

## Re-Wilding of Rescued Chinkara *Gazella bennettii* Fawns in Western Maharashtra, India

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### Abstract

During the foaling season of 2020, we rehabilitated three fawns of Indian Chinkara (*Gazella bennettii*). After a medical check and a feed, they were released in the area from which they had been collected and joined their assumed mothers in the wild. In all three cases, the fawns readily fed on a formula of cow's milk. All three rewilding sessions were documented with camera traps and the females' approach, and reunion with the fawn studied.

**Keywords:** Rehabilitation; Rewilding; Fawns; Indian Chinkara; Gazelle; *Gazella bennettii*

### Introduction

The Indian Chinkara (*Gazella bennettii*, Family Bovidae, subfamily antilopinae) is an antelope bearing ringed permanent horns with bony cores, measures about 650 mm, biomass of about 23 Kg and exhibits sexual dimorphism with males having larger horns and bigger body size [1]. The species is also known as the Deccan Chinkara (Wilson and Mittermeier 2011) and is assessed by the IUCN Red List as of Least Concern [2]. In India, the Chinkara is protected under the Wildlife Protection Act 1972, included under Schedule 1 [1]. It is also traditionally protected by some ethnic communities such as Guda Bishnoian-Khejarli in the Jodhpur District, Alai-Satheran and Rotu in Nagaur, Chohtan and Gudamalani in Barmer, Bhadariyaji in Jaisalmer, Sanchor in Jalore, and Mukam-Samrathal in Bikaner [3].

In India, this terrestrial antelope occurs from Punjab and Rajasthan eastwards through the Gangetic basin and southwards till the Deccan Plateau. Outside India, it is found in Pakistan [4] and Iran [5]. It inhabits semiarid regions, hilly areas with sparse and scrub vegetation fringed by agricultural cropland and sand dunes in western and central India in regions receiving annual rainfall of 150 - 750 mm [6]. As observed by us it feeds on fresh grass, shoots of the crop (lentils and cereals) and accessible bushes and trees, flowers, *Zizyphus* and other wild berries and can go without water for extended periods of time. Fawns are usually delivered twice a year - between March and July and September to October [1].

Similar to other ungulate species, the hiding of newly born fawns by using the prone-response, by the female is well known [7,8]. Researchers found that the prone position adopted by newly born fawns reduced considerably the chances of their discovery by predators [7]. The mothers were observed to remain at great distances from the ground-hugging fawn spent as little time as possible in their pres-

ence, lead potential predators away from the location of the fawn, in case of twins placed them in separate locations, changed the fawn’s location after each suckling, displayed high levels of vigilance when approaching the location of the fawn, and oriented their body and muzzle in the general direction of the fawn [8].

As per our observations and other reports the threats faced by the Chinkara are habitat destruction, overgrazing by livestock animals, and the fawns and sick animals face predation risks by Bonelli’s Eagle *Hieraeetus fasciatus* (pers. obs. SP), Grey Wolf *Canis lupus*, Striped Hyena *Hyaena hyaena*, Common Leopard *Panthera pardus*, Asiatic Lion *Panthera leo*, Dhole *Cuon alpinus* and stray dogs *Canis domesticus*; road traffic accidents, swallowing of plastic material, getting snared in wire fences, falling in open wells, poaching, and poisoning due to ingestion of pesticides and insecticides used in cropland are other risks [3,6,9,10].

We report three instances of rescue and re-wilding of Chinkara or Indian Gazelle fawns in Pune district, Maharashtra, India, during spring 2020 (Figure 1). In all three instances, fawns were first brought to the Ela Transit Treatment Center (ETTC) of Ela Foundation and Maharashtra Forest Department by the villagers. ETTC is located at Pingori village in Purandar taluka (an administrative unit of a district). All fawns were treated in a similar manner, checked for physical fitness and injuries, and bottle-fed with boiled cow’s milk that was 50% diluted with water, and with multi-vitamin and calcium drops (Figure 2). We aged, sexed and collected biometric data from each of the fawns (Table 1).

Date	Estimated age	Biomass (g)	Snout to rump (mm)	Tail (mm)	Snout (mm)	Abdominal circumference (mm)	Ear (mm)	Hind hoof (mm)	Forelimb fingers (mm)
17-04-20	3/4 days	1980	510	110	50	290	80	40	60
27-07-20	1-2 hrs	1380	460	90	35	240	50	20	40
02-08-20	3/4 days	1944	460	90	40	300	80	44	40

**Table 1:** Biometrics of three fawns of Indian Chinkara (*Gazella bennettii*) rescued and re-wilded.



**Figure 1:** A rescued Indian chinkara fawn at the transit treatment center of ELA foundation.



**Figure 2:** Indian chinkara fawn feeding from a bottle.

## Case Reports

### Case 1

On 17<sup>th</sup> April 2020 at 1800 hrs a Chinkara fawn was found sitting on the ground at Jadhavwasti, Kolvihire village, Pune district. The habitat is a mosaic of scrubland and agricultural cropland which is located in the ecotone of two bio-geographic zones of India, the Deccan plateau and the Western Ghat Mountains. The parents were chased by stray dogs that distracted the chasing dogs away from the fawn. The fawn was found by a vigilant farmer and brought to ETTC. On examination, the Chinkara fawn did not show any external injury and was alert. The 3 or 4 days old, female fawn was isolated and kept alone in a room and Reconyx trap camera was deployed to study and document the behavior of the fawn. Analysis of the pictures showed that the fawn was capable of standing on four legs and could walk well when alone. We, therefore, interpreted that lying still is a strategy adopted by the fawn when confronted with threat. This immobility especially when the fawn is in wild habitat amidst boulders and grass, which are found in the natural habitat of the Chinkaras, offers them considerable camouflage.

