

Conservation Area Series No. 22

**FAUNAL COMPOSITION OF KAIMUR
WILDLIFE SANCTUARY
(BIHAR)**

**T. P. BHATTACHARYYA
M. K. GHOSH**

ZOOLOGICAL SURVEY OF INDIA

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Kaimur Wild Life Sanctuary
(Bihar)**

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INTRODUCTION

Kaimur wildlife sanctuary is located in the Rohtas and Bhabua districts of Bihar. It is bounded in the north by the districts of Bhojpur, Buxar and part of Ghazipur of U. P.; in the south by the districts of Palamau and Garhwa; in the west by the districts of Sonabhadra and Varanasi of U. P. and in the east by the districts of Aurangabad and part of Jehanabad. The total area of the Sanctuary comprises of an area of 1342.22 sq. km. The entire area of the sanctuary has a good natural sal forests associated with Northern Tropical Mixed Dry Deciduous Forests, *Boswellia* Forests and Dry Bamboo drakes. Being associated with other ecological zones, the sanctuary has given rise to a rich and diversified fauna. The area was declared as wildlife sanctuary on 20 July 1979. Detailed information on the faunal composition of this sanctuary is not available except a few scattered reports (Shahi, 1977; Sinha 1986). As a part of the fauna of conservation areas programme, Zoological Survey of India has conducted one faunistic survey in this sanctuary. During this survey attempts were made to identify the existing faunal composition along with ecological data, population trend and factors affecting them. For this purpose, in addition to systematic field observations and permitted collection of specimens, necessary discussions with local people as well as management people were made. In the present paper an account of the faunal composition with special reference to birds and mammals of the Kaimur Sanctuary along with ecological conditions have been given.

CAMPS

Rohtas : It is very near to Rohtas township and is 55 km south of Sasaram. Rohtasgarh is located at a distance of 5 km west of Rohtas township. A Kilometer north of Rohtas fort, the Bawan talab was located. As the name indicates the talab was said to have been surrounded by 52 tanks in olden days, but there is no trace of them now. Camp days—08.11.1997 to 11.11.1997.

Adhaura : It is situated at a height of about 400 m form the sea level on the plateau of Kaimur hills and at a distance of about 58 km south of Bhabua. The area is composed of dry rock and a number of villages with agricultural fields. Camp days—12.11 1997 to 20.11 1997.

Mundeswari : It is situated at a distance of 12 km south-west of Bhabua. The ancient historical monument of famous Mundeswari temple was built on the summit of a hill at a height of about 182.8 m Hindu inscriptions of about 635 A.D. are found on it. Camp days—21.11.1997 to 24.11.1997.

PHYSICAL FEATURES

Kaimur Sanctuary is the best forested land of Deccan Peninsula with two provinces : (a) Central highlands in the west which include both the Satpura and Vindhya hill ranges namely Satpura-Maikal hills and Vindhya-Bagelkhand hills. (b) Chota Nagpur Plateau in the east and south.

The Sanctuary has two parts, *viz.* plains and plateau regions. Up to the foot hills of Kaimur hill the area consists of the alluvial soil and is naturally fertile. As the plain approaches the foot hills, the soil becomes stony and is poor in fertility. The Kaimur plateau is an undulating table land having thin scrubby jungles and the land is not at all fertile. There are also some patches bereft of any vegetation at the top hill part. Soil erosion in these forests is very common.

Of the numerous stratigraphical sub-divisions constituting the great Vindhyan system, only two are conspicuous in the sanctuary area. They are the Kaimur sandstone and the Rohtas limestone. The Kaimur sandstone covers the greater portion of the table-land and along its southern and south-western borders forms the precipitous escarpments. The Kaimur sandstone is known to be an excellent building material. The Rohtas limestone, is a very fine grained evenly-bedded rock; largely burnt for lime; and some of the beds are used as lithographic stone. Certain minerals such as sulphur and pyrites are also found near the sanctuary area. This physical feature has resulted in a number of industries near the sanctuary area of which Banjari cement, Rohtas cement, Sahu cement and Portland cement factories are worth mentioning. Rohtas vegetable oil and sugar industries are also operating there.

Water supply in the sanctuary during rain and winter remains adequate. There are six rivers namely Karamnasa, Durgawati, Tilhar, Suvra, Kudra and Varuna which provide some water throughout the year.

Three well-developed seasons *viz.* Summer (mid March to mid May), Monsoon (mid May to mid October) and winter (mid October to mid March) could be recognised. Forested tract of the sanctuary gets more precipitation varying from 24 cm to 35 cm during monsoon period.

FLORA

In the area under cultivation Sugar-cane, Poppy, Rice and a variety of other food crops are grown. This area is bare or dotted over with clumps of bamboos and mango orchards. The villages inside the sanctuary are frequently surrounded by groves of Palmyra (*Borassus flabelliformis*) and Date-Palm (*Phoenix sylvestris*). Numerous more isolated examples of *Tamarindus* sp., *Odina* sp., *Sapindus* sp. and *Moringa* sp. also occur associated with which are frequently found *Glycosmis* sp., *Clerodendron* sp., *Solanum* sp., *Jatropha* sp., *Trema* sp.,

Streblus sp., etc. Different species of the genera *Ammannia*, *Utricularia*, *Hygrophila*, *Sesbania* are the weeds near the rice fields which cover the low lying lands. Further from the river some dry scrub jungles are met with, of which the principal species belong to the genera *Butea*, *Ficus*, *Schleichera*, *Wendlendia*, *Gmelina*, etc. The grasses clothing the drier parts are generally of coarse character viz. *Andropogon contortus*, *A. aciculatus*, *A. annulatus*, *A. foveolatus*, *A. pertusus*, *Aristida adscenscoidis*, *Tragus racemosus*, *Iseilema laxum*; various Anthistriae and Sabai Grass (*Inchaemum angustifolium*). Throughout the alluvial part which stretches to the foot of the hills the pipal (*Ficus religiosa*) and Banyan (*Ficus indica*) are common. The other principal trees growing in this area are the Bel (*Aegle marmoles*), Neem (*Melia azadirachta*), Siris (*Mimosa sirissa*) and Jack Fruit (*Artocarpus integrifolia*).

In the Kaimur hill, a different class of vegetation exists. On the plateau there is long grass, chiefly spear-grass, Kus (*Poa cynosuroides*), khas-khas (*Andropogon muricatus*), trees of *Diospyros* sp. and *Terminalia* sp., and here and there *Boswellia* sp., in places the curious White-barked *Sterculia foetida* spreads over the precipitous cliffs, and vast stretches of bamboo cover the debris at its base. Among the important trees found are Amaltas (*Cassia fistula*), Red cotton Tree (*Bombax malabaricum*), the Hara (*Terminalia chebula*) and Tend (*Diospyros manoxylon*). The Plateau is also rich in various jungle products from many of which the inhabitants obtain a livelihood. They are the Khair (*Acacia catechu*), Palas (*Butea frondosa*), Tasar (silkworm feeds on the Asan Tree, *Terminalia tomentosa*), the kus grass and the long coarse Sabai grass. Perhaps, the most useful of all the trees which clothe the hills and the undulating slope at their base is the Mahua (*Bassia latifolia*).

FAUNAL COMPOSITION

Differences in the elevations, soil composition, floral composition along with a number of rivers, swamps, have provided great range of variations in respect of micro and macro ecosystem within the Kaimur sanctuary. This varied ecosystem in turn has resulted a rich, both qualitative and quantitative, fauna in the sanctuary. Based on sightings, actual collection during survey and collected local report, an account of the fauna of the sanctuary is given below. During the survey works no actual estimates of the population of different species were done but attempts have been made to quantify some major species of mammals. For systematic account of mammals Ellerman & Morisson-Scott (1966) has been followed.

Following abbreviations have been used in the text : E : length of ear; Fa : length of forearm; F & cl : length of foot and claw; HB : head and body length; Hf : length of hind foot; Tb : length of tibia; Tl : length of tail; Tr : length of tragus.

Vertebrate species included in Schedule I and Schedule II of the Indian wildlife (Protection) Act, 1972 have been marked with * and ** respectively.

SYSTEMATIC ACCOUNT

Class MAMMALIA
Order INSECTIVORA
Family SORICIDAE

1. *Suncus murinus caerulescens* (Shaw)

1796. *Sorex pilorides* Shaw, *Mus. Lever.*, 2 : 31. Not of Pallas 1779, which is undeterminable.

1800. *Sorex caerulescens* Shaw, *Genl. Zoo. Mamm.*, 1 : 533.

Common names : House shrew (Eng.) Chuchundar (Hin.).

Material examined : 1 ♂, 1 ♀, Rohtas, 8.xi.1997; 2 ♀, Adhaura, 15.xi.1997; 1 ♂, Mundeswari, 23.xi.1997.

Measurements : External : 2 ♂, HB 136, 117; TI 83, 70; Hf 20, 20; E 15, 15. 3 ♀, HB 101-115 (108); TI 66-69 (68); Hf 17-20 (18); E 11-15 (13).

Distribution : Throughout India particularly in residential areas.

Remarks : Most common specially in and around houses, stores and fringe areas of the forest. Nests were found by the side of bushes, garbage, drains and under stone.

Much variations in size, colour, nature of fur and shape of tail have been observed in the present specimens.

Order CHIROPTERA
Family PTEROPODIDAE

2. *Pteropus giganteus* (Brünnich)

1782. *Vespertilio gigantea* Brünnich. *Dyrenes Histories*, 1 : 45 (Bengal, India).

Common names : Indian Flying Fox (Eng.), Gadai, Barbagal, Badur (Hin.).

Distribution : Widely distributed in India including Andaman Islands.

Elsewhere : Bangladesh, Myanmar, Nepal, Pakistan and Sri Lanka.

Remarks : Fairly common in the sanctuary excepting the dense part of the forest. In the evening animals were found foraging in the villages and forest for wild fruits. People were found often killing them for flesh.

3. *Cynopterus sphinx sphinx* (Vahl)

1797. *Vespertilio sphinx* Vahl. *Syr. Nat. Selsk. Copenhagen*, 4(1) : 123 (Tranquebar, Tanjavur, Tamil Nadu, India).

Common names : Short-nosed Fruit Bat (Eng.), Chota Badur (Hin.)

Material examined : 1♂, 1♀, Rohtas, 9.xi.1997; 1♀ Adhaura, 17.xi.1997.

Measurements : External : 1♂ : HB 106.5; F & cl 18.0; E 21.9; Fa 73.8; Tb 33.0
1♀ : HB 101.4; F & cl 16.5; E 20.0; Fa 71.7; Tb 28.9.

Distribution : Throughout the mainland of India.

Elsewhere : Bangladesh, Myanmar, Nepal, Pakistan and Sri Lanka.

Remarks : Most common throughout the sanctuary. Large number of them were found to visit all the orchards during evening hours causing serious damage to crops. Even then they play an important role in the natural pollination and dispersal of seed in the forest ecosystem.

4. *Cynopterus brachyotis* (Müller)

1838. *Pachysoma brachyotis* Müller, *Tijdschr. Natuur. Gesch.*, 5(1) : 146 (Borneo).

Common names : Borneo short-nosed Fruit Bat (Eng.), Chota Badur (Hin.).

Material examined : 1♀, Adhaura, 17.xi.1997.

Measurements : External : 1♀, F & Cl 17.3; E 17.8; Fa 70.0; Tb 27.0.

Distribution : India : Andaman and Nicobar Islands, Assam, Bihar, Kerala, Meghalaya, Mizoram, Tamil Nadu, West Bengal.

Elsewhere : Borneo, Cambodia, Celebes, Java, Malaysia, Myanmar, Nepal, Pakistan, Phillipine Islands, Southern China, Sumatra Thailand and Vietnam.

Remarks : Moderately common in the collecting locality. Sinha (1986) also reported this species from Rohtas district.

Family RHINOPOMATIDAE

5. *Rhinopoma hardwickei hardwickei* Gray

1831. *Rhinopoma hardwickii* Gray, *Zool. Misc.*, : 37 (India).

Common name : Lesser Rat-tailed Bat (Eng.).

Distribution : Almost throughout the country except north eastern states.

Elsewhere : Afghanistan, Myanmar, Pakistan and Thailand.

