

Janki Devi Bajaj Government Girls College Kota,
Rajasthan

Bird Identification



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INTRODUCTION

Bird is a very beautiful animal. The birds are included in phylum chordate and class Aves.

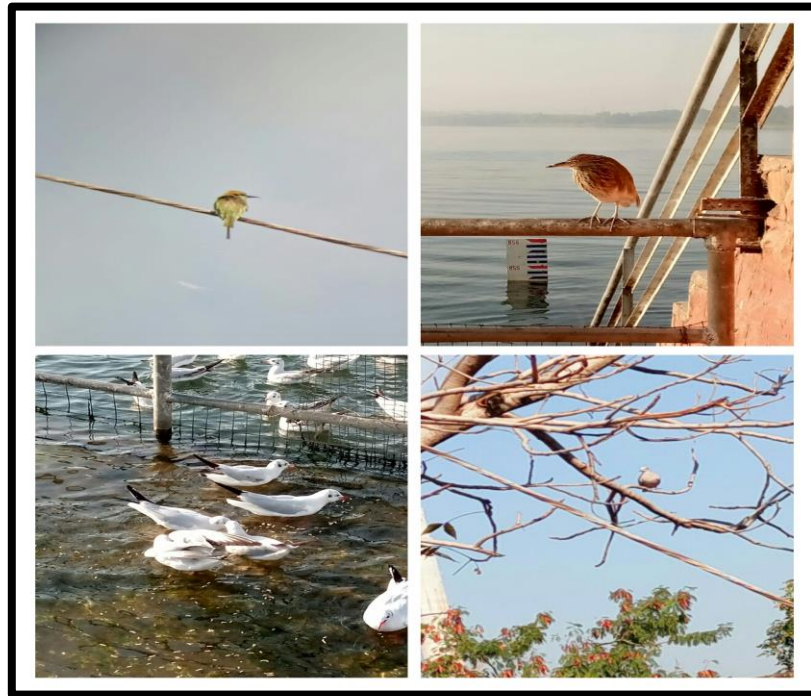
Birds always help us to connect with nature so it is very interesting to watch them and identify them.

Birds commonly found on the trees, in their nest, on river and some time on land.

Bird watching the observation of live bird in their natural habitat, a popular pastime and scientific sport that developed almost entirely in the 20th century.

By attract us by their voice, plumage pattern, colour and we used the both of things in this.

We can watch and identify the birds by the naked eye and binocular and we used the both of things in this.



Bird do many activities that attract us like breeding, nesting, feeding, flying, dancing and incubation too.

Objectives

To identify the birds on the basis of their plumage and appearance at Kishor Sagar Talab, Chambal Garden, Kota Beraj, Sursan Talab, Abhera Mahal, Jawahar Nagar, C.V. Garden, Bhitriya Kunda (Kota), Naval Sagar (Bundi).

Methodology

- Direct observation will be done during the early hours in morning and evening.

Bird identification books, Meter tape, GPS, Binocular, Camera with zoom lens, Telescope etc. will be used during the entire work.

Bird watching site

Kishor Sagar Talab, Chambal Garden, Kota Beraj, Sursan Talab, Abhera Mahal, Jwahar Nagar, C.V. Garden, Bhatriya Kunda (Kota), Naval Sagar(Bundi).

In this bird file we are going to show you the different kinds of bird that commonly found in our Rajasthan and our nearest area. The 30 identified birds are as follows:

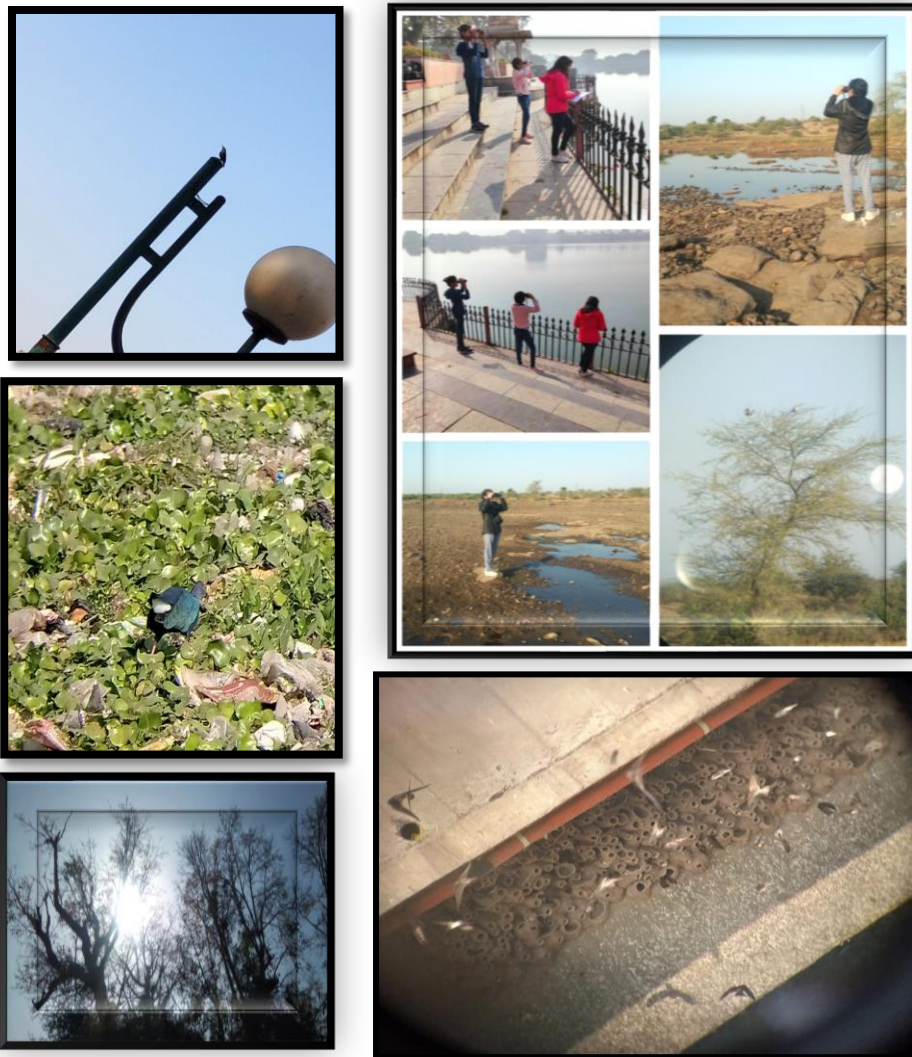


Plate 1



Sterna aurantia

RIVER TERN

ZOOLOGICAL NAME- *Sterna aurantia*

DISTRIBUTION - The river tern are distributed in **Pakistan, India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Cambodia, Laos, Vietnam and China**. Vagrant birds have been observed in Iran and Afghanistan.

HABIT AND HABITAT- This species is uncommon. **It inhabits inland wetlands and freshwater bodies (up to 600m) of India, Myanmar, Bangladesh, Bhutan, Cambodia, and Thailand**. It mainly forages on fish, crustaceans, and insects (Bird Life International 2016)

COMMENTS -The **Indian river tern** or just **river tern** (*Sterna aurantia*) is a tern in the family Laridae. It is a resident breeder along inland rivers from Iran east into the Indian Subcontinent and further to Myanmar to Thailand, where it is uncommon. Unlike most *Sterna* terns, it is almost exclusively found on freshwater, rarely venturing even to tidal creeks.

