

Conservation Area Series, 40

**Fauna of
Bandhavgarh Tiger Reserve
(Madhya Pradesh)**



ZOOLOGICAL SURVEY OF INDIA

Conservation Area Series, 40

Fauna of
BANDHAVGARH TIGER RESERVE
(Madhya Pradesh)

Edited by the Director, Zoological Survey of India, Kolkata



Zoological Survey of India
Kolkata

CITATION

Editor-Director. 2009. *Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40 : 1-291. (Published by the Director, *Zool. Surv. India*, Kolkata)

Published : July, 2009

ISBN 978-81-8171-223-3

Co-ordinator

Dr. Kailash Chandra

Zoological Survey of India, Central Regional Station, Jabalpur-482 002

© Govt. of India, 2009

ALL RIGHTS RESERVED

- No part of this publication may be reproduced stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- This book is sold subject to the condition that it shall not, by way of trade, be lent, resold, hired out or otherwise disposed of without the publisher's consent, in any form of binding or cover other than that in which, it is published.
- The correct price of this publication is the price printed on this page. Any revised price indicated by a rubber stamp or by a sticker or by any other means is incorrect and should be unacceptable.

PRICE

Indian Rs. 550.00

Foreign : \$ 35; £ 30

Published at the Publication Division by the Director, Zoological Survey of India, 234/4, AJC Bose Road, 2nd MSO Building, 13th floor, Nizam Palace, Kolkata 700020 and printed at M/s Alpha Printers, New Delhi - 110 015.

*Fauna of
Bandhavgarh Tiger Reserve (Madhya Pradesh),
Conservation Area Series*

40

2009

1-291

CONTENTS

1. AN OVERVIEW 1-24
Kailash Chandra
2. INSECTA : ODONATA 25-38
S.K. Mishra
3. INSECTA : ORTHOPTERA 39-57
Sunil Kumar Gupta
4. INSECTA : MANTODEA 59-61
Kailash Chandra
5. INSECTA : HEMIPTERA (Aquatic and Semi-aquatic) 63-70
G. Thirumalai and R.M. Sharma
6. INSECTA : NEUROPTERA 71-73
Kailash Chandra and J. Thilak
7. INSECTA : DIPTERA : CECIDOMYIIDAE (Gall Midges) 75-79
R.M. Sharma
8. INSECTA : COLEOPTERA : SCARABAEIDAE 81-88
Kailash Chandra
9. INSECTA : LEPIDOPTERA : RHOPALOCERA AND GRYPOCERA 89-129
K. Chandra, R.M. Sharma and M.L. Koshta
10. INSECTA : LEPIDOPTERA : HETEROPTERA 131-140
Kailash Chandra
11. ACARI : TETRANYCHIDAE (Mites) 141-146
Y.N. Gupta
12. PISCES 147-160
J. Thilak

13.	APPENDIX-AMPHIBIA	161-162
14.	REPTILIA	163-177
	Kailash Chandra and R.P. Gupta	
15.	AVES	179-270
	Kailash Chandra and R.P. Gupta	
16.	MAMMALIA	271-291
	D.K. Harshey	

FAUNA OF BANDHAVGARH TIGER RESERVE : AN OVERVIEW

KAILASH CHANDRA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

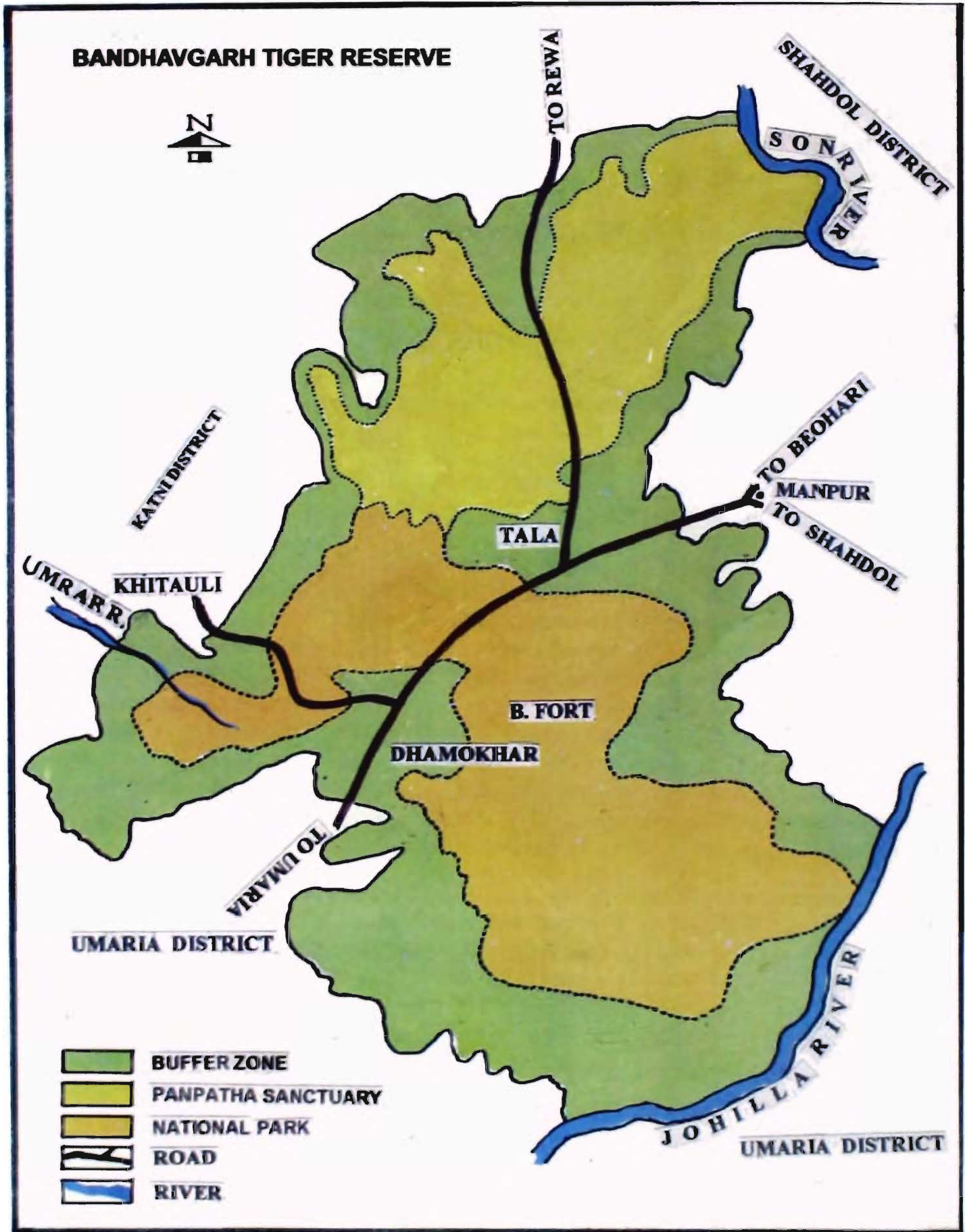
INTRODUCTION

Bandhavgarh lies on the extreme north-eastern border of the state of Madhya Pradesh in district Umaria (which was earlier a part of Sahadol district) and the northern flanks of the eastern Satpura mountain range. It is located on the coordinates 23°30' 12" to 23° 46' 30" N and 80° 47' 15" to 81°11' 45" E at altitudes between 410 m and 810 m. Presently the Reserve's area falls in the two districts Umaria and Katni.

The vibrant and luxuriant jungle of the reserve is composed of Tropical Moist deciduous Forests, North Indian Moist deciduous Forests, Moist Peninsular low level Sal and West Gangetic Moist Mixed deciduous Forests. The dominant species, however is Sal (*Shorea robusta*), interspersed with dense clumps of Bamboo throughout the Reserve. Large grassy patches or meadows are plenty in the Reserve. More than twenty streams rise or flow through the Reserve, of which Umrar (forming the western boundary) is the largest. All the streams ultimately flow into river Son, an important southern tributary of the Ganges. The climate of the Reserve is North Indian monsoonal having well-defined winter, summer and rainy seasons. Most of the rainfall is received during monsoon with an average of 1173 mm. The mercury can drop up to 2°C in peak winter and may go up to 40°C in peak summer.

Bandhavgarh was declared a National Park in 1968 with an area of 105 sq. km acknowledging its status as a prime wilderness land. In the year 1982, three more ranges viz. Khitauli, Magdhi and Kallawah were added to Tala range (the original Bandhavgarh National Park) to expand the area of Bandhavgarh to the extent of 448 sq. km. It was in the year 1993 Bandhavgarh Tiger Reserve came in to being having a core area of 694 sq. km including previously noted ranges and the Panpatha Sanctuary along with a buffer area of 437 sq. km enlarging the total area of the Reserve to 1161.47 sq km (Map-I).

Bandhavgarh is an invaluable treasure house of wild fauna as it is said to have the highest density of healthy wild tiger population in the world and one of the most widely visited Tiger Reserves of the country by domestic as well as foreign tourists. The tourism season starts from October till June. It was the former hunting preserve of Maharaja of Rewa. The area was also popularly known as country of white tigers. The



Map of Bandhavgarh Tiger Reserve

white tigers, now a major attraction around the world's zoos, were first discovered in the erstwhile Rewa State. Apart from tiger, the reserve is unique from biodiversity point of view.

Besides, Bandhavgarh Tiger Reserve also possesses several places of historical importance and archaeological significance like Bandhavgarh Fort, Chakradhara, Gopalpur, Shesh Shaiya, Badigufa, Ketkiha, Bhitri Bah, Tree Cave Point, Sita Mandap, Ghorademon, Andheri Jhiria, Raj Bahera, Sehra and Mahaman Pond etc. As far as the legend goes, the fort of Bandhavgarh was a token of love from one of the revered Hindu God-incarnates, Lord Rama for his much loved younger brother Lakshman. The man made caves with their inscriptions and rock-paintings force archeologists to date Bandhavgarh settlements back to pre-Christ times, if not pre-historic.

FAUNAL EXPLORATIONS

In order to draw a faunal diversity profile of the Tiger Reserve, several faunistic surveys were undertaken in the core and buffer zones of the reserve from 2003-2007. Based on the faunal samples collected and animals observed at various locations of the reserve, the information emanated is given in Table-1.

Altogether 644 species are documented of which, 341 are vertebrates and 303 invertebrates.

Faunal diversity profile of Bandhavgarh Tiger Reserve

S. No.	Name of the Group	Number of species
1	ACARI	8
2	ORTHOPTERA	27
3	MANTODEA	3
4	ODONATA	32
5	HEMIPTERA (Aquatic & Semiaquatic)	8
6	NEUROPTERA	4
7	LEPIDOPTERA (Rhopalocera)	102
8	LEPIDOPTERA (Heterocera)	60
9	COLEOPTERA (Scarabaeidae)	53
10	DIPTERA (Cecidomyiidae)	6
11	PISCES	17
12	AMPHIBIA (Appendix)	9
13	REPTILIA	21
14	AVES	252
15	MAMMALIA	42
TOTAL		644

ACKNOWLEDGEMENTS

My sincere thanks are due to Dr. Ramakrishna, Director, Zoological Survey of India, for providing facilities and encouragements. I am also thankful to the authors for contributing the chapters without which this document would not have seen the light of the day and to Dr R.M. Sharma, Scientist-D for his whole hearted support in finalizing the document. I also extend my thanks to Shri M.E. Limje, Photographer Grade-III for the photographs utilized in the document. I am also indebted to various experts on different groups and their inputs for the finalization of manuscripts.

I sincerely thank Shri Rati Ram Verma, Publication Production Officer, Zoological Survey of India, Kolkata for his efforts in bringing out the document.

PLATE-1



Plateau of Bandhavgarh Tiger Reserve



Bamera Dam

PLATE-2

Dominant Sal (*Shorea robusta*) Forests in Bandhavgarh Tiger Reserve



Moist Deciduous Forests in Bandhavgarh Tiger Reserve

PLATE-3



Shesh Shaiya in Bandhavgarh Tiger Reserve



Tiger Pug mark in Tala Range

PLATE-4

*Holochora* sp.*Trigonidium* sp.*Gastrimargus africanus africanus* (Saussure)*Catantops pinguis innotabilis* (Walker)*Xenocatantops humilis humilis* (Serville)*Toxoderopsis taurus* Wood-Mason
Mantid

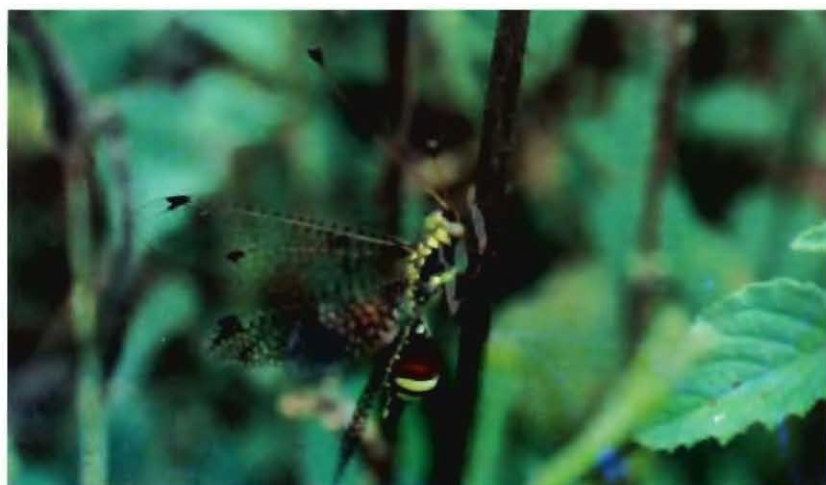
PLATE-5



Palpares pardus Rambur



Tomatares pardalis (Fabricius)



Ogcogater tessellata (Westwood)

PLATE.6



The Spot Swordtail
Pathysa nomius (Esper)



The Common Mormon
Papilio polytes romutus Cramer



The Lime Butterfly
Papilio demoleus demoleus Linnaeus



The Common Gull
Cepora nerissa phryne (Fabricius)



The White Orange Tip
Ixias marianne (Cramer)



The Common Tiger
Danaus chrysippus chrysippus (Linnaeus)

PLATE-7



The Blue Tiger
Tirumala limniace (Cramer)



The Common Crow
Euploea core core (Cramer)



The Yellow Pansy
Junonia hierta hierta (Fabricius)



The Blue Pansy
Junonia orithya swinhoei Butler



The Lemon Pansy
Junonia lemonias vaicva (Fruhstorfer)



The Orange Oakleaf
Kallima inachus (Boisduval)

PLATE-8



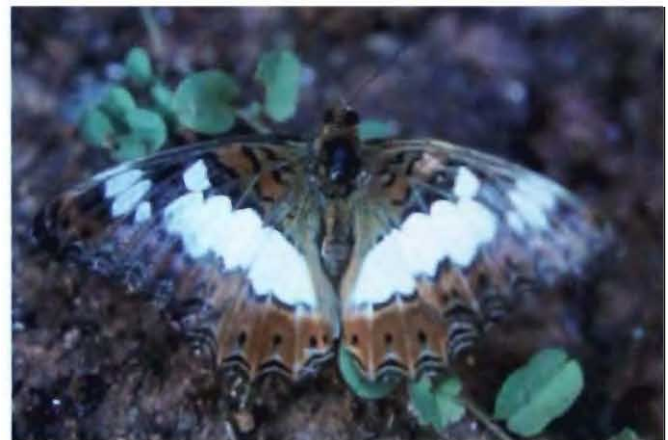
The Orange Oakleaf
Kallima inachus (Boisduval) - Ventral view



The Danaid Eggfly
Hypolimnus misippus (Linnaeus)



