

Study on *Vanellus Indicus* and *Himantopus Himantopus* in Kota District (Rajasthan)

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Abstract: *Vanellus indicus* (Family: Charadriidae) and *Himantopus himantopus* (Family: Recurvirostridae) are common species belong to order Charadriiformes. *Vanellus indicus* are resident waders in India. The *Himantopus himantopus* are both a resident and a visitor in India. Kota city offers habitat diversity such as water bodies, rivers sides, wetlands and forests, suitable for the avian fauna *Vanellus indicus* of family Charadriidae and *Himantopus Himantopus* of Family Recurvirostridae. Study was focused on habitat, food preference and other activities of *Vanellus indicus* and *Himantopus himantopus* in Kota region, Kota district of Rajasthan.

Keywords: *Vanellus indicus*, *Himantopus himantopus*, Kota District

1. Introduction

Charadriiformes is one of the orders of Class Aves. Avian Fauna of this order collectively referred to as shorebirds or waders. *Vanellus indicus* (Family: Charadriidae) and *Himantopus himantopus* (Family: Recurvirostridae) are common species belonging to order Charadriiformes. The global population of *Vanellus indicus* is estimated to be about 50, 000 to 60, 000 individuals. The IUCN Red List of Threatened Species classifies *Vanellus indicus* as 'Least Concern', and it is listed under Schedule IV of the Indian Wildlife Protection Act, 1972. *Vanellus indicus* are resident waders that usually inhabit areas close to water. The principal habitats of *Vanellus indicus* are grasslands, wetlands, river sides, arable lands, gardens, and open forests. *Vanellus indicus* are highly active and vocal birds that are known for their wide range of distraction displays and their characteristic defense strategies. *Himantopus himantopus* have an extremely broad breeding range, from temperate to tropical climates and from rain forests to deserts, spreading over Eurasia, Africa, Australia and the America. Most members of this family are, nomadic, moving as conditions change, with a few northern hemisphere populations migrating over short distances. The *Himantopus himantopus* are both a resident and a visitor in India. Every winter it makes its way south in small flocks and settles on the edges of marshes, lakes, rivers and tidal areas all over the Indian peninsula. In summer these flocks move northwards again, to nest in the lakes and rivers of northern India. The *Himantopus himantopus* fits perfectly into a special eco - niche, consists of reasonably clear water, rich in aquatic life, ranging in depth from four to twelve inches. Kota city offers habitat diversity such as water bodies, rivers and wetlands suitable for these avian faunae. The presence of natural resources such as food and water make Kota city a preferred habitat for bird species. Thus, the study was conducted to provide preliminary information regarding the habitat preference, food and activity patterns of *Vanellus indicus* and *Himantopus himantopus*.

2. Material and Methods

Site and location of the study: The study area is located in the Kota district, which lies along the Chambal River. Study was carried out in Kota region, Kota district of Rajasthan. Kota is located at 23°45' to 28°33' N longitude and 75°9' to 77 26' E

latitude at an elevation of 271 meters in the state Rajasthan. Kota region is fertile owing to the presence of the Chambal River. This region has rich black soil and favors cultivation of crops. The field survey was carried out in different areas of Kota district from August 2024 to January 2025. Observations were carried out using binoculars at a distance.

Taxonomic position of *Vanellus indicus*

Class - Aves

Order - Charadriiformes

Family - Charadriidae

Genus - *Vanellus*

Species - *V. indicus*

- 1) *Vanellus indicus* are resident waders in India. They are ground birds, incapable of perching. Wide range of areas close to water, open areas, along shorelines of water bodies, flooded areas, agricultural fields, dry land, open grasslands, wetlands and open fields were found to be preferred habitat of *Vanellus indicus*. It was observed that *Vanellus indicus* favored riversides during winter. Many species took advantage of human - altered habitats such as agricultural lands and sewage ponds.
- 2) The wings and back of *Vanellus indicus* are light brown. It has black breast and throat and a red bill with a black tip. It also sports red wattles in front of the eyes and a white patch that runs down the cheeks to the underparts. In flight, the black flight feathers that contrast with the white wing patch can be noted.
- 3) These birds are found to be mainly insectivorous, but also observed to feed on molluscs and fishes, snails and other invertebrates, mostly picked from the ground. It was noticed that they feed during the day and also feed at night.
- 4) It was observed that locomotion is an important activity for *Vanellus indicus* that helps them to move from one place to another in search of food, water, shelter, nesting sites, and even as defense to move away from potential threats. They were found to make use of the legs to disturb insect prey from soft soil. *Vanellus indicus* were noticed to run a short distance and pick up food from the ground. Flight was slow, with deliberate flaps, but the birds were observed to be capable of showing remarkable agility when defending their nest. *Vanellus indicus* noticed to rest on the ground usually with the *tarsi* laid

flat on the ground but sometimes they may rest on one leg.

