Cuckoo is mainly a monsoon visitor to the well forested areas of Saurashtra and it was surprising to see it in the winter in this area. Bagda *et al.* (2015) show records of this species from Gir National Park and surrounding areas and a winter record from Positra, near Dwarka, in January 2014, is mentioned. This record from Khijadiya in the winter is interesting and suggests that the species may wander to suitable habitats in Saurashtra in the non-breeding season.

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Streaked Weaver *Ploceus manyar* in Gosabara, near Porbandar

I visited Gosabara wetland, also known as Mokarsagar, with Manoj Finava, Ashwin Trivedi and Prasad Ganpule on 29 December 2018. In the evening at around 17:30 hrs, we saw and photographed 3-4 Streaked Weavers (*Ploceus manyar*) in the reeds near one of the ponds. The birds were identified by their heavily streaked breast and flanks, and were in non-breeding plumage, with a yellow supercilium and blackish streaked head. For Gujarat, the Streaked Weaver is known to be resident in Kachchh and northern Gujarat only (Ganpule 2016). There are no records known from Saurashtra. However, Dhaval Vargiya, who has extensively birded in this area, informed that he had seen the Streaked Weaver earlier in this area but could not photograph it. This sighting of the Streaked Weaver near Porbandar is interesting and it is possible that this species is overlooked and could be occurring in other parts of the state.

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Further sightings of Slaty-legged Crake *Rallina eurizonoides* in Dadra & Nagar Haveli

A first sighting of the Slaty-legged Crake (*Rallina eurizonoides*) from the forest near Madhuban dam, Dadra & Nagar Haveli, was reported in August 2017, when an adult with a juvenile were seen and photographed (Mishra 2017). This was the first sighting of the species for Gujarat. A second sighting was in December 2017, when a juvenile Slaty-legged Crake was observed again in a different area of the Madhuban dam forest. Further observations in the monsoon season of 2018 confirmed that the Slaty-legged Crake was seen regularly and breeding in this area. Hence, this species is probably resident here in Dadra & Nagar Haveli and is highly active in the breeding season.

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Little Crake *Porzana parva* in Kheda District

In the month of December 2018, we were on a visit to Limbasi, in Dist: Kheda. At around 17:00 hrs in the evening, there was a continuous call of a Water Rail (*Rallus aquaticus*) from the road-side reeds. Hence, we stopped to try and photograph it. We waited for an hour but did not see the bird. We saw some movement in the reeds at around 18:00 hrs, almost at sunset. To our surprise, we saw an adult male Little Crake (*Porzana parva*), walking on the edge of the water and feeding. The bird was very bold and it kept on walking towards us, without any hesitation. We could take good photographs and confirmed the identification by the red base to bill and the longer primary projection. The Little Crake is thought to be a vagrant to Gujarat but there have been recent records from Jamnagar, Nal Sarovar and also near Kheda (photos on the 'Oriental Bird Images' website). Thus, this is another sighting of the Little Crake from Gujarat.

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Indian Grey Hornbill *Ocyrceros birostris* at Sundarvan, Ahmedabad

On 2 May 2019, a Thursday, at around 10:00 hrs, I was doing routine bird watching at Sundarvan Nature Discovery Centre, Satellite Road within Ahmedabad city, when a pair of Indian Grey Hornbill (*Ocyrceros birostris*) was seen on a *gunda* tree (*Cordia dichotoma*). I took some photographs of the pair perched in the tree. This was a rare sighting here at Sundarvan as well as in Ahmedabad. Earlier, it was recorded by Bhavik Bhatt on 18 April 2019 in Sundarvan (*pers. comm.*). The species was last recorded in 2008 in this area. The sighting of a pair in Sundarvan is encouraging and indicates that it could breed here.

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Steppe Buzzard *Buteo buteo vulpinus* in Vadodara

On 10 December 2017, at around 10.30 hrs while returning from birding, I saw a medium-sized bird of prey perched on a dead tree in a common plot situated in Gotri area, in the middle of Vadodara. First, I assumed it to be a Long-legged Buzzard (*Buteo rufinus*). I took a few photographs before it flew away due to the disturbance caused by heavy traffic. After coming back, I shared the photos with other senior birdwatchers and it was identified as a Steppe Buzzard (*Buteo buteo vulpinus*). The Steppe Buzzard is a winter visitor to Gujarat, with records from Greater and Little Rann of Kachchh, Saurashtra and isolated records are known from other parts of the state (Ganpule 2016). This is the first time I had seen it in the middle of a large city like Vadodara.