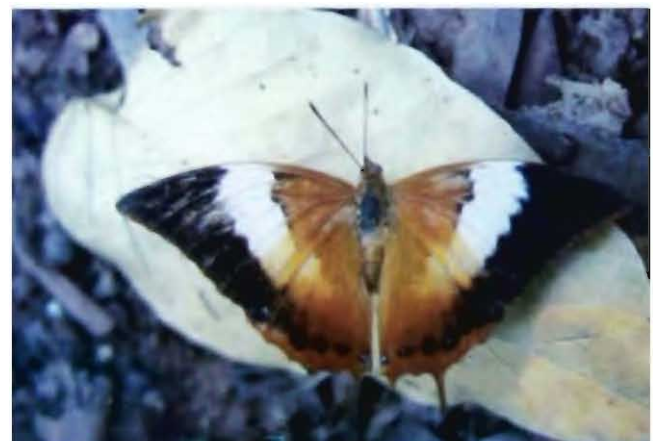
The Great Eggfly
Hypolimnus Bolina Linnaeus (Female)



The Commander
Moduza procris procris (Cramer)



The Baronet
Symphaedra nais (Forster)



The Tawny Rajah
Charaxes bernardus (Fabricius)

PLATE-9



The Tawny Coster
Acraea terpsicore (Linnaeus)



The Common Pierrot
Castalius rosimon rosimun (Fabricius)



The Common Silverline
Spindasis vulcanus Fabricius



The Indian Skipper
Spialia galba (Fabricius)



The Glass Demon
Udaspes folus (Cramer)



The Dark Palm Dart
Telicota ancilla Herrich-Schaffer

PLATE-10



Hippotion boerhaviae (Fabricius)



Marumba dyras dyras (Walker)



Psilogramma menephron menephron (Cramer)



Theretra alecto alecto (Linnaeus)



Hyposidra talaca (Walker)



Phalera raya Moore

PLATE-11



Micronia aculeata Guen'ee



Actias selene (Hubner)



Hymenia recurvalis (Fabricius)



Episparis variabilis (Walker)



Spodoptera litura (Fabricius)



Trigonodes hyppasia (Cramer)

PLATE-12



Common Toad
Bufo melanostictus Schneider



Ornate Microhylid Frog
Microhyla ornata (Dumeril & Bibron)



Painted Frog
Kaloula pulchra Gray



Burrowing Frog
Tomopterna breviceps (Schneider)



Common Tree Frog
Polypedates maculatus Gray

PLATE-13



Indian Soft Shell Turtle
Aspideretes gangeticus (Cuvier)



Common Fat-tailed Gecko
Eublepharis hardwickii Gray



Yellow bellied House Gecko
Hemidactylus flaviviridis Ruppell



Garden Lizard
Calotes versicolor (Daudin)



Fan Throated Lizard
Sitana ponticeriana Cuvier



Common Skink
Mabuya carinata (Schneider)

PLATE-14



Bengal Monitor Lizard
Varanus bengalensis (Daudin)



Indian Rock Python
Python molurus (Linnaeus)



Striped Keelback
Amphiesma stolata (Linnaeus)



Spectacled Cobra
Naja naja (Linnaeus)



Russell's Viper
Daboia russelli (Shaw)

PLATE-15



White-necked Stork
Ciconia episcopus (Boddaert)



Painted Stork
Mycteria leucocephala (Pennant)



Lesser Adjutant Stork
Leptoptilos javanicus (Horsfield)



Black Ibis
Pseudibis papilosa (Temminck)



Black-Shouldered Kite
Elanus caeruleus (Desfontaines)



Crested Serpent Eagle
Spilornis cheela (Latham)

PLATE-16



White Breasted Waterhen
Amaurornis phoenicurus (Pennant)



Little Ringed Plover
Charadrius dubius Scopoli



Redwattled Lapwing
Vanellus indicus (Boddaert)



Spotted Dove
Streptopelia chinensis (Scopoli)



Greater Coucal
Centropus sinensis (Stephens)



Small Blue Kingfisher
Alcedo atthis (Linnaeus)

PLATE-17



White-breasted Kingfisher
Halcyon smyrnensis Linnaeus



Common Hoopoe
Upupa epops Linnaeus



Wiretailed Swallow
Hirundo smithii Leach



Large pied Wagtail
Motacilla maderaspatensis Gmelin



Large Cuckoo Shrike
Coracina macei (Lesson)



Rufous backed shrike
Lanius schach (Linnaeus)

PLATE-18



Bay-backed Shrike
Lanius vittatus Valenciennes



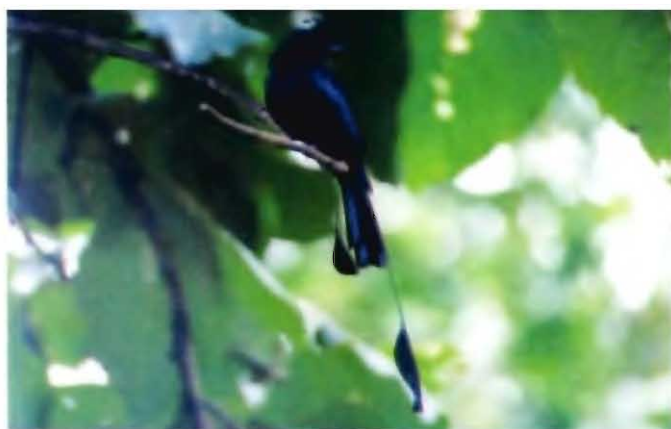
Oriental Magpie-Robin
Copsychus saularis (Linnaeus)



Purple Sunbird
Nectarinia asiatica (Latham)



Black Headed Munia
Lunchura malacca (Linnaeus)



Great Racket-tailed Drongo
Dicrurus Paradiseus Linnaeus



Jungle Crow
Corvus macrorhynchos Wagler

PLATE-19



langoor
Semnopithecus entellus (Dufrense)



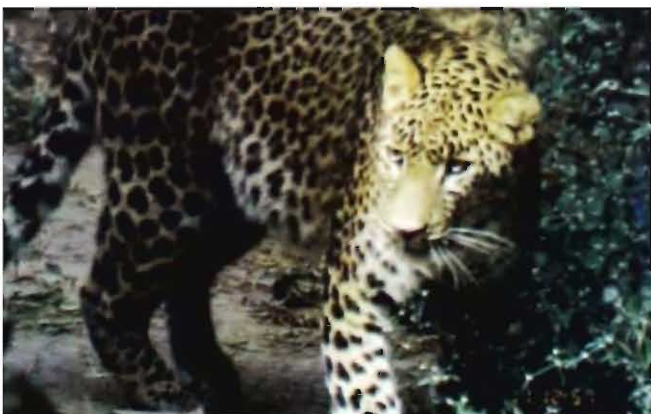
Asiatic Jackal
Canis aureus Linnaeus



Asian Wild Dog
Cuon alpinus (Pallas)



Jungle Cat
Felis chaus Schreber



Leopard
Panthera pardus (Linnaeus)



Tiger
Panthera tigris (Linnaeus)

PLATE-20



Wild Boar
Sus scrofa (Linnaeus)



Cheetal
Axis axis (Erxleben)



Sambar
Rusa unicolor (Kerr)



Three Striped Squirrel
Funambulus palmarum (Linnaeus)

INSECTA ODONATA

S.K. MISHRA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

Odonata includes damselflies and dragonflies, which are well admired for their bright metallic colours and flying prowess. They are commonly found in the vicinity of fresh water bodies like ponds and streams etc and play an important role as predator in both larval and adult stages. Recently, Mishra (2007) published an account of 70 species of Odonata belonging to 40 genera under 9 families from Madhya Pradesh.

The identification of Odonata collections made from Bandhavgarh Tiger Reserve has revealed 32 species belonging to 24 genera under 7 families. These include 8 species of damselflies (Zygoptera) and 24 species of dragonflies (Anisoptera).

List of Odonates recorded from Bandhavgarh Tiger Reserve

Order ODONATA

Suborder ZYGOPTERA

I. Family COENAGRIONIDAE

1. *Ceriagrion coromandelianum* (Fabricius)
2. *Pseudagrion decorum* (Rambur)
3. *Pseudagrion microcephalum* (Rambur)
4. *Agriocnemis pygmaea* (Rambur)
5. *Ischnura aurora aurora* (Brauer)

II. Family PROTONEURIDAE

6. *Disparoneura quadrimaculata* (Rambur)

III. Family PLATYCNEMIDIDAE

7. *Copera marginipes* (Rambur)

IV. Family LESTIDAE

8. *Lestes viridulus* Rambur

Suborder ANISOPTERA

V. Family AESHNIDAE

9. *Anax guttatus* (Burmeister)

VI. Family GOMPHIDAE

10. *Ictinogomphus rapax* (Rambur)

VII. Family LIBELLULIDAE

11. *Orthetrum sabina sabina* (Drury)

12. *Orthetrum pruinatum neglectum* (Rambur)

13. *Orthetrum cancellatum cancellatum* (Linnaeus)

14. *Orthetrum glaucum* (Brauer)

15. *Potamarcha congener* (Rambur)

16. *Lathrecista asiatica asiatica* (Fabricius)

17. *Brachydiplax sobrina* (Rambur)

18. *Brachythemis contaminata* (Fabricius)

19. *Crocothemis servilia servilia* (Drury)

20. *Diplacodes trivialis* (Rambur)

21. *Neurothemis tullia tullia* (Drury)

22. *Neurothemis fulvia* (Drury)

23. *Neurothemis intermedia intermedia* (Rambur)

24. *Bradinopyga geminata* (Rambur)

25. *Trithemis aurora* (Burmeister)

26. *Trithemis festiva* (Rambur)

27. *Trithemis pallidinervis* (Kirby)

28. *Rhyothemis variegata variegata* (Linnaeus)

29. *Tholymis tillarga* (Fabricius)

30. *Pantala flavescens* (Fabricius)

31. *Tamea basilaris burmeisteri* Kirby

32. *Palpopleura sexmaculata sexmaculata* (Fabricius)

SYSTEMATIC ACCOUNT

Order ODONATA

Suborder ZYGOPTERA

I. Family COENAGRIONIDAE

1. *Ceriagrion coromandelianum* (Fabricius)

1798. *Agrion coromandelianum* Fabr., *Ent. Syst. Suppl.*, : 287

1933. *Ceriagrion coromandelianum* : Fraser, *Fauna Brit., India, Odon.*; 1 : 315-316.

Material examined : 1ex; Male, 29.ix.2002, Bathan, Umaria BNP., coll. R.K. Singh & Party.

Distribution : India : Throughout India including Madhya Pradesh (Seoni, Umaria) and Chhattisgarh.

Elsewhere : Bangladesh, China, Japan, Malaysia, Myanmar, Nepal and Sri Lanka.

Remarks : Very common species in Madhya Pradesh.

2. *Pseudagrion decorum* (Rambur)

1842. *Agrion decorum* Rambur, *Ins. Neurop.*, 258.

1933. *Pseudagrion decorum* : Fraser, *Fauna, Brit; India Odon.*; 1 :286-289.

Material examined : 1ex; Male, 29.ix.2002, Bathan, Umaria BNP. Coll. R.K. Singh & Party.

Distribution : India, Madhya Pradesh (Jabalpur, Chhindwara, Umaria), Himachal Pradesh, Karnataka, Tamilnadu, Uttar Pradesh and West Bengal.

Elsewhere : Myanmar and Sri Lanka.

Remarks : Found in plains, mostly near placid water body.

3. *Pseudagrion microcephalum* (Rambur)

1842. *Agrion microcephalum* Rambur. *Ins. Neurop.* : 259.

1933. *Pseudagrion microcephalum* : Fraser, *Fauna, Brit. India Odon.*, 1 :278-280.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Umaria).

Elsewhere : Australia, Java, Myanmar and Sri Lanka.

Remarks : Inhabits plains and submontane zones.

4. *Agriocnemis pygmaea* (Rambur)

1842. *Agrion pygmaeum* Rambur; *Ins. Neurop* : 278.

1877. *Agriocnemis pygmae* Selys, *Syn. Agr. Smelegion* : *Agrion (Suite et fin)* : 52.

1933. *Agriocnemis pygmaea* : Fraser, *Fauna Brit. India, Odon*; 1 : 398-401.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Jabalpur, Chhindwara, Umaria).

Elsewhere : Australia, China, Indonesia, Malaysia, Myanmar.

Remarks : It is one of the smallest species of damselfly. Adults can be seen near water bodies and amidst vegetation.

5. *Ischnura aurora aurora* (Brauer)

1858. *Agrion delicatum* Hagen, *Verh. Zool. bot. Ges. Wien.*, 8 : 479.

1933. *Ischnura delicata* : Hagen; Fraser, *Fauna Brit., India. Odon.*, (1) : 360.

1954. *Ischnura aurora aurora*; Lieftinck, *Treubia*, 22 : 74.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Gwalior and Umaria).

Elsewhere : Australia, China, Indonesia, Malaysia, New Zealand and Sri Lanka.

Remarks : This species is commonly inhabits marshy areas flying through grasses and weeds.

II. Family PROTONEURIDAE

6. *Disparoneura quadrimaculata* (Rambur)

1842. *Disparoneura quadrimaculata* Rambur, *Paris* 16 : 1-534.

1995. *Disparoneura quadrimaculata*; Prasad & Varshney, *Oriental insect* 29 : 394.

Material examined : 1 ex; Male, 27.ix.2002, Mahadev Pond, Umaria, BNP, coll. R.K. Singh & Party.

Distribution : India : Madhya Pradesh (Hoshangabad and Umaria) Delhi, Uttar Pradesh, and Western Ghats.

III. Family PLATYCNEMIDIDAE

7. *Copera marginipes* (Rambur)

1842. *Platycnemis marginipes* Rambur, *Ins. Neurop.*, : 240.

1890. *copera marginipes* (Rambur) : Kirby, *Syn. Cat. Odon.* : 129.

1933. *Copera, marginipes* : Fraser, *Fauna Brit. India, Odon.* 1 : 192-197.

Material examined : 1 ex; Male, 26.ix.2002, Laxman Dhara, Umaria, BNP coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Hoshangabad and Umaria).

Elsewhere : China, Java, Indonesia, Malaysia, Myanmar and Sri Lanka.

Remarks : This species shows a number of varieties according to the age of specimens and locality.

IV. Family LESTIDAE

8. *Lestes viridulus* Rambur

1842. *Lestes viridula* Rambur, *Hist. Nat Ins. Neurop.*, : 252-253.

1890. *Lestes viridulus* Kirby. *Cat. Odon;* : 163.

1933. *Lestes viridula* : Fraser, *Fauna Brit., India odon;* 1 :45-46.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R.K. Singh & Party.

Distribution : India : Madhya Pradesh (Chhindwara and Ujjain), Bihar, Chhattisgarh and Uttar Pradesh.

Elsewhere : Thailand.

Remarks : It is commonest species during the dry seasons.

Suborder ANISOPTERA

Family AESHNIDAE

9. *Anax guttatus* (Burmeister)

1839. *Aeschna guttata* Burmeister, *Handb. Ent.* 2 : 840.

1936. *Anax guttatus*, Fraser, *Fauna Brit. India, Odon.*, : 140-142.

Material examined : 1ex; Male, 29.ix.2002, Bathan, Umaria BNP. Coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : Malaysia, Myanmar, Taiwan and Thailand.

Remarks : This dragonfly inhabits small weedy ponds and lakes.

VI. Family GOMPHIDAE

10. *Ictinogomphus rapax* (Rambur)

1842. *Diastatomma rapax* Rambur. *Ins. Neurop.*, : 169.

1934. *Ictinus rapax* : Fraser, *Fauna Brit. India Odon*; 2 : 373-376.

Material examined : 1 ex; Male, 27.ix.2002, Mahadev pond, Umaria, BNP, coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : Malaysia, Myanmar and Sri Lanka.

Remarks : It is known to inhabit both lotic and lentic water bodies, but principally in the later. If disturbed it usually returns to its resting place again and again.

VII. Family LIBELLULIDAE

11. *Orthetrum sabina sabina* (Drury)

1770. *Libellula sabina* Drury, *III. Exot. Ins.*, 1 :114-115.

