

## Sympatric Breeding of Marshall's and Common lora in Hingolghadh, Rajkot Dist.

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**Introduction:** Marshall's lora (*Aegithina nigrolutea*) is endemic to the Indian Subcontinent. It is uncommon and patchily distributed in Gujarat, occurring in dry scrub forests of Saurashtra, Kachchh and North Gujarat. Common lora (*Aegithina tiphia*) is a polytypic species of which the race *humei* is resident in Gujarat (Ali 1955, Rasmussen & Anderton 2012). It occurs in well wooded areas all over the State with exception to Kachchh and some parts of northern Saurashtra.

**Taxonomic Status:** Common lora is polytypic with the nominate, *septentrionalis*, *humei* and *multicolor* subspecies occurring in India (Rasmussen & Anderton 2012). Marshall's lora was considered a sub-species of Common lora by Ripley (1982), Ali & Ripley (1996) and Grimmett *et al.* (1998) but it is now considered to be a full species (Wells *et al.* 2003, Grimmett *et al.* 2011, Rasmussen & Anderton 2012), with Rasmussen & Anderton (2012) noting "specific status is upheld" for Marshall's lora. Currently Marshall's lora is considered to be monotypic.

**Geographical Distribution:** Ranges of Marshall's lora and Common lora overlap greatly in Gujarat. Common lora is absent in Kachchh and in some areas of Northern Saurashtra, but occurs almost everywhere else in Gujarat. Range for Marshall's lora in Gujarat is Kachchh, Central Saurashtra and North Gujarat, in arid scrub forests, which is its preferred habitat. Marshall's lora is thought to be absent in Gir National Park area and South Gujarat with no properly documented sightings. Thus in some regions (central Saurashtra and North Gujarat), both occur together (Grimmett *et al.* 2011). Thus a large area exists wherein ranges of both overlap and hence are sympatric.



Common lora - Male

Common lora prefers well wooded areas with big trees. Since both species prefer different habitats, though being sympatric, I had never seen them together in the same area earlier. I am very familiar with both species; having done a detailed study on Marshall's lora near Morbi (Ganpule 2014) and observing Common lora many times in Gir National Park and in other well wooded areas in Saurashtra.

**Observations of Sympatric Breeding:** We (Ashvin Trivedi, Swadeepsinh Jadeja, Manoj Finava and me) visited Hingolghadh, near Rajkot, on 6 July 2014, to photograph India Pitta (*Pitta brachyura*). While in the area, we saw a male Common lora calling and singing from a small scrub tree. A female, which was present on the same tree, did not respond to the calls of the male. On closer look, we were surprised to see that it was a female Marshall's lora and it was busy searching for insects and feeding, neglecting the calls of the male Common lora. We had never seen both the species together in the same area since, as stated earlier, habitat preferences of both species are different. We observed a female Common lora nearby and then saw the male and female together in a nest on a big *Ficus spp.* tree. The nest had been completed and both the male and female Common lora were seen visiting it. However we could not determine if eggs/young were present.

We also observed the courtship display of Marshall's lora nearby. We saw a female Marshall's lora with nesting material in its beak entering a nearby scrub two-three times, which was indicative of nest building. This was less than 100mts from the nest of the Common lora. We tried to follow the bird and searched the area, but could not find its nest as the dense thorny trees hampered our approach; and we did not want to disturb the birds. However we observed that Marshall's lora was common and could see and hear at least 8 to 10 birds in the same scrub area.

On another visit to Hingolghadh on 11 July 2015, we (Ashok Mashru, Nirav Bhatt, Darshak Karia and Manoj Finava) again saw and observed both the species in the same area. However, this time we saw fledged young of Common lora. We saw the male and female Common lora with the chicks. Marshall's lora were also seen and heard in good numbers (7-8 individuals). It seems Marshall's lora is more common in Hingolghadh than Common lora. Again we tried to search for nests of Marshall's lora in the area, but could not find any nests. We saw two males singing and calling from a small tree, trying to attract a female which was present nearby. Nest building or individuals with nesting material were not seen. It seems that the breeding of Common lora is earlier than Marshall's lora. This apparent

## Sympatric breeding...

difference in breeding timings is intriguing and needs further study.