The fawn readily bottle-fed on the formula and slept most of the time (Figure 3). We decided to replace the fawn in the same place it was found on the previous day, at 1400 hrs. On replacement, the fawn immediately uttered several calls/bleats. The calls were similar to those of a sheep (*uonnnk, unnk*). A camera trap was deployed to monitor further events. As soon as we moved away from the location,

the fawn stood up and continued calling. At 1600 hrs we saw an adult female Chinkara approach the fawn. The fawn ran towards who we assume to be the mother Chinkara that stood about 50 m from the release site. The fawn was color marked and was not observed again.



**Figure 3:** An Indian chinkara fawn asleep after feeding.

## Case 2

On 27<sup>th</sup> July 2020, at 1330 hrs, a shepherd grazing his sheep noticed that his dogs suddenly started barking and chasing two adult Chinkaras. This occurred at Kawadewadi, Pingori village, Purandar taluka. The habitat is a hilly region by the side of a winding road. The dogs chased the Chinkara adults that galloped uphill at considerable speed. He noticed an unusually shaped object between some boulders. Upon close examination he found a Chinkara fawn sitting motionlessly on the ground. He mistook it to be lame and it was brought to ETTC. When kept alone the fawn struggled and could stand up on four legs. It was alert and did not show any external injury. The umbilical cord stump was freshly severed and healthy and the gender was male. We estimated that it was a newborn that was delivered an hour or so ago. The coat was dry and was licked clean, supposedly, by the mother Chinkara. It suckled readily on the milk supplement and in three hours drank a total of 35 ml of milk at one-hour intervals. The fawn slept between each feeding.

We decided to replace the fawn at the same place on the same evening after the shepherds came back from the mountains along with their sheep and dogs. The fawn was wrapped in a cloth and on reaching the spot of rescue we saw a total of seven Chinkaras in the vicinity. The herd included two males, two females, and three one-year-old fawns. We replaced the rescued fawn marked on the nape with blue color, at the same place at 1800 hrs, and deployed a Bushnell camera trap to monitor developments. We heard and recorded the calls of the fawn which can be transliterated as *uonnnk, unnk, uonnk*. We saw that an adult female Chinkara had noticed the fawn, became restless, and slowly started approached the fawn while widely circling around it, but kept a distance of about 3 - 10 meters from it. We decided to leave the area and recheck the camera trap in the morning. On 28<sup>th</sup> July at 0600 hrs the fawn was not present at the re-wilding site and scrutiny of the camera trap images showed that the adult female came up to about 3 m from the fawn, who stood up and approached the mother at 2103 hrs. The fawn was not observed again.



**Case 3**

On 2<sup>nd</sup> August 2020 at about 1330 hrs a Chinkara fawn was found by a farmer in a crop field with about two feet tall lentil shrubs at Kawadewadi, Pingori village, Purandar taluka. His attention was drawn by the alarm calls of Jungle Crows *Corvus macrorhynchos* and on close scrutiny, he saw that the fawn was surrounded by growling feral dogs. The fawn was sitting on the ground motionless and was grunting. The farmer brought the fawn to ETTC. We found that it was healthy and had suffered no injury and estimated it to be 3 - 4 days post-birth. The fawn was spoon-fed with the milk formula. It did not stand up in front of observers and lay motionless. If it was made to stand up, it sat down immediately the fawn was kept in isolation for a few hours and eventually stood up on its' own. At 1915 hrs we took it to the exact spot where it was found. A camera trap was deployed for monitoring. After observing from a distance we noticed a female Chinkara slowly approach the fawn. Analysis of camera trap images showed that the fawn stood up and walked away at 1930 hrs. The fawn was seen walking with the parents on 3<sup>rd</sup> August at a distance of more than 500 m from the site where it was kept.

**Discussion and Conclusion**

Similar to the behaviors described for other ungulates, the rescued Chinkara fawns feigned limping, refused to stand up, and prefer to lie on the ground in the presence of human observers. This can lead to a mistaken conclusion upon the part of the laymen that they are either paralyzed or have weak legs. The fawns are often erroneously "rescued" for this reason and are thereby inadvertently deprived of natural parental care. However, camera trap images reveal that they are able to walk normally in the absence of human observers. The fawns are kept in safe places by parents when they go for grazing [8]. We find that in cases where predation risks are perceived, temporary removal of fawns can be undertaken, the fawns fed with 50% diluted cow's milk with vitamin and calcium supplements, and subsequently rewilded at the earliest of the uninjured and healthy fawns. We have shown that if a fawn is returned to the location where it was collected within 12 hours they are readily accepted by the parents and can continue a natural lifestyle. We recommend monitoring with camera traps in order to ensure the proper rescue of the fawn by the parents. Also, this method can be a simple conservation solution for future fawns collected in the wild and brought to rehabilitation centers.

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