1936. *Orthetrum sabina* : Fraser, *Fauna Brit. India. Odon*; 3 :300-302.

1987. *Orthetrum sabina sabina* : Lahiri, *Rec. zool. Surv. India, Occ. Paper No. 99* : 183.

Material examined : 1 ex; Male, 26.ix.2002, Laxman Dhara, Umaria, BNP coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Jabalpur, Seoni and Umaria).

Elsewhere : Australia, Java, Egypt, Iraq, Iran, Myanmar, Nepal, Sri Lanka, Taiwan, Turkey.

Remarks : This is the most predaceous dragonfly found in India.

12. *Orthetrum pruinatum neglectum* (Rambur)

1842. *Libellula neglecta* Rambur, *Ins. Neurop.*, :36.

1936. *Orthetrum pruinatum neglectum* : Fraser, *Fauna Brit. India, Odon* (3) : 311-312.

Material examined : 1 ex; Male, 26.ix.2002, Laxman Dhara, Umaria, BNP coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : China, Indonesia, Malaysia, Myanmar, Nepal, Sri Lanka, Tibet and Taiwan.

Remarks : It is known to inhabit perennial and seasonal monsoon ponds, paddy fields and cemented tanks.

13. *Orthetrum cancellatum cancellatum* (Linnaeus)

1758. *Libellula cancellata* Linnaeus, *Syst. Nat. ed. x vol.*, 1 : 544

1936. *Orthetrum cancellatum cancellatum* : Fraser, *Fauna Brit. India, Odon.* (3) : 302-304.

Material examined : 1 ex; Male, 30.ix.2002, Gohari, Umaria, BNP, coll. R.K. Singh & Party.

Distribution : India : Madhya Pradesh (Chhindwara, Seoni and Umaria) Himachal Pradesh and Jammu & Kashmir.

Elsewhere : Asia, Africa and British Island.

Remarks : This species is best recognized by its black pterostigma, bright yellow costa and antenodal nervures, and the female by the black subdorsal festooned stripe on abdomen.

14. *Orthetrum glaucum* (Brauer)

1865. *Libellula glauca* Brauer, *Verh. Zool. Bot. Ges Wien*, 15 : 1012.

1936. *Orthetrum glaucum* : Fraser, *Fauna Brit. India, Odon;* 3 : 307-309.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R. K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : China, Indonesia, Malaysia, Myanmar, Nepal and Sri Lanka.

Remarks : This species is strictly montane, known to occur up to an altitude of 1500 meters.

15. *Potamarcha congener* (Rambur)

1842. *Libellula obscura* Rambur, *Hist. Nat. Ins. Neurop.*, : 64

1842. *Libellula congener*; Rambur, *Hist. Nat. Ins. Neurop.*, : 70

1991. *Potamarcha congener*; Rambur : *Selys. Anal. Soc. Esp. Hist. nat.*, 20 : 221

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : Australia, Bangladesh, Malaysia, Myanmar and Nepal.

Remarks : This species inhabits small weedy ponds and marshy areas.

16. *Lathrecista asiatica asiatica* (Fabricius)

1798. *Libellula asiatica* Fabricius, *Ent. Syst. Suppl.*, : 283.

1936. *Lathrecista asiatica asiatica* : Fraser, *Fauna Brit. India. Odon.*, 3 : 281-284.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R. K. Singh & Party.

Distribution : India : Chhattisgarh (Bastar), Madhya Pradesh (Seoni and Umaria) Maharashtra and West Bengal.

Elsewhere : Borneo, China, Japan, Malaysia, Myanmar, Sri Lanka and Thailand.

Remarks : This is a shy dragonfly with rapid flight usually found in colonies.

17. *Brachydiplax sobrina* (Rambur)

1842. *Libellula sobrina* Rambur, *Ins. Nevero.*, : 114.

1936. *Brachydiplax sobrina* : Fraser, *Fauna Brit. India, Odon.*, 3 : 325-327.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP. Coll. R.K. Singh & Party.

Distribution : India : Throughout India including Madhya Pradesh (Jabalpur, Seoni and Umaria).

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

Remarks : It is very shy dragonfly.

18. *Brachythemis contaminata* (Fabricius)

1793. *Libellula contaminata* Fabricius, *Ent. Syst.*, 2 : 282.

1936. *Brachythemis contaminata* : Fraser, *Fauna Brit. India, Odon.*, 3 : 365-366

Material examined : 1 Male, 1 Female, 29.ix.2002, Bathan, Umaria BNP, coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : Bangladesh, China, Japan, Malaysia, Myanmar, Nepal and Sri Lanka.

19. *Crocothemis servilia servilia* (Drury)

1770. *Libellula servilia* Drury, *III. Ex. Ins.*, 1 : 112.

1936. *Crocothemis servilia servilia* : Fraser, *Fauna, Brit, India, Odon.*, 3 : 345-347.

Material examined : 1 ex; Male, 29.ix.2002, Bathan, Umaria BNP. Coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Jabalpur, Seoni and Umaria)

Elsewhere : Australia, Bangladesh, China, Iran, Indonesia, Japan, Malaysia, Myanmar, Nepal and Sri Lanka.

Remarks : It is a multivoltine species with three generations in a year.

20. *Diplacodes trivialis* (Rambur)

1842. *Libellula trivialis* Rambur, *Ins. Neurop.*, : 115

1936. *Diplacodes trivialis* : Fraser, *Fauna, Brit., India, Odon.*, 3 : 336-338.

Material examined : 1 ex; Male, 26.ix.2002, Laxman Dhara, Umaria, BNP coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Gwalior, Seoni, and Umaria).

Elsewhere : Australia, Japan, Malaysia, Myanmar, Sri Lanka and Indonesia (Sumatra).

Remarks : It is widely distributed in plains up to over 7000 ft in both dry and wet areas.

21. *Neurothemis tullia tullia* (Drury)

1773. *Libellula tullia* Drury, 111, *Exot. Ins.*, 2 : 85.

1890. *Neurothemis tullia*; Drury, Kirby, *cat. Odon.*, : 8.

1936. *Neurothemis tullia tullia* : Fraser, *Fauna, Brit. India, Odon.*, 3 : 360-362

Material examined : 1 ex; Male, 11.viii.2005, Pathan Ama nala and Sita Mandap, Umaria, BNP, coll. K. Chandra & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni, Betul and Umaria).

Elsewhere : China, Myanmar, Malaysia, Nepal and Sri Lanka.

Remarks : Adults are weak in flight and flutter on aquatic vegetation, near swampy areas and weedy tanks, in large colonies.

22. *Neruothemis fulvia* (Drury)

1773. *Libellula fulvia* Drury, III. *Exot. Ins.*, 2 : 84.

1936. *Neurothemis fulvia* : Fraser, *Fauna Brit. India, Odon.*, 3 : 353.

Material examined : 1 ex; Female, 26.i.2004, Barbaspur, Umaria, BNP, coll. Y. N. Gupta & Party.

Distribution : Throughout India including Madhya Pradesh (Umaria).

Elsewhere : Australia, Bangladesh, Japan, Malaysia and Myanmar.

Remarks : Found in large colonies in low-lying swampy areas; abundant during August-September months.

23. *Neurothemis intermedia intermedia* (Rambur)

1842. *Libellula intermedia* Rambur; *Ins. Neurop.*, : 91.

1936. *Neruothemis intermedia intermedia* : Fraser, *Fauna Brit India Odon.*, 3 : 357-358.

Material examined : 1 ex; Female, 27.i.2004, Talamor, Umaria, BNP, coll. Y. N. Gupta & Party.

Distribution : Throughout India including Madhya Pradesh (Chhindwara, Umaria)
Elsewhere : Indochina, Malacca, Malaya, Myanmar, Nepal and Sri Lanka.

24. *Bradinopyga geminata* (Rambur)

1842. *Libellula geminata* Rambur, *Ins. Neurop.*, : 90.

1936. *Bradinopyga geminata* : Fraser, *Fauna Brit. India, Odon.*, 3 : 349-350.

Material examined : 1 ex; Male, 28.i.2004, Hardiha Barrier, Umaria, BNP, coll. Y. N. Gupta & Party.

Distribution : India, Madhya Pradesh (Chhindwara, Datia, Gwalior and Umaria), Uttar Pradesh and West Bengal.

Remarks : This species furnishes a fine example of protective, cryptic colouring which is enhanced by its action.

25. *Trithemis aurora* (Burmeister)

1839. *Libellula aurora* Burmeister, *II and b, Ent.*, (2) : 859.

1936. *Trithemis aurora* : Fraser, *Fauna Brit. India, Odon.*; 3 : 383-385.

Material examined : 1 ex; Male, 16.viii.2005, Machkheta, Umaria, BNP, coll. K. Chandra & Party.

Distribution : Throughout India including Madhya Pradesh (Chhindwara, Jabalpur, and Umaria).

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

Remarks : It prefers montane streams. Adult males can be seen resting on vegetation near water bodies, making short beats up and down, but always returning to the initial resting place.

26. *Trithemis festiva* (Rambur)

1842. *Libellula festiva* Rambur, *Ins. Neurop.*, : 92.

1936. *Trithemis festiva* : Fraser, *Fauna Brit. India, Odon.*, 3 : 387-389.

Material examined : 1 ex; Male, 17.viii.2005, Panpatha Range Umaria, BNP. coll. K. Chandra & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

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

Remarks : The species is found near water, usually settling on rocks in mid-stream or on twigs hanging over water.

27. *Trithemis pallidinervis* (Kirby)

1889. *Sympetrum pallidinervis* Kirby, *Trans. Zool. Soc. London*, **12** : 327.

1936. *Trithemis pallidinervis* : Fraser, *Fauna Brit. India, Odon.*, **3** : 389-391.

Material examined : 1 ex; Female, 05.ii.2004, Patour Umaria, BNP. coll. Y. N. Gupta & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).

Elsewhere : Malaysia, Myanmar, Sri Lanka and Taiwan.

Remarks : This species inhabit stagnant water and marshy areas.

28. *Rhyothemis variegata variegata* (Linnaeus)

1763. *Libellula variegata* Linnaeus, *Amoenitates Acad.*, **6** : 412.

1936. *Rhyothemis variegata variegata* : Fraser, *Fauna Brit. India Odon.*, **3** : 423-424.

Material examined : Umaria, 1 ex; Female, 05.ii.2004, Patour Umaria, BNP coll. Y.N. Gupta & Party.

Distribution : Throughout India including Madhya Pradesh (Jabalpur, Seoni and Umaria).

Elsewhere : Bangladesh, Malaysia, Myanmar, Nepal, Sri Lanka and Tibet.

Remarks : This species is easily distinguished by variegated pattern of colour on the wings. Found around weedy tanks and weak in flight.

29. *Tholymis tillarga* (Fabricius)

1798. *Libellula tillarga* Fabricius, *Ent. Syst. Suppl.*, : 285.

1936. *Tholymis tillarga* : Fraser, *Fauna Brit. India, Odon.*, **3** : 411-413.

Material examined : 1 ex; Male, 04.ii.2004, Kuchwahi village, Umaria, BNP coll. Y.N. Gupta & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria)
Elsewhere : Australia, Africa, Indonesia, Malaysia, Myanmar and Sri Lanka.

Remarks : Crepuscular in habit, appearing shortly before dusk and attracted to light.

30. *Pantala flavescens* (Fabricius)

1798. *Libellula flavescens* Fabricius, *Ent. Syst. Suppl.*, : 285.

1936. *Pantala flavescens* : Fraser, *Fauna Brit. India Odon.*, 3 : 414-416.

Material examined : 1 ex; Female, 11.viii.2005, Pathan Amanala and Sita Mandap, Umaria, BNP, coll. K.Chandra & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria)
Elsewhere : Malaysia, Myanmar, Sri Lanka and Tibet.

Remarks : It is common and migratory species, occurring abundantly throughout monsoon period.

31. *Tramea basilaris burmeisteri* Kirby

1839. *Libellula chinensis* Burmeister, *Handb. Ent.*, 2 : 852.

1936. *Tramea basilaris burmeisteri* : Fraser, *Fauna Brit. India, Odon.*, 3 : 432-434.

Material examined : 1 ex; Male, 1 Female, 29.ii.2002, Ganesh Pahari, Umaria, BNP, coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Datia, Gwalior, Seoni and Umaria).

Elsewhere : China, Malaysia, Myanmar, Nepal, Sri Lanka and Tibet.

32. *Palpopleura sexmaculata sexmaculata* (Fabricius)

1787. *Libellula sexmaculata* Fabricius, *mant. Ins. i.* : 338.

1936. *Palpopleura sexmaculata sexmaculata* : Fraser, *Fauna Brit. India, Odon.*, 3 : 318-320.

Material examined : 1 ex; Male, 29.ix.2002, Ganesh Pahari, Umaria, BNP, coll. R.K. Singh & Party.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria).
Elsewhere : Malaysia and Sri Lanka.

Remarks : Adults are seen away from water, moving into vegetation soon after the emergence.

SUMMARY

An account of 32 species of Odonates belonging to 24 genera under 7 families from Bandhavgarh Tiger Reserve, Madhya Pradesh is provided.

REFERENCE

Mishra, S.K. 2007. Insecta : Odonata. In : *Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series, 15(Pt-1) : 245-272. (Published by Zool. Surv. India)*

INSECTA : ORTHOPTERA

SUNIL KUMAR GUPTA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

The major work on Orthoptera of India is published by Kirby (1914) and Chopard (1969). Recently, Chandra *et al.* (2007) reported 139 species of Orthoptera from Madhya Pradesh and Chhattisgarh. The scattered information on faunal diversity of Orthoptera of some districts and protected areas of these states is available viz. Tandon *et. al.* (1976, 1995), Shishodia (1988, 1991, 1995, 1999, 2000, 2006), Joshi *et. al.* (2004) and Gupta (2008, 2009).

The present study deals with 27 species under 27 genera belonging to seven families, viz. Tettigoniidae (03 species), Gryllotalpidae (01), Gryllidae (04), Trigonidiidae (02), Acrididae (12), Pyrgomorphidae (02) and Tetrigidae (03) from the Tiger Reserve and all species are new record to Umaria district.

List of Orthoptera recorded from Bandhavgarh Tiger Reserve

Order ORTHOPTERA

Suborder ENSIFERA

Infraorder ONIIDEA

Superfamily TETTIGONIOIDEA

Family TETTIGONIIDAE

1. *Euconocephalus incertus* (Walker)
2. *Letana* sp.
3. *Holochlora* sp.

Infraorder GRYLLIDEA

Superfamily GRYLLOTALPOIDEA

Family GRYLLOTALPIDAE

4. *Gryllotalpa africana* Beauvois

Superfamily GRYLLOIDEA

Family GRYLLIDAE

Subfamily GRYLLINAE

5. *Acheta domesticus* Linnaeus6. *Gryllus bimaculatus* De Geer7. *Modicogryllus confirmatus* (Walker)

Subfamily NEMOBIINAE

8. *Pteronemobius fascipes* (Walker)

Family TRIGONIDIIDAE

9. *Trigonidium* sp.10. *Anaxipha* sp.

Suborder CAELIFERA

Infraorder ACRIDIDEA

Superfamily Acridoidea

Family ACRIDIDAE

Subfamily ACRIDINAE

11. *Acrida exaltata* (Walker)

Subfamily OEDIPODINAE

12. *Acrotylus humbertianus* Saussure13. *Aiolopus thalassinus tamulus* (Fabricius)14. *Gastrimargus africanus africanus* (Saussure)15. *Trilophidia annulata* (Thunberg)

Subfamily HEMIACRIDINAE

16. *Spathosternum prasiniferum prasiniferum* (Walker)

Subfamily OXYINAE

17. *Oxya hyla hyla* Serville

Subfamily COPTACRIDINAE

18. *Eucoptacra saturata* (Walker)

Subfamily EYPREPOCNEMIDINAE

19. *Choroedocus* sp.