Remarks : Not very common. A troop of 12 animals were found in rock fissure near Mundeswari Temple, Sinha (1986) also recorded this species from Rohtas district.

Family EMBALLONURIDAE

6. *Taphozous nudiventris kachhensis* Dobson

1872. *Taphozous kachhensis* Dobson, *J. Asiat. Soc. Beng.* 41(2) : 221 (Kutch, Gujarat, India).

Common names : Naked-bellied Tomb Bat (Eng.), Chota Badur (Hin.).

Distribution : Bihar, Delhi, Gujarat, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Sikkim, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan and Pakistan.

Remarks : Common throughout the sanctuary. Roosts in caves, rock fissures and also in various less disturbed man made structures. A roost of about fifteen animals were found in the rock fissure at Mundeswari. Sinha (1986) also reported this species from Rohtas district.

Family MEGADERMATIDAE

7. *Megaderma lyra lyra* Geoffroy

1801. *Megaderma lyra* Geoffroy, *Ann. Mus. Hist. Nat. Paris*, 15 : 190 (Possibly Madras, Tamil Nadu, India).

Common name : Indian False Vampire (Eng.).

Material examined : 1 ♀, Rohtas, 10.xi.1997; 2 ♀, Adhaura, 20, 24.xi.1997.

Measurements : External : 3 ♀ : Fa 65.5, 67.3, 68.5; E 36.0, 39.2; 40.0; Tb 35.0, 34.3, 35.6; F & cl 17.7, 17.2, 18.9.

Distribution : Almost throughout the mainland of India.

Elsewhere : Afghanistan, Bangladesh, Nepal, Pakistan and Sri Lanka.

Remarks : Fairly common in the localities, Roosts of 4 to more than 15 animals were noticed in the local cowsheds and various other man made, less used structures. Feeds on lizards, frogs, mouse, beetles, etc.

Family RHINOLOPHIDAE

8. *Rhinolophus lepidus lepidus* Blyth

1844. *Rhinolophus lepidus* Blyth, *J. Asiat. Soc. Beng.*, 13 : 486 (Vicinity of Calcutta, India).

Common names : Little Indian Horse-shoe Bat (Eng.).

Distribution : Widely distributed in the mainland of India, in the north upto Delhi and Mizoram in the east.

Remarks : Common. A troop of eight animals of this species was found in a cave of the hill top near Mundeswari temple.

9. *Hipposideros* sp.

Remarks : Not common in the sanctuary. Two specimens were observed flying irregularly through the varandha of Adhaura Rest House for about half-an-hour during the camp days there. Specific identification was not possible.

Family VESPERTILIONIDAE

10. *Pipistrellus coromandra coromandra* (Gray)

1838. *Scotophilus coromandra* Gray, *Mag. Zool. Bot.* 2 : 498 (Pondicherry, Coromandel coast. India).

Common name : Indian Pipistrelle (Eng.).

Distribution : Widely distributed in southern India, north to Jammu & Kashmir, east to north eastern states including Tripura.

Elsewhere : Afghanistan, Nepal, Pakistan and Sri Lanka.

Remarks : Very common and could be seen in the dusk while they are flying over canal, swamps and other open areas. Small roost of 4-6 individuals were found in holes and crevices of rocks, trees, walls, ceilings, logs and many other places even within the busy human habitations.

10. *Pipistrellus mimus* Wroughton

1899. *Pipistrellus mimus* Wroughton, *J. Bombay. nat. Hist. Soc.*, 12 : 722 (Maheskatri, Dangs. Gujarat. India).

Common name : Indian Pigmy Pipistrelle (Eng.).

Distribution : Widely distributed throughout the mainland of Indian region. Afghanistan, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam.

Remarks : Very common, particularly in the residential areas. Roosts in any dark place in close association with human beings. Sinha (1986) reported this species from Rohtas district.

11. *Pipistrellus dormeri* (Dobson)

1875. *Scotozous dormeri* Dobson, *Proc. Zool. Soc. Lond.*, : 373 (Bellary Hills, Bellary, Karnataka. India).

Common name : Dormer's Bat (Eng.).

Material examined : 5♂, 4♀ Rohtas, 8-11.xi.1997.

Measurements : External : 5♂ : Fa 33.4-36.2 (35.1); TI 34.7-39.6 (37.7); E 10.7-13.5 (12.2); Tr 4.7-5.8 (5.3); Tb 13.1-14.0 (13.6); F & cl 6.2-7.4 (6.8). 4♀ : Fa 34.6-36.9 (35.9); TI 38.2-40.7 (39.0); E 12.9-14.2 (13.8); Tr 5.5-5.9 (5.7); Tb 13.0-14.0 (13.7); F & cl 6.4-7.4 (6.9).

Distribution : Widely distributed from Jammu & Kashmir in the north to Karnataka in the south; Gujarat in the West to West Bengal in the east. Pakistan, possibly Taiwan.

Remarks : Most common. Roosts were found in various man made structures in the village, as well as deep in the forest in rock crevices, tree holes, etc. Examination of stomach contents revealed hard parts of coleopteran insects and dipteran fly.

12. *Scotophilus heathi heathi* (Horsfield)

1831. *Nycticeius heathi* Horsfield, *Proc. Zool. Soc. Lond.*, (Madras = Chennai, Tamil Nadu, India).

Common name : Greater yellow Bat (Eng.).

Material examined : 2♂, 1♀, Rohtas, 10, 11.xi.1997.

Measurements : External : 2♂ : Fa 60.4, 61.8; TI 61.4, 63.8; E 17.4, 18.4; Tr 7.5, 8.6; Tb 26.2, 26.7; F & cl 11.1, 11.9 1♀ Fa 63.1; TI 63.0; E 18.2; Tr 9.0; Tb 27.8; F & cl 13.4.

Distribution : Widely distributed throughout the mainland of India.

Elsewhere : Afghanistan, Bangladesh, Myanmar, Nepal, Pakistan and Sri Lanka.

Remarks : Most common. Large number of them roost in small groups in different places of less used man made structures and also in caves and crevices of rocks. A group of ten individuals were found roosting in rock crevices near Mundeswari Temple.

Order PRIMATES

Family CERCOPITHECIDAE

** 13. *Macaca mulatta mulatta* (Zimmermann)

1780. *Cercopithecus mulatta* Zimmermann, *Gesch. Mensch.*, 2 : 195 (India).

Common names : Rhesus Macaque (Eng.), Bandar (Hin.).

Distribution : From Jammu and Kashmir in the north to Andhra Pradesh in the south, and Gujarat in the west to Arunachal Pradesh in the east. Bangladesh, Bhutan, China, Myanmar and Thailand.

Remarks : Fairly common in the forested areas. Occasionally raids the orchards and vegetable gardens. Altogether 10 troops were observed. Troop size varied from 15 to 22 animals.

**** 14. *Presbytis entellus entellus* (Dufresne)**

1797. *Simia entellus* Dufresne, *Bull. Soc. Philon. Paris.*, 1(7) : 49 (Bengal).

Common names : Hanuman Langur (Eng.), Hanuman, Langur (Hin.).

Distribution : Jammu and Kashmir, Gujarat, Punjab, Haryana, Himachal Pradesh, Rajasthan, Delhi, Uttar Pradesh, Bihar, West Bengal, Orissa, Madhya Pradesh.

Elsewhere : Bangladesh.

Remarks : Fairly common in the fringe areas of the forest, regularly invading the agricultural crops and orchards. Large troops of 15-30 animals were observed at different places of Rohtas and Bhabua districts.

Order CARNIVORA
Family CANIDAE

*** 15. *Canis lupus pallipes* Sykes**

1831. *Canis pallipes* Sykes, *Proc. Zool. Soc. Lond.*, : 101 (Deccan, India).

Common names : Wolf (Eng.), Bheriya (Hin.).

Distribution : Gujarat, Rajasthan, Uttar Pradesh, Bihar, West Bengal, Assam, Orissa, Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra. Arabian peninsula, Iran and Pakistan.

Remarks : Local people reported wolf to be common in recent past and cited several examples of lifting of domestic stocks. However, during our visit we could observe a pair of wolf only once on the kaimur plateau near to Rohtas Fort. We could not find any recent record of lifting of domestic stock. It appears that its population has dwindled tremendously and now it has become rare in the sanctuary.

**** 16. *Canis aureus indicus* Hodgson**

1833. *Canis aureus indicus* Hodgson, *Asiat. Res.*, 18, 2 : 237 (Nepal).

Common names : Asiatic Jackal (Eng.), Gidar, Shial (Hin.).

Distribution : Bihar, West Bengal, Northeastern States including Tripura.

Elsewhere : Bangladesh, Bhutan, Myanmar and Thailand.

Remarks : Frequently observed singly or in pairs in the fringe areas of the forest, but more near villages and cultivated fields.

It was reported to be most common in the villages causing considerable damage of the poultry and other domestic stocks. But its population has dwindled severely due to random use of pesticides for protection of crops and killing for fur.

**** 17. *Vulpes bengalensis* (Shaw)**

1800. *Canis bengalensis* Shaw, *Genl. Zool.*, 1, 2 : 300 (Bengal).

Common names : Bengal Fox (Eng.), Lomri (Hin.).

Distribution : Practically throughout India from the Himalayan foot hills to Kanya Kumari in the south.

Elsewhere : Bangladesh, Nepal and Pakistan.

Remarks : Common in the reeds and grass jungles along the bank of rivers and canals, in the cultivated fields, but not in the deep forest. It comes out of the burrows at dusk and moves almost throughout the night in and around villages in search of food.

Local people reported that some professional hunters regularly visit the area for collection of this animal by indigenous method. Random use of pesticide has also affected the population of this animal and now a days they are wiped out from some of the villages within the sanctuary.

*** 18. *Melursus ursinus ursinus* (Shaw)**

1791. *Bradypus ursinus* Shaw, *Nat. Misc.*, 2 (Unpaged), Pls. 58-59 (Patna, Bihar, India).

Common names : Sloth Bear (Eng.), Richh, Bhalu (Hin.).

Distribution : Peninsular India to Uttar Pradesh and in the east upto Arunachal Pradesh.

Elsewhere : Bangladesh.

Remarks : Moderately common, solitary individuals were met within the forest particularly on the kaimur plateau of Adhaura range. This animal possesses some threat to the villagers. Incidence of human moulting by this animal were also reported by the villagers.

Lives in natural caves among the rocks deep inside the forests as well as near human habitation. Occasionally raid the mature crop field neighbouring the forest. Foot marks or markings of this animal was noticed throughout the forest.

Family VIVERRIDAE

**** 19. *Viverricula indica indica* (Desmarest)**

1817. *Viverra indica* Desmarest, *Nouv. Dict. Hist. Nat. Paris*, 7 : 170 (India).

Common names : Small Indian Civet (Eng.), Mashk billa, Khattus (Hin.).

Distribution : Almost throughout the mainland of India.

Elsewhere : Bangladesh, Bhutan, Pakistan and Sri Lanka.

Remarks : Very common in the sanctuary, particularly in and around human habitations and grassy or bushy areas along the rivers, canals and other water bodies. Takes shelter in various places like self made holes in the bushes, natural holes of the trees, under the rocks, as well as in the roof or false ceiling of relatively less used houses. Quite a good number of them were observed moving around villages of Adhaura and Mundeswari.

**** 20. *Paradoxurus hermaphroditus* (Pallas)**

1777. *Viverra hermaphrodita* Pallas, In Schreber, *Dic. Säugethiere*, 3 : 426 (India).

Common names : Common Palm Civet, Toddy cat (Eng.), Lakati, chingar, khattus (Hin.).

Distribution : Throughout India.

Elsewhere : Afghanistan, China, Indonesia, Malaysia, Myanmar, Pakistan and Phillipines.

Remarks : Lives in tree holes, top of palm trees and also in thatched roof of houses. Comes out of the hiding place immediately after evening and follows a particular route to the foraging ground. Causes much damage to poultry and vegetable gardens. A single animal was observed in the night moving around village at Adhaura. Its population in the sanctuary appears to be much low.

Family HERPESTIDAE

21. *Herpestes auropunctatus auropunctatus* (Hodgson)

1836. *Mangusta auropunctata* Hodgson, *J. Asiat. Soc. Beng.*, 5 : 235 (Nepal).