This species breeds from March to May in colonies in less accessible areas such as sandbanks in rivers. It nests in a ground scrape, often on bare rock or sand, and lays three greenish-grey to buff eggs, which are blotched and streaked with brown.

This is a medium-sized tern, 38–43 cm long with dark grey upperparts, white underparts, a forked tail with long flexible streamers, and long pointed wings. The bill is yellow and the legs red. It has a black cap in breeding plumage. In the winter the cap is greyish white, flecked and streaked with black, there is a dark mask through the eye, and the tip of the bill become dusky

The sexes are similar but juveniles have a brown head, brown-marked grey upperparts, grey breast sides and white underparts. The bill is yellowish with a dark tip

As with other *Sterna* terns, the river tern feeds by plunge-diving for fish, crustaceans, tadpoles and aquatic insects in rivers, lakes, and tanks. Its numbers are decreasing due to the pollution of their habitat.



Nest of *Sterna aurantia*

Plate 2



Dicrurus caerulescens

WHITE BELLIED DRONGO

ZOOLOGICAL NAME- *Dicrurus caerulescens*

Distribution- The white-bellied drongo is a resident breeder in India and Sri Lanka. This species is usually found in dry scrub or open forests. The distribution is restricted to **peninsular India south of the Himalayas and to the west of the Gangetic delta bounded on the west by the Aravallis.**

□ HABIT AND HABITAT- Generally, inhabits well-wooded deciduous tracts, bamboos, light forests, hill and plain, and avoids cultivation and treeless country as well as heavy evergreen forest. These birds are particularly found in bamboo and thin tree jungles, and is usually to be met with about shady paths and small clearings in this. Diet is mainly insectivorous, but it may invariably be seen probing into the blossoms of the Silk Cotton, Flame of the Forest and Coral trees for the sugary nectar they exude. They perch upright close to the tops of trees and capture insects in the air with short aerobatic sallies. Larger insects may be captured using their claws.

COMMENT- The **white-bellied drongo** (*Dicrurus caerulescens*) is a species of drongo found across the Indian Subcontinent. Like other members of the family Dicruridae, they are insectivorous and mainly black in colour, but with a white belly and vent. Young birds are, however, all black and may be confused with the black drongo, which is smaller and more compact in appearance. The subspecies found in Sri Lanka has white restricted to the vent.

This drongo is black without any glossy feathers on the upperside and greyish on the throat and breast, while the belly and vent are entirely white in the Indian form which is the nominate subspecies. The fork of the tail is less deep than in the black drongo which is often seen in the same habitats. Young black drongo's can have a lot of white on the underside but it is usually scaly in appearance. The Sri Lankan forms *insularis* of the northern dry zone and *leucopygialis* of the southern wet zone have the white restricted to the vent. Birds that are less than a year old lack the white on the underside but are browner above and greyish below. Males have a very slightly shorter tail on average than females.

The size of the birds varies clinally with northern birds larger. The extent of white on the underside also declines with size although there is a lot of local variation. The Sri Lankan forms *leucopygialis* and *insularis* are darker than the Indian form and there is some intergradation within the Sri Lankan forms. The species is believed to be closely related to *Dicrurus leucophaeus*, but has not been confirmed with molecular sequence studies.

Both the white-bellied drongo and the black drongo share a diploid chromosome number of 68.

Plate 3



Dicrurus macrocercus



Nest of *Dicrurus macrocercus*

BLACK DRANGO

ZOOLOGICAL NAME- *Dicrurus macrocercus*

DISTRIBUTION- The black drongo (*Dicrurus macrocercus*) belongs to the family of drongos, the Dicruridae. The black drongo species is distributed in **Afghanistan, Indian subcontinent, southeast Asia, China and Taiwan**. These drongo species are aggressive and fearless birds.

HABIT AND HABITAT- The black drongo is found predominantly in open country and usually perches and hunts close to the ground. They are mostly aerial predators of insects but also glean from the ground or off vegetation. They are found as summer visitors to northeastern Afghanistan and northern Pakistan but are residents from the Indus Valley until Bangladesh and into India and Sri Lanka. Some populations show seasonal movements that are poorly understood while populations in Korea are known to be migratory. The black drongo can be found in savanna, fields, and urban habitat.

COMMENT- Black drongo is a beautiful Indian bird. It is a wholly black bird with a distinctive forked tail. Size of black drongo is between 22 cm to 30 cm including the tail. The Weight of adult is between 40 g. to 80 g.

Black drongo has glossy blue-black or green-black plumage, with semi-translucent primaries visible in flight. Adults usually have a small white spot at the base of the gape and the iris is dark brown in color. The tail is long and deeply forked, and curves out at the end of outer tail feathers. Head is black, with only very small white patch at bill's commissures. Bill is black. Eyes are reddish. Legs and feet are dark grey.



Milvus migrans

BLACK KITE

ZOOLOGICAL NAME- *Milvus migrans*

DISTRIBUTION- The black kite is widely distributed **through the temperate and tropical parts of Eurasia and parts of Australasia and Oceania**, with the temperate region populations tending to be migratory.

HABIT AND HABITAT- Black kites are commonly found **along river edges**, which provide necessary resources such as fresh water and fish. Wetlands are another habitat that attracts black kites. Black kites also occur in woodlands, open savannas, and sometimes even in large cities.

COMMENT- Black kites can be distinguished from red kites by the slightly smaller size, less forked tail (visible in flight), and generally dark plumage without any rufous. The sexes are alike though the male is a little smaller and less aggressive (this is the case in most birds of prey). The upper plumage is brown but the head and neck tend to be paler. The patch behind the eye appears darker. The outer flight feathers are black and the feathers have dark cross bars and are mottled at the base. The lower parts of the body are pale brown, becoming lighter towards the chin. The body feathers have dark shafts giving it a streaked appearance. The cere and gape are yellow, but the bill is black (unlike that of the yellow-billed kite). The legs are yellow and the claws are black. They have a distinctive shrill whistle followed by a rapid whinnying call. Males and females have the same plumage but females are longer than male and have a little larger wingspan. Their wingspan is around 150 cm.

The breeding season of the black kite in India begins in winter (mainly January and February), the young birds fledging before the monsoons. The nest is a rough platform of twigs and sticks placed in a tree. Nest sites may be reused in subsequent years. European birds breed in summer. Birds in the Italian Alps tended to build their nest close to water in steep cliffs or tall trees. Nest orientation may be related to wind and rainfall. The nests may sometimes be decorated with bright materials such as white plastic and a study in Spain suggests that they may have a role in signalling to keep away other kites.

Plate-5



Psittacula krameri

Rose-ringed parakeet

ZOOLOGICAL NAME - *Psittacula krameri*

DISTRIBUTION- Boreal rose-ringed parakeet (*P. k. borealis*) is distributed in **Bangladesh, Pakistan, northern India and Nepal to central Burma**; introduced populations are found worldwide.

HABIT AND HABITAT- Rose-ringed Parakeet is common in **cultivated areas, urban parks and gardens, open countryside with trees, palm-trees thickets, dry and open forest**. It also may be found in semi-desert areas and second grow open jungles, mainly in lowlands.

COMMENT- The local name of Rose ringed Parakeet is parrot / tota. Size of Rose ringed Parakeet is between 35 cm to 45 cm including the tail. The Weight of adult is between 110 g. to 140 g. Rose-ringed Parakeet has yellow-green plumage, long, graduated tail and broad, rounded and hooked pinkish-red bill. The face, abdomen and under wing-coverts are yellowish-green. The nape and the back of the head is variably washed with blue. There is a broad chin / cheek-stripe and a black narrow line from cere to eye.