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Hybrid Yellow Wagtail *Motacilla flava* in Jamnagar

It was on 1 April 2018 in the morning, when I started for INS Valsura Salt Pans, near Jamnagar, to look at waders in breeding plumage in the coastal parts of Jamnagar. As I was driving my car slowly in the area, a bright olive-yellow coloured bird perched on a branch of small Acacia drew my attention. It was a Yellow Wagtail (*Motacilla flava*) in breeding plumage, but with a yellow supercilium behind the eye on its dark black head. I had seen the subspecies *feldegg* in Jamnagar earlier, which has a complete black head. So I researched this and it was interesting to find out that it could be 'xanthophrys' morph bird; a rare hybrid between *feldegg* and *lutea*. However, such birds usually have a supercilium in front of eye also but here, the supercilium was seen only behind the eye. The various subspecies of Yellow Wagtails hybridize fairly regularly and this individual seemed to be a result of such hybridization. Detailed DNA study is required to identify such individuals as this did not fit a 'xanthophrys' due to the incomplete supercilium nor was it a pure *feldegg*.

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Watercock *Gallixrex cinerea* at Pariej, Kheda

On 16 July 2018, I was at Pariej Lake, Kheda, with C. B. Modhwadia. It was a cloudy evening and we were photographing a Sarus Crane (*Grus antigone*) when I heard a loud call, which was not known to me. I saw a large, blackish bird outside the reeds. I noticed its striking red crest and yellow-tipped bill and I identified it as a male Watercock (*Gallixrex cinerea*). We took some photographs and confirmed the identification but since we were quite far, we were unable to get good photos. In a few seconds, it again vanished into the reeds. We waited and kept looking for it. The Watercock came out after a few minutes. It was quite shy and flew away after a short time. Mashru (2017), in a comprehensive compilation of records of Watercock from Gujarat, lists records of the species by Uday Vora from Viroja, behind Pariej Lake, in monsoon of 2004. Though this sighting is not unexpected, the Watercock is quite uncommon in this area.

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Red-crested Pochard *Netta rufina* in Bhavnagar

On 9 December 2018, I went for birding at Akwada Lake near Bhavnagar, with my uncle, at about 07:00 hrs in the morning. There, we observed a Red-crested Pochard (*Netta rufina*). I took a few photographs and confirmed the identification. The Red-crested Pochard is now an uncommon or rare winter migrant to Saurashtra, with sightings mainly from large lakes in our region (Ganpule 2016). A recent record from Gir-Somnath District is known (Patel 2019) but I am not aware of sightings reported from Bhavnagar area recently. Senior birders confirmed that the species is now rare in Bhavnagar.

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Indian Courser *Cursorius coromandelicus* in Rajkot

While visiting Chibhada Village near Khirasara *vidi*, we saw five Indian Coursers (*Cursorius coromandelicus*) on the evening of 13 October 2018. The first author had seen the species earlier in 2002 at Khirasara *vidi*. On enquiring about previous sightings from other birdwatchers, Ashok Mashru informed that he had seen 10 birds on the evening of 28 September 1986 at Lalpari Lake and Rajdeepsinh Zala had recorded it near Christ College and at Khirasara *vidi* in August 2003. Recently, this year, Raju Karia had photographed a pair on 21 April 2019 at Chibhada pond. After that sighting, he had photographed an adult with a chick. It seems that the Indian Courser is mostly a monsoon migrant to Rajkot but the recent record by Raju Karia in the month of April, with a chick, confirms its breeding in Rajkot area.

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Cinereous Vulture *Aegypius monachus* in Chhari-Dhand, Kachchh

I was visiting Chhari-Dhand Lake, in Kachchh, with my friends Vikramsinh, Nirav and Ashish. A Cinereous Vulture (*Aegypius monachus*) was seen and photographed by us on 25 November 2018, in the dried lake. The lake had dried entirely since there was very less rainfall in the monsoon. When we saw this bird, it was seen perched beside a Steppe Eagle (*Aquila nipalensis*). We took some good photographs of this vulture. The Cinereous Vulture is a rare winter visitor to Kachchh, with only sporadic sightings in the last few years. It is now increasingly rare in our region and there have been very few sightings reported from this area.

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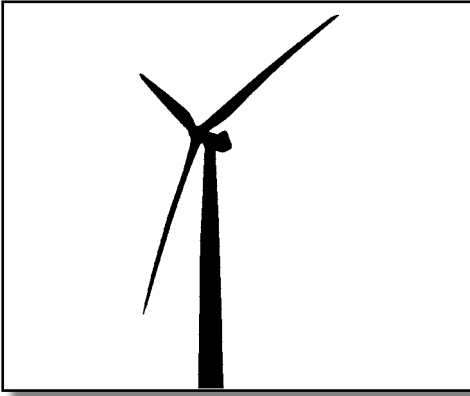
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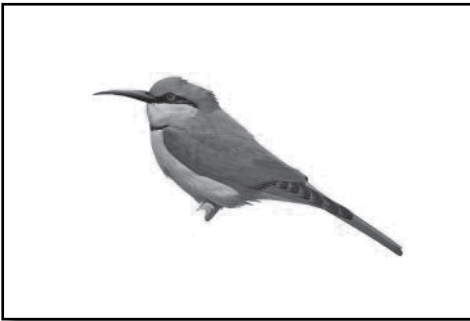
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ABSTRACTS