Common names : Small Indian Mongoose (Eng.), Neula (Hin.).

Distribution : Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, Bihar, West Bengal, North-eastern States.

Elsewhere : Bhutan and Nepal.

Remarks : Most common. Found in and around villages but not in the actual forests. Lives in colony making burrows in the bushes particularly along the canals drains, tanks, bunds, etc. Troops were observed in all the village areas. Preys mainly upon small birds, lizards, amphibians and insects. Occasionally causes damage to poultry.

This species receives protection from the villagers for its so called snake killing habit. Some of the villagers were found to keep this animal as a pet.

22. *Herpestes edwardsi nyula* (Hodgson)

1836. *Mangusta (Herpestes) nyula* Hodgson, *J. Asiat. Soc. Beng.*, 5 : 236 (Nepal).

Common names : Indian Grey Mongoose (Eng.), Neula (Hin.).

Distribution : Ranges from Gujarat to Assam including Orissa and Sikkim. Bangladesh and Nepal.

Remarks : Fairly common in the villages and in the open areas of the forests. Lives in holes or under any suitable covers. A number of animals were seen in the forested part of Adhaura and Mundeswari.

Family HYAENIDAE

23. *Hyaena hyaena hyaena* (Linnaeus)

1758. *Canis hyaena* Linnaeus. *Syst. Nat.*, 10th ed., 1 : 40 (Benna mountains. Laristan. Iran).

Common names : Striped Hyaena (Eng.), Lakar Baggha (Hin.).

Distribution : Almost throughout India in suitable habitats; the eastern limit being West Bengal.

Elsewhere : Afghanistan, Arabia, Iran, Iraq, Nepal, North Africa, Pakistan, Transcaucasia and Turkestan.

Remarks : Moderately common. Lives in the ravine grass jungle and rocky areas, but solitary animal could even be seen in the cultivated field and also in the open areas of the forest even in the day time. A single animal was seen in the forest outskirts at Adhaura during day time.

Family FELIDAE

** 24. *Felis chaus affinis* Gray

1830. *Felis affinis* Gray. *Illustr. Ind. Zool.*, 1. pl. 3 (Gangotri, Uttar Pradesh, India).

Common names : Jungle cat (Eng.), Junglee billi (Hin.).

Distribution : Himalayas from Jammu and Kashmir to North-eastern states.

Elsewhere : China and Nepal.

Remarks : Moderately common. Lives in scrub jungle, reedy and grassy banks of rivers and canals, also takes shelter in other suitable places such as deserted houses and godowns, etc. within the village. Causes much damage to poultry but there is no hunting pressure. Animals were seen on a number of occasions in several places of the sanctuary.

* 25. *Panthera pardus fusca* (Meyer)

1794. *Felis fusca* Meyer, *Zool. Ann.*, 1 : 394 (Bengal)

Common names : Indian Leopard, Panther (Eng.), Tenduwa (Hin.).

Distribution : Throughout India in suitable habitats.

Elsewhere : Bangladesh, China, Myanmar and Sri Lanka.

Remarks : Moderately common in deeper parts of the forests. Frequently visits the open areas and even villages in search of prey species. Lifting of domestic cattles has also been reported by the villagers. Pug marks and scats were seen in a number of places. However, a single animal was seen at Adhaura while it was trying to capture an young cow but failed due to sudden presence of the survey team at the spot.

According to the census carried out by the local Forest Department during 1997 the estimated number of Leopard in the sanctuary was 38 while the same was 25 during 1993 census.

* 26. *Panthera tigris tigris* (Linnaeus)

1758. *Felis tigris* Linnaeus, *Syst. Nat.*, 10th ed., 1 : 41 (Bengal).

Common names : Tiger (Eng.), Bagh (Hin.).

Distribution : Throughout India in the forested tracts.

Elsewhere : Bangladesh, Myanmar and Nepal.

Remarks : Various forests, interspersed with cane brakes, swamps and open grass lands provide an ideal habitat for the tigers.

According to census carried out by the local forest department during 1997 the estimated number of tiger in the sanctuary was 5 and the same number of tiger was found in 1993 census also. During our survey work we could not see a single tiger but could found the pug mark of 1 adult male and 1 adult female. It has been felt that tigers are gradually losing their ground in this sanctuary.

Order ARTIODACTYLA

Family SUIDAE

27. *Sus scrofa cristatus* Wagner

1939. *Sus cristatus* Wagner, *Munch. Gelehrt. Anz.*, 9 : 435 (Possibly Malabar Coast, India).

Common names : Indian Wild Boar (Eng.), Suor (Hin.).

Distribution : Throughout India, in forested tracts.

Elsewhere : Bangladesh, Indonesia, Malaysia, Myanmar, Nepal, Pakistan, Sri Lanka and Vietnam.

Remarks : Fairly common. Animals, in herds of 10 to 20, were seen in a number of places on several occasions. There is certain amount of hunting pressure during harvesting period due to its crop raiding habit.

Family CERVIDAE

28. *Muntiacus muntjak vaginalis* (Boddaert)

1785. *Cervus vaginalis* Boddaert, Elench. Anim., 1 : 136 (Bengal).

Common names : Indian Muntjac, Barking Deer (Eng.), Kakar (Hin.).

Distribution : Bihar, Uttar Pradesh, West Bengal, Assam, Arunachal Pradesh, Sikkim, Tripura, Meghalaya, Mizoram.

Elsewhere : Bangladesh, Bhutan, Myanmar, Vietnam and Yunnan.

Remarks : Rare and confined only to the forested part of the sanctuary. Its peculiar bark was heard only once at Kaimur plateau during our survey period.

29. *Axis axis axis* (Erxleben)

1777. *Cervus axis* Erxleben, *Syst. Regn. Anim.*, : 312 (Bank of Ganges, Bihar, India).

Common names : Spotted Deer (Eng.), Chital (Hin.).

Distribution : In the forested tracts from Peninsular India to Kumaon in Uttar Pradesh and Sikkim in the north, and to Meghalaya in the east.

Elsewhere : Bangladesh, Nepal and Sri Lanka.

Remarks : Common, lives in herds. Herds of 10 to 22 animals were observed in a number of occasion at different places. During harvesting period these animals often raid the cultivated fields. In the process of guarding the fields by the villagers, many of the deer are killed or injured. There is considerable amount of hunting pressure on them for their skins and antlers.

30. *Cervus unicolor niger* Blainville

1816. *Cervus niger* Blainville, *Bull. Soc. Philom Paris*, : 76 (According to Ellerman, 1951 type-locality is somewhere in north India).

Common names : Sambar (Eng., Hin.).

Distribution : Peninsular India including Goa to Himachal Pradesh in the north, West Bengal in the east.

Elsewhere : Bangladesh and Nepal.

Remarks : Moderately common in the forested part of the Sanctuary. They frequently visit the neighbouring crop fields causing considerable damage to crops. There is considerable hunting pressure for its flesh. Villagers were found moving freely inside the sanctuary with Firearms in search of different deers and other animals.

Family BOVIDAE

* 31. *Tetracerus quadricornis* (Blainville)

1816. *Cerophorus* (*Cervicapra, quadricornis* Blainville, *Bull. Soc. Philom. Paris*, : 75 (Peninsular India).

Common names : Four-Horned Antelope, Chousingha (Eng.), Chousingha, Chowka, Doda (Hin.).

Distribution : Peninsular India except Malabar coast, north to Rajasthan and northeast to Bihar and Orissa.

Remarks : Rare. Prefers woods and hilly country near water. usually seen alone or in pairs. Feeds mainly in the day on grass, leaves and wild fruits. Decline in the population is mainly due to hunting and habitat shrinkage.

32. *Boselaphus tragocamelus* (Pallas)

1766. *Antilope tragocamelus* Pallas, *Misc. Zool.*, : 5 (Plains of peninsular India).

Common names : Nilgai, Blue Bull (Eng.), Nil, Nilgai, Rojh, Rojra (Hin.).

Distribution : Peninsular India from base of Himalayas to Karnataka and certain areas of Maharashtra.

Remarks : Rare. Areas sparsely dotted with trees are the usual haunts and avoids dense forests. Feeds on leaves and fruits from early evening till late in the morning. Due to cow like appearance they are regarded as a sacred animal and there is no haunting pressure. Sometimes causes damage to the cultivated crops and farmers sentiment is involved for this creature.

33. *Gazella bennetti* (Sykes)

1831. *Antilope bennetti* Sykes, *Proc. Zool. Soc. Lond.*, 1830-31 : 104 (Deccan, India).

Common names : Indian Gazelle, Chinkara (Eng.), Chinkara, Kal Punch (Hin.).

Distribution : From Gujarat, Rajasthan to a little south of Krishna River.

Elsewhere : Pakistan.

Remarks : Shahi (1977) reported 'The (Kaimur) plateau is a sanctuary created especially to save this animal but there is considerable political pressure to get at least part of this sanctuary released. The species will vanish if this move succeeds—the plateau is this beautiful animal's last hold on life.' Gazelles were though common in the area but were subject to several threats. During 1993 and 1997 census carried out by the state Forest Department not a single animal could be sighted. As a result, for want of proper conservation steps, they have probably been exterminated from the entire area at present.

Order LAGOMORPHA
Family LEPORIDAE

34. *Lepus nigricollis ruficaudatus* Geoffroy

1826. *Lepus nigricollis* Geoffroy, *Dict. Class. Hist. Nat.*, 9 : 381 (India).

Common names : Indian Hare, Rufous-tailed Hare (Eng.), Khargosh (Hin.).

Distribution : Assam, Bihar, Madhya Pradesh, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttar Pradesh, West Bengal.

Elsewhere : Bangladesh and Nepal.

Remarks : Fairly common. In spite of tremendous hunting pressure, hazards of insecticides, habitat destruction, etc. this species is still surviving due to its small size, great tenacity under trying conditions and amazing power of concealment. A good number of hares were observed at night in several places of the sanctuary.

Order RODENTIA
Family SCIURIDAE

**** 35. *Petaurista petaurista philippensis* (Elliot)**

1839. *Pteromys philippensis* Elliot, *Madras J. Litt. Sci.*, 10 : 217 (Near Madras, Tamil Nadu, India).

Common names : Common Giant Flying Squirrel (Eng.), Ural Gilheri (Hin.).

Distribution : Northern, Western, Southern India, Bihar and West Bengal in Eastern India.

Elsewhere : Nepal.

Remarks : Fairly common. Strictly arboreal in habit and found in the deep as well as fringe areas of the forest. Lives in hollows of old trees, often within the villages. At night while moving along the forest road, this animal could easily be seen while gliding from one tree to other. Two such animals were seen in the forest of Adhaura.

36. *Funambulus pennanti* Wroughton

1905. *Funambulus pennanti* Wroughton, *J. Bombay nat. Hist. Soc.*, **16** : 411 (Mandvi Taluka, Surat, Gujarat, India).

Common names : Northern Palm Squirrel, Five-striped Squirrel (Eng.), Gilheri (Hin.).

Material examined : 1 ♀, Rhotas, 11.xi.1997.

Measurements : External : 1 ♀ : HB 143.0; TI 152.0; Hf 36.5; E 16.5.

Distribution : From Maharashtra and Madhya Pradesh to Jammu and Kashmir in the north, Meghalaya in the east, Andaman Islands.

Elsewhere : Bangladesh, Iran, Nepal and Pakistan.

Remarks : It is not a forest form but lives near villages and roadsides. Takes shelter in houses, gardens, groves and hedges and on road side trees. Causes much damage of the orchards.

Family HYSTRICIDAE

37. *Hystrix indica indica* Kerr

1792. *Hystrix cristata* var *indica* kerr, *Anim. Kingd.*, : 213 (India).

Common names : Indian crested Porcupine (Eng.), Sahi (Hin.).

Distribution : Throughout India, except Northeastern States.

Elsewhere : China, Iran, Iraq, Pakistan, Russian Turkestan, Saudi Arabia, Syria and Sri Lanka.

Remarks : Reported to be common by the villagers. Causes considerable damage to the tuberous crops. It has the habit of gnawing bones found in the jungles. We could find a number of burrows on the hill slopes of Kaimur. Quills were seen in the house of villagers and it appears that there is certain hunting pressure.