Subfamily CATANTOPINAE

20. *Catantops pinguis innotabilis* (Walker)
21. *Stenocatantops splendens* (Thunberg)
22. *Xenocatantops humilis humilis* (Serville)

Family PYRGOMORPHIDAE

23. *Atractomorpha crenulata* (Fabricius)
24. *Chrotogonus (Chrotogonus) trachypterus trachypterus* (Blanchard)

Infraorder TETRIGIDEA

Superfamily TETRIGOIDEA

Family TETRIGIDAE

Subfamily SCALIMENINAE

25. *Criotettix* sp.

Subfamily TETRIGINAE

26. *Hedotettix gracilis* (De Haan)
27. *Ergatettix dorsifera* (Walker)

SYSTEMATIC ACCOUNT

Order ORTHOPTERA

Suborder ENSIFERA

Infraorder ONIIDEA

Superfamily TETTIGONIOIDEA

Family TETTIGONIIDAE

1. *Euconocephalus incertus* (Walker)

1869. *Conocephalus incertus* Walker, *Cat. Derm. Salt. Brit. Mus.*, 2 : 320.

1912. *Euconocephalus incertus* Karny, *Gen. Insect.*, 2 (139) : 35.

Material examined: Umaria district, Bandhavgarh National Park (BNP), Forest Rest House, Tala, 24.x.07(1 Female), coll. R.M. Sharma & party.

Diagnostic characters: Fastigium of vertex produced conically in front; radius sector 2 arise much before the middle of wing; ovipositor subequal to the length of body.

Distribution : India : Andaman & Nicobar Islands, Chhattisgarh, Madhya Pradesh (Jabalpur, Umaria), Meghalaya, Nagaland, Orissa, Pondicherry, Rajasthan, Sikkim, Tripura and West Bengal.

Elsewhere : Australia, Borneo, China, Java, Myanmar, Pinang, Sri Lanka and Sumatra.

2. *Letana* sp.

1869. *Letana* Walker, *Cat. Derm. Salt. Br. Mus.*, :277.

Material examined: Umaria district, Tala, 22.i.04 (1 male), Hardiha 28.i.04 (1 male), coll. Y.N. Gupta & party.

Diagnostic characters: Body with dark-brown or chocolate colour spots; antennae; annulated with dark-brown rings; tegmina surpass the tip of hind femora; radial sector forked.

Distribution : India : Arunachal Pradesh, Bihar, Chhattisgarh, Delhi, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh (Chhindwara and Umaria), Maharashtra, Pondicherry, Rajasthan, Tamil Nadu, Uttarakhand and West Bengal.

Elsewhere: China, Nepal and Sri Lanka.

3. *Holochlora* sp.

1873. *Holochlora* Stal, *Ofv.Vet. Akad. Forh.* 30(4) : 42.

Material examined: Umaria district, Forest Rest House, Bandhavgarh 31.x.07 (1 male), coll. R.M. Sharma & party.

Diagnostic characters : Greenish colour; antennae long, yellowish; eyes big and oval. Fastigium conically produced with round apex. Anterior margin of pronotum concave and posterior margin convex. Male subgenital plate at the region of bifurcation forms a circle; style foot shaped.

Distribution : India : Andaman & Nicobar Islands, Himachal Pradesh, Madhya Pradesh (Mandla and Umaria), Manipur, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Tripura and West Bengal.

Elsewhere : Bhutan, Java and Sri Lanka.

Infraorder GRYLLIDEA

Superfamily GRYLLOTALPOIDEA

Family GRYLLOTALPIDAE

4. *Gryllotalpa africana* Beauvois

1905. *Gryllotalpa africana* Beauvois *Ins. Afr. Amer.*, 229.

1967. *Gryllotalpa africana* Chopard *Orthopt. Cat.*, part 12 : 449.

Material examined : Umaria district, F.R.H. Tala 10.viii.05 (1 male) coll. K. Chandra.

Diagnostic characters : Colour light brown; shape stout; mirror of male wider; anterior tibiae armed with four dactylus and pseudepiphallus is narrowly cordiform and the hooks rather short, acute.

Distribution : India : Andaman Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh (Seoni and Umaria), Meghalaya, Orissa, Pondicherry, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Australia, Bhutan, Iran, Madagascar, Malaya, Myanmar, Pakistan, South Spain, Singapore and Sri Lanka.

Superfamily GRYLLOIDEA

Family GRYLLIDAE

Subfamily GRYLLINAE

5. *Acheta domesticus* Linnaeus

1758. *Gryllus (Acheta) domesticus* Linnaeus *Syst. Nat.*, 1 : 428.

1967. *Acheta domesticus*, Chopard, *Orthopt. Cat.*, Pt. 10 : 62.

Material examined : Umaria district, Hardiha 28.i.04 (1 Female); Kuchrrahi 04.ii.04 (1 Female), Forest rest house, Bandhavgarh 31.x.07 (1 male, 1 Female), coll. Y.N. Gupta & party.

Diagnostic characters : Colouration reddish yellow or testaceous. Body depressed and pubescent; head wide frontal rostrum; vertex with a yellow transverse band; tegmina well developed.

Distribution : India : Chhattisgarh, Chandigarh, Delhi, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh (Jabalpur, Mandla and Umaria), Maharashtra, Punjab, Rajasthan, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Pakistan.

6. *Gryllus bimaculatus* De Geer

1773. *Gryllus bimaculatus* De Geer, *Mem. Ins.*, 3 : 531.

1936. *Gryllus bimaculatus*, Chopard, *Ceylon J. Sci.*, (B) 20 : 22.

Material examined : Umaria district, Tala 22.i.04 (1 male), coll. Y.N. Gupta & party.

Diagnostic characters : Body and legs glabrous, body typically black with a yellow spot at base of each tegmen.

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Chandigarh, Delhi, Gujarat, Himachal Pradesh, Haryana, Jammu and Kashmir, Karnataka, Kerala, Maharashtra, Madhya Pradesh (Hoshangabad, Jabalpur, Mandla, Seoni and Umaria), Manipur, Meghalaya, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal.

Elsewhere : Malaysia, Malaya, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, and Tropical Africa.

7. *Modicogryllus confirmatus* (Walker)

1869. *Gryllus confirmatus* Walker *Cat. Derm. Salt. Brit. Mus.*, 1 : 37

1964. *Modicogryllus confirmatus* Randell *Can. Ent.*, 96(12) : 1584.

Material examined : Umaria district, Forest Rest House Bandhavgarh 31.x.07 (1 male), coll. R.M. Sharma & party.

Diagnostic characters : Head brown with narrow yellow band connecting the lateral ocelli; occiput with 6 short yellowish lines; mirror longer than wide, divided by a curved vein; 2 oblique veins, lateral field transparent, two anterior veins strongly curved and separated from other posterior veins.

Distribution : India : Andaman Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Chandigarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Meghalaya, Manipur, Maharashtra, Madhya Pradesh (Mandla, Seoni and Umaria), Orissa, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, China, Iran, Israel, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka and Thailand.

Subfamily NEMOBIINAE

8. *Pteronemobius fascipes* (Walker)

1869. *Eneoptera fascipes* Walker, *Cat. Derm. salt. Brit. Mus.*, 1 : 67.

1931. *Pteronemobius fascipes* Chopard, *Bull. Raffles Mus.*, 6 : 134.

Material examined : Umaria district, Hardiha 28.i.04 (1 male), Forest Rest House Bandhavgarh 31.x.07 (1 male), coll. Y. N. Gupta & party.

Diagnostic characters : Head blackish with four pale lines on the occiput; palpi blackish at base, with 4th and 5th joints white; pronotum brownish above; posterior tibiae with 3 external and 4 internal spines in male.

Distribution : India : Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Haryana, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh (Chhindwara, Mandla, Seoni and Umaria), Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : China, Indonesia (Java), Malaya, Malaysia, Myanmar, Philippines, Sri Lanka, Singapore and Taiwan.

Family TRIGONIDIIDAE

9. *Trigonidium* sp.

1839. *Trigonidium* Rambur, *Faune Andal.*, 2 : 31.

Material examined : Umaria district, Tala 22.i.04 (1 Female), coll. Y.N. Gupta & party, Dhamakhor 28.x.07 (1 male) coll. R.M. Sharma & party.

Diagnostic characters : Colouration black, shining, with posterior legs yellowish. Head black; tegmina convex, venation same in male & female (both sexes), with straight and parallel veins; between the principle veins, there are false veins which give to the tegmina a straight aspect. Wings of variable length.

Distribution : India : Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Chandigarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Lakshdweep, Madhya Pradesh (Chhindwara and Umaria), Maharashtra, Manipur, Meghalaya, Mizoram, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Africa, Australia, Bhutan, China, Iran, Japan, Korea, Madagascars, Maldive Island, Malaysia, Myanmar, Nepal, New Zealand, South Europe, South Asia, Sri Lanka and Vietnam.

10. *Anaxipha* sp.

1874. *Anaxipha* Saussure, *Miss. Mexique, Orth.*,: 370.

Material examined : Umaria district, Forest Rest House, Bandhavgarh 31.x.07(1 female), coll. R.M. Sharma & party.

Diagnostic characters : Size small, body rather long and slender. Head wider than the pronotum; eyes vertically lengthened; fifth joint of maxillary palpi long, triangular. Anterior tibiae perforated on one or both side. Elytra membranous extending up to abdomen apex. Wings usually caudate.

Distribution : India : Andaman & Nicobar Islands, Assam, Chandigarh, Himachal Pradesh, Karnataka, Madhya Pradesh (Shahdol and Umaria), Manipur, Meghalaya, Orissa, Punjab, Tamil Nadu, Tripura, Uttarakhand and West Bengal.

Elsewhere: Australia, Africa, Java, Madagascar, Malaysia, Myanmar, Philippines and Sri Lanka.

Suborder CAELIFERA

Infraorder ACRIDIDEA

Superfamily ACRIDOIDEA

Family ACRIDIDAE

Subfamily ACRIDINAE

11. *Acrida exaltata* (Walker)

1859. *Truxalis exaltata* Walker, *Ann. Mag. nat. Hist.*, 4 (3) : 222.

1893. *Truxalis bravicornis* Bolivar, *Feuille Jeunes Nat.*, 27 : 162, no. 8.

1902. *Acrida lugubris* Burr, *Trans. R. ent. Soc. Lond.*, 2 : 170, p. 13.

1936. *Acrida curta* Uvarov, *Linn. Journ. Zool.*, 39 : 536.

1914. *Acrida exaltata* Kirby, *Fauna British India*, Orth., 1 : 99, fig. 80.

Material examined : Umaria district, Hardiha 28.i.04(1 male, 1 female), B.B. Road 31.i.04 (1 female), coll. Y.N. Gupta & party, Kucharahi 04.ii.04 (1 male, 2 female), Panpatha 23.x.07 (1 male), Gurvahi village Pond Panpatha 24.x.07 (1 female), Dhamakhor 28.x.07 (1 female), Forest Rest House 29.x.07 (1 male), Forest Rest House Bandhavgarh 31.x.07 (1 male) coll. R.M. Sharma & Party.

Diagnostic characters : Male : Moderate in size. Body slender, strongly elongate and laterally compressed; head elongate, conical and equal in length with pronotum; face strongly bent downwards. Fastigium of vertex longer than broad, its apex obtuse, and broadly rounded; antennae shorter than head and pronotum together. Pronotum disc weakly tectiform and tricarinate; prozona longer than metazona; median carina of prozona crossed by only posterior sulci. Tegmen long and narrow, apex acutely pointed. Supra anal plate triangular. Cercus narrow, conical. Epiphallus with broad brinige, ancorae large, lophi small and bilobate.

Female : Body larger, anterior ovipositor valves short, subgenital plate short and broad.

Colour : Green, Dried specimens appear yellowish or yellowish brown.

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Orissa, Madhya Pradesh (Chhindwara, Jabalpur, Mandla, Rewa, Seoni, Sidhi and Sahdol), Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Iran, Pakistan, Sri Lanka, Saudi Arabia, Yemen and West Eden.

Subfamily OEDIPODINAE

12. *Acrotylus humbertianus* Saussure

1884. *Acrotylus humbertianus* Saussure, *Mem. Soc. Phys. Hist. nat. Geneva*, 28(9) : 189.

1914. *Acrotylus humbertianus* : Kirby, *Fauna Brit. India, Orthopt.*, : 153.

Material examined : Umaria district, Hardiha 28.i.04 (1 male), coll. Y.N. Gupta & party.

Diagnostic characters : Body pilose, antennae longer than head and pronotum together, the tip of vertex conical, concave, with a carina on each side, prozona with two fuscous fascia, lateral margin white below, tegmina with two oblique white spots or fascia, wings hyaline, yellow at base, radial area with a semilunar fuscous fascia.

Distribution : India : Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Madhya Pradesh (Katni, Shahdol, Seoni and Umaria), Maharashtra, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

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

13. *Aiolopus thalassinus tamulus* (Fabricius)

1798. *Gryllus tamulus* Fabricius, *Ent. Syst. Suppl.*, : 195.

1838. *Gomphocerus tricoloripes* Burmeister., *Hand. Ent.*, 2 : 649.

1888. *Epacromia rufostriata* Kirby, *Proc. zool. Soc. Lond.*, 550.

1968. *Aiolopus thalassinus tamulus* (Fabr.), *Bull. Br. Mus. nat. Hist. (Ent.)* : 307-350.

Material examined: Umaria district, Hardiha 28.i.04 (1 female), coll. Y. N. Gupta & party, Dhamokhor 28.x.07(1 female), Gurvahi village Pond, Panpatha 24.x.07(1 male, 1 female), coll. R.M. Sharma & party.

Diagnostic characters: Medium size; antenna as long as head and pronotum; filiform, fastigium of vertex pentagonal, frontal ridge almost flat and gradually narrowing upwards. Pronotum slightly constricted between prozona and metazona; metazona longer than prozona; presence of two brown stripes from both middle part of the eyes and running laterally up to the upper part of metazona. Cerci rounded and conical; supra anal plate short, triangular, epiphallus medium size, bridge short and broad, ancorae bilobed and oval shaped, bent in the inner side. Lophi bilobed, Cingulum horse-shoe shaped. Ovipositor short, valve moderately robust, lower valve with small tooth.

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Delhi, Himachal Pradesh, Haryana, Karnataka, Kerala, Madhya Pradesh (Mandla, Shahdol and Umaria), Maharashtra, Manipur, Meghalaya, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Australia, Bangladesh, Borneo, Brunei, China, Celebes, Hainan, Hong Kong, Java, Lombok, Malaya, Myanmar, New Guinea, Pakistan, Philippines, Papua, Singapore, Sri Lanka, Sumatra, Thailand and Timor.

14. *Gastrimargus africanus africanus* (Saussure)

1888. *Oedaleus* (*Gastrimargus*) *marmoratus* Var. *africanus*. Saussure, *Mem. Soc. Phus. Hist. Mat. Geneve.*, 30(1) : 39
1922. *Gastrimargus marmoratus* (nec. Thunb.) Boliver *Afrique Orientale Anglaise* : 174
1925. *Gastrimargus africanus*, Uvarov, *Ann. Mag. Nat. Hist.*, (9)15 : 622.
1926. *Gastrimargus africanus*, Uvarov, *Trabs. Ent. Soc. Lond.*, 436
1928. *Gastrimargus africanus* var. *orientalis* Sjostedt, *Sevemski Akad. Handi.* (3) 6 no. 1 : 11, tab. 8, figs 6,7.
1982. *Gastrimargus africanus africanus*, Ritchie, *Bull. Br. Mus. Nat. Hist. (Ent.)* 44(4) : 248-250.

Material examined : Umaria district, Hardiha 28.i.04 (1 female), coll. Y.N. Gupta & party.

Diagnostic characters : Antennae filiform; fastigium of vertex narrowing forwards, with truncated apex and well developed lateral and weak median carinule. Pronotum tectiform with high median carina. Prozona a little shorter than metazona, posterior margin of metazona acutangular. Mesosternal interspace much wider than its length. Tegmina and wings usually fully developed. Tegmen surpassing hind knee by one-quarter to one-half of hind femur length, cerci conical, inner portion slightly blunt. Wings with complete fascia, basal area usually bright yellow.