General green/yellow, black chin and wide black stripe across lower cheeks, pink collar around hind neck, nape of neck washed with blue, upper mandible dark red tipped with black, lower mandible black with dark red at base, thighs green. Upper feathers are darker green above than below where they are mostly grey. The tail has bluish-green central rectrices, and ochraceous under tail feathers. Female has only a dull emerald-green collar and lacks blue, pink and black on the head.

Plate-6



Pavo cristatus

INDIAN PEAFOWL

ZOOLOGICAL NAME- *Pavo cristatus*

DISTRIBUTION- Indian peafowl are **widely distributed in the wild across South Asia** and protected both culturally in many areas and by law in India. Conservative estimates of the population put them at more than 100,000.

HABIT AND HABITAT- **The Indian peafowl is a resident breeder across the Indian subcontinent and inhabits the drier lowland areas of Sri Lanka.** In the Indian subcontinent, it is found mainly below an elevation of 1,800 m (5,900 ft) and in rare cases seen at about 2,000 m (6,600 ft).

COMMENT - The **Indian peafowl** (*Pavo cristatus*), also known as the **common peafowl**, and **blue peafowl**, is a peafowl species native to the Indian subcontinent. It has been introduced to many other countries.

Indian peafowl display a marked form of sexual dimorphism. The peacock is brightly coloured, with a predominantly blue fan-like crest of spatula-tipped wire-like feathers and is best known for the long train made up of elongated upper-tail covert feathers which bear colourful eyespots. These stiff feathers are raised into a fan and quivered in a display during courtship. Despite the length and size of these covert feathers, peacocks are still capable of flight. Peahens lack the train, have

a white face and iridescent green lower neck, and dull brown plumage. The Indian peafowl lives mainly on the ground in open forest or on land under cultivation where they forage for berries, grains but also prey on snakes, lizards, and small rodents. Their loud calls make them easy to detect, and in forest areas often indicate the presence of a predator such as a tiger. They forage on the ground in small groups and usually try to escape on foot through undergrowth and avoid flying, though they fly into tall trees to roost.

Plate-7



Ardea alba

GREAT EGRET

ZOOLOGICAL NAME - *Ardea alba*

DISTRIBUTION - The great egret is generally a very successful species with a large and expanding range, occurring worldwide in temperate and tropical habitats. It is ubiquitous across the Sun Belt of the United States and in the Neotropics.

HABIT AND HABITAT - Great Egrets live in freshwater, brackish, and marine wetlands. During the breeding season they live in colonies in trees or shrubs with other waterbirds, ranging across the southeastern states and in scattered spots throughout the rest of the U.S. and southern Canada. The colonies are located on lakes, ponds, marshes, estuaries, impoundments, and islands. Great Egrets use similar habitats for migration stopover sites and wintering grounds. They hunt in marshes, swamps, streams, rivers, ponds, lakes, impoundments, lagoons, tidal flats, canals, ditches, fish-rearing ponds, flooded farm fields, and sometimes upland habitats.

COMMENT- The **great egret** (*Ardea alba*), also known as the **common egret**, **large egret**, or (in the Old World) **great white egret** or **great white heron** is a large, widely distributed egret, with four subspecies found in Asia, Africa, the Americas, and southern Europe, recently also spreading to more northern areas of Europe. Distributed across most of the tropical and warmer temperate regions of the world, it builds tree nests in colonies close to water.

The great egret is a large heron with all-white plumage. Standing up to 1 m (3.3 ft) tall, this species can measure 80 to 104 cm (31 to 41 in) in length and have a wingspan of 131 to 170 cm (52 to 67 in). Body mass can range from 700 to 1,500 g (1.5 to 3.3 lb), with an average around 1,000 g (2.2 lb). It is thus only slightly smaller than the great blue or grey heron (*A. cinerea*). Apart from size, the great egret can be distinguished from other white egrets by its yellow bill and black legs and feet, though the bill may become darker and the lower legs lighter in the breeding season. In breeding plumage, delicate ornamental feathers are borne on the back. Males and females are identical in appearance; juveniles look like nonbreeding adults. Differentiated from the intermediate egret (*Mesophoyx intermedius*) by the gape, which extends well beyond the back of the eye in case of the great egret, but ends just behind the eye in case of the intermediate egret.

It has a slow flight, with its neck retracted. This is characteristic of herons and bitterns, and distinguishes them from storks, cranes, ibises, and spoonbills, which extend their necks in flight. The great egret walks with its neck extended and wings held close. The great egret is not normally a vocal bird; it gives a low, hoarse croak when disturbed, and at breeding colonies, it often gives a loud croaking *cuk cuk cuk* and higher-pitched squawks.



Nest of *Ardea alba*

Plate-8



Pastor roseus

ROSY STARLING

ZOOLOGICAL NAME - *Pastor roseus*

DISTRIBUTION - The breeding range of this bird is from easternmost Europe across temperate southern Asia. It is a strong migrant, and winters in India and tropical Asia. In India in winter, it often appears to outnumber the local starlings and mynas. The rosy starling is a bird of steppe and open agricultural land.

HABIT AND HABITAT- The breeding range of this bird is in steppes, semi-deserts and deserts of Central Asia and Southeast Europe. It can be found from northwestern Mongolia via Dzungarei, Xinjiang, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan to southern Russia, Ukraine, Azerbaijan and Armenia . Its southern range extends to the north of Afghanistan and Iran . Irregular and rare broods are also observed outside of this area (Romania) It is a strong migrant, and winters in India and tropical Asia. In India in winter, it often appears to outnumber the local starlings and mynas.

COMMENT- Rosy starlings (*Pastor Roseus*) are highly gregarious birds, and often form large, noisy flocks, which can on occasion be a pest for growers of cereal crops or orchards; the birds are strongly attracted to flowering trees. However, they are also greatly beneficial to farmers because they prey on pests such as locusts and grasshoppers, thereby limiting their numbers. The birds breed in tight colonies in a very short breeding season timed to take advantage of peak abundance of grasshoppers between months of May to June. **Breeding:** The rosy starling is a colonial breeder, and like other starlings, is highly gregarious, forming large winter flocks. It also shares other species' omnivorous diet, although it prefers insects. The song is a typical starling mixture of squeaks and rattles, given with much wing trembling. In Xinjiang, China, farmers used to use insecticide to eliminate locust, which is costly and polluting. In the 1980s, experts found that rosy starlings which fly to Xinjiang farms and feed on locusts could be used for control instead. The experts begin to build artificial nests to attract rosy starlings, an effort reported to be so successful that the number of locusts was insufficient to feed the birds, causing many juveniles die for hunger. By the 2000s many Xinjiang farms greatly decreased the usage of insecticide.

Plate-9



Turdoides somervillei

Jungle Babbler

ZOOLOGICAL NAME - *Turdoides somervillei* (Sykes).

Distribution – Throughout India and Assam, in the plains and up to about 5,000 feet elevation. It avoids both heavy evergreen forest and treeless country. Five geographical races are recognised on slight differences, mainly of colouration. Replaced in Ceylon and Burma by other related species.