Avian mortalities: Study of avian mortalities due to wind farms by Kumar et al. *Current Science* 16 (9): 1587-1592

The authors carried out a study on avian mortalities at two wind farms, one of which was in Samakhiyali, Kachchh, while the other was in Karnataka. The authors collected data from Kachchh over a three year period, with surveys for bird carcasses being made at 59 selected turbines. A total of 47 bird carcasses belonging to 11 species in a period of three years were reported from Kachchh. The annual bird mortality rate for Kachchh was estimated to be 0.478 birds / turbine. Species like Pallid Scops Owl (*Otus brucei*), Indian Pitta (*Pitta brachyura*), etc. were found. Carcasses of two threatened species, Painted Stork (*Mycteria leucocephala*) and Dalmatian pelican (*Pelecanus crispus*) were also noted. The authors suggest that sites for wind farms should be carefully selected based on avifaunal importance of these sites.



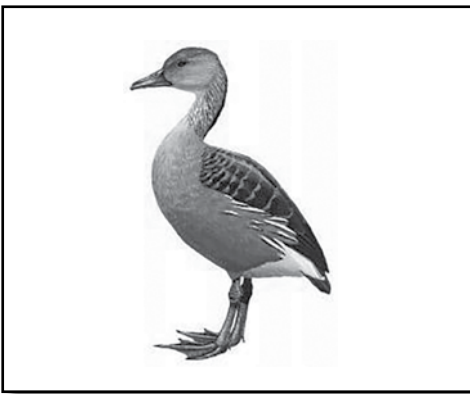
Chestnut-headed Bee-eater: Photographic record of Chestnut-headed Bee-eater from Gujarat by Rajni Trivedi. *Newsletter for Birdwatchers* 57 (3): 33

The author saw and photographed a group of Chestnut-headed Bee-eaters (*Merops leschenaulti*) from Meshwo Dam, in Dist: Sabarkantha. Two photographs are given which clearly show all the features of this species. The Chestnut-headed Bee-eater is a vagrant to Gujarat with a previous record from forests of southern Gujarat. This photographic record is important as there are no previous photographic records of the species from Gujarat. This sighting from northern Gujarat is interesting and suggests the species could be a vagrant to the state.



Bearded Vulture: Sighting of Bearded Vulture from Girnar Wildlife Sanctuary by Dipak Vadher. *Indian BIRDS* 15 (1): 24-25

The author reports a sighting of Bearded Vulture (*Gypaetus barbatus*), also known as Lammergeier, from Girnar Wildlife Sanctuary, near Junagadh in January 2019. A juvenile or immature Bearded Vulture was seen soaring near Girnar and photographed. All its diagnostic features were visible in the photographs taken by the author. It was seen soaring along with an Oriental Honey Buzzard (*Pernis ptilorhynchus*) and so a size comparison could also be made. The author discusses that this is the first confirmed record of the Bearded Vulture for Gujarat and it is an addition to the Gujarat checklist as an earlier record from the Greater Rann of Kachchh was treated as unconfirmed due to lack of photographs or other corroborative evidence.



Fulvous Whistling Duck: Sighting of Fulvous Whistling Duck in Gujarat with notes on its historical status by Naria et al. *Indian BIRDS* 15 (2): 59-60

The authors photographed a pair of Fulvous Whistling Ducks (*Dendrocygna bicolor*) near Vadodara in April 2019. The birds were seen well and all the distinguishing features noted. The authors discuss the historical records of the species from the state and noted that it had not been properly documented earlier and the Fulvous Whistling Duck was added to the Gujarat checklist based on historical records from Kachchh. However, there are no recent records of this species from Gujarat, and the authors state that this is the first photographic record of the species for western India.

□

“ Some years back I had warned against old trees getting more and more crowded and dying under the sheer accumulations of guano. It is nothing to be elated to find overcrowded heronries and clusters of vulture nests. The need of the hour is to actively ensure protection to such large trees attracting vultures, storks and the like, even if in doing so the birds foul up the neighbourhood, as large trees are being planted and raised around water bodies in the countryside where the hard-pressed birds could shift in time. The species selected for raising must be thick-boughed and dense-foliaged, like, Tamarinds, Banyans, 'Rayan' and the like.

How critical the existence of the suitable trees are, can be learnt from a group of young men in Mysore, who are valiantly struggling to ensure protection to trees resorted to Spot-billed Pelicans to nest on. Equally critical are the gigantic Bombax trees of Assam for the continued survival of the two species of Adjutant Storks - an obvious fact which needed the efforts of the young Assamese student to highlight. All such trees take time to become robust enough to support colonies and till such time, it bears repetition, the existing trees patronized by birds must be identified and protected by popular sentiments. ”

- Lavkumar Khachar