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh (Chhindwara, Mandla, Sahdol, Seoni, Sidhi and Umaria), Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere: Africa, Myanmar, Nepal, Pakistan, Saudi Arabia, Sri Lanka, Thailand, Tibet and Yemen.

15. *Trilophidia annulata* (Thunberg)

1815. *Gryllus annulatus*, Thunberg, *Mem. Acad. Sci. St. Petersb.*, 5 : 234.

1914. *Trilophidia annulata*, Kirby, *Fauna British India, Orthoptera : Acrididae* : 149.

1965. *Trilophidia annulata*, Hollis, *Trans. R. ent. Soc. Lond.*, 117(8) : 251-253.

Material examined : Umaria district, Dhamokhor 28.x.07 (1 female), coll. R.M. Sharma & party.

Diagnostic characters : Male : Size medium; vertex behind eyes with a pair of tubercles; fastigium of vertex elongate-trapezoid; antennae filiform, longer than head and pronotum together. Pronotum tectiform with well marked crest; prozona shorter than metazona, tooth like projections present on median carina on the dorsum of prozona; metazona with weak median carina; circus narrow and conical. Apex of subgenital plate obtuse-angular.

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh (Chhindwara, Mandla, Seoni and Umaria), Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Borneo Hong Kong, Japan, Java, Korea, Malaya, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sarawak, Singapore, Sri Lanka, Sumatra, Taiwan, Thailand and Vietnam.

Subfamily HEMIACRIDINAE

16. *Spathosternum prasiniferum prasiniferum* (Walker)

1871. *Heteracris* (?) *prasinifera* Walker, *Cat. Derm. Salt. Brit. Mus.*, 5 Suppl. : 65.

1914. *Spathosternum prasiniferum*, Kirby, *Fauna British India, Orthoptera : Acrididae* : 208.

1936. *Spathosternum prasiniferum prasiniferum* Tinkham, *Ling. Sci. J.*, 15 : 51.

Material examined : Umaria district, Kuchrahi 04.ii.04 (1 male), coll. Y.N. Gupta & party.

Diagnostic characters : Body size small; rufo testaceous or green colour. Broad blackish or dark-green stripe runs behind the lower part of the eyes and below the lateral carina of the pronotum; prosternal tubercle spatulate. The tegmina and wings well developed; central area of tegmen with a longitudinal black streak which is well marked in female and almost obsolete in male.

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh (Chhindwara, Mandla, Sahdol, Seoni, Sidhi and Umaria), Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, China, Hainan, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand, Vietnam and West Malaysia.

Subfamily OXYINAE

17. *Oxya hyla hyla* Serville

1831. *Oxya hyla* Serville, *Annl. Sci. nat. (Zool.)*, **22** : 287.

1971. *Oxya hyla hyla*, Hollis, *Bull. Brit. Mus. nat. Hist. (Ent.)*, **26** (7) : 282

Material examined : Umaria district, Kuchrahi 04.ii.04 (1 female), coll. Y.N. Gupta & party, Forest Rest House 29.x.07 (1 female), Forest Rest House Bandhavgarh 31.x.07 (1 male, 1 female), coll. R.M. Sharma & Party.

Diagnostic characters:-Body finely rugose; supra-anal plate trapezoidal with triangular apical projection and a tubercle on each side of a median apical process; cercus conical or compressed rounded with acute or subacute apex. Epiphallus with narrow bridge, without ancorae and well developed tooth like inner lophi; subgenital plate of female with two longitudinal ridges extending forwards from posterior margin.

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Himachal Pradesh, Haryana, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh (Rewa, Sahdol, Seoni and Umaria), Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Africa, Angola, Bangladesh, Ethiopia, Gambia, Ghana, Guinea, Iran, Kenya, Korea, Madagascar, Maldives, Mali, Malawi & Zambia, Nepal, Niger, Pakistan, Persia, Tanzania and Uganda.

Subfamily COPTACRIDINAE

18. *Eucoptacra saturata* (Walker)

1870. *Acridium saturatum* Walker, *Cat Derm Salt. Br. Mus.*, 4 Locustidae : 628.

1921. *Eucoptacra saturata* : Uvarov, *Ann. Mag. Nat. Hist.*, (9) 7 : 503.

Material examined : Umaria district, B.B.Road 31.i.04 (1 female), coll.Y.N. Gupta & party.

Diagnostic characters : Medium size body; antennae filiform, generally longer than head and pronotum together. Fastigium of vertex narrow, concave in middle sloping with sharp lateral carinulae. Front straight almost vertical, slightly inclined backwards. Frontal ridge wide, flat, expanded between antennae, narrowed apically. Pronotum weakly tectiform with linear median carinulae, cut by 3 sulci, posterior margin of metazona angular. Prosternal tubercle obtusely conical. Tegmen fully developed, apex obliquely truncated.

Distribution : India : Andhra Pradesh, Assam, Arunachal Pradesh, Chhattisgarh, Himachal Pradesh, Maharashtra, Madhya Pradesh (Shivpuri and Umaria), Manipur, Maharashtra, Meghalaya, Orissa, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Elsewhere : China, Myanmar and Taiwan.

Subfamily EYPREPOCNEMIDINAE

19. *Choroedocus* sp.

1878. *Demodocus* Stal, *Boh. Svensk.vet. Akad. Handl.*, 5(4) : 74.

1914. *Choroedocus* Bolivar, *Trab. Mus.nat. Cienc. Nat. madr.*, 20 : 110.

Material examined : Umaria district, F.R.H. Tala 14.viii.05 (1 female, NC), coll. K. Chandra.

Diagnostic characters : Body large and stout, antennae filiform, fastigium parabolic with obtuse apex. Frontal ridge wide and flat, constricted towards apex. Pronotum compressed distinct at prozona, median carina cut by 3 sulci. Metazona shorter than prozona of which posterior margin rounded. Prosternal tubercle cylindrical, basal part narrowed, but before middle widened, apex obtuse. Cercus wide, thick, strongly compressed, incurved conical.

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Delhi, Himachal Pradesh, Madhya Pradesh (Hoshangabad, Sahdol and Umaria), Maharashtra, Sikkim, Tamil Nadu, Tripura, Uttarakhand and West Bengal.

Elsewhere : Africa, Bangladesh, China, Island of Hainon, Sri Lanka and Thailand.

Subfamily CATANTOPINAE

20. *Catantops pinguis innotabilis* (Walker)

1870. *Acridium innotabile* Walker, *Cat Derm Salt. Br. Mus.*, 4 : 629.

1902. *Catantops indicus* I. Bolivar *Ann. Soc. ent. France*, 70 : 626.

1925. *Catantops innotabilis*, Uvarov *Mission Babault Inde. Acrididae Paris* : 30.

1943. *Catantops innotabilis*, Uvarov *Ann. Mag. nat. Hist.*, 10(11) : 127.

1956. *Catantops pinguis innotabilis* : Dirsh *Publcoes cult co. Diam. Angola*, 28 : 105.

Material examined : Umaria district, Shesh Shaiya 26.i.04 (1B&), Hardiha 28.i.04 (1 male), Kucharahi 04.ii.04 (1 female), coll. Y.N. Gupta & party, Sahdol, Gurvahi village Pond, Panpatha 24.x.07 (1 female), Son river Mosanaghat 26.x.07 (1 female), Dhamokhor 28.x.07 (1 female), Forest Rest House Bandhavgarh 31.x.07 (1 female, NC), Coll. R.M. Sharma & party.

Diagnostic characters : Size medium; antennae filiform, shorter than head and pronotum together; basal disc of wing from colourless to weakly greenish; the external disc of the hind femur with a small black median spot, the size of which varies sometimes. Prosternal tubercle short, subcylindrical, rounded at apex; lateral lobe of pronotum without pattern; hind femur broad and thick, external disc without black median spot below upper carinula, internal disc with four small black, irregular spots; hind tibia light red; Tegmina and hind wings extend beyond the hind knees

Male : Cercus compressed, up curved, expanded at apex, slender, bifurcated, upper one blunt and the lower one pointed. Epiphallus bridge-shaped, with a subgenital plate laterally compressed navicular, ancorae pointed, lophi small lobiform.

Female : Very similar to males except longer. Cercus short, conical. Valve of ovipositor moderately curved. Subgenital plate with truncated apex.

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Lakshadweep Islands, Madhya Pradesh (Chhindwara, Shahdol, Seoni and Umaria), Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Borneo, Hong-Kong, Indo-China, Java, Japan, Kambodia, Korea, Myanmar, Malaysia, Malaya, Maldive Island, New Guinea, Pakistan, Philippines, Sri Lanka, Sumatra, South Tibet, Thailand and Yunnan.

21. *Stenocatantops splendens* (Thunberg)

1815. *Gryllus splendens* Thunberg, *Mem. Acad. Sci.St. Petersh.*, 5 : 236.

1953. *Stenocatantops splendens* : Dirsh & Uvarov, *Tijdschr. Ent.*, **96**(3) : 237.

Material examined: Umaria district, Hardiha 28.i.04 (5 male), B.B. Road 31.i.04 (1 male, 1 female), coll. Y.N. Gupta & party, B.N.P. 13.viii.05 (1 female), Tala range 16. Viii. 05 (1 male) coll. K. Chandra.

Diagnostic characters : Body colour brown or brownish testaceous; size medium; body slender and elongated; middle joints of antennae about twice or three times as long as broad, prosternal tubercle strongly curved and inclined backwards in profile.

Distribution : India : Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Delhi, Karnataka, Kerala, Madhya Pradesh (Mandla, Seoni and Umaria), Maharashtra, Manipur, Meghalaya, Orissa, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal.

Elsewhere : Borneo, Celebes, China, Hainan, Java, Korea, Malaya, Maluccas Island, Myanmar, Philippines, Sri Lanka, Sumatra and Thailand.

22. *Xenocatantops humilis humilis* (Serville)

1939. *Acridium humile* Serville *Ins, Orth.*, : 662.

1953. *Xenocatantops humilis humilis*: Dirsh and Uvarov, *Tijdschr. Ent.*, **96** : 237.

Material examined : Umaria district, B.B. Road 31.i.04 (3 female), coll. Y.N. Gupta & party, Gurvahi village Pond, Panpatha 24.x.07 (1 male), coll. R.M. Sharma & party.

Diagnostic characters : Body medium size, slender, frons in profile straight, moderately sloping backwards; pronotum constricted in middle.

Distribution : India : Andaman Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Kerala, Madhya Pradesh (Umaria), Maharashtra, Manipur, Meghalaya, Mizoram, Tamil Nadu, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, Borneo, Indo-China, Java, Lombok, Malaya, Myanmar, New Guinea, Philippines, Sri Lanka, Sumatra, Thailand, S. Tibet, Vietnam and Yunnan.

Family PYRGOMORPHIDAE

23. *Atractomorpha crenulata* (Fabricius)

1793. *Truxalis crenulata* Fabricius, *Ent. Syst.*, **2** : 28.

1969. *Atractomorpha crenulata*, Kevan and Chen, *Zool. J. Lin. Soc.*, **48** : 187.

Material examined : Umaria district, B.B. Road 31.i.04(2 male), Kucharahi 04.ii.04 (1 female), coll. Y.N. Gupta & party, Dhamokhor 28.x.07 (1 female), Forest Rest

House 29.x.07 (1 male), Forest Rest House Bandhavgarh 31.x.07 (1 male, 2 female), coll. R.M. Sharma & party.

Diagnostic characters : Body medium, narrow and slender; antennae sub-filiform; head conical; fastigium of vertex shorter; cheeks with a row of granular structure; pronotum submarginate in front, and angulated behind slightly tricarinate; metazona shorter than prozona; tegmina pointed, extending for one-fourth of their length beyond the hind femora; hind wings normally tyrian pink to light mallow purple at base.

Distribution : India : Andaman and Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Lakshadweep, Madhya Pradesh (Chhindwara, Jabalpur, Mandla, Shahdol and Umaria), Maharashtra, Meghalaya, Nagaland, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, Maldives Island, Myanmar, Malaysia, Sri Lanka, South Vietnam and Thailand.

24. *Chrotogonus (Chrotogonus) trachypterus trachypterus* (Blanchard)

1836. *Ommexecha trachypterus* Blanchard. *Ann. Soc. Ent. France*, 5 : 618, pl. 22, fig. 6.

1914. *Chrotogonus sordidus* Kirby *Faun. Brit. India.*: 162. [f. *brachypterus*] 42-43.

1959. *Chrotogonus trachypterus trachypterus*, Blanchard *Publ. cult. Diamang.*, 43: 224-225.

Material examined : Umaria district, Shesh Shaiya 26.i.04 (1 male), Hardiha 28.i.04 (2 female), Kuchrrahi 04.ii.04 (1 female), coll. Y.N. Gupta & party, Son river, Mosanaghat 26.x.07 (1 female), coll. R.M. Sharma & party.

Diagnostic characters : Colour brown. Body small, rugose and tuberculate. Head short, broad, rugose, fastigial furrow present, antennae fulvous; eyes rounded; pronotum short, broad with small tubercle; sternum yellowish with black spot. Tegmina shorter than the abdomen. Hind wings are clearly hyaline. Epiphallus without ancorae, with curved lophi and dorsolateral appendices.

Distribution : India : Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Himachal Pradesh, Haryana, Jammu & Kashmir, Madhya Pradesh (Chhindwara, Jabalpur, Mandla, Shahdol and Umaria), Maharashtra, Meghalaya, Orissa, Punjab, Rajasthan, Sikkim, Uttarkhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Nepal and Pakistan.

Infraorder TETRIGIDEA

Superfamily TETRIGOIDEA

Family TETRIGIDAE

Subfamily SCELIMENINAE

25. *Criotettix* sp.

1887. *Criotettix* Bolivar, *Annls Soc. Ent. Belg.*, 31 : 222.

1904. *Acanthalobus* Hancock, *Spolia zeylan.*, 2 : 131.

Material examined : Umaria; Panpatha 18.viii.05 (1 female), coll. Y.N. gupta & party, Forest Rest House, Bandhavgarh 31.x.07(1 male), coll. R.M. Sharma & party.

Diagnostic characters : Body elongated and slender. Colour brown or grey or yellowish grey. Head not exserted; vertex generally as broad as an eye, narrowed in front, extends up to the level of eyes in front, depressed on either side; median carinula distinct anteriorly; lateral carinula elevated on the level of eyes and reflexed laterally in front, frontal costa bifurcate behind the paired ocelli, depressed in front, sinuated between the eyes, narrowly sulcate between the paired ocelli, moderately sulcate in front. Antennae filiform and inserted below the middle of eyes. Elytra elongated, rounded at apex. Wings as long as pronotum; anterior and middle femora elongated margin finely serrulated.

Distribution : India : Andhra Pradesh, Assam, Bihar, Chhattisgarh, Madhya Pradesh (Umaria), Maharashtra, Manipur, Meghalaya, Sikkim, Tamil Nadu, Tripura and West Bengal.

Elsewhere : Borneo, East Indies, Great Sunda Island, Japan, Java, Lombok, Malaya, Myanmar, New Guinea, Philippines, Sri Lanka, South China and Sumatra.

Subfamily TETRIGINAE

26. *Hedotettix gracilis* (De Haan)

1842. *Acridium (Tetrix) gracile* De Haan, *Temminck. Verhandl., Orthoptera*, : 167-169.

1914. *Hedotettix gracilis* : Kirby, *Faun. Brit. India, Orth.*, : 72.

Material examined : Umaria district, Forest Rest House Bandhavgarh 31.x.07 (1 female), coll. R.M. Sharma & party.

Diagnostic characters : Body small to large; head not exserted above the pronotum; vertex equal to or narrower than an eye, front margin rounded; frontocosta widely sulcate, the rami widened between the antennae; antennae inserted below the middle of

eyes; pronotum angulate anteriorly, extended behind up to the apex of hind femora or beyond it; dorsum finely granulose, tectiform between shoulders; wings extending up to the pronotum or surpass a little.