Family MURIDAE

38. *Vandeleuria Oleracea dumeticola* (Hodgson)

1845. *Mus dumeticola* Hodgson, *Ann. Mag. nat. Hist.*, **15** : 268 (Nepal).

Common name : Indian Long-tailed Tree Mouse (Eng.).

Distribution : Bihar, Uttar Pradesh, Orissa, West Bengal, Sikkim, North Eastern States.

Elsewhere : Myanmar and Nepal.

Remarks : Common in the villages and fringe areas of the forest but avoid the houses. Arboreal in habit and nests are made with leaves in the tree holes, termite mounds and similar many other places.

39. *Millardia meltada meltada* (Gray)

1837. *Golunda meltada* Gray, *Mag. N. H.*, 1 : 586 (Dharwar, Karnataka, India).

Common names : Soft-furred Field Rat, Metad (Eng.); Chuha (Hin.).

Distribution : Madhya Pradesh to Bihar in the east, and Tamil Nadu in the south.

Elsewhere : Sri Lanka.

Remarks : Moderately common. Burrows were found at several places in and around cultivated fields mainly along the bunds.

40. *Rattus rattus rufescens* (Gray)

1837. *Mus rufescens* Gray, *Ann. Mag. nat. Hist.*, 1 : 35.

Common names : House Rat (Eng.); Kala chuha (Hin.).

Material examined : 1♂, 1♀, Adhaura, 16, 17.xi.1997.

Measurements : External : Sub. ad. ♂ : HB 110; TI 156; Hf 28; E 21. 1♀ : HB 178; TI 218; Hf 32; E 23.

Distribution : Almost throughout India in major cities as well as in villages.

Elsewhere : Malaysia, Pakistan and Thailand.

Remarks : Most common in residential areas mainly in the shops and godowns. Not found in the forests. Considered as a serious pest.

41. *Rattus rattus arboreus* (Horsfield)

1851. *Mus arboreus* (Buchanan-Hamilton) Horsfield, *Cat. E. India Co. Mus.*, : 141 (Bengal).

Common names : House Rat (Eng.); Gora chuha (Hin.).

Material examined : 2♂, 2♀, Adhaura, 16.xi.1997.

Measurements : External : 2♂ : HB 140, 155; TI 167, 165; Hf 31, 31; E 20, 22. 2♀ : HB 165, 167; TI 207, 210; Hf 34, 31; E 22, 23.

Distribution : Uttar Pradesh, Bihar, Orissa, West Bengal.

Elsewhere : Nepal.

Remarks : Most common in residential areas and also moderately found in the forests. Nests were found in different places of houses and also in the trees like Mango, Ficus, Pipul, etc. Considered as a most serious pest of stored grains and poultry.

42. *Mus musculus castaneus* Waterhouse

1843. *Mus castaneus* Waterhouse, *Ann. Mag. nat. Hist.*, **12** : 134 (Phillipines).

Common names : House Mouse (Eng.); Musi, Chuhi (Hin.).

Material examined : 2♂, Adhaura, 15, 16.xi.1997.

Measurements : External : 2♂ : HB 75, 72; Tl 87, 99; Hf 16, 17; E 11,14.

Distribution : Almost throughout India.

Elsewhere : China, Malaysia, Myanmar, New Guinea, Phillipines, Sri Lanka and Thailand.

Remarks : Most common. Found in the houses, shops, godowns but not in the forest. Considered as a serious pests of house hold goods and articles of merchandise.

Distribution of this mouse is modified by human agencies.

43. *Mus booduga booduga* (Gray)

1837. *Leggada booduga* Gray, *Charlesworth's Mag. nat. Hist.*, **1** : 586 (Southern Mahratta Country, India).

Common names : Little Indian Field Mouse (Eng.); Chuhi (Hin.).

Material examined : 1♀, Adhaura, 15.xi.1997.

Measurements : External : 1♀ : HB 79; Tl 86; Hf 17; E 11.

Distribution : Almost throughout India.

Elsewhere : Bangladesh.

Remarks : Most common. Found in the cultivated fields, grannaries and grassy banks of rivers. Large number of burrows were observed in the cultivated fields. Local migration from field to the neighbouring grannaries during monsoon period and back during dry period has been reported.

Certain amount of stored grains were found in some of the burrows, still then it is not considered as a pest by the farmers.

44. *Golunda ellioti ellioti* Gray

1837. *Golunda ellioti* Gray, *Charlesworth's Mag. nat. Hist.*, **1** : 586 (Dharwar, Karnataka, India).

Common name : Indian Bush Rat (Eng.).

Distribution : Punjab, Himachal Pradesh, Uttar Pradesh, Peninsular India, Madhya Pradesh, Bihar, West Bengal, Assam.

Elsewhere : Afghanistan, Nepal, Pakistan and Sri Lanka.

Remarks : A diurnal species of rat. Found in the bushes and grassland of forests as well as villages. Feeds mainly on wild seeds and fruits. Nests are made in the bushes a little above the ground.

45. *Bandicota bengalensis bengalensis* (Gray)

1833. *Arvicola bengalensis* Gray, *Ill. Indian Zool.*, 2 : pl. 21 (Bengal).

Common names Lesser Bandicoot Rat (Eng.); Chota Ghous (Hin.).

Distribution : Almost throughout India.

Elsewhere : Bangladesh, Bhutan, Myanmar, Nepal, Pakistan and Sri Lanka.

Remarks : Most common. Found in and around cultivated fields and also in godowns, shops and granaries. A number of burrows were found in the bunds and cultivated fields where huge amount of grains were found stored. Seasonal migration from field to nearby granaries and back has been reported. Causes huge damage to field crops and stored articles.

46. *Bandicota indica nemorivaga* (Hodgson)

1836. *Mus (Rattus) nemorivagus* Hodgson, *J. Asiat. Soc. Beng.*, 5 : 234 (Nepal).

Common names : Large Bandicoot Rat (Eng.); Ghous (Hin.).

Distribution : Bihar, West Bengal, Assam, Manipur, Meghalaya, Sikkim.

Elsewhere : Bangladesh, Formosa, Nepal and Thailand.

Remarks : Common. Mainly found in the banks of canals, ponds and any other marshy areas of villages and forests. It often visits the houses and granaries. Omnivorous in food habit. Readily goes to the water in search of fish, molluscs, crabs, etc.

47. *Nesokia indica indica* (Gray)

1832. *Arvicola indica* Gray, *Ill. Indian Zool.*, pl. 11. (India).

Common name : Short-tailed 'Mole Rat' (Eng.).

Distribution : Punjab, Haryana, Himachal Pradesh, Rajasthan, Uttar Pradesh, Bihar, West Bengal.

Elsewhere : Afghanistan, Bangladesh, Iran and Pakistan.

Remarks : Fossorial in habit. Makes extensive tunnels and spends most of the time under the ground by covering the opening of the burrow with piles of earth. Prefers to live in the forested tracts nearer to the cultivated fields. During the survey, not a single specimen could be seen or trapped, but a burrow system at the base of a Mango tree near a nullah at Adhaura was noticed. Appears not to be common in the area.

48. *Tatera indica indica* (Hardwicke)

1807. *Dipus indicus* Hardwicke. *Trans. Linn. Soc. London*, 2 : 144, pl. 26 (Between Varanasi and Hardwar. Uttar Pradesh. India).

Common names : Indian Antelope-Rat (Eng.); Harna Musa, Gora Chuha, Safed Chuha (Hin.).

Material examined 1♂, Rohtas, 10.xi.1997.

Measurements : External : 1♂ HB 160; TI 170; Hf 39; E 22.

Distribution : Jammu and Kashmir in the north to Karnataka in the south and West Bengal in the east.

Elsewhere : Afghanistan, Iran, Nepal and Pakistan.

Remarks : Very common. Found in and around the bushes of relatively dry agricultural fields nearer to forest but not in the deep forest. Occasionally visits the poultry and granaries.

Class AVES

Order PELECANIFORMES

Family PHALACROCORACIDAE

1. *Phalacrocorax niger* (Vieillot)

1817. *Hydrocorax niger* Vieillot, *Nouv. Dict. Hist. Nat.*, 8 : 88 (East India = Bengal).

Common names : Little cormorant (Eng.); Pan Kowwa, Jograbi (Hin.).

Remarks : Common. Found throughout the sanctuary near water sources.

2. *Ardeola grayii grayii* (Sykes)

1832. *Ardesa grayii* Sykes, *Proc. Zool. Soc. Lond.*, : 158 (Dukhun).

Common names : Indian Pond Heron, Paddy bird (Eng.); Bagla (Hin.).

Remarks : Common. Found throughout the sanctuary near water bodies.

Order CICONIFORMES

Family ARDEIDAE

3. *Bubulcus ibis coromandus* (Boddaert)

1783. *Cancroma coromanda* Boddaert, *Table Plenum.*, : 54 (Coromandel).

Common names : Cattle Egret (Eng.); Gai bagla (Hin.).

Remarks : Fairly common. Found throughout the sanctuary and usually found moving with grazing village cattle in paddy fields.

4. *Ardea alba modesta* J. E. Gray

1831. *Ardea modesta* J. E. Gary, *Zool. Misc.*, : 19 (India).

Common names : Eastern Large Egret (Eng.); Tar Bagla, Bada Bagla (Hin.).

Remarks : Common. Found in the paddy fields and water bodies throughout the sanctuary.

5. *Ixobrychus cinnamomeus* (Gmelin)

1789. *Ardea cinnamomea* Gmelin, *Syst. Nat.*, 1(2) : 643 (China).

Common names : Chestnut Bittern (Eng.); Lal bagla (Hin.).

Remarks : Not common. Seen only once near irrigation canal at Adhaura.

Family CICONIIDAE

6. *Anastomus oscitans* (Boddaert)

1783. *Ardea oscitans* Boddaert, *Table Plenum.*, : 55 (Pondicherry).

Common names : Openbill Stork (Eng.); Gungla, Ghungil, Ghonghila (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in cultivated fields. Apart from local shifts, performs regular migratory movement being directly influenced by water conditions.

Order FALCONIFORMES

Family ACCIPITRIDAE

7. *Milvus migrans govinda* Sykes

1832. *Milvus govinda* Sykes, *Proc. Zool. Soc. Lond.*, : 81 (Dukhun).

Common names : Periah kite (Eng.); Cheel (Hin.).

Remarks : Moderately common. Found throughout the sanctuary near villages and human habitations.

8. *Gyps indicus indicus* (Scopoli)

1786. *Vultur indicus* Scopoli, *Del. Faun. et. flor. Insubr.*, 2 : 85 (India).

Common names : Indian Long-billed Vulture (Eng.); Gidh (Hin.).

Remarks : Moderately common. Found throughout the sanctuary on outskirts of villages.

9. *Gyps bengalensis* (Gmelin)

1788. *Vultur bengalensis* Gmelin, *Syst. Nat.*, 1(1) : 245 (Bengal).

Common names : Indian White-backed Vulture (Eng.); Gidh (Hin.).

Remarks : Moderately common. Five individuals were found roosting on a tree near villages at Mundeswari.

10. *Circaetus gallicus gallicus* (Gmelin)

1788. *Falco gallicus* Gmelin. *Syst. Nat.*, 1(1) : 259 (France).

Common names : Short-toed Eagle (Eng.); Saapmaar (Hin.).

Remarks : Not common. A single specimen was seen deep inside the forest at Kaimur Plateau.

Family FALCONIDAE

* 11. *Falco biarmicus jugger* J. E. Gray

1834. *Falco jugger* J. E. Gray, in *Hardwicke's Ill. Ind. Zool.*, 2 : pl. 26 (India).

Common names : Laggar Falcon (Eng.); Laggar, Jaggar (Hin.).

Remarks : Not common. Only a single specimen was seen resting on a tree branch inside forest at Adhaura.

Order GALLIFORMES

Family PHASIANIDAE

12. *Francolinus pondicerianus interpositus* Hartart

1917. *Francolinus pondicerianus interpositus* Hartart, *Novit. Zool.*, 24 : 288 (Oudh).