**Discussion:** Though direct evidence of breeding of both species in the same area was not found, it is more than apparent that both Common lora and Marshall's lora do breed in the same area, perhaps within a distance of less than 100mts between the nests. Hence it can be said that Common lora and Marshall's lora breed sympatrically in Hingolghadh. Direct contact between both species was observed too. It is not known if both were present in this area earlier. Shivraj Kumar (1962) does not mention Common lora while writing about ringing recoveries, while Khachar (1998, 2002) writes about Marshall's lora at Hingolghadh, but does not give details about the occurrence of Common lora. However, both the species have been described as resident at Hingolghadh (Naik *et al.* 1990). Marshall's lora has been described as uncommon in Saurashtra by Dharmakumarsinhji (1955). It seems because of difficulty in differentiating the two species people might have avoided mentioning about Common lora at Hingolghadh as Marshall's lora is common in semi-arid areas of Saurashtra.

Since both the species were seen in such a close proximity to each other, I specifically tried to observe the interaction between both the species. From the behaviour of both species, no interaction between them was observed. Both were seen on the same tree without any competition and tolerated each other's presence.

At Hingolghadh, vocal differences between Marshall's and Common lora were noted and it is the easiest way to separate them. Both species were heard calling regularly here. Plumage differences are not so clear in males of Common and Marshall's lora in breeding plumage (Ganpule 2014). However female Marshall's lora is easily separated from female Common lora based on tail colour in breeding season; female Marshall's lora has a black tail with white tips/edges, which are quite prominent, while female Common lora of the race *humei* always has a green tail without any white in it. Vocal differences remain the best and easiest way to separate the two species. In Gujarat, Ali (1955) was able to separate *nigrolutea* from *tiphia* 'at once' by ear in the field. Identification is usually easy in non-breeding plumages, when both species show characteristic differences. It seems the courtship display in both species is different (but needs further study) and songs also differ markedly.

This observation of sympatric breeding of Marshall's lora and Common lora at Hingolghadh is important and has not been reported earlier. This strengthens species status for Marshall's



Prasad Ganpule

lora. Reproductive isolation is one of the hallmarks of Biological Species Concept (BSC), and the fact that Marshall's lora and Common lora breed in close proximity without any kind of interaction is noteworthy. This is important as sympatric, reproductively isolated taxa are treated as separate species under all species concepts – BSC, Phylogenetic Species Concept and Monophyletic Species Concept (Alström & Mild 2004). Vocal differences are also very distinct and both species can be easily separated on the basis of their typical songs and calls. This alone would justify separating Marshall's lora from Common lora.

It is apparent from these observations that in areas where suitable habitat exists, both Common lora and Marshall's lora can occur together and breed sympatrically. Though predominantly a scrub-forest, Hingolghadh has areas with large trees, which fulfills the habitat requirements of both the species. Marshall's lora is more common here but the continued presence of Common lora in the area indicates that it can thrive in well wooded areas in the midst of scrub forests. The successful breeding of Common lora observed in the area confirms this. Though habitat preferences of both species are different, with Marshall's lora preferring arid scrub and Common lora well wooded areas and forests, Hingolghadh supports breeding of both the species.