HABIT AND HABITAT- This Babbler inhabits outlying jungle as well as well-wooded compounds, gardens and groves of trees about towns and villages. The 'Hocks' or 'sisterhoods' spend their time hopping about on the ground, rummaging amongst the fallen leaves for insects. They habitually form the nucleus of the mixed hunting parties of insectivorous birds that move about the forests. They keep up a constant harsh chatter and squeaking, and as a rule the best of good fellowship prevails within a sisterhood. Occasionally differences of opinion arise between members, and loud and discordant wrangling ensues; bill and claw are then freely plied and feathers fly. To outside aggression however, they always present a united front and when one of the Hock has been set upon, the others will boldly attack and often put to rout the marauding hawk or cat.

COMMENT- There is no well defined season and odd birds breed irregularly throughout the year. The breeding pairs continue to remain with the flock, only detaching themselves now and again to attend to their private concerns. The nest is a loosely put together cup of twigs, roots and grass placed in the fork of some leafy mango or other tree, 8 to 10 feet from the ground. Three or four eggs comprise the clutch. They are of a beautiful turquoise blue colour. Both sexes build, incubate and tend the young. The Pied Crested and Common Hawk-Cuckoos often foist their eggs in this babbler's nest, and shed their parental responsibilities upon the dupe.

Plate-10



Corvus splendens

Common House-Crow

ZOOLOGICAL NAME - *Corvus splendens* (Vicillot).

Distribution - A resident species everywhere in the plains of India, Burma and Ceylon. Limited numbers have secured a footing even in some of our higher hill stations. Mased on slight differences, mainly in colouration, four geographical races are recognised within our area.

HABIT AND HABITAT- The House-Crow is the commonest and most familiar of Indian birds, an unflinching commensal of man and an element of his social system. His intelligence and boldness, coupled with an infinite capacity for scenting and avoiding danger carry him triumphantly through a life of sin and wrong-doing. Foodgetting is a simple matter with the crow. Nothing comes amiss to him. He will take a dead rat or kitchen refuse, pilfer from a protesting fishwife's basket, or decamp with the egg on your breakfast table. His thieving propensities, however, are in a great measure redeemed by his efficient service as scavenger. Although crows devour locusts, termites and other injurious insects, particularly when these are swarming, they also raid ripening crops such as wheat and maize and cause damage to fruit in orchards. Their status in regard to agriculture, therefore, is summed up as neutral.

COMMENT - The breeding season varies in different parts of the country. In Western India House-Crows nest between April and June, in Bengal slightly earlier, while in the heavy rain full areas of S.-W. India breeding is usually over before the onset of the South-West Monsoon in May. The nest is an untidy platform of twigs—also wire or hoop-iron when available—with a central cup-like depression lined with coir and other fibre. It is placed in the fork of a tree at any height from 10 feet up. The normal clutch is of 4-5 eggs, pale blue-green, speckled and streaked with brown.

Both sexes share in nest-building, incubation and care of the young. The Koel, one of our commonest parasitic cuckoos, habitually lays in the nest of this crow.

Plate-11



House-Sparrow

ZOOLOGICAL NAME - *Passer domesticus* (Linnaeus).

Distribution - Throughout the Indian Empire excepting Andamans, Nicobars and extreme South Tenasserim. Ordinarily up to about 7,000 feet in the Himalayas. Divided into several races over Europe, Asia and Africa. We are concerned with two, viz. the Indian race *indicus*, and the larger Kashmir and N-W. Frontier race *parkini*(—*bactrianns*.)

HABIT AND HABITAT - The House-Sparrow is a confirmed hanger-on of Man in hills and plains alike, whether in bustling, noisy city or outlying forest village. When fresh areas are colonised, the Sparrow is amongst the foremost to profit, and quick to adapt itself to the new surroundings. In spite of this, however, its complete absence in certain apparently suitable localities—as for example in the Travancore hills-- seems curious and inexplicable. In winter, House-Sparrows collect in flocks—often of considerable size to feed in the neighbourhood of cultivation. At this season, too, large numbers roost together in favourite trees or hedges, and indulge in a great deal of noise and bickering before settling down for the night. Their food consists mostly of grains and seeds gleaned on the ground, or picked out of horse -and cattle-droppings. Indeed, the presence or absence of horses at a hill-station, for example, has a marked influence on the local sparrow population. Insects and flower buds are also eaten.

COMMENT- Breeding males have, besides, a loud monotonous, and still more aggravating ' song ' Tsi, tsi, tsi or cheer, cheer, cheer, &c, uttered, sometimes for fully 10 minutes on end, as the bird fluffs out its plumage, arches its rump, droops its wings and struts about arrogantly, twitching its slightly cocked tail. Nesting Practically throughout the year. Several broods are raised in quick succession. The nest is a collection of straw and rubbish placed in a hole in wall or ceiling, niche,

gargoyle, inverted lamp shade, and in every conceivable situation within or on the outside of a tenanted building. Rarely, in some small bushy tree or creeper. The eggs—three to five—are whitish or pale greenishwhite, marked with various shades of brown. Both sexes build and tend the young, but the female alone incubates. The incubation period is 14 days.

Plate-12



Xanthoelma haemacephala

Coppersmith barbet

ZOOLOGICAL NAME - *Xanthoelma haemacephala*

Distribution - Resident throughout the greater part of the Indian Empire from about 2,500 feet in the Himalayas down. Rare in the arid portions of the N.-W., and replaced by the allied Crimson-throated species (*X. malabarica*) in the humid forest tracts of S.-W. India.

HABIT AND HABITAT - The Crimson-breasted Barbet is a common bird throughout its range. Its loud, monotonous ringing tuk tuk, etc. as of a distant coppersmith hammering on his metal, every 2 seconds or so throughout the hotter parts of the day, with no variation and seldom a pause—are amongst the more familiar bird voices of the countryside. It is found wherever there are trees—especially Banyan, Peepal and the various other J-ici—be it in outlying forest or in the heart of a noisy city. When calling the head is bobbed from side to side producing a curious ventriloquistic effect. This, combined with the assimilative colouration of the bird, makes it difficult to locate amongst the foliage. The Coppersmith is entirely arboreal and never descends to the ground. Its food consists almost exclusively of fruits and berries of which I-icus figs form an overwhelming proportion. The birds collect in large numbers to feed on trees laden with these figs, in company with mynas, bulbuls, green pigeons and a host of other frugivorous species. It

occasionally captures moths and winged termites, launching ungainly and ludicrous aerial sallies from a branch in their pursuit.

COMMENT - The season ranges between January and June and sometimes two broods are reared in succession. The eggs are laid in hollows 6 to 8 inches deep excavated by the birds in branches or decaying poles and tree stumps, at moderate heights. The tunnels are lengthened and used year after year and may in time become several feet deep. Softwood trees such as Coral and Drumstick are commonly selected. As in woodpeckers, the entrance hole—about 2 inches in diameter—is placed on the underside when a horizontal branch is used. The eggs—usually three—are glossless white, unmarked. Both sexes share in excavating the nest tunnel, incubation and feeding the young.

Plate-13



Euiynainis scolopacciis

Koel

ZOOLOGICAL NAME - *Euiynainis scolopacciis*

Distribution – Throughout the Indian Empire except the N-Y. V. Province. Two Races are recognised, viz., the smaller scolopacciis occupying India and Ceylon, the larger muhivami in which the female is more rufescent Assam and Burma. Resident, but also local migrant.