Common names : North Indian Grey Partridge (Eng.); Teetar, Ran teetar, Safeed teetar, Gora teetar (Hin.).

Remarks : Fairly common. A number of specimens were seen inside forests at Adhaura and also on way to Bhagwanpur from Adhaura.

13. *Coturnix coturnix coturnix* (Linnaeus)

1758. *Tetrao coturnix* Linnaeus, *Syst. Nat.* 10th ed., 1 : 161 (Sweden).

Common names Grey Quail (Eng.); Bater, Bada bater, Ghagus bater (Hin.).

Remarks : Fairly common. A number of specimens were seen inside forest at Adhaura and on the hill slopes of Mundeswari temple.

14. *Gallus gallus murghi* Robinson & Kloss

1920. *Gallus ferrugineus murghi* Robinson & Kloss, *Rec. Ind. Mus.*, 19 : 14, 15 (Chirala, Gaya district, Bihar).

Common names Indian Red Junglefowl (Eng.); Jangli Murgha, Ban Murgha, Lal Murgha ♂, Jungli Murghi, Ban Murghi ♀ (Hin.).

Remarks : Moderately common throughout the forests of the Sanctuary.

* 15. *Pavo cristatus* Linnaeus

1758. *Pavo cristata* Linnaeus. *Syst. Nat.*, 10th ed., 1 : 156 (India).

Common names : Indian Peafowl (Eng.); Mor, Manjur, Mayura (Hin.).

Remarks : Not common. Neither a single specimen could be seen nor even its call could be heard throughout the survey period.

Order GRUIFORMES

Family TURNICIDAE

16. *Turnix sylvatica dussumier* (Temminck)

1828. *Hemipodius dussumier* Temminck, *Pl. col. livr.*, 76 : pl 454, f. 2 (Bengal).

Common names : Little Bustard-Quail (Eng.); Ginwa lowwa, Chhota lowwa, Dabki (Hin.).

Remarks : Rare. A pair was seen in a scrub jungle bordering cultivation at Rohtas.

Family RALLIDAE

17. *Gallinula chloropus indica* Blyth

1842. *Gallinula chloropus?* Var *indicus* Blyth. *J. Asiat. Soc. Beng.*, 11 : 887 (Calcutta).

Common names : Indian Moorhen (Eng.); Jal Murghi, Pani Murghi (Hin.).

Remarks : Moderately common. Shifts locally with water conditions. Specimens were seen in water bodies at Rohtas and Adhaura.

18. *Porphyrio porphyrio poliocephalus* (Latham)

1801. *Gallinula poliocephala* Latham, *Index. Orn., Suppl.* : 68 (India).

Common names : Indian Purple Moorhen (Eng.); Kaim, Kalim, Kharim, Khima (Hin.).

Remarks : Less common. Two specimens were seen in the water bodies at Rohtas and one specimen at Adhaura.

19. *Fulica atra atra* Linnaeus

1758. *Fulica atra* Linnaeus, *Syst. Nat.* 10th ed., 1 : 152 (Sweden).

Common names : Coot (Eng.); Dasari, Dasarni, Aari, Thekari, Khuskul (Hin.).

Remarks : Rare. Only a single specimen was seen near a water body at Rohtas.

Order CHARADRIIFORMES

Family JACANIDAE

20. *Metopidius indicus* (Latham)

1790. *Parra indica* Latham, *Index Orn.*, 2 : 765 (India).

Common names : Bronzewinged Jacana (Eng.); Pipi, Kundai (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary near water bodies.

Family CHARADRIIDAE

21. *Vanellus indicus indicus* (Boddaert)

1783. *Tringa indica* Boddaert, *Table Pl. enlum.*, : 150 (Goa).

Common names : Red-wattled Lapwing (Eng.); Titeeri, Titai, Titi, Titori (Hin.).

Remarks : Fairly common. Found throughout the Sanctuary in open fields and cultivated lands.

22. *Vanellus malabaricus* (Boddaert)

1783. *Charadrius malabaricus* Boddaert, *Table Pl. enlum.*, : 53 (Malabar Coast).

Common names : Yellow-wattled Lapwing (Eng.); Zirdi (Hin.).

Remarks : Rare. A single specimen was seen in a cultivated field at Adhaura.

23. *Tringa glareola* Linnaeus

1758. *Tringa glareola* Linnaeus. *Syst. Nat.*, 10th ed., 1 : 149 (Sweden).

Common names : Spotted Sandpiper (Eng.); Chupka, Chobaha, Titvari (Hin.).

Remarks : Rare. Winter visitor. A pair was seen near water bodies at Adhaura.

Order COLUMBIFORMES

Family COLUMBIDAE

24. *Treron phoenicoptera phoenicoptera* (Latham)

1790. *Columba phoenicoptera* Latham, *Index Orn.*, 2 : 597 (India).

Common names : Bengal Green Pigeon (Eng.); Harial (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary.

25. *Streptopelia tranquebarica tranquebarica* (Hermann)

1804. *Columba tranquebarica* Hermann. *Obs. Zool.*, : 200 (Tranquebaro. India).

Common names : Indian Red Turtle-Dove (Eng.); Seroti fakhta, Girwi fakhta, Biki, Itooa (Hin.).

Remarks : Fairly common. Found throughout the Sanctuary in forest patches and near villages.

26. *Streptopelia decaocto decaocto* (Frisvaldszky)

1838. *Columba risoria* Linn. var. *decaocto* Frivaldszky, *K. Magyar Tudos Tarsasag Evkonyvi*, 3 : 183. pl. 8 (Turkey).

Common names : Indian Ring Dove (Eng.); Dhor fakhta, Parki, Gugi, Panduk (Hin.).

Remarks : Very common. Found throughout the Sanctuary in forests and villages.

27. *Streptopelia chinensis suratensis* (Gmelin)

1789. *Columba suratensis* Gmelin, *syst. Nat.*, 1(2) : 778 (Surat, Gulf of Canbay, India).

Common names : Indian Spotted Dove (Eng.); Chitroka fakhta, chitta fakhata, Parki, Chitta, Panduk (Hin.).

Remarks : Very common. Found throughout the Sanctuary in forests and nearby villages.

Order PSITTACIFORMES
Family PSITTACIDAE

28. *Psittacula eupatria* (Linnaeus)

1766. *Psittacus eupatria* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 140 (No locality).

Common names : Large Indian Parakeet, Alexandrine Parakeet (Eng.); Rai tota, HIRAMAN tota (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary in different habitats.

29. *Psittacula krameri manillensis* (P. L. S. Müller)

1776. *Psittacus fasciatus* P. L. S. Muller, *Natursyst.*, Suppl. : 74 (Pondicherry).

Common names : Roseringed Parakeet (Eng.); Tota, Lybar tota (Hin.).

Remarks : Very common. Found throughout the Sanctuary in forest patches and nearby villages.

30. *Psittacula cyanocephala* (Linnaeus)

1766. *Psittacus cyanocephalus* Linnaeus, *Syst. Nat.*, 12th ed., 1 : 141 (Madras).

Common names : Blossomheaded Parakeet (Eng.); Tuiya tota (Hin.).

Remarks : Less common. Found throughout the Sanctuary.

Order CUCULIFORMES
Family CUCULIDAE

31. *Clamator jacobinus serratus* (Sparrman)

1786. *Cuculus seratus* sparrman. *Mus. carls.*, fasc. 1, no. 3 and pl. (S. Africa).

Common names : Pied crested cuckoo (Eng.); Papiya, Kala Papiya, Chatak (Hin.).

Remarks : Rare. A single specimen was seen throughout the survey period deep inside forest at Adhaura.

32. *Cuculus varius varius* Vahl

1797. *Cuculus varius* Vahl, *Skriv. Naturhist. Selsk. Kiobenhavn.*, 4(1) : 60 (Tranquebar).

Common names : Common Hawk-Cuckoo, Brainfever Bird (Eng.); Kapak, Upak, Papiya (Hin.).

Remarks : Less common. Found throughout the Sanctuary.

33. *Cuculus micropterus micropterus* Gould

1837. *Cuculus micropterus* Gould, *Proc. zool. Soc. Lond.*, : 137 (Himalayas).

Common names Indian Cuckoo (Eng.); Kyphal pakka (Hin.).

Remarks : Less common. Four specimens could be seen at Adhaura. Easily located by its loud call.

34. *Eudynamys scolopacea* (Linnaeus)

1758. *Cuculus scolopaceus* Linnaeus, *Syst. Nat.* 10th ed., 1 : 111 (Malabar).

Common names : Indian Koel (Eng.); Koel (Hin.).

Remarks : Common. Found throughout the Sanctuary.

35. *Rhopodytes viridirostris* (Jerdon)

1840. *Zanclostomus viridirostris* Jerdon, *Madras Jour. Lit. Sci.*, 11 : 223. (bottom of the Coonoor Pass).

Common names : Small Greenbilled Malkoha (Eng.); Kappra, Popiya (Hin.).

Remarks : Less common. Found only in deep forest.

36. *Taccocoa leschenaultii sirkee* (J. E. Gray)

1831. *Centropus sirkee* J. E. Gray. In Hardwicke's *Ill. Ind. Zool.*, 1(6). pl. 28 (No locality = Cawnpore).

Common names : Sirkeer Cuckoo (Eng.); Fangli tota (Hin.).

Remarks Less common. Only two specimens were seen inside forest at Adhaura.

37. *Centropus sinensis* (Stephens)

1815. *Polophilus sinensis* Stephens, In Shaw's *Gen. Zool.*, 9(1) : 51 (China).

Common names : Crow-pheasant, Coucal (Eng.); Mahoka (Hin.).

Remarks : Fairly common. Found throughout the Sanctuary in different habitats.

Order STRIGIFORMES

Family STRIGIDAE

38. *Otus bakkamoena* Pennant

1769. *Otus bakkamoena* Pennant, *Ind. Zool.*, 3, pl. 3 (Sri Lanka).

Common names : Collared Scops Owl (Eng.); Tharkavi Choghad (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary.

3 *Otus scops sunia* (Hodgson)

1836. *Scops sunia* Hodgson, *Asiat. Res.*, 19 : 175 (Nepal)

Common name : Scops Owl (Eng.).

Remarks : Uncommon. A single specimen was seen inside forest patches at Adhaura.

40. *Glaucidium radiatum* (Tickell)

1833. *Strix radiata* Tickell, *J. Asiat. Soc. Beng.*, 2 : 572 (Borabhum and Dholbhum).

Common names : Barred Jungle Owlet (Eng.); Jungli choghad (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary.

Order CAPRIMULGIFORMES

Family CAPRIMULGIDAE

41. *Caprimulgus indicus* Latham

1790. *Caprimulgus indicus* Latham, *Index Orn.*, 2 : 588 (India).

Common names : Indian Jungle Nightjar (Eng.); Chhippak, Chhappa, Dabchiri, Dabnak (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary.

Order APODIFORMES

Family APODIDAE

42. *Apus affinis affinis* (J. E. Gray)

1830. *Cypselus affinis* J. E. Gray, in Gray and Hardwicke's *Ill. Ind. Zool.*, 1(2), pl. 35, f. 2 (Ganges).

Common names : Indian House Swift (Eng.); Ababell, Babeela (Hin.).

Remarks : Moderately common. Found throughout the Sanctuary near villages.

43. *Cypsiurus parvus batasiensis* (J. E. Gray)

1829. *Cyp (Selus) batasiensis [Sic]* J. E. Gray, in *Griffith's Anim. kingdom*, 7 : 60 (India).

Common names : Indian Palm Swift (Eng.); Tadi abadeel, Talchatta, Patta deuli (Hin.).

Remarks : Less common. Found throughout the Sanctuary.

Order CORACIIFORMES
Family ALCEDINIDAE

44. *Ceryle rudis leucomelanura* Reichenbach

1851. *Ceryle leucomelanura* Reichenbach, *Handb. spec. Orn.*, : 21, pl. ccix, b, f 3488 (Ceylon).

Common names : Indian Pied Kingfisher (Eng.); Machhi Baag, Koryala, Kilkila (Hin.).

Remarks : Rare. A single specimen was seen near a village pond at Bhagwanpur.

45. *Halcyon smyrnensis* (Linnaeus)

1758. *Alcedo smyrnensis* Linnaeus, *Syst. Nat.*, ed. 10. 1 : 116 (Asia).