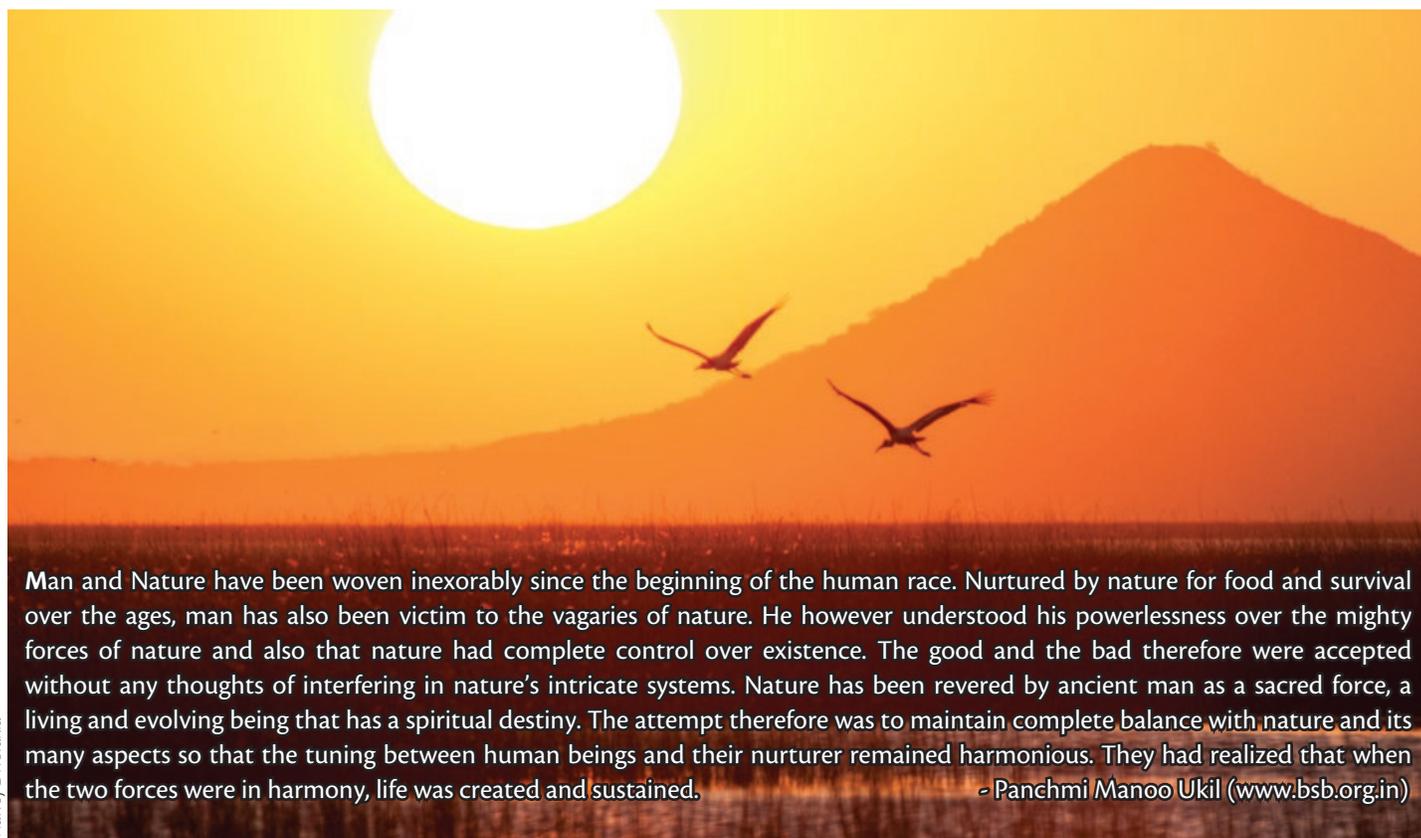
**Conclusion:** Sympatric breeding of Common lora and Marshall's lora strengthens species status for Marshall's lora. It is possible that both Marshall's lora and Common lora may be occurring in the same area in other parts of Gujarat and elsewhere in India, and birdwatchers should try and search for such areas.

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Man and Nature have been woven inexorably since the beginning of the human race. Nurtured by nature for food and survival over the ages, man has also been victim to the vagaries of nature. He however understood his powerlessness over the mighty forces of nature and also that nature had complete control over existence. The good and the bad therefore were accepted without any thoughts of interfering in nature's intricate systems. Nature has been revered by ancient man as a sacred force, a living and evolving being that has a spiritual destiny. The attempt therefore was to maintain complete balance with nature and its many aspects so that the tuning between human beings and their nurturer remained harmonious. They had realized that when the two forces were in harmony, life was created and sustained.

- Panchmi Manoo Ukil (www.bsb.org.in)