HABIT AND HABITAT - The Koel is one of our most familiar birds, its call being perhaps even better known than its appearance. It frequents gardens, groves and open country abounding in large leafy trees. It is entirely arboreal and never descends to the ground. During winter the bird is silent, but with the approach of the hot weather and its coincident breeding season, it waxes extremely vociferous. All through that season its loud, shrill, shrieking notes resound on the countryside throughout the day and often far into the night.

COMMENT - The call begins with a low kil-oa, but rises in scale with each successive kit-Tut until at the seventh or eighth it reaches feverish pitch and breaks off abruptly. The bird soon

commences it all over again. Another common note is a sharp quick-repeated kik-kik-kik uttered by the female as she dashes from tree to tree or hops amongst the branches. Its food consists chiefly of Banyan and Peepal figs and berries of various kinds, but insects and caterpillars are also eaten. Its flight is swift and straight, and a Koel fleeing before the vindictive onslaught of a pair of irate crows is a common sight. Nesting: The laying season is mainly from April to August and corresponds with that of its most usual host, the House Crow. Occasionally the Jungle-Crow, which nests somewhat earlier, is victimised. Its eggs are rather smaller, but very like the crow's in appearance, pale greyish-green or stone colour speckled and blotched with reddish-brown. As many as six have been found in a single crow's nest. It appears that the female Koel seizes the opportunity to deposit her egg in a crow's nest while the male deliberately draws the owners away by leading them a chase. It is also evident that the young Koel usually succeeds in disposing of his rightful foster-brothers at an early age.

Plate-14



Acridolheres tristis

Common Myna

ZOOLOGICAL NAME - *Acridolheres tristis*

Distribution - Throughout the Indian Empire, in summer up to about 10,000 feet in the Himalayas. Two races are recognised, viz. the Indian tristis, and the darker Ceylonese melanosternus.

HABIT AND HABITAT - Along with the Crow, the Kite and the Sparrow, the Myna is our commonest and most familiar bird about human habitations- in the heart of a bustling city or far out on the countryside. It is sociable in disposition and omnivorous in diet, two conditions which fit it admirably for a life of commensalism with Man. A pair or two usually adopt a house or compound for their own and guard it jealously against intrusion from others of their kind. Large numbers, however, will collect to feed, whether on earthworms on a freshly watered lawn, a swarm of winged termites or on a Peepal or Banyan tree in fruit. They may commonly be seen hunting grasshoppers on the heels of grazing cattle, or following the plough, stalking alongside it, side-hopping jauntily, and springing in the air now and again to secure the fleeing quarry. The birds have communal roosts in favourite groves of trees to which large numbers foregather every

evening. These are often shared by parakeets, crows and other species who contribute to the din that prevails before the birds finally retire for the night.

COMMENT - This Myna has a varied assortment of sharp calls and chatter. A loud, scolding rddio-radio-rddio is commonly heard, while during the mid-day heat when a pair are resting in a shady spot, the male will frequently go through an amazing gamut of keekkeek-keek, kok-kok-kok, chiiY-cliur, etc., with plumage frowzled and a ludicrous bobbing of his head before his mate. Nesting: The season is principally from April to August. Often two successive broods are raised. The nest is a collection of twigs, roots, paper and rubbish, placed in holes in trees and walls, or between the ceiling and roof of a house. The same site is used year after year. The eggs—four or five—are a beautiful glossy blue. Both sexes, build, incubate and tend the young.



Plate-15



Acridotheres ginginianus

Bank Myna

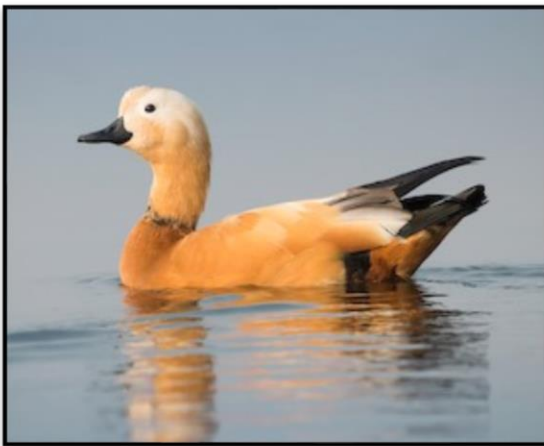
ZOOLOGICAL NAME- *Acridotheres ginginianus*

DISTRIBUTION - The greater part of Northern India from Sind to Eastern Bengal, and south to about the latitude of Bombay. In portions of the Himalayas, up to about 3,000 feet. It is a resident, but also moves about a good deal locally.

HABITS AND HABITAT - The Bank Myna is found in open cultivated country in the neighbourhood of towns and villages. Railway stations are a favourite resort and large numbers may often be seen sauntering about on the platforms picking up bits of food dropped by the passengers. The bird may also be confidently looked for about municipal refuse dumps and amongst grazing cattle. Its antics of clinging to the ears of the animals to pick off ticks, and holding on precariously as these are Happed, are amusing to watch. Its voice is somewhat softer than that of the common Myna, but otherwise there is little appreciable difference in the habits of the two.

COMMENT- The season is between May and August. The birds breed in colonies, often of considerable size. The nest is a rough pad of grass, leaves and rubbish placed in tunnels excavated by the birds in earth banks, or in those in the revetment of bridges, etc. When dug by the birds, these tunnels are frequently up to 5 feet deep and often coalesce with adjacent ones. They terminate in a bulbous nest-chamber. The normal clutch consists of three to five eggs, glossy pale blue, without markings.

Plate-16



Tadorna ferruginea

Ruddy shelduck

ZOOLOGICAL NAME - *Tadorna ferruginea*

DISTRIBUTION - The ruddy shelduck is a common winter visitor in India where it arrives by October and departs by April. Its typical breeding habitat is large wetlands and rivers with mud

flats and shingle banks, and it is found in large numbers on lakes and reservoirs. It breeds in high altitude lakes and swamps in Jammu and Kashmir.

HABITAT - The ruddy shelduck mostly inhabits inland water-bodies such as lakes, reservoirs and rivers. The male and female form a lasting pair bond and the nest may be well away from water, in a crevice or hole in a cliff, tree or similar site.

COMMENT - The ruddy shelduck is a mainly nocturnal bird. It is omnivorous and feeds on grasses, the young shoots of plants, grain and water plants as well as both aquatic and terrestrial invertebrates. On land it grazes on the foliage, in the water it dabbles in the shallows, and at greater depths, it up-ends, but it does not dive.

Plate-17



Motacilla alba

White wegtail

ZOOLOGICAL NAME - *Motacilla alba*

DISTRIBUTION - The species breeds in much of Europe and the Asian Palearctic and parts of North Africa. It has a toehold in Alaska as a scarce breeder.

HABITAT - It is found in open freshwater wetland habitats. It is one of the few *Motacilla* wagtails that has adapted well to urban habitats and is often found perched on overhead water storages in residential buildings.

COMMENT - Males of the white white wagtail (*Motacilla alba*), common across Eurasia, are variably white and gray or white and black. The variety in Britain is called pied wagtail

They mostly feed on insects, favoring bare areas for foraging, where they can easily spot and pursue their prey. They generally nest in the crevices of stone walls or natural and man-made structures.

Plate-18



Merops superciliosus

Blue cheeked bee eater

ZOOLOGICAL NAME - *Merops superciliosus*

DISTRIBUTION - The blue-cheeked bee-eater species are distributed in northwest Africa, Egypt, parts of Middle East, parts of West Asia and northwestern parts of Indian subcontinent. The wintering population occurs in central Africa.

