

A White-eyed Buzzard nestling with four legs: Gir National Park

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During my routine patrolling on 3 June 2015, at around 09:00 hrs in the Jamwala Range of Gir National Park, I was attracted by alarm calls of different birds. I noticed a disturbed nest, which lay scattered, with a white colored chick shivering on the ground. The chick was identified as a nestling White-eyed Buzzard (*Butastur teesa*). The chick had unusual limbs, which was noticed when taken in the hand. It had an extra limb on each leg (which was found to be non-functional), thus having four legs. The chick was rescued and brought to the Forest Department rescue center. It was fed with raw chicken and proper care was taken to help it survive. Unfortunately, it died within two days of rescue. This was the first time I had noticed a bird with four legs and it was very unusual.

[This condition wherein extra limbs are attached to the skeletal structure is known as *polymelia*. *Polymelia* is a congenital defect associated with extra limbs in humans and animals. Sometimes, twin embryos are formed and one degenerates completely except for the formation of one or more limbs, which end up being attached to the other twin. This causes extra limbs to be attached to the skeletal structure. So etiology would start from twin embryo development or genetic malformation. In this case, the extra limbs were attached to the tibia-tarsus joint. As per studies in cases of *polymelia*, the extra limb is shrunken and/or deformed, but it was not seen in this case. As per the observer, the extra legs looked normal but non-functional. The extra legs lacked a full set of toes and had different number of toes on each leg.

The reasons for *polymelia* in birds are not known and it is linked to genetics or environmental contaminants or a combination of both (Pourlis 2011). Only a few records of *polymelia* in wild birds have been recorded from different parts of world. See Pourlis (2011) for details of such cases. But *polymelia* has been recently reported in domestic chickens more commonly (Ajayi & Mailafia 2011, Abu-Seida 2013, Amatya 2015, Barua et al. 2015).

Polymelia in birds of prey is rare. *Polymelia* and *syndactyly* was reported in a Swainson's Hawk (*Buteo swainsoni*) in the USA, where two digits on the right leg and one digit on the left leg extended from the distal tibiotarsus (Rogers et al. 2016). However, the extra legs were not as developed as seen here and were just small appendages. Other reported cases of abnormalities in birds of prey; in Britain, a Peregrine Falcon (*F. peregrinus*) had a duplication of hind digit, while a male Merlin (*F.columbarius*) had two fused digits (Cooper 1984). But these were not cases of *polymelia*.

We asked a few experts about this. Todd Katzner replied that he had never seen such a case. Other birders also replied that this was very rare and very few cases of *polymelia* have been reported in wild birds.

Hans Peeters stated that he had seen only one bird with *polymelia*; an Eagle (*Aquila* sp.), which had an extra leg projecting from the tibia-tarsus joint of one leg. This was reported in a German journal many years ago. He further stated that it was possible that this nestling had other internal physical defects and so it did not survive and also, such cases of entire extra legs are very rare (Hans Peeters, in litt., email dated 16 February 2017).

Hence, this is a unique and a first reported case of bilateral *polymelia* in a White-eyed Buzzard in the wild in India.

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