Common names : White breasted Kingfisher (Eng.); Kilkila, Kourilla (Hin.).

Remarks : Fairly common. Found throughout the Sanctuary near water bodies and village ponds.

46. *Alcedo atthis pallasii* Reichenbach

1851. *Alcedo pallasii* Reichenbach, *Handb. Spec. Orn.*, : 3, pl. cccxcii, figs, 3043-6 (Siberia).

Common names : Small Blue Kingfisher (Eng.); Chhota kilkila, Nita or Naka machhralaa (Hin.).

Remarks : Not common. Partly resident and partly migratory. A single specimen was seen near a village pond at Rohtas.

Family MEROPODIDAE

47. *Merops philippinus* Linnaeus

1766. *Merops philippinus* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 183 (Phillipine Islands).

Common names : Bluetailed Bee-eater (Eng.); Bada Patringa (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

48. *Merops orientalis* Latham

1801. *Merops orientalis* Latham, *Index Orn., Suppl.*, : xxxiii (India).

Common names : Small Green Bee-eater (Eng.); Patringa, Harrial (Hin.).

Remarks : Less common. Found throughout the Sanctuary.

Family CORACIIDAE

49. *Coracius benghalensis benghalensis* (Linnaeus)

1758. *Corvus benghalensis* Linnaeus. *Syst. Nat.*, ed. 10, 1 : 106 (Madras).

Common names : Indian Roller, Blue Jay (Eng.); Nilkant, Sabzak (Hin.).

Remarks : Common. Found throughout the Sanctuary.

Family UPUPIDAE

50. *Upupa epops* Linnaeus

1758. *Upupa epops* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 117 (Sweden).

Common names : Hoopoe (Eng.); Hudhud (Hin.).

Remarks : Not common. Found throughout the Sanctuary in deciduous forest biotope, nearby cultivated fields and villages.

Family BUCEROTIDAE

51. *Anthracoceros coronatus* (Boddaert)

1783. *Buceros coronatus* Boddaert. *Table pl. enlum.*, : 53 (Malabar).

Common names : Malabar Pied Hornbill (Eng.); Dhan Chiri (Hin.).

Remarks : Less common. Found throughout the Sanctuary in forests and around villages.

Order PICIFORMES

Family CAPITONIDAE

52. *Megalaima zeylanica caniceps* (Franklin)

1831. *Bucco caniceps* Franklin. *Proc. Zool. Soc. Lond.*, 1 : 121 (India).

Common names : Large Green Barbet (Eng.); Bada basanta (Hin.).

Remarks : Common. Found throughout the sanctuary.

53. *Megalaima viridis* (Boddaert)

1783. *Bucco viridis* Boddaert, *Table pl. enlum.*, : 53 (India).

Common names : Small Green Barbet (Eng.); Chhota Basantha (Hin.).

Remarks : Less common. Found throughout the sanctuary.

54. *Megalaima haemacephala indica* (Latham)

1788. *Bucco indicus* Latham, *Index Orn.*, 1(1) : 205 (India).

Common names : Crimson-breasted Barbet, Coppersmith (Eng.); Katphora, Basanth Lisora, Tambayat (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

Family PICIDAE

55. *Dinopium benghalense* (Linnaeus)

1758. *Picus benghalensis* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 113 (Benghala = Chandannagore, Hugli, W. B.).

Common names : Goldenbacked Woodpecker (Eng.); Katphora (Hin.).

Remarks : Fairly common. Found throughout the sanctuary in forests as well as in nearby villages.

56. *Picoides mahrattensis* (Latham)

1801. *Picus mahrattensis* Latham, *Index orn., Suppl.*, f. xxxi (India).

Common names : Yellow fronted Pied Woodpecker, Mahratta Woodpecker (Eng.); Katphora (Hin.).

Remarks : Less common. Found throughout the sanctuary in forests as well as in nearby villages.

Order PASSERIFORMES

Family PITTIDAE

57. *Pitta brachyura* (Linnaeus)

1766. *Corvus brachyurus* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 158 (Ceylon).

Common names : Indian Pitta (Eng.); Naorang (Hin.).

Remarks : Less common. Found throughout the sanctuary in forests.

Family ALAUDIDAE

58. *Mirafra javanica cantillans* Blyth

1844. *Mirafra cantillans* Blyth, *J. Asiat. Soc. Beng.*, 13 : 960 (Bengal).

Common names : Singing Bush Lark (Eng.); Agan, Agin (Hin.).

Remarks : Moderately common. Found throughout the sanctuary, singly or in pairs, running on the ground, picking seeds and insects.

59. *Mirafra assamica assamica* Horsfield

1839. *Mirafra assamica* Horsfield, *Proc. Zool. Soc. Lond.*, : 162 (Assam).

Common names : Bengal Bush Lark (Eng.); Aggia, Aggin (Hin.).

Remarks : Not common. A pair was only seen feeding on ground near cultivated field at Adhaura.

60. *Mirafra erythroptera erythroptera* Blyth

1845. *Mirafra erythroptera* Blyth, *J. Asiat. Soc. Beng.*, 13 : 958 (Northern Deccan).

Common names : Redwinged Bush Lark (Eng.); Aggia, (Hin.).

Remarks : Less common. Found throughout the reserve in bushes and open grounds.

61. *Eremopterix grisea* (Scopoli)

1845. *Alauda grisea* Scopoli, *Del. Flor. et. Faun. Insubr.*, 2 : 95 (India).

Common names : Ashycrowned Finch-Lark (Eng.); Diyora, Duri, Deoli, Dabak chiri, Fothauli (Hin.).

Remarks : Common. Found throughout the sanctuary squatting and feeding on dusty cart-tracks.

62. *Ammomanes phoenicurus* (Franklin)

1831. *Mirafra phoenicura* Franklin, *Proc. Zool. Soc. Lond.*, : 119 (Between Calcutta and Benaras).

Common names : Indian Rufoustailed Finch-Lark (Eng.); Aggia, Retal (Hin.).

Remarks : Moderately common. Found throughout the sanctuary near cultivated fields and open lands.

63. *Alauda gulgula inconspicua* Severtzov

1873. *Alauda inconspicua* Severtzov, *Vertik. Turkest. Zhivotu.*, : 142 (Turkestan).

Common names : Small Sky Lark (Eng.); Bharat, Chandul (Hin.).

Remarks : Rare. A single specimen was seen near cultivated land bordering forest at Adhaura.

Family HIRUDINIDAE

64. *Hirundo concolor* Sykes

1833. *Hirundo concolor* Sykes, *Proc. zool. Soc. Lond.*, : 33 (Dhukhun).

Common names : Dusky Crag Martin (Eng.); Chatan ababil (Hin.).

Remarks : Less common. Found throughout the sanctuary near human habitations.

Family LANIDAE

65. *Lanius vittatus* Valenciennes

1826. *Lanius vittatus* Valenciennes, *Dict. Sci. Nat. ed. Levrault*, 40 : 227 (Pondicherry).

Common names : Indian Baybacked Shrike (Eng.); Pachanak (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

66. *Lanius schach erythronotus* (Vigors)

1831. *Collurio erythronotus* Vigors, *Proc. zool. Soc. Lond.*, : 42 (Himalayas).

Common names : Rufousbacked Shrike (Eng.); Mattiya latora, Kajala latora (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

67. *Lanius cristatus* Linnaeus

1758. *Lanius cristatus* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 93 (Benghala = Bengal).

Common names : Brown Shrike (Eng.); Kerkheta (Hin.).

Remarks : Less common. Found throughout the sanctuary.

Family ORIOLIDAE

68. *Oriolus oriolus Kundoo* Sykes

1832. *Oriolus kundoo* Sykes, *Proc. zool. Soc., Lond.*, : 87 (Dukhun).

Common names : Indian Golden Oriole (Eng.); Peelak (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

69. *Oriolus xanthornus* (Linnaeus)

1758. *Coracias xanthornus* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 108 (Bengal).

Common names : Indian Blackheaded Oriole (Eng.); Peelak, Zardak (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

Family DICRURIDAE

70. *Dicrurus hottentottus* (Linnaeus)

1766. *Corvus hottentottus* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 155.

Common names : Haircrested Drongo (Eng.); Bhujanga, Buchanga, Kotwal, Kalkalachi (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

71. *Dicrurus caerulescens* (Linnaeus)

1758. *Lanius caerulescens* Linnaeus, *Syst. Nat.* ed. 10, 1 : 95 (Benghala = Bengal).

Common names : Whitebellied Drongo (Eng.); Pahari buchanga, Dhapri (Hin.).

Remarks : Common. Found throughout the sanctuary.

72. *Dicrurus paradiseus* (Linnaeus)

1766. *Cuculus paradiseus* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 172.

Common names : Greater Racket-tailed Drongo (Eng.); Bhimraj, Bhringraj (Hin.).

Remarks : Not common. Found throughout the sanctuary in forest patches.

Family STURNIDAE

73. *Sturnus malabaricus* (Gmelin)

1789. *Turdus malabaricus* Gmelin, *Syst. Nat.*, 1 : 816 (Malabar Coast).

Common names : Greyheaded Myna (Eng.); Pawei (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

74. *Sturnus Pagodarum* (Gmelin)

1789. *Turdus pagodarum* Gmelin, *Syst. Nat.*, 1 : 816 (Malabar).

Common names : Blackheaded or Brahminy Myna (Eng.); Popoya Myna, Kalasir Myna, Puhai (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

75. *Sturnus Contra* Linnaeus

1758. *Sturnus contra* Linnaeus. *Syst. Nat.*, ed. 10, 1 : 167 (India).

Common names : Indian Pied Myna (Eng.); Ablak or Ablaki Myna (Hin.).

Remarks : Very common. Found throughout the sanctuary.

76. *Acridotheres tristis* (Linnaeus)

1766. *Paradisea tristis* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 167 (Phillipines).

Common names : Indian Myna (Eng.); Desi Myna (Hin.).

Remarks : Very common. Found throughout the sanctuary.

77. *Acridotheres fuscus* (Wagler)

1827. *Pastor fuscus* Wagler. *Syst. Av. Pastor* sp. 6 (India).

Common names : Jungle Myna (Eng.); Pahari Myna, Jungli Myna (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

Family CORVIDAE

78. *Dendrocitta vagabunda* (Latham)

1790. *Coracius vagabunda* Latham, *Index Orn.*, 1 : 171 (India).

Common names : Indian Tree Pie (Eng.); Mahalat (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

79. *Corvus splendens* Vieillot

1817. *Corvus splendens* Vieillot, *Nouv. Dict. d' Hist. Nat.*, **8** : 44 (Bengal).

Common names : Indian House Crow (Eng.); Kowwa, Desi Kowwa (Hin.).

Remarks : Very common. Found throughout the sanctuary near human habitation.

80. *Corvus macrorhynchos culminatus* (Sykes)

1832. *Corvus culminatus* Sykes, *Proc. zool. Soc. Lond.*, : 96 (Dukhum).

Common names : Indian Jungle Crow (Eng.); Kala Kowwa, Jangli Kowwa (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

Family CAMPEPHAGIDAE**81. *Coracina melanoptera sykesi* (Strickland)**

1844. *Lalage sykesi* Strickland, *Ann. Mag. nat. Hist.*, **13** : 36 (Calcutta).

Common names : Blackheaded Cuckoo-Shrike (Eng.); Jungli Kesya (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

82. *Pericrocotus cinnamomeus peregrinus* (Linnaeus)

1766. *Parus peregrinus* Linnaeus, *Syst. Nat.*, ed. 12, **1** : 342 (Punjab).

Common names : Northern Small Minivet (Eng.); Bulalchashm, Rajalal, Rajelal (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

Family IRENIDAE**83. *Aegithina tiphia* (Linnaeus)**

1758. *Motacilla tiphia* Linnaeus, *Syst. Nat.*, ed. 10, **1** : 186 (Bengal).

Common names : Common Iora (Eng.); Shaubeega, Shaubeegi (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

84. *Choropsis aurifrons* (Temminck)

1829. *Phyllornis aurifrons* Temminck, *pl. col. D' Ois*, libr. 81 pl. 484 (Cachar).