Distribution : India : Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Karnataka, Madhya Pradesh (Chhindwara, Mandla, Seoni, Umaria), Manipur, Meghalaya, Maharashtra, Orissa, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, Celebes, Java, Myanmar, Pakistan, Sumatra, Sri Lanka, Taiwan, Thailand and Vietnam.

27. *Ergatettix dorsifera* (Walker)

1871. *Tettix dorsifera* Walker, *Cat. Derm. Salt. Brit. Mus.*, 5 Suppl., : 825.

1929. *Ergatettix dorsifera* : Hebard, *Revue suisse Zool.*, 36 : 588.

Material examined : Umaria district, Forest Rest House Bandhavgarh 31.x.07 (1 male, 2 female), coll. R.M. Sharma & party.

Diagnostic characters : Size medium; head distinctly exserted above the surface of pronotum; vertex narrower than an eye; antennae situated below the inferior margin of eyes; pronotum and wings extend beyond the apex of hind femora; dorsum wide between shoulders, rugulose; median carina depressed in front, undulate behind the shoulders; lateral carinae wavy; posterior femora elongate.

Distribution : India : Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh (Chhindwara, Mandla, Seoni and Umaria), Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Central Asia, Greater Sunda Islands, Java, Myanmar, Nepal, South China, Sri Lanka, Sumatra, Sumba, Taiwan and Turkmenia.

SUMMARY

The present study deals with 27 species belonging to 27 genera under seven families, viz. Tettigoniidae (03), Gryllotalpidae (01), Gryllidae (04), Trigonidiidae (02), Acrididae (12), Pyrgomorphidae (02) and Tetrigidae (03) from the Bandhavgarh Tiger Reserve, Madhya Pradesh

REFERENCES

- Chopard, L. 1969. The fauna of India and adjacent countries. Orthoptera, 2, Grylloidea. *The Manager of publication Delhi* : xviii+ 421.
- Chandra, K., Gupta, S.K. and Shishodia, M.S. 2007. A checklist of Orthoptera of Madhya Pradesh and Chhattisgarh. *Zoo's print Journal* 22(5) : 2683-2687.
- Gupta, S.K. 2008. New records of two short-horned grasshoppers from Central India. *Bionotes*, 10(3) : 89.
- Gupta, S.K. 2009. New records of some Orthoptera insects from Central India. *Bionotes*, 11(1) : 28.
- Joshi, K.C., Kulkarni, N., Roychoudhury, N., Chandra, S., and Barve, S. 2004. A study of insects from Kanha National Park. *Journal of Tropical Forestry*, 20(3 & 4) : 58-74.
- Kirby, W. F. 1914. The fauna of British India, including Ceylon and Burma Orthoptera (Acridiidae) : IX + 276pp. London.
- Shishodia, M. S. 1988. Additional type material of *Capulica alata* Uvarov, *Rec. zool. Surv. India*, 85(3) : 465.
- Shishodia, M. S. 1991. Grouse locusts (Insecta : Orthoptera : Tetrigidae) of Kanha National Park, Mandla, Madhya Pradesh, India. *Rec. zool. Surv. India*, 89 (1-4) : 101-104.
- Shishodia, M.S. 1995. Insecta : Orthoptera. *Fauna of Indravati Tiger Reserve, Conservation Area Series*, 6 : 11-17. *Zool. Surv. India*.
- Shishodia, M.S. 1999. Orthoptera fauna of Pataalkot, Chhindwara, Madhya Pradesh, India. *Rec. zool. Surv. India*, 97(4) : 33-43.
- Shishodia, M.S. 2006. On a collection of grasshoppers by Dr. M. L. Roonwal from the erstwhile Rewa estate, Madhya Pradesh. *Bionotes*, 8(1) : 11-12.
- Tandon, S.K., Shishodia, M.S. and Dey, A. 1976. On a collection of Orthoptera (Insecta) from Kanha National Park, Mandla, Madhya Pradesh, India. *Newsl. zool. Surv. India*, 2(4) : 167-170.
- Tandon, S.K., Shishodia, M.S. and Dey, A. 1995. Insecta : Orthoptera. *Fauna of Kanha Tiger Reserve, Conservation Area Series*, 7 : 19-25. *Zool. Surv. India*.

INSECTA : MANTODEA

K. CHANDRA

Zoological Survey of India, Central Regional Station, Jabalpur-482002, M.P.

INTRODUCTION

These are carnivorous insects popularly known as 'Praying mantids' Mukherjee *et al.* (1995) reported 162 species under 68 genera from India, where in 16 species representing 2 families were included from Madhya Pradesh and Chhattisgarh. Mukherjee and Shishodia (1999) studied the mantid fauna of Pataalkot, Chhindwara and added seven more species. The present study reports three species under three families collected from Bandhavgarh Tiger Reserve.

List of Mantids recorded from Bandhavgarh Tiger Reserve

Family HYMENOPODIDAE

Subfamily HYMENOPODINAE

1. *Creobroter apicalis* Saussure

Family LITURGUSIDAE

Subfamily LITURGUSINAE

2. *Humbertiella similis* Giglio-Tos

Family TOXODERIDAE

Subfamily TOXODERINAE

3. *Toxoderopsis taurus* Wood-Mason

SYSTEMATIC ACCOUNT

1. *Creobroter apicalis* Saussure

1869. *Creobroter apicalis* Saussure, Mitt, Schweiz, Entomol. Ges., 3 : 73.

1927. *Creobroter apicalis* : Giglio,-Tos, Das Tierreich, 50 : 558.

1951. *Creobroter apicalis* : Roonwal & Bhasin, Indian Forester, 77(5) : 313-318.

1995. *Creobroter apicalis* : Mukherjee, Hazra & Ghosh, *Oriental Insects*, 29 : 227.

Material examined : District Umaria, Bandhavgarh National Park, Tala Guest House, 10.08.2005 (1 ex.), coll. K. Chandra.

Diagnostic characters : Vertex with a spine. Fore wing with yellow band bordered by an eye spot and placed in the middle of the length of the wing; eye mark enclosing black dots, usually two and rarely one in males. Hind wing pink at base, smoky patch faded, brief and at center of anal area.

Distribution : India : Assam, Karnataka, Kerala, Madhya Pradesh (Umaria), Manipur, Meghalaya, Orissa, Sikkim and West Bengal.

Family LITURGUSIDAE

Subfamily LITURGUSINAE

2. *Humbertiella similis* Giglio-Tos

1897. *Humbertiella indica* Bolivar, *Ann. Soc. Entomol. France*, 66 : 303.

1927. *Humbertiella similis* : Giglio-Tos, *Das Tierreich*, 50 : 65.

1995. *Humbertiella similis* : Mukherjee, Hazra & Ghosh, *Oriental Insects*, 29 : 243.

Material examined : District Umaria, Bandhavgarh National Park, Tala Guest House, 14.08.2005 (1 ex.), coll. K. Chandra

Diagnostic characters : Frontal sclerite black or brownish; upper edge may be whitish, nearly straight in the middle. Pronotum without marginal spines, bosseles flat. Fore femora internal spines black at apical halves and at bases. The four posterior tibiae a little sinuated, more marked in middle tibiae. Fore wings blackish, extend beyond end of abdomen, costal area reticulated, anal vein 2-3 branched.

Distribution : India : Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh (Umaria). Orissa, Uttar Pradesh.

Elsewhere : Nepal and Sri Lanka.

Family TOXODERIDAE

Subfamily TOXODERINAE

3. *Toxoderopsis taurus* Wood-Mason

1889. *Toxoderopsis taurus* Wood- Mason, *J. Asiatic Soc. Bengal*, 58 : 320.

1927. *Toxoderopsis taurus* : Giglio-Tos, *Das Tierreich*, 50 : 569.

1995. *Toxoderopsis taurus* : Mukherjee, Hazra & Ghosh, *Oriental Insects*, **29** : 325.

Material examined : District Umaria, Bandhavgarh National Park, Tala Guest House, 18.08.2005 (1 ex.), coll. K. Chandra.

Diagnostic characters: Body slender. Eyes with long sharp spines; two distinct tubercles between base of antenna and eye margin. Vertex with a short median truncated protuberance; it is sculptured by black spots, with prominently elevated lobes (one median and two lateral). Fore femur with externally two broad blackish bands; internal spines 10-11, external 5 and rarely 6, discoidal 3 (middle one much longer). Fore tibia with 4 external and 8 internal spines. Fore wing with opaque, brownish reticular costal area; discoidal area transparent except distal pale smoky patch; anal area with smoky patch near base and distal area. Hind wing hyaline, costal area with a distal dirty smoky patch. Cerci flattened, long and distal most segment 3 crested, apex angular (two crests of equal size and length, rest one less than half of other two in length).

Distribution : India : Bihar, Madhya Pradesh (Umaria) and Orissa

Elsewhere : Pakistan.

SUMMARY

The present study reports three species of mantids under three families collected from Bandhavgarh Tiger Reserve.

REFERENCES

Giglio-Tos, E. 1927. Orthoptera : Mantodea. *Das Tierreich*, **50** : 707.

Mukherjee, T.K., Hazra, A.K. and Ghosh, A.K. 1995. The Mantid Fauna of India (Insecta: Mantodea). *Oriental Insects*, **29** : 185-358.

Mukherjee, T.K. and Shishodia, M.S. 1999. Mantodea of Patakot, Chhindwara District Madhya Pradesh, India. *Rec. zool. Surv. India*, **97**(Part-4) : 45-48.

INSECTA HEMIPTERA (Aquatic and Semi-Aquatic)

G. THIRUMALAI AND R.M. SHARMA*

Zoological Survey of India, Southern Regional Station, Chennai-600 028

INTRODUCTION

Aquatic and semi aquatic bugs not only play a vital role but also form an important component in food chain of fresh water ecosystem. They are overall indicators of long term environmental conditions and constitute integral components of almost all freshwater communities (Hynes, 1984; Patrick & Palavage, 1994; Ramakrishna, 2000). Due to their diverse habitats and poor dispersal capability these insects also serve as Zoogeographical indicators (Jordon, 1951; Hungerford & Matsuda, 1958). Certain species of aquatic bugs are very effective in biological control of mosquitoes and other pest flies because they feed on the immatures. The various families also display differing tolerances to water pollution, and as a result have potential utility as bioindicators of water quality (Polhemus & Polhemus, 2007). Some of the aquatic bugs are key stone predators, their abundance is essential to the existence of animal communities in an aquatic habitat (Murdoch, *et al.*, 1984). Though, aquatic insects constitute less than 3% of global diversity (Cheng, 1976), they represent 95% of all macro-invertebrate species in fresh water habitats. (Ward, 1992) Recently, Thirumalai, *et al.* (2007b) check listed 57 species of 27 genera under 13 families from the State of Madhya Pradesh. However, present account is based on a small collection containing 8 species of 6 genera under 5 families from Bandhavgarh Tiger Reserve. *Anisops paranigrolineatus* Brooks has been recorded for the first time from the state raising the number of species known from the state to 58.

Systematic List of aquatic and semi-aquatic Hemiptera

Order HEMIPTERA

Suborder HETEROPTERA

Infraorder GERROMORPHA

Family GERRIDAE

Subfamily GERRINAE

Genus *Limnometra* Mayr, 1865

1. *Limnometra fluviorum* (Fabricius)

Family HYDROMETRIDAE

Subfamily HYDROMETRINAE

Genus *Hydrometra* Latreille, 1796

2. *Hydrometra greeni* Kirkaldy, 1898.

Infraorder NEPOMORPHA

Family NOTONECTIDAE

Subfamily ANISOPINAE

Genus *Anisops* Spinola, 1837

3. *Anisops bouvieri* Kirkaldy, 1904

4. *Anisops paranigrolineatus* Brooks

Family NEPIDAE

Subfamily RANATRINAE

Tribe **Ranatrini**

Genus *Ranatra* Fabricius, 1790

5. *Ranatra elongata* Fabricius

6. *Ranatra filiformis* Fabricius

Subfamily NEPINAE

Tribe **Nepini**

Genus *Laccotrephes* Stål, 1866

7. *Laccotrephes ruber* (Linnaeus, 1764)

Family BELOSTOMATIDAE

Subfamily BELOSTOMATINAE

Genus *Diplonychus* Laporte, 1833

8. *Diplonychus rusticus* (Fabricius)

SYSTEMATIC ACCOUNT

Order HEMIPTERA

Suborder HETEROPTERA

Infraorder GERROMORPHA

Family Gerridae

Subfamily Gerrinae

Genus *Limnometra* Mayr, 18651. *Limnometra fluviorum* (Fabricius)1798. *Cimex fluviorum* Fabricius, *Ent. Syst. Suppl.*, 543.1903. *Gerris fluviorum* (Fabricius) : Distant, *Fauna British India*, 2 : 1771903. *Gerris armata* Spinola : Distant, *Fauna British India*, 2 : 180.1958. *Limnometra fluviorum* (Fabricius) : Hungerford & Matsuda, *Kans. Univ. Sci. Bull.*, 39 : 401;1960. *Tenagogonus(Limnometra) fluviorum* (Fab.) : Matsuda, *Kans.Univ. Sci. Bull.*, 41 : 206.

Diagnosis : *L. fluviorum* can easily be identified by the presence of a spine –like projection on the dorsolateral rear margin of middle coxae. This is a very common species and recorded from a wide variety of freshwater habitats.

Material Examined : 5 male (W), 1 male (Apt), 5 female (W), 3 female (Apt) from Charan Ganga, Bhandavgarh, Umaria, 27.x.2007, Coll. R.M. Sharma.

Distribution : India : Karnataka, Kerala, Maharashtra, Pondicherry, Tamilnadu, West Bengal.

Elsewhere : Philippines; Sri Lanka.

Family HYDROMETRIDAE

Subfamily HYDROMETRINAE

Genus *Hydrometra* Latreille, 17962. *Hydrometra greeni* Kirkaldy, 18981898. *Hydrometra greeni* Kirkaldy, *Entomologist*, 31 : 2;1903. *Hydrometra vittata* (Stål): Distant, *Fauna British India*, 2 : 170.2002. *Hydrometra greeni* Kirkaldy : Thirumalai, *Rec. zool. Surv. India*, 100(1-2) : 79.

Diagnosis: Anteclypeus conical, seventh abdominal strigite in male with a deep depression, fringed with short stiff hairs. In India this species occurs from near sea level to over 1500 meters elevation. Its habitats include ponds, swampy areas, rocky up and low land streams, lakes, flooded paddy fields.

Material examined : 1 male and 1 female from FRH, Bhandavgarh, Umaria, 31.x.2007, Coll. R.M. Sharma.

Distribution : India (Very Widely distributed).

Elsewhere : Bangladesh; China; Nepal; Sri Lanka; Sumatra; Thailand; Vietnam.

Infraorder NEPOMORPHA

Family NOTONECTIDAE

Subfamily ANISOPINAE

Genus *Anisops* Spinola, 1837

3. *Anisops bouvieri* Kirkaldy, 1904

1904. *Anisops bouvieri* Kirkaldy, *Wiener Ent. Zeit.*, **23** : 116.

Diagnosis : This is a very mobile species and is found mostly in freshwater pools, lakes, ponds, forest streams. The males have cephalic projections which are more or less acuminate and longer and extends one fifth of its mentral length beyond the outer margin of the eyes and the left paramere is deeply excavate. The female ovipositor is normal, however the females of *A. bouvieri* and *A. batillifrons* Lundblad are indistinguishable. This species is mostly found in India.

Material Examined : 1 male, 3 female from Son River, Maseeraghat, Umaria, 26.x.2007. Coll. R.M. Sharma.

Distribution : India : Andaman & Nicobar Islands; Andhra Pradesh; Arunachal Pradesh; Assam; Bihar; Karnataka; Kerala; Madhya Pradesh; Maharashtra; Orissa; Pondicherry; Rajasthan; Tamilnadu; Uttar Pradesh and West Bengal.