HABITAT - Blue-cheeked Bee-Eater breeds mainly in sand deserts near water fringed with bushes and acacia or tamarisks. It lives in open cultivation, with some trees and bushes, or dry uncultivated country with scattered bushes.

COMMENT -The Blue-cheeked Bee-eater, *Merops persicus*, is a near passerine bird in the bee-eater family, This species, like other bee-eaters, is a richly-colored, slender bird. It is predominantly green; its face has blue sides with a black eye stripe, and a yellow and brown throat; the beak is black. It can reach a length of 24-26 cm, including the two elongated central tail feathers.

This is a bird which breeds in sub-tropical semi-desert with a few trees, such as acacia. It winters in open woodland or grassland.

As the name suggests, bee-eaters predominantly eat insects, especially bees, wasps and hornets, which are caught in the air by sorties from an open perch.



Plate-19



Vanellus duvaucelii

River lapwing

ZOOLOGICAL NAME - *Vanellus duvaucelii*

DISTRIBUTION - The River lapwing occurs in the northern Indian Subcontinent and much of South-East Asia, including India. In India, it breeds in the parts of East and Central India, including Orissa, Andhra Pradesh and eastern Madhya Pradesh, and disperses in winter to larger areas.

HABITAT - Lapwing will live on all types of farmland but prefer mixed farming systems and extensively managed wet grasslands. They prefer wide open landscapes during the breeding season to avoid predators.

COMMENT -It has a black crest, crown, face and central throat and grey-white neck sides and nape. It has a grey-brown breast band and white underparts with a black belly patch. The back is brown, the rump is white and the tail is black. This is a striking species in flight, with black primaries (= longest wing feathers), white under wings and upper wing secondaries (shorter, upper "arm" feathers), and brown upper wing coverts. The call of the River Lapwing is a sharp tip-tip or did-did-did. The breeding display, given on the ground, includes stooping, spinning, stretching and crest-raising.

Plate-20



Columba livia

Rock pigeon

ZOOLOGICAL NAME - *Columba livia*

DISTRIBUTION - Look for Rock Pigeons in urban parks and neighborhoods, around farms, under highway or railroad bridges, and around tall rocky cliffs.

HABITAT - Naturally, these birds thrive in cliff side settings, particularly sea cliffs. Introduced and feral individuals can live in cliff settings, but have found a perfect niche in urban and city living. Cities provide them with perfect scavenging opportunities, as humans produce lots of garbage.

COMMENT - These birds usually have a dark bluish grey head, neck and chest with glossy yellowish, greenish and reddish purple iridescence along their neck and wing feathers. The Rock pigeon is a very hardy and active bird. It is a strong flyer and is mostly seen in the fields searching for grains or green foods. It is a strong flyer and is mostly seen in the fields searching for grains or green foods.

Plate-21



Kiltacincla malabarica

THE SHAMA

ZOOLOGICAL NAME- *Kiltacincla malabarica*

DISTRIBUTION – Patchily through the whole of India (excepting the dry portions in the N.-W.), Burma, Ceylon and the Andamans. Three races are recognised on comparative lengths of tail, and details of colouration.

HABIT AND HABITAT- The Shama is essentially a bird of forest-clad foothills and ghats, where it haunts the seclusion of dense secondary undergrowth, being particularly fond of bamboo-covered ravines. It is extremely shy and retiring as far as Man is concerned, but otherwise closely resembles the Dhayal in habits. Its beautiful song of several clear melodious notes is principally heard in the early mornings and at dusk, often continuing till close on nightfall. On account of its retiring disposition and the remoteness of its normal habitat, the Shama is much more likely to be met with as a cage-bird by most readers than in a wild state. It is popularly acknowledged as the finest songster we have in India and is accordingly much prized by fanciers. It thrives well, and even breeds, in captivity. Besides its own vocal accomplishments, it will readily learn to mimic the calls of other birds accurately.

COMMENT- Its diet is exclusively insectivorous, consisting of grasshoppers and other insects and larva which are taken either off the ground or among bushes. The breeding season is mainly between April and June. The nest—a shallow cup of rootlets, grass and bamboo leaves—is placed at moderate heights in some hollow in a tree-trunk or at the base of a tangled bamboo clump. The eggs three or four in number—closely resemble those of the MagpieRobin, being some shade of blue-green, densely blotched with brown or reddish-brown.

Plate-22



Hirundo smithii

INDIAN WIRE TAILED SWALLOW

ZOOLOGICAL NAME- *Hirundo smithii*

DISTRIBUTION -The Indian race filifera is found from about 5,000 feet in the Himalayas south to Mysore and the Nilgiris, and from the N-W. Frontier and Sind east to Bengal. Also in Pegu and Tenasserim. Mainly resident, but local migrant in parts.

HABIT AND HABITAT- The habits of the Wire-tailed Swallow do not differ appreciably from those of the foregoing species. It is, however, even more devoted to the neighbourhood of water and is hardly ever met with away from it. Several birds may be seen loosely together skimming over the surface of a wheel or village tank, or hawking insects a few feet above it or over ploughed fields around its margin. It utters a pleasant chit-chit while (lying about. In the breeding season the male has a pretty little twittering song. When agitated, as for example when the nest is threatened by a sparrow, the birds launch a series of furious mock attacks snapping their bills at the intruder every time they shoot past him. The ' war cries ' then uttered are very like the chi-chip, chi-chip of a wagtail in flight.

COMMENT- The season extends practically over the whole year, but the principal months are March to September. Two broods are frequently raised in succession. The nest does not differ from that of the Crag-Martin. It is attached under arches of bridges and culverts, to cliffs flanking streams, and frequently to rafters in the verandahs of bungalows. In situations as the last, the House-Sparrow often ousts the rightful owners, usurping the nest for its own purposes. The nest is usually solitary, but occasionally several are built close together. The normal clutch is of three to five eggs, in appearance like those of the Common Swallow. Both sexes share in building and care of the young.

Plate-23



Tocktis birostris

COMMON GREY HORNBILL

ZOOLOGICAL NAME- *Tocktis birostris*

DISTRIBUTION - Throughout India excepting the N. W. Province, Sind, Punjab and parts of Rajputana. Absent in Assam, Burma and Ceylon.

HABIT AND HABITAT- The Grey Hornbill inhabits open, wooded plains country and deciduous forest. It is commonly found in groves of ancient mango, Banyan and Peepal trees in the vicinity of towns and villages, and freely enters well-wooded gardens and compounds. It is exclusively arboreal and met with in pairs or family parties of 5 or 6 birds which fly across from one fig-laden Peepal or Banyan tree to another in a V-leader fashion. Where food is plentiful, large numbers often collect, associating with green pigeons, mynas, bulbuls and other frugivorous birds. The flight, typical of the hornbills, is laboured, undulating and noisy, consisting of a few rapid wing strokes followed by an interval of gliding. It has a loud cackling cry K-k-k-kar, and a variety of squealing and chattering conversational notes. A shrill alarm whistle which is uttered to apprise the company of impending danger. Its diet consists mainly of figs of Banyan, Peepal and the various other species of figs, but large insects and lizards are also eaten.