Common names : Gold fronted Chloropsis (Eng.); Harewa, Sabz Harewa (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

Family PYCNONOTIDAE

85. *Pycnonotus melanicterus flaviventris* (Tickell)

1833. *Vanga flaviventris* Tickell, *J. Asiat. Soc. Beng.*, 2 : 573 (Dholbhum).

Common names : Blackcrested yellow Bulbul (Eng.); Zard Bulbul (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in forest biotope.

86. *Pycnonotus jocosus pyrrhotis* (Bonaparte)

1850. *Ixos pyrrhotis* 'Hodgs' = Bonaparte, *Consp. Gen. Av.*, 1 : 265 (Nepal).

Common names : Red whiskered Bulbul (Eng.); Kamera Bulbul, Pahari Bulbul (Hin.).

Remarks : Very common. Found throughout the sanctuary.

87. *Pycnonotus cafer bengalensis* Blyth

1845. *Pycnonotus bengalensis* Blyth, *J. Asiat. Soc. Beng.*, 14 : 566 (Bengal).

Common names : Redvented Bulbul (Eng.); Kala Bulbul, Bulbuli (Hin.).

Remarks : Very common. Found throughout the sanctuary.

Family MUSCICAPIDAE

88. *Pellornum ruficeps* Swainson

1832. *Pellornum ruficeps* Swainson, *Fauna Boreali Americana*, : 487 (India).

Common name : Spotted Babbler (Eng.).

Remarks : Moderately common. Found throughout the sanctuary.

89. *Chrysomma sinense* (Gmelin)

1789. *Parus sinensis* Gmelin, *Syst. Nat.*, 1 : 1012 (China).

Common names : Yellow-eyed Babbler (Eng.); Gulab Chashm, Bulal Chashm (Hin.).

Remarks : Less common. Found throughout the sanctuary.

90. *Dumetia hyperythra* (Franklin)

1831. *Timalia hyperythra* Gmelin, *Proc. zool Soc. Lond.*, : 118 (Ganges near Varanasi).

Common name : Rufousbellied Babbler (Eng.).

Remarks : Uncommon. Two specimens were seen inside forest at Adhaura.

91. *Turdoides caudatus* (Dumount)

1823. *Cossyphus caudatus* Dumount, *Dict. Sci. nat.*, 29 : 268 (India).

Common names : Common Babbler (Eng.); Chilchil, Ddumri (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

92. *Turdoides striatus* (Dumount)

1823. *Cossyphus striatus* Dumount, *Dict. Sci. nat.*, 29 : 268 (Bengal).

Common names : Jungle Babbler (Eng.); Satbhai, Pengya Myna (Hin.).

Remarks : Common. Found throughout the sanctuary.

93. *Alcippe poioicephala* (Jerdon)

1390. *Timalia (sci) poioicephala* Jerdon, *Madras Jour. Lit. Soc.*, 13 : 169 (Coonoor Ghat, Nilgiris).

Common name : Quaker Babbler (Eng.).

Remarks : Uncommon. Only two specimens were seen inside forest at Kaimur plateau.

94. *Muscicapa thalassina* Swainson

1838. *Muscicapa thalassina* Swainson, *Nat. Library, Flycatchers*, 21 : 252 (India).

Common names : Verditer Flycatcher (Eng.); Turra (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in forest biotope only.

95. *Rhipidura aureola* Lesson

1830. *Rhipidura aureola* Lesson, *Traite d'orn.*, : 290 (Bengal).

Common names : Whitebrowed Fantail Flycatcher (Eng.); Machharya, Nachan, Chakdil (Hin.).

Remarks : Uncommon. Throughout the survey period only four specimens could be observed in forest bushes.

96. *Cistiola juncidis cursitans* (Franklin)

1831. *Prinia cursitans* Franklin, *Proc. zool. Soc. Lond.*, : 118 (between Calcutta and Benaras).

Common names : Streaked Fantail Flycatcher (Eng.); Ghaski-phutki, Ghaski-pitpisi (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in forest patches.

97. *Prinia hodgsonii* Blyth

1844. *Prinia hodgsonii* Blyth, *J. Asiat. Soc. Beng.*, 13 : 376 (Mirzapur district, U.P.).

Common names : Franklin's Wren-Warbler (Eng.); Putki (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in forest patches.

98. *Prinia sylvatica* Jerdon

1840. *Prinia sylvatica* Jerdon, *Madras Jour. Lit. Sci.*, 11 : 4 (Nilgiris).

Common names : Jungle Wren-Warbler (Eng.); Tot-rungi (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in forest bushes.

99. *Orthotomus sutorius patia* Hodgson

1845. *Orthotomus patia* Hodgson, *Proc. zool. Soc. Lond.*, : 29 (Nepal).

Common names : Tailor Bird (Eng.); Darzee, Pididi (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

100. *Phylloscopus collybita tristis* Blyth

1843. *P. (hylloscopus) tristis* Blyth, *J. Asiat. Soc. Beng.*, 12 : 966 (Calcutta).

Common name : Brown Leaf Warbler, Chiffchaff (Eng.).

Remarks : Uncommon. Winter visitor. A few specimens could be seen in forest bushes.

101. *Erithacus calliope* (Pallas)

1776. *Motacilla calliope* Pallas. *Reise Russ. Reichs.*, 3 : 697 (Yenesei).

Common names : Rubythroat (Eng.); Gangula (Hin.).

Remarks : Uncommon. Winter visitor. Two specimens were seen in forest bushes at Rohtas.

102. *Copsychus saularis* (Linnaeus)

1758. *Gracula saularis* Linnaeus, *Syst. Nat.*, 1 : 109 (Bengal).

Common names : Magpie-Robin, Dayal Thrush (Eng.); Dhaiyal, Dhaiyar (Hin.).

Remarks : Common. Found throughout the sanctuary.

103. *Copsychus malabaricus* (Scopoli)

1786. *Muscicapa malabarica* Scopoli, *Del. Flor. et. Faun. Insubr.*, 2 : 96 (Malabar).

Common names : Indian Shama (Eng.); Shama (Hin.).

Remarks : Moderately common. Found throughout the sanctuary in forest patches away from human habitation.

104. *Phoenicurus ochruros rufiventris* (Vieillot)

1818. *Oenanthe rufiventris* Vieillot, *Nouv. Dict. d'hist. Nat.*, nouv. ed., 21 : 431 (Tibet).

Common names : Black Redstart (Eng.); Thirthira, Thirthir-kampa (Hin.).

Remarks : Uncommon. Summer visitor. A single specimen was seen in forest bushes at Adhaura.

105. *Cercomela fusca* (Blyth)

1851. *Saxicola fusca* Blyth, *J. Asiat. Soc. Beng.*, 20 : 523 (Muttra).

Common name : Brown Rock chat (Eng.).

Remarks : Uncommon. A pair was seen in forest bushes of Kaimur plateau.

106. *Saxicola caprata bicolor* Sykes

1832. *Saxicola bicolor* Sykes, *Proc. zool. Soc. Lond.*, : 92 (Dukhun).

Common names : Pied Bush chat (Eng.); Pidda, Kala Pidda (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

107. *Saxicoloides fulicata cambaiensis* (Latham)

1790. *Sylvia cambaiensis* Latham, *Index orn.*, 2 : 554 (Gujarat. India).

Common names : Indian Robin (Eng.); Kalchuri (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

108. *Zoothera citrina* (Latham)

1790. *Turdus citrinus* Latham, *Index orn.*, 1 : 350 (Cachar, India).

Common name : Orangeheaded Ground Thrush (Eng.).

Remarks : Uncommon. A single specimen was seen in forest patches at Adhaura.

Family PARIDAE

109. *Parus major nipalensis* Hodgson

1837. *Parus nipalensis* Hodgson, *Ind. Rev.*, 2(1) : 31 (Nepal).

Common name : Grey Tit (Eng.).

Remarks : Moderately common. Found throughout the sanctuary in forest patches.

Family SITTIDAE

110. *Sitta castanea* Lesson

1830. *Sitta castanea* Lesson, *Traite d'orn.*, : 316 (Bengal).

Common names : Chestnut bellied Nuthatch (Eng.); Siri (Hin.).

Remarks : Uncommon. A pair was seen deep inside forest at Adhaura.

111. *Salpornis spilonotus* (Franklin)

1831. *Certhia spilonota* Franklin, *Proc. zool. Soc. Lond.*, : 125 (Vindhyan Hills).

Common name : Spotted Grey creeper (Eng.).

Remarks : Uncommon. A Single specimen was seen at Adhaura near forest edges.

Family MOTACILLIDAE

112. *Anthus novaeseelandiae rufulus* Vieillot

1818. *Anthus rufulus* Vieillot, *Dict. d' Hist. Nat.*, 26 : 494 (Bengal).

Common names : Indian Paddy field Pipit (Eng.); Rugail, Charchari (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

113. *Motacilla citreola* Pallas

1776. *Motacilla citreola* Pallas, *Reise. Russ. Reichs*, 3 : 696 (Siberia).

Common names : Yellowheaded Wagtail (Eng.); Pilkya, Pani-ka-Pilkya (Hin.).

Remarks : Uncommon. Winter visitor. A pair was seen at Adhaura.

114. *Motacilla alba dukhunensis* Sykes

1871. *Motacilla dukhunensis* Sykes, *Proc. zool. Soc. Lond.*, : 91 (Dukhun).

Common names : Pied wagtail (Eng.); Dhoban (Hin.).

Remarks : Moderately common during winter (visitor). Found throughout the sanctuary.

Family DICAETIDAE**115. *Dicaeum erythrorhynchos* (Latham)**

1790. *Certhia erythrorhynchos* Latham, *Index Orn.*, 1 : 299 (India).

Common names : Tickell's Flowerpecker (Eng.); Phoolchuki (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

Family NECTARINIIDAE**116. *Nectarinia zeylonica flaviventris* (Hermann)**

1804. *Certhia flaviventris* Hermann, *Observ. Zool.*, : 136 (Tranquebarica).

Common names : Purplerumped Sunbird (Eng.); Phul Soongni (Hin.).

Remarks : Uncommon. Only a pair could be seen at Adhaura during the entire survey period.

117. *Nectarinia asiatica* (Latham)

1790. *Certhia asiatica* Latham, *Index Orn.*, 1 : 288 (India).

Common names : Purple sunbird (Eng.); Phul Soongni (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

118. *Arachnothera longirostris* (Latham)

1790. *Certhia longirostra* Latham, *Index Orn.*, 1 : 299 (Bengal).

Common name : Little Spiderhunter (Eng.).

Remarks : Uncommon. Only two birds could be seen throughout the survey period-one at Adhaura and the other near Mundeswari temple.

Family ZOSTEROPIDAE

119. *Zosterops palpebrosa* (Temminck)

1824. *Sylvia palpebrosa* Temminck, *Pl. Col. d'ois.*, 49, pl. 293, fig. 3 (Bengal).

Common names : White-eye (Eng.); Badoona (Hin.).

Remarks : Common. Found throughout the sanctuary.

Family PLOCEIDAE

120. *Passer domesticus indicus* Jardine & Selby

1835. *Passer indicus* Jardine & Selby. *Ill. Orn.*, 3, pl. 118 (India).

Common names : House sparrow (Eng.); Churi, Khas churi (Hin.).

Remarks : Very common. Found throughout the sanctuary near human habitation.

121. *Petronia xanthocollis* (Burton)

1838. *Fringilla xanthocollis* Burton. *Cat. Bds. Mus. Fort Pitt, Chatham.* : 23 (India).

Common names : Yellowthroated sparrow (Eng.); Raji, Jungli-chiria (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

122. *Ploceus philippinus* (Linnaeus)

1766. *Loxia philippina* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 305 (Phillipines).

Common names : Baya (Eng.); Baya, Son-chiri (Hin.).

Remarks : Common. Found throughout the sanctuary.

123. *Ploceus manyar flaviceps* Lesson

1831. *Ploceus flaviceps* Lesson, *Traite d'orn.*, : 435 (Pondicherry).

Common names : Streaked Weaver Bird (Eng.); Bamani Baya (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

1 *Strilda amandava* (Linnaeus)

1758. *Fringilla amandava* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 180 (Eastern India).