4. *Anisops paranigrolineatus* Brooks

1951. *Anisops paranigrolineata*, Brooks, *Kans. Univ. Sci. Bull.*, **34** : 407

2001. *Anisops paranigrolineata*, Brooks : Thirumalai, ZSI, *Fauna of Conservation Area*, **11** : 117.

Diagnosis : The interocular space is not swollen; the left paramere in male is little excavate.

Material Examined : 7 male, 10 female and 4 immature from Son River, Maseeraghat, Umaria, 26.x.2007. Coll. R.M. Sharma

Distribution : India : Kerala, Madhya Pradesh, Maharashtra, Tamilnadu, Uttar Pradesh.

Remarks : It is so far known only from India and has a remarkable distribution in being restricted so far to Kerala, Maharashtra, Tamilnadu and Uttar Pradesh. The present record is the first from the state.

Family NEPIDAE

Subfamily RANATRINAE

Tribe Ranatrini

Genus *Ranatra* Fabricius, 1790

4. *Ranatra elongata* Fabricius

1790. *Ranatra elongata* Fabricius *Skrif. Nat. Selesk.*, 1 : 228.

1906. *Ranatra elongata* Fabricius : Distant, *Fauna Brit. India*, 3 : 18.

1947. *Ranatra elongata* Fabricius : Hafiz & Pradhan, *Rec. Indian Mus.*, 45 : 368.

Diagnosis : This genus is cosmopolitan in distribution and contains more than 120 species all over the world. It is reported to be feeding on tadpoles, nymph of mayflies and other aquatic hemipterans and during dry seasons, it is known to migrate in search of suitable areas. This species can be identified by the structure of the anterior femur, which is provided with a triangular tooth beyond the middle of its length, and the metasternal process, which is sub triangular, and centrally longitudinally foveately sulcate. The forecoxae are two-thirds the length of prothorax and anterior lobe of prothorax less than twice the length of posterior lobe. Large body size (40-60 mm) and the length of the respiratory siphon that is equal or longer than the body can also distinguish this species.

Material Examined: 3 male, 3 female from Garphuri, Bhandavgarh, Umaria, 31.x.2007; 4 male and 2 immature from Son River, Maseeraghat, Umaria, 26.x.2007; 2 female from Dhamkhera, Bhandavgarh, Umaria, 28.x.2007, Coll. R.M. Sharma.

Distribution: India; Australia; Nepal; Sri Lanka.

5. *Ranatra filiformis* Fabricius

1790. *Ranatra filiformis* Fabricius, *Skrit. Nat. Selsk.*, 1 : 228.

1860. *Ranatra sordidula* Dohrn, *Stett. ent. Zeit.*, 21: 409

1906. *Ranatra filiformis* Fabricius:Distant, *Fauna British India*, 3: 21.

Diagnosis: The males of this species can be identified by the absence of a tooth and presence of several small spines on the inner margins of distally hook shaped paramere and presence of wide interocular space. This species is smaller in size than *R. elongata*. This species is mostly found among vegetation, fringing the shallower parts of water, clinging to submerged vegetation and feeds on nymphs of dragonflies and mosquito pupae.

Material Examined : 1 female from Dhamkhera, Bhandavgarh, Umaria, 28.x.2007; 2 male, 2 female from Bamera dam, Panpatha, Umaria, 25.x.2007, Coll. R.M. Sharma.

Distribution : India (Widely distributed).

Elsewhere : Nepal; Pakistan; Philippines; Sri Lanka.

Subfamily NEPINAЕ

Tribe NEPINI

Genus *Laccotrephes* Stål, 1866

6. *Laccotrephes ruber* (Linnaeus, 1764)

1764. *Nepa ruber*, Linnaeus, *Mus. Lud. Ulr.* 165.

1906. *Laccotrephes ruber* (Linn.) : Distant, *Fauna British India*, 3 : 18.

Diagnosis : This is a common species with wide distribution in the Indo-Australian region and is largely found in habitats like rivers, streams, tanks, etc. The abdominal appendices are distinctly longer than the body, the prosternum is convex in the middle and has a curved and hook shaped male paramere.

Material examined : 7 male, 1 female from Garhpuri, Bhandavgarh, Umaria, 31.x.2007; 1 female from Guruvahi Village Pond, Panpatha, Umaria, 24.x.2007; 2B&B& from Dhamkhere, Bhandavgarh, Umaria, 28.x.2007; 2 female from Son River, Maseeraghat, Umaria, 26.x.2007, Coll. R.M. Sharma.

Distribution : India : Arunachal Pradesh, Assam, Bihar, Chandigarh, Delhi, Gujarat, Himachal Pradesh, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Tamilnadu, Uttar Pradesh, West Bengal.

Elsewhere : China; Japan; Nepal; Pakistan; Taiwan.

Family BELOSTOMATIDAE

Subfamily Belostomatinae

Genus *Diplonychus* Laporte, 18337. *Diplonychus rusticus* (Fabricius)

1781. *Nepa rustica* Fabricius, *Species insectorum*, 2 : 333.
1776. *Nepa plana* Sulzer, *abgek. Gesch. Insect*, 92.
1863. *Appasus marginicollis* Dufour, *Ann. Soc. Ent. France*, (4) 3 : 393.
1868. *Diplonychus rusticus* (Fab.): Mayr *Zoolog. Teil Wien*, 188.
1871. *Diplonychus rusticum* (Fab): Mayr, *Verh. zool.-bot. Ges. Wien*, 21 : 437.
1906. *Sphaerodema rusticum* (Fab.): Distant, *Fauna British India*, 3 : 36.
1915. *Sphaerodema rustica* (Fab) : Bergroth, *J. Bombay nat. Hist.*, 24 : 179.

Diagnosis : This species has a single segmented fore tarsus with small claw, pale lateral basal margins of pronotum and its head length is shorter than the width between the eyes. This species is commonly found in fishponds and voraciously feeds on fish fry, mosquito larvae and other aquatic organisms.

Material Examined : 1 male, 2 female from Dhamkhere, Bhandavgarh, Umaria, 28.x.2007; 3 male and 1 female from FRH, Bhandavgarh, Umaria, 31.x.2001, Coll. R.M. Sharma.

Distribution: Australia; China; India; Indonesia; Japan; Malaysia; Myanmar; New Guinea; New Zealand; Sri Lanka; Thailand.

SUMMARY

A small collection containing 8 species of 6 genera under 5 families was obtained from Bandhavgarh Tiger Reserve, district Umaria, Madhya Pradesh. *Anisops paranigrolineatus* Brooks has been recorded for the first time from the state.

REFERENCES

- Cheng, L., 1976. Insects in marine environments. In: Cheng, L., (ed), *Marine Insects*. North Holland/American Elsevier, Amsterdam, : 1-4.
- Hungerford, H.B. and Matsuda, R. 1958. Some interesting aspects of the world distribution and classification of aquatic and semi aquatic Hemiptera. *Proc. 10th International Cong. Ent.*, 1(1956) : 337-348.

- Hynes, H.B.N. 1984. Aquatic insects and mankind. In : The Ecology of Aquatic insects. Ed. V.H. Resh and D.M. Rosenberg Praeger, New York, p. 625.
- Jordon, K.H.C. 1951. Zoogeographische Betrachtungen über ostliche sachsen dargestelltandentschen Neuf under von Heteropteren *Zool. Anz.*, **147** : 79-84.
- Murdoch, W.W., Scott, M.A. and Ebsworth, P. 1984. Effects of the general predator Notonectidae (Hemiptera) upon a fresh water community. *J. anim. Ecol.*, **53** : 791-808.
- Patrick, R. and Palavage, D.M. 1994. The value of species as indicators of water quality. *Proc. Acad. Nat. Sci. Philadelphia*, **145** : 55-92.
- Polhemus, J.T. and Polhemus, D.A. 2007. Freshwater Animal Diversity Assessment. Global diversity of true bugs (Heteroptera; Insecta) in freashwater. *Hydrobiologia*, The International Journal of Aquatic Sciences, 10.1007/s 10750-007-9033-1 published on line : 18th December 2007.
- Ramakrishna, 2000. Limnological investigation and distribution of micro and macro invertebrates and vertebrates of Fox Sagar Lake, Hyderabad. *Rec. Zool. Surv. India*, **98**(1) : 169-196.
- Ward, J.V., 1992. *Aquatic Insect Ecology, Biology and Habitat*. John Wiley & Sons, Inc. New York, 438 pp.
- Thirumalai, G. 2007a. A Synoptic list of Nepomorpha (Hemiptera: Heteroptera) from India. *Rec. zool. Surv. India, Occ. Paper No. 273* : 1-84. (Published by Director, Zool. Surv. India).
- Thirumalai, G., R.M. Sharma and Chandra, K. 2007b. A Checklist of Aquatic and semi-aquatic Hemiptera (Insecta) of Madhya Pradesh. *Rec. zool. Surv. India*. **107**(4) : 71-91.

INSECTA : NEUROPTERA

KAILASH CHANDRA AND J. THILAK

Zoological Survey of India, Central Regional Station, Jabalpur-482002. M.P.

INTRODUCTION

Neuroptera commonly known as “Lace Wings” are small to large sized soft-bodied insects. They are recognized by the fine network of veins of generally transparent wings and well developed antennae. The wings are held roof-like over the back at rest and are generally similar in size, shape and venation. The mouth parts are adapted for chewing. The larvae are predacious, aquatic, semi aquatic, arboreal or terrestrial (Ghosh, 1998).

About 5000 species of Neuroptera are known from the world and about 335 species under 125 genera and 13 families are known from India (Ghosh, 1998). The present study deals with a small collection containing 4 species belonging to 4 genera and 2 families from Bandhavgarh Tiger Reserve.

Ghosh (1983) recorded 10 species of Neuroptera belonging to 10 genera and 5 families from Madhya Pradesh.

Systematic list of Neuroptera recorded from the Tiger Reserve

Phylum ARTHROPODA

Class INSECTA

Order NEUROPTERA

Family MYRMELEONTIDAE

Genus *Palpares* Rambur

1. *Palpares pardus* (Rambur)

Genus *Tomatares* Hagen

2. *Tomatares pardalis* (Fabricius)

Family ASCALAPHIDAE

Genus *Ogcogaster* Westwood3. *Ogcogaster tessellata* (Westwood)Genus *Glyptobasis* MacLachlan4. *Glyptobasis dentifera* (Westwood)

SYSTEMATIC ACCOUNT

1. *Palpares pardus* (Rambur)

1862. *Myrmeleon pardus* Rambur. *Hist. Nat. Ins. Neur.*, : 375.

1868. *Palpares pardus* Mac Lachlan. *J. Linn. Soc.*, 9 : 275.

1984. *Palpares pardus*, Ghosh, *Rec. zool. Surv. India. Occ. Paper No. 52* : 12.

Material examined: 1 ex., 25.x. 2007 , Bamera Dam, district Umaria, coll. R.M. Sharma and party.

Distribution : India : Bihar, Madhya Pradesh, Maharashtra, Orissa, South India, Sikkim and West Bengal.

2. *Tomatares pardalis* (Fabricius)

1781. *Myrmeleon pardalis* Fabricius, *Spec. Ins.*, 398.

1984. *Tomatares pardalis*, Ghosh, *Occ. Pap. Rec. zool. Surv. India*, No. 52 : 14, figs. 21-25.

Material examined: 1 ex., 25.x. 2007, Bamera Dam, district Umaria, coll. R.M. Sharma and party.

Distribution: India : Bihar, Madhya Pradesh, North India, Orissa and West Bengal

3. *Ogcogaster tessellata* (Westwood)

1848. *Ascalaphus (Ogcogaster) tessellatus* : Westwood, *Cabinet Oriental ent.* pl. 34.

1853. *Ascalaphus tessellatus* : Walker, *Cat. Brit. Mus., Neur.*, : 420.

1871. *Ogcogaster tessellatus* : MacLachlan, *J. Linn. Soc.*, 11 : 265.

1908. *Ogcogaster tessellata* : Weele, *Cat. Coll. Selys.*, 8 : 253.

1909. *Ogcogaster tessellatus* : Needham, *Rec. Indian Mus.*, 3 : 198.

1911. *Ogcogaster tessellata* : Banks, *Proc. ent. Soc. Wash*, 13 : 9

1922. *Ogcogaster tessellata* : Fraser, *Rec. Indian Mus*, 24 : 518.

Material examined : 1 ex ., 24-10-07, Forest Rest House, Bandhavgarh, Panpatha, district Umaria, coll. R.M. Sharma and party.

Distribution : India : Bihar, Madhya Pradesh, Gujarat and Western Himalaya.

Elsewhere : Pakistan.

4. *Glyptobasis dentifera* (Westwood)

1848. *Ascalaphus (Ogcogaster) dentifer* Westwood, *Cabinet Oriental ent.*, pl. 34.

1852. *Ascalaphus dentifer* : Walker, *Cat. Brit. Mus. Neur.*, : 421.

1871. *Glyptobasis dentifera* : MacLachlan, *J. Linn. Soc.*, **11** : 278.

1908. *Glyptobasis dentifera* : Weele, *Cat. Coll. Selys*, **8** : 241.

1909. *Glyptobasis dentifer* : Needham, *Rec. Indian. Mus.*, **3** : 198.

1922. *Glyptobasis dentifera* : Fraser, *Rec. Indian Mus.*, **24** : 516.

1949. *Glyptobasis dentifera* : Kimmins, *Ann. Mag. Nat. Hist.*, **12(2)** : 19.

Material examined: 2 ex., 23.x.2007, Forest Rest. House, Bandhavgarh, district Umaria , 1 ex., 25.x. 2007, Bamera Dam, district Umaria, 1 ex., 25.x. 2007, Panpatha, district Umaria, 1ex., 31.x.2007, F.R.H, Bandhavgarh, district Umaria, all coll. R.M. Sharma and party.

Distribution: India : Goa, Orissa, Madhya Pradesh ,Maharashtra, South India, Uttar Pradesh and West Bengal.

SUIMMARY

The present study deals with a small collection containing 4 species belonging to 4 genera and 2 families from the Tiger Reserve.

REFERENCES

- Ghosh, S.K. 1983. Notes on the biogeography of Neuroptera: Planipennia from certain areas of the North–West Himalayan and northern peninsular sectors of India. *Rec. zool. Surv. India*, **80** : 291-300.
- Ghosh, S.K. 1998. *Neuroptera*, pp. 252-257, In : Faunal diversity in India, ENVIS Centre. *Zoological Survey of India*, Calcutta.

INSECTA : DIPTERA : CECIDOMYIIDAE (Gall Midges)

R.M. SHARMA

Zoological Survey of India, Central Regional Station, Jabalpur-482002 (M.P.)

INTRODUCTION

The name gall midge comes from the ability of the larvae to produce galls or abnormal growths on various organs of plants and the family name *Cecidomyiidae* is derived from the Latin word '*Cecidium*' meaning '*gall*'. The family *Cecidomyiidae* best known as plant gall makers, is one of the largest families of order Diptera not only from the point of view of regional fauna but also from the standpoint of global distribution (Skuhrava, Skuhravy and Brewer, 1984).

Presently, the family consists of four subfamilies viz. *Catotrichinae*, (not reported from India) *Lestremiinae*, *Porricondylinae* and *Cecidomyiinae*. The species belonging to second and third subfamilies are mycophagous, saprophagous, phytosaprophagous and xylophagous in nature. The subfamily *Cecidomyiinae* includes phytophagous (gall forming or non-gall forming and inquilines), zoophagous or predatory species. Several phytophagous gall midges cause considerable damage to economically important agricultural/horticultural crops and have gained the status of serious pests.

The number of species of all *Cecidomyiidae* in the world at large and India in particular is still unknown and inestimable. Of the 5451 species and 598 genera of living and fossil gall midges known from the world (Gagné 2004), Indian diversity accounts for 394 described species belonging to 125 genera under three subfamilies, which is approximately 7.10 % of world diversity (Sharma, 2009).