- 5) *Vanellus indicus* were found to be vigilant during both day and night. This bird is known for its characteristically loud alarm call. During the study the active and vigilant nature of *Vanellus indicus* was observed. The percentage of vigilance was to be higher during the breeding season than during non - breeding season. This could be due to the ground feeding as well as ground - nesting nature of the bird.

Taxonomic position of *Himantopus himantopus*

Class - Aves

Order - Charadriiformes

Family - Recurvirostridae

Genus - *Himantopus*

Species - *H. Himantopus*

- 1) Direct observation of *Himantopus himantopus* was conducted by walking around the river side and wetlands. Binoculars were used. Regular field observations were carried out in the study area. It was observed that the preferred Habitat of *Himantopus himantopus* was shallow lakes, wet lands, ponds and riversides ranging in depth from four to twelve inches; along with other waders.
- 2) The birds are black above and white below, with a white head and neck. Male of *Himantopus himantopus* has jet - black mantle and pointed wings; rest of plumage glossy white. Female of *Himantopus himantopus* is dark brown where male is black. Very long, pink - red legs diagnostic almost ten inches long, extends much beyond tail. legs enable it to enter relatively deep water.
- 3) It was observed that *Himantopus himantopus* feeds mainly on insects and crustaceans found near river side and water bodies. In areas where the current was sluggish *Himantopus himantopus* were found to feed on molluscs, worms, insects, seeds and certain plants. It was noticed that these birds picked up their food from sand or water. Their bill was found to be ideal for jabbing and pecking at food in the water.
- 4) During the warmer hours of the day *Himantopus himantopus* was observed to settle briefly in shallow water to take rest while still remaining alert to detect any form of approaching danger. Any unusual sound, or the flutter of wings was enough to alarm the birds.

3. Observation Table:

S no.	Year	Month	Time
1.	2024	August 2024 to September 2024	11.00 AM to 3.00 PM
2.	2024	October 2024 to November 2024	11.00 AM to 3.00 PM
3.	2024- 2025	December 2024 to January 2025	11.00 AM to 3.00 PM



Figure 1: *Himantopus himantopus*

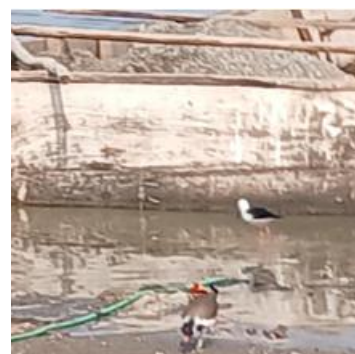


Figure 2: River side habitat



Figure 3: *Vanellus indicus*



Figure 4: Dry land habitat

4. Result and Discussion

The study suggested that Kota city throughout all seasons is a favored spot for *Vanellus indicus*. It was observed that *Vanellus indicus* usually prefer open areas near water resources. The wetlands were the most preferred sites during all seasons. The most preferred site of *Vanellus indicus* during winter was also shallow wetlands and rived sides, this is due to decreased water level. The wetland serves as feeding as well as social interactions grounds for the birds. During the

study, it was observed that lapwings were vigilant during both breeding and non - breeding seasons during different periods from morning to evening. The availability of wide - ranging habitats, abundant supply of food and water, and highly active defense techniques of *Vanellus indicus* have helped these birds to adapt to the growing anthropogenic presence. These birds were found to be highly vigilant and vocal and display a broad range of activity patterns including feeding, locomotion, defense and resting which supports their survival. The occurrence of the highest number of *Vanellus indicus* was observed in August and the lowest number in January.

Preferred Habitat of *Himantopus himantopus* was found near ponds, riversides and wetlands, often along with the other waders like *Vanellus indicus* due to the presence of ample food and water resources and lower level of disturbance. *Vanellus indicus* and *Himantopus himantopus* were observed to move among human without fear but with vigilance of risk factors. The presence of these birds in riverside sites among boats and human, confirm that these birds have adapted very well to anthropogenic pressures. Measures may be taken to conserve and protect habitats of *Vanellus indicus* and *Himantopus himantopus*.

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