Common names : Red Munia, Avadavat (Eng.); Lal, Lal Munia (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

125. *Lonchura malabarica* (Linnaeus)

1758. *Loxia malabarica* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 175 (India).

Common names : White throated Munia (Eng.); Charchara, Charga, Charakka, Pidda (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

126. *Lonchura punctulata* (Linnaeus)

1758. *Loxia punctulata* Linnaeus, *Syst. Nat.*, ed. 10, 1 : 173 (Calcutta).

Common names : Spotted Munia (Eng.); Telia Munia, Seenabaz, Sinewaz (Hin.).

Remarks : Fairly common. Found throughout the sanctuary.

127. *Lonchura malacca* (Linnaeus)

1766. *Loxia malacca* Linnaeus, *Syst. Nat.*, ed. 12, 1 : 302 (China, Java & Belgium).

Common names : Blackheaded Munia (Eng.); Nakalnor, Telia Munia, Sing-baz, Pora Munia, Nukroul (Hin.).

Remarks : Moderately common. Found throughout the sanctuary.

Class REPTILIA

Various ecosystem of the sanctuary support a very good population of different reptilian species. A list of reptilian species based on collection, observation and earlier reports has been prepared by our departmental scientist Shri S. Sur which is given below :

Family CROCODYLIDAE	
Scientific Name	Common name
1. <i>Crocodylus palustris</i> Lesson *	Muggar Marsh Crocodile
Family EMYDIDAE	
2. <i>Kachuga kachuga</i> (Gray) *	Sail Terrapin
3. <i>Kachuga smithi</i> Gray	
Family GEKKONIDAE	
4. <i>Hemidactylus flaviviridis</i> Ruppel	Yellow-bellied House Gekko
5. <i>Hemidactylus brooki</i> Gray	House Gekko
Family AGAMIDAE	
6. <i>Calotes versicolor</i> (Daudin)	Blood Sucker
7. <i>Psammophilus blanfordanus</i> (Stoliczka)	Dwarf Rock Lizard
Family SCINCIDAE	
8. <i>Mabuya macularia</i> (Blyth)	Bronze Grass Skink
9. <i>Mabuya carinata</i> (Schneider)	Common or Brahminy Skink
10. <i>Riopa albopunctata</i> Gray	Brown Dwarf Skink
11. <i>Riopa punctata</i> (Gmelin)	Dotted Garden Skink
12. <i>Varanus bengalensis</i> (Daudin) **	Indian Monitor
13. <i>Varanus flavescens</i> (Gray) *	Yellow Monitor
Family BOIDAE	
14. <i>Python molurus</i> Linnaeus *	Indian Rock Python
Family COLUBRIDAE	
15. <i>Amphiesma stolata</i> (Linnaeus)	Striped Keelback
16. <i>Xenochrophis piscator</i> (Schneider) **	Cheekered keelback
17. <i>Ptyas mucosus</i> (Linnaeus) **	Rat Snake
18. <i>Ahaetulla Pictus</i> Gmelin	Common Green whip snake
Family TYPHLOPIDAE	
19. <i>Ramphotyphlops braminus</i> (Daudin)	Common Blind Snake
Family ELAPHIDAE	
20. <i>Naja naja</i> (Linnaeus) **	Indian Cobra
21. <i>Ophiophagus hannah</i> (Cantor) **	King cobra
Family VIPERIDAE	
22. <i>Vipera russelli</i> (Shaw) **	Russell's Viper

DISCUSSION

Kaimur Sanctuary being extended over the Satpura and Vindhya hill ranges in the west and Chota Nagpur plateau in the east and south represents a varied physiography. It contains a good number of everflowing rivers, nullahs and canals. Some part of the sanctuary is also subject to seasonal inundation. These diverse ecological factors have resulted a varied micro and macro habitats which in turn gave rise to a wonderful faunal diversity including the tiger, the apex of the Pyramid. Subsequently, to conserve this great national heritage the area was declared as a sanctuary in 1979. All the management programmes for this sanctuary are still lying in papers only. It was really shocking to note that even an inch of the sanctuary is not free from human interference. There are a number of villages with extensive cultivated fields in the sanctuary, who alongwith their 22000 domestic cattle are entirely dependent on the natural resources of the sanctuary. In addition to this 30,000 cattles are brought to the sanctuary regularly from outside for grazing. Cattle were found grazing even in the deepest part of the forests. Huge grazing of domestic cattle not only degrades the habitat but also will lead to serious outbreak of contagious disease among the wild herbivores.

Accidental forest fire during summer has been reported to be a common feature. Due to lack of antifire measures, a lot of habitat are getting destroyed.

Some miscreants are very active in the sanctuary. They are so well organised with modern arms that they do not hesitate to attack the management people. During our survey, we observed that the management people are afraid of going in the forest for patrolling. The Rehal camp has been abandoned as the choukidar of that camp was driven away by the miscreants after been beaten mercilessly.

A number of factories are operating near the Sanctuary area for which different parts of the sanctuary are being sacrificed. Movement of heavy vehicles are likely to disturb the normal habitat for wildlife.

The sanctuary was found to have a lot of hunting pressure. On a number of occasions the survey party noticed local people moving inside the deepest part of the forest with firearms for hunting.

As a result of the above factors quality of the habitat is being degraded at a fast rate and flora and fauna are the worst victims.

From the above discussion it is obvious that though the forest has been declared as a sanctuary, but in reality it is not enjoying the status of even a Reserve forest. Entire area with its varied ecosystems and faunal diversity is now most vulnerable and may reach in near future to a point of no return.

RECOMMENDATION

To conserve the great national heritage contained in the Kaimur Sanctuary, socio economic condition of the people living in and around must be taken into consideration. Practical aspects as regard to the needs and requirements of the local people cannot be ignored by simple notification and framing rules. Following recommendations may be considered for the conservation of the sanctuary.

1. The forest must be demarked into the core and buffer zones.
2. To meet up the need of forest produce by the local people, the buffer zone may be declared as protected forest, from where they may collect fuel wood and other requirements under the total control of the management authorities. However, attempts should be made to minimize their requirement gradually. Supply of low fuel consuming 'chula', use of solar energy, social forestry, easy loan for construction of pakka buildings, etc. may come under this programme.
3. Cultivation of fodder in the wasteland may be initiated to minimize the grazing pressure. Free inoculation of domestic cattle must be arranged to minimize spreading of contagious diseases.
4. To fight against the miscreants and drive them away from the sanctuary, number of forest guards should be increased sufficiently along with proper modern equipment. Active co-operation from the police department should also be asked for. In this connection, communication system among the different blocks should be improved.
5. Unless the local people are taken into confidence, no conservation programme can achieve any success. Awareness programme must be organised regularly to make the local people understand that sanctuary is not against them, rather it is for them. Assurance must be given to them that they will not be deprived from their rights. In this coase, fullest cooperation from them may be received for the conservation of this national heritage which will serve as substantial resource for future generations.
6. Well-equipped research wing should be arranged immediately. This wing will carry out researches on the eco-development of the area, status of different species, population fluctuations, animal behaviour, diseases and others. Carrying capacity of the forest need also to be studied from time to time in respect of different species occurring within the sanctuary.

SUMMARY

Based on survey works, literature and local reports, a detailed account of the faunal composition of the Kaimur Sanctuary has been prepared. A total of 48 species of

mammals, 127 species of birds have been reported and a list of 22 reptilian species is also given. Status of different mammalian species has been discussed. Attempts have been made to identify the different factors responsible for the habitat destruction. Necessary recommendations have been made for the habitat improvement and management of the sanctuary.

ACKNOWLEDGEMENT

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Showing habitation and Paddy field within Sanctuary



View of forest with road



A Nilgai Deer enclosure



Pugmark of a Tiger



Palm Squirrel feeding on coconut shoot



Calotes sp



Drango



Rufous backed Shrike



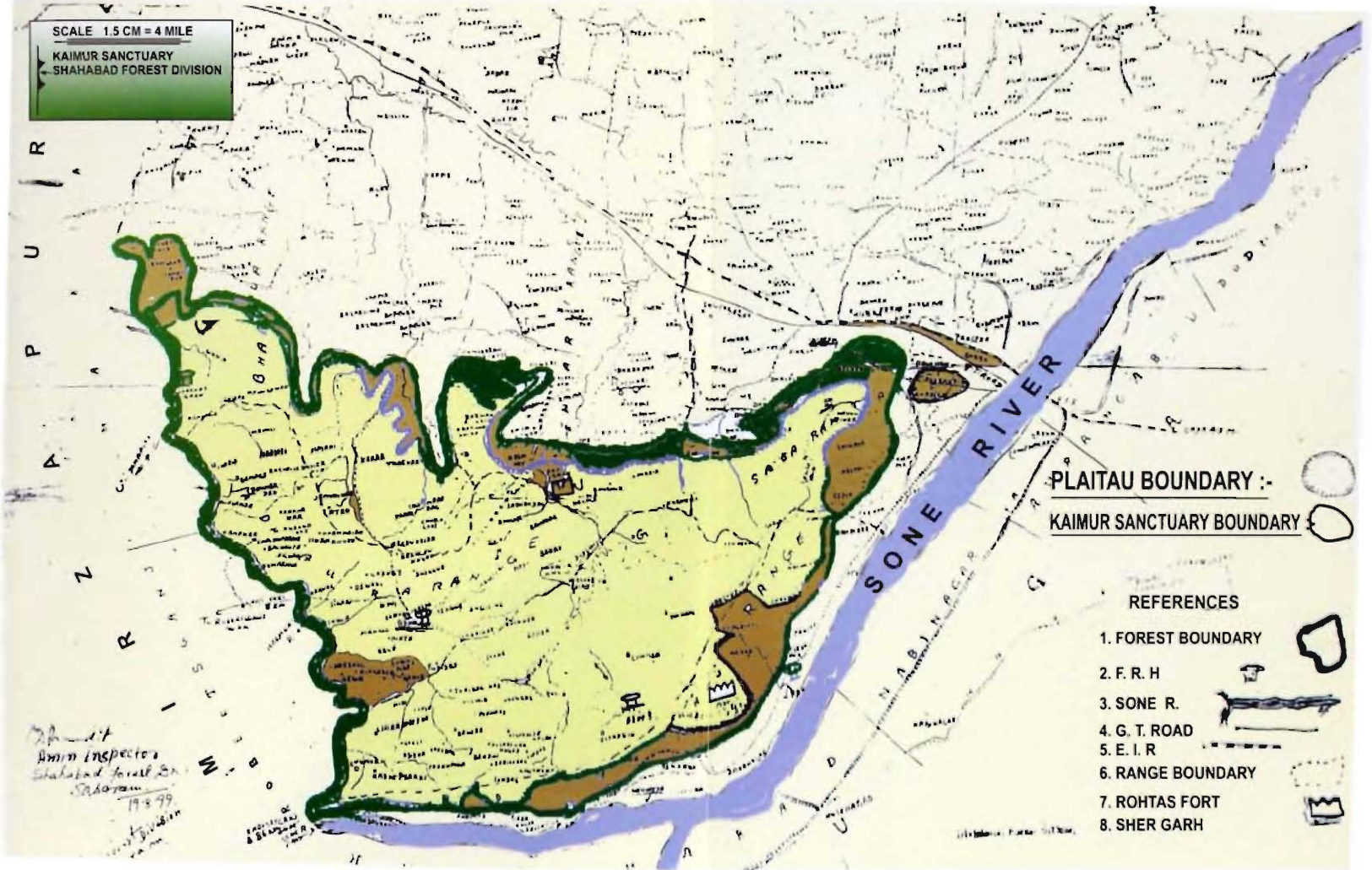
Red Turtle Dove



Alexandrine Parakeet

SCALE 1.5 CM = 4 MILE

KAIMUR SANCTUARY
SHAHABAD FOREST DIVISION



PLAITAU BOUNDARY :-

KAIMUR SANCTUARY BOUNDARY

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1. FOREST BOUNDARY
2. F. R. H
3. SONE R.
4. G. T. ROAD
5. E. I. R
6. RANGE BOUNDARY
7. ROHTAS FORT
8. SHER GARH

Amin Inspector
Shahabad Forest Div.
Saharanpur
1989