Nothing is known about the gall midges of any Tiger Reserves in Madhya Pradesh. Sharma (2005) reported 15 species from Melghat Tiger Reserve, Maharashtra. The present account of six species of five genera under single subfamily is based on the collection of either gall or adult gall midges reared from the galls by the author from Bandhavgarh Tiger Reserve in the year 2007.

List of Gall midges recorded from Bandhavgarh Tiger Reserve

Order DIPTERA

Suborder NEMATOCERA

Family CECIDOMYIIDAE

Subfamily CECIDOMYIINAE

Supertribe **Lasiopteridi**Tribe **Lasiopterini**1. *Lasioptera achyranthesae* Sharma2. *Lasioptera bryoniae* SchinerSupertribe **Cecidomyiidi**Tribe **Asphondyliini**Subtribe **Asphondyliina**3. *Asphondylia tectonae* ManiTribe **Cecidomyiini**4. *Horidiplosis mathuri* Mani5. *Odinadiplosis odinae* Mani6. *Procontarinia matteina* Kieffer and Cecconi**SYSTEMATIC ACCOUNT**

Order DIPTERA

Suborder NEMATOCERA

Family CECIDOMYIIDAE

Subfamily CECIDOMYIINAE

Supertribe **Lasiopteridi**Tribe **Lasiopterini**1. *Lasioptera achyranthesae* Sharma1988. *Lasioptera achyranthesae* Sharma, *J. Bombay. nat. Hist. Soc.*, **85**(2) : 376.2003. *Lasioptera achyranthesae* Sharma, *Ann. For.*, **11**(2) : 272.

2004. *Lasioptera achyranthesae*: Gagné *Cat. Of Cecidomyiidae of World, Memoirs Ent. Soc. Washington*, **25** : 177.

2005. *Lasioptera achyranthesae* Sharma. *Zool. Surv. India, Con. Area Series*, **24** : 371.

Material examined : Stem and leaf galls were collected from Tiger Reserve

Host Plant : *Achyranthes aspera* Linn. (Amaranthaceae).

Distribution : Coromandal Coast in South India, Karnataka, Maharashtra, Madhya Pradesh, Punjab.

2. *Lasioptera bryoniae* Schiner

1868. *Lasioptera bryoniae* Schiner, *Reise der oesterreichischen Fregatte Novara, Diptera*, **2** : 5

2003. *Lasioptera bryoniae* : Sharma, *Ann. For.*, **11**(2) : 273.

2004. *Lasioptera bryoniae* : Gagné *Cat. Of Cecidomyiidae of World, Memoirs Ent. Soc. Washington*, **25** : 178.

2005. *Lasioptera bryoniae* : Sharma, *Zool. Surv. India, Con. Area Series*, **24** : 371.

Material examined: Stem galls were collected from Tiger Reserve. A few adult midges along with hymenopterous parasites were reared from the collected galls.

Host Plant : *Diplocyclos* (= *Bryonia*) *palmatus* (L) Jeffrey (Cucurbitaceae).

Distribution : Maharashtra, Madhya Pradesh, Punjab, Tamil Nadu.

Supertribe *Cecidomyiidi*

Tribe *Asphondyliini*

Subtribe *Asphondyliina*

3. *Asphondylia tectonae* Mani

1974. *Asphondylia tectonae* Mani, *Oriental Ins.*, **8**(1) : 61

2003. *Asphondylia tectonae* : Sharma, *Ann. For.*, **11**(2) : 274.

2004. *Asphondylia tectonae* : Gagné *Cat. of Cecidomyiidae of World, Memoirs Ent. Soc. Washington*, **25** : 85.

2005. *Asphondylia tectonae*: Sharma, *Zool. Surv. India, Con. Area Series*, **24** : 372.

Material examined : Leaf and stem galls were collected from Tiger Reserve.

Host Plant : *Tectona grandis* L. (Verbenaceae)

Distribution : Throughout Western Ghats and Vindya- Satpura ranges.

Tribe Cecidomyiini

4. *Horidiplosis mathuri* Mani

1935. *Horidiplosis mathuri* Mani, *Rec. Indian. Mus.*, **37** : 440.
 2003. *Horidiplosis mathuri* : Sharma, *Ann. For.*, **11(2)** : 276.
 2004. *Horidiplosis mathuri* : Gagné *Cat. of Cecidomyiidae of World, Memoirs Ent. Soc. Washington*, **25** : 165.
 2005. *Horidiplosis mathuri* : Sharma, *Zool. Surv. India, Con. Area Series*, **24** : 373.

Material examined : Leaf galls were collected from Tiger Reserve.

Host Plant : *Ficus recemosa* (= *glomerata*) Roxb (Moraceae)

Distribution : Throughout India.

5. *Odinadiplosis odinae* Mani

1935. *Odinadiplosis odinae* Mani, *Rec. Indian Mus*, **37** : 436
 2003. *Odinadiplosis odinae* : Sharma, *Ann. For.*, **11(2)** : 277.
 2004. *Odinadiplosis odinae* : Gagné *Cat. of Cecidomyiidae of World, Memoirs Ent. Soc. Washington*, **25** : 212
 2005. *Odinadiplosis odinae*: Sharma, *Zool. Surv. India, Con. Area Series*, **24** : 374.

Material examined : Leaf galls were collected from Tiger Reserve.

Host Plant : *Lannea coromandelica* (Houtt) Merr (= *Odina wodier* Roxb.) (Anacardiaceae)

Distribution : Throughout India.

6. *Procontarinia matteina* Kieffer and Cecconi

1906. *Procontarinia matteina* Kieffer and Cecconi *Marcellia*, **5** : 135
 2003. *Procontarinia matteina* : Sharma, *Ann. For.*, **11(2)** : 278.
 2004. *Procontarinia matteina* : Gagné *Cat. of Cecidomyiidae of World, Memoirs Ent. Soc. Washington*, **25** : 225
 2005. *Procontarinia matteina*: Sharma, *Zool. Surv. India, Con. Area Series*, **24** : 374.

Material examined : Leaf galls were collected from Tiger Reserve.

This is one of the most common species found all over India.

Host Plant : *Mangifera indica* L. (Anacardiaceae).

Distribution : Throughout India including Andaman Islands.

SUMMARY

The present account of six species of five genera under single subfamily, Cecidomyiinae is based on the collection of either gall or adult gall midges reared from the galls by the author from Bandhavgarh Tiger Reserve.

REFERENCES

- Gagné, R.J. 2004. A Catalog of the Cecidomyiidae (Diptera) of the World. *Memoirs Ent. Soc. Washington*, **25** : 1-408.
- Mani, M.S. 1935. Studies on Indian Itonididae (Cecidomyiidae : Diptera) II. Descriptions of new midges and galls. *Rec.Indian Mus.*, **37** : 425-454.
- Mani, M.S. 1974. Description of a new species of *Asphondylia* Rond. (Diptera : Itonididae) from India. *Oriental Insects*, **8**(1) : 61-62.
- Sharma, R.M, 1988. Description of a new Indian gall midge (Diptera: Cecidomyiidae: Lasiopteridi) causing galls on *Achyranthes aspera* Linn. (Amaranthaceae). *J. Bombay nat. Hist. Soc.*, **85**(2) : 376-379.
- Sharma, R.M. 2003. Checklist of Plant galls (Zooecidia) from Maharashtra State. *Ann. For.*, **11**(1): 101-112.
- Sharma, R.M. 2005. *Insecta* : Gall midges (Diptera : Cecidomyiidae). *Zool. Surv. India. Fauna of Melghat Tiger Reserve, Conservation Area Series*, **24** : 369-375.
- Sharma, R.M. 2009. Checklist of Indian Gall midges (Diptera : Cecidomyiidae). [http://www.zsi.gov.in/zoological survey of india/zsidata/checklist](http://www.zsi.gov.in/zoological%20survey%20of%20india/zsidata/checklist)

INSECTA : COLEOPTERA : SCARABAEIDAE

KAILASH CHANDRA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

The Scarabaeid beetles include the insects of both positive as well as negative significance. Dung beetles play an important role in enhancing the nutritional value of the soil, whereas chafers are known to be the pests of various crops and vegetation.

The first comprehensive account of Scarabaeid beetles of the Indian region was published by Arrow (1910, 1917, 1931) in three volumes of 'Fauna of British India' and 58 species were reported from Madhya Pradesh, wherein only nine species of the subfamily Scarabaeinae were known from Umaria district. The list of Scarabaeid beetles of Madhya Pradesh and Chhattisgarh and their details were published by Chandra (2000) and Chandra and Ahirwar (2007) respectively. Chandra and Ahirwar (2005) studied the scarabaeid beetles of Bandhavgarh National Park and 44 species under 24 genera were reported (Annexure-1). The further survey of the park from 2005 to 2007 resulted the addition of 9 more species under 8 genera and six subfamilies. All these species are new records to the fauna of Bandhavgarh Tiger Reserve.

List of Scarabaeid Beetles from Bandhavgarh Tiger Reserve

Subfamily CHIRONINAE

1. *Chiron cylindrus* Fabricius

Subfamily GEOTRUPINAE

2. *Bolboceras* sp.

Subfamily SCARABAEINAE

3. *Gymnopleurus sumptuous* Castelnau
4. *Onthophagus graceosetosus* Arrow
5. *Onthophagus unifasciatus* (Schaller)

Subfamily Melolonthinae

6. *Lepidiota* sp.

Subfamily RUTELINAE

7. *Anomala dimidiata* Hope

subfamily CETONIINAE

8. *Coenochilus nitidus* Arrow9. *Heterorrhina elegans* (Wied.)

SYSTEMATIC ACCOUNT

Order COLEOPTERA

Suborder POLYPHAGA

Family SCARABAEIDAE

Subfamily CHIRONINAE

1. *Chiron cylindrus* (Fabricius)1798. *Scarites cylindrus* Fabricius, *Ent. Syst. Suppl.*, p. 44.1801. *Passalus cylindrus*, Illiger, *Mag. Insektank*, I, 1u, 2 : 163.1840. *Chiron digitatus*, Castelnau, *Hist. Nat. Ins. Col.*, 2 : 177.1954. *Chiron cylindrus*, Paulian, *Bull. Inst. Franc. Afr. Noire*, 16(4)A : 1216.

Material examined: Umaria district, Bandhavgarh Tiger Reserve (BTR), Tala, 10. viii. 2005(2 ex.), 11. viii. 2005(1 ex.), coll. K. Chandra.

Diagnosis : Length : 9-11 mm.; breadth : 2-4 mm. Body brown to black, elongate and cylindrical, and shining. Head coarsely, finely, rather closely punctate; Clypeus small and broad, with a small transverse median carina bearing small tubercle on either sides of the middle. Labrum quadridentate; mandibles regularly arcuate. Pronotum finely and sparsely punctate, with lateral margins almost straight; with anterior angles acute and posterior angles dilated. Scutellum narrow, elongate with apex blunt. Elytra finely punctate striate, with intervals convex and smooth.

Distribution : India : Madhya Pradesh (Jabalpur, Umaria and Hoshangabad), Chandigarh, Haryana, Punjab, Uttar Pradesh, Orissa and West Bengal.

Elsewhere : Sri Lanka.

Subfamily GEOTRUPINAE

2. *Bolboceras* sp.

1819. *Bolboceras* Kirby, *Trans. Linn. Soc. Lond.*, 12 : 459.

1910 (1911). *Bolboceras*, Boucomont, *Ann. Soc. Ent. France*, 69 : 338-343.

Material examined : Umaria district, BTR, Tala, 10.viii.2005(1 ex.), coll. K. Chandra.

Diagnosis : Body globular. Labrum transverse generally excised; mandibles projecting beyond labrum. Antennal club lenticulate. Pronotum very convex, with posterior angles descending more than humeral angles of elytra. Scutellum broad, almost triangular. Coxae, almost contiguous, middle one slightly separated.

Distribution : India: Madhya Pradesh, Haryana, Punjab, Uttar Pradesh, Orissa and West Bengal.

Elsewhere : Widely distributed.

Subfamily SCARABAEINAE

3. *Gymnopleurus sumptuosus* Castelnau

1840. *Gymnopleurus sumptuosus* Castelnau, *Hist. Nat.*, ii. : 71.

1931. *Gymnopleurus sumptuosus* : Arrow, *Fauna Brit. India*, (Lamellicornia : Coprinae) 3 : 61.

Material examined : Umaria district, BTR, Tala, 17.viii.2005 (1 ex.), coll. K. Chandra.

Diagnosis : Size : Length 13.5 mm; breadth 10. mm. Bright metallic green, blue or violet above, lower surface darker or black. Head finely coriaceous, opaque and rather closely punctate. Clypeus with four rounded lobes and ocular lobes slightly prominent. Pronotum strongly and closely punctate. Legs slender; front tibia armed with three external teeth occupying more than one-third of the outer edge, remainder of the edge finely serrate. Elytra shining on the disc and subopaque at the sides.

Distribution : India : Madhya Pradesh (Indore and Umaria), Maharashtra and Deccan Peninsula.

4. *Onthophagus griseosetosus* Arrow

1931. *Onthophagus griseosetosus* Arrow, *Fauna Brit. India*, (Lamellicornia: Coprinae) 3:192

Material examined : Umaria district, BTR, Tala, 11.viii.2005 (1 ex.), coll. K. Chandra.

Diagnosis : Length : 10.5-12.5mm; breadth : 6-7 mm. Brownish-black, very opaque above; pygidium and lower surface clothed with short greyish hairs; upper surface

evenly and moderately closely clothed with grey setae. Head rather narrow, eyes moderately large. Pronotum closely covered with fine oval granules; front angles produced and moderately sharp, lateral margins nearly straight in front and feebly sinuate behind, and base strongly rounded and obtusely angulate in middle.

Distribution : India : Madhya Pradesh (Jabalpur and Umaria), Karnataka, Tamil Nadu and Uttarakhand.

5. *Onthophagus unifasciatus* (Schaller)

1783. *Scarabaeus unifasciatus* Schaller, *Abh. Hall. Nat. Ges.*, I : 240.

1792. *Scarabaeus unifasciatus* Fabricius, *Ent. Syst.*, I : 49.

1858. *Onthophagus prolixus*, Walker, *Ann. Mag. Nat. Hist.*, (2), 3 : 208.

1931. *Onthophagus unifasciatus* : Arrow, *Fauna Brit. India*, (Lamellicornia : Coprinae) 3 : 341

Material examined : Umaria district, BTR, Tala, 16.viii.2005 (1 ex.), coll. K. Chandra.

Diagnosis : Length : 6-9 mm; breadth : 4-5 mm. Body coppery green or dark blue, short, compact and shining; with the elytra bright yellow, decorated with a broad irregular black median band, a spot upon the 5th interval close to the base, a transverse spot adjoining the apical margin, and the suture of the same colour. Pronotum rather strongly punctured everywhere, obliquely retuse in front, and with three dorsal prominence midway between the front and hind margins; two lateral ones forming short longitudinal carinae, the median one longitudinally impressed and the grooved continued backwards to the base. Elytra finely striate, with the dorsal intervals flat, rather closely punctured.

Distribution : India: Madhya Pradesh (Jabalpur and Umaria), Bihar, Jharkhand, Karnataka, Haryana, Maharashtra, Uttaranchal, Punjab, Tamil Nadu and West Bengal.

Elsewhere: Sri Lanka.

Subfamily MELOLONTHINAE

6. *Lepidiota* sp.

1837. *Lepidiota* Hope, *Col. Man.*, I : 98.

1943. *Lepidiota* : Arrow, *Ann. Mag. Nat. Hist.*, 11(10) : 773-775.

Material examined : Umaria district, BTR, Tala, 14.viii.2005 (1 ex.), coll. K. Chandra.

Diagnosis : Body large, elongate robust and scaly. Head almost square; Clypeus slightly reflexed, entire or sinuate in front. Labrum strongly