COMMENT- The season is principally between March and June. The hornbills as a group are remarkable for their curious nesting habits. A natural hollow is selected in some old tree trunk, usually fairly high up. Within this the female imprisons herself, using the flat sides of her bill as a trowel to plaster up the entrance with her droppings which harden to the consistency of cement. Only a narrow slit is left through which the cock assiduously feeds her throughout the incubation period. After the young are hatched out, the hen emerges from her self-imposed confinement, the wall is built up again, and thenceforward she assists her mate in feeding the young. The same nest-site is used for several successive seasons. The eggs- two or three in number - are dull, glossless white.

Plate-24



Ardeola grayii

INDIAN POND HERON

ZOOLOGICAL NAME- *Ardeola grayii*

DISTRIBUTION- The Indian pond heron is distributed in the **Persian Gulf, Indian Subcontinent, Myanmar, Laccadives, Maldives, Andamans and Nicobars Islands**. These bird species winter in Malay Peninsula.

HABIT AND HABITAT- The Indian pond heron's feeding habitat is **marshy wetlands**. They usually feed at the edge of ponds but make extensive use of floating vegetation such as water hyacinth to access deeper water. They may also on occasion swim on water or fish from the air and land in deeper waters. They have also been observed to fly and capture fishes leaping out of water. Sometimes, they fly low over water to drive frogs and fishes towards the shore before settling along the shoreline. They have been noted to pick up crumbs of bread and drop them on the water surface to bait fishes.

The primary food of these birds includes crustaceans, aquatic insects, fishes, tadpoles and sometimes leeches (*Herpobdelloides* sp.). Outside wetlands, these herons feed on insects (including crickets, dragonflies and bees), fish (*Barilius* noted as important in a study in Chandigarh) and amphibians.

COMMENT- They appear stocky with a short neck, short thick bill and buff-brown back. In summer, adults have long neck feathers. Its appearance is transformed from their dull colours when they take to flight, when the white of the wings makes them very prominent. It is very similar to the squacco heron, *Ardeola ralloides*, but is darker-backed. To the east of its range, it is replaced by the Chinese pond heron, *Ardeola bacchus*.

During the breeding season, there are records of individuals with red legs. The numbers do not suggest that this is a normal change for adults during the breeding season and some have suggested the possibility of it being genetic variants.

Erythristic plumage has been noted. The race *phillipsi* has been suggested for the populations found in the Maldives, however this is not always recognized. It forms a superspecies with the closely related Chinese pond heron, Javan pond heron and the Madagascar pond heron.

They are usually silent but may make a harsh croak in alarm when flushed or near their nests.

Plate-25



Gallinula galeata

COMMON GALLINULE

ZOOLOGICAL NAME- *Gallinula galeata*

DISTRIBUTION- The **common gallinule** (*Gallinula galeata*) is a bird in the family Rallidae. It was split from the common moorhen by the American Ornithologists' Union in July 2011. It lives around well-vegetated marshes, ponds, canals, and other wetlands in the Americas. The species is not found in the polar regions or many tropical rainforests. Elsewhere, the common gallinule is likely the most commonly seen rail species in much of North America, except for the American coot in some regions.

HABIT AND HABITAT- The gallinule has dark plumage apart from the white undertail, yellow legs and a red frontal shield. The young are browner and lack the red shield. It has a wide range of gargling calls and will emit loud hisses when threatened. This is a common breeding bird in marsh environments and well-vegetated lakes. Populations in areas where the waters freeze, such as southern Canada and the northern USA, will migrate to more temperate climates. This species will consume a wide variety of vegetable material and small aquatic creatures. It forages beside or in the water, sometimes upending in the water to feed. Its wide feet allow it to hop about on lily pads.

It is often secretive, but can become tame in some areas. Despite loss of habitat in parts of its range, the common gallinule remains plentiful and widespread.

COMMENT- The common gallinule will fight to defend its territory. The nest is a basket built on the ground in dense vegetation. Laying starts in spring, between mid-March and mid-May in northern hemisphere temperate regions. About 8 eggs are usually laid per female early in the season; a brood later in the year usually has only 5–8 or even fewer eggs. Nests may be re-used by different females. Incubation lasts about three weeks. Both parents incubate and feed the young. These fledge after 40–50 days, become independent usually a few weeks thereafter, and may raise their first brood the next spring. When threatened, the young may cling to a parent's body, after which the adult birds fly away to safety, carrying their offspring with them.



Plate 26



Porphyrio porphyria

WESTERN SWAMPHAN

ZOOLOGICAL NAME- *Porphyrio porphyrio*

DISTRIBUTION- It commonly found in **large weedy wetlands, marshes, swamps, paddy-fields and ponds**. The birds often live in pairs and larger communities.

HABIT AND HABITAT- A large purplish-blue bird with long red legs and large feet. It has a huge red bill which extends back into a red frontal shield. The white patch under its stumpy tail can be seen as it is flicked up at each step. It is fond of climbing up reeds and sunning itself early in the morning. It is usually found in reedy swamps and marshes, where it is seen in pairs or small parties. It stalks or skulks through the vegetation with a jerky bobbing of the head and flicking of the tail. It feeds on shoots and other vegetation, as well as insects and molluscs, and larger parties can be destructive in young paddy fields. The call consists of loud hooting, cackling and hoarse notes. In the breeding season the male has an elaborate if amusing courtship display. He holds up waterweed in his bill as an offering to the female, who he bows to whilst uttering loud chuckles.

COMMENT- Swamphens are generally seasonal breeders, correlating with peak rainfall in many places, or summer in more temperate climates. The purple swamphen breeds in warm reed beds. The pattern of social behaviour tends to be monogamy.

Pairs nest in a large pad of interwoven reed flags, etc., on a mass of floating debris or amongst matted reeds slightly above water level in swamps, clumps of rushes in paddocks or long unkempt grass. Each bird can lay 3–6 speckled eggs, pale yellowish stone to reddish buff, blotched and spotted with reddish brown. The incubation period is 23–27 days, and is performed by both sexes. The precocious chicks are feathered with downy black feathers and able to leave the nest soon after hatching, but will often remain in the nest for a few days. Young chicks are fed by their parents (and group members) for between 10–14 days, after which they begin to feed themselves.

Plate-27



Vanellus indicus

RED WATTLED LAWING

ZOOLOGICAL NAME- *Vanellus indicus*

DISTRIBUTION- It breeds from West Asia (Iraq, SW Iran, Persian Gulf) eastwards across South Asia (Baluchistan, Sri Lanka, Afghanistan, Pakistan, the entire Indian subcontinent up to Kanyakumari and up to 1800m in Kashmir/Nepal), with another sub-species further east in Southeast Asia. May migrate altitudinally in spring and autumn (e.g. in N. Baluchistan or NW Pakistan), and spreads out widely in the monsoons on creation of requisite habitats, but by and large the populations are resident.

This species is declining in its western range, but is abundant in much of South Asia, being seen at almost any wetland habitat in its range

HABIT AND HABITAT- Red-wattled lapwings are large waders, about 35 cm (14 in) long. The wings and back are light brown with a purple to green sheen, but the head, a bib on the front and back of the neck are black. Prominently white patch runs between these two colours, from belly and tail, flanking the neck to the sides of crown. Short tail is tipped black. A red fleshy wattle in front of each eye, black-tipped red bill, and the long legs are yellow. In flight, prominent white wing bars formed by the white on the secondary coverts.

Race *aigneri* is slightly paler and larger than the nominate race and is found in Turkey, Iran, Iraq, Afghanistan and the Indus valley. The nominate race is found all over India. The Sri Lankan race *lankae* is smaller and dark while *atronuchalis* the race in north-eastern India and eastern Bangladesh has a white cheek surrounded by black.

Males and females are similar in plumage but males have a 5% longer wing and tend to have a longer carpal spur. The length of the birds is 320–350 mm, wing of 208–247 mm with the nominate averaging 223 mm, Sri Lanka 217 mm. The Bill is 31–36 mm and tarsus of 70–83 mm. Tail length is 104–128 mm.

COMMENT - It usually keeps in pairs or trios in well-watered open country, ploughed fields, grazing land, and margins and dry beds of tanks and puddles. They occasionally form large flocks, ranging from 26 to 200 birds. It is also found in forest clearings around rain-filled depressions. It runs about in short spurts and dips forward obliquely (with unflexed legs) to pick up food in a typical plover manner. They are said to feed at night being especially active around the full moon. Is uncannily and ceaselessly vigilant, day or night, and is the first to detect intrusions and raise an alarm, and was therefore considered a nuisance by hunters. Flight rather slow, with deliberate flaps, but capable of remarkable agility when defending nest or being hunted by a hawk. The breeding season is mainly March to August. The courtship involves the male puffing its feathers and pointing its beak upwards. The male then shuffles around the female. Several males may display to females and they may be close together. The eggs are laid in a ground scrape or depression sometimes fringed with pebbles, goat or hare droppings. About 3–4 black-blotched buff eggs shaped a bit like a peg-top (pyriform), 42x30 mm on average. Nests are difficult to find since the eggs are cryptically coloured and usually matches the ground pattern. In residential areas, they sometimes take to nesting on roof-tops.

Plate-28



Vanellus malabaricus

YELLOW WATTLE LAPWING

ZOOLOGICAL NAME- *Vanellus malabaricus*

DISTRIBUTION - The yellow-wattled lapwing (*Vanellus malabaricus*) is a lapwing that is endemic to the Indian Subcontinent. It is found **mainly on the dry plains of peninsular India** and has a sharp call and is capable of fast flight. Although they do not migrate, they are known to make seasonal movements in response to rains.

HABIT AND HABIT- These are conspicuous and unmistakable birds found in dry stony and open grassland or scrub habitats. They are medium-sized pale brown waders with a black crown which is separated from the brown on the neck by a narrow white band and large yellow facial wattles. The chin and throat are black and the brown neck and upper breast is separated from the white belly by a narrow blackish line. The tail has a subterminal black band which does not extend into the outer tail-feathers. There is a white wingbar on the inner half of the wing. The bill is yellow at the base. They have tiny yellow carpal spurs. The crown feathers can be raised slightly in displays. They are mostly sedentary but populations make long distance movements in response to the monsoons. They are occasional visitors to the Kathmandu valley in Nepal and a vagrant was seen in Malaysia.

COMMENT-These lapwings breed in the dry season with peak breeding in March to May ahead of the monsoons. The nest territory has been estimated, based on the distance to nearest neighbors, to be about 2.7 acres. They lay four eggs in a ground scrape. A nest in a clump of grass has been noted as exceptional. Parents visit water and wet their breast feathers ("belly soaking"; they may stay for as much as 10 minutes to soak water) which may then be used to cool the eggs or chicks. The four eggs typically hatch simultaneously, even though they are laid with a difference of a few days.¹ The nidifugous young are well camouflaged as they forage with the parents. Chicks squat flat on the ground and freeze when parents emit an alarm call. A second brood may be raised, particularly when the first fails and young from a previous brood have been seen along with parent birds incubating a second clutch.¹ Simultaneous courtship displays among several pairs in close proximity has been noted. In one study more than 60% of the nests had 4 eggs-clutches with the rest having 3 eggs. Hatching success was found to be about 27.58% and egg loss was due to

predation and nest damage. The incubation period was 27–30 days. When the nests are approached, the incubating bird attempts to move away from the nest without drawing attention to it.

The food of the yellow-wattled lapwing is beetles, termites and other invertebrates, which are picked from the ground. The feather mite *Magimelia dolichosikya* has been noted as an ectoparasite of this species.

Plate-29



Atuhits rufulus

INDIAN PIPIT

ZOOLOGICAL NAME- *Atuhits rufulus* .

DISTRIBUTION - Resident throughout the Indian Empire. Three races are recognized mainly on depth of coloration, viz.: the palest N.-W. Indian wailei, the intermediate peninsular and Hurma race rufulus, and the richly coloured Travancore-Oykm-Malaya malayensis.

HABITS - The Indian Pipit affects open country, in the plains as well as up to about 6,000 feet in the hills. Pairs or scattered parties are met with in ploughed and stubble fields, fallow land, under groves of shady trees or on open grass-covered stony hill- sides. They feed on the ground, running about briskly and moving their tail up and down in the manner of wagtails, flying up into trees when disturbed. They have the same gently undulating flight, and the notes uttered on the wing- a feeble pipit-pipit or Iseep-Hecp, etc. — are also similar to, yet easily distinguishable from, those of the wagtails. Their food consists of weevils and other small insects.

COMMENT- During the breeding season the male indulges in a song flight—an exceedingly poor imitation of the Skylark's. It soars and flutters a few feet up in the air uttering a feeble cheeping ' song ' and descends to earth in a couple of minutes. When the nest young are threatened, the parents express concern by repeatedly flying up 15 or 20 feet in the air with an agitated tsip-tsip-lsip, hovering flutteringly overhead for a while, and sailing down obliquely to the ground some distance away, wings depressed at the sides and tail tilted upwards. Nesting. The season ranges between February and October, but is most general from March to June. The nest is a shallow cup of fine grass, rootlets and hair sometimes partially domed placed on the ground in an old hoof-print of

cattle or under shelter of a clod or diminutive bush. The eggs, three or four in number, are yellowish- or greyish-white irregularly blotched and spotted with brown, more densely at the broader end. Both sexes share in building the nest and tending the young.

Plate 30.



Dryobates mahrattensis

MAHRATTA WOODPECKER

ZOOLOGICAL NAME- *Dryobates mahrattensis*

Distribution - Resident practically throughout India from about 2,500 feet in the Himalayas to North Ceylon—plains as well as hills at moderate elevations, Assam and Upper Burma. Two races are recognized, viz., the darker South India-Ceylon race *mahrattensis*, and the paler North India-Burma *anrocristatus*.

HABITS- This little woodpecker frequents open scrub country, light deciduous forest, mango orchards and groves of trees. It avoids heavy evergreen jungle. It is usually met with in pairs commonly in association with the mixed avian hunting parties. The birds fly from tree-trunk to tree-trunk alighting low down and scuttling upwards jerkily, direct or in spirals, halting at intervals to tap on the bark or peer into crevices for lurking insects. The tail is pressed against the stem to form a supporting tripod. Their diet consists of ants and grubs which are captured by means of the long, extensile, barb-tipped tongue.

COMMENT - The call notes commonly uttered are a sharp click, click or click-r-r-r. The flight is swift and undulating attained by a series of rapid wing beats followed by short pauses. Nesting: The season is principally from January to May. The eggs are laid in a hole excavated by the birds in the decaying stem or branch of a tree, at moderate heights. When in a horizontal branch, the entrance hole—about 2" in diameter is situated on the underside. No lining is employed. The eggs 3 in number—are glossy white, unmarked. Both sexes share in excavating the nest-hole, incubation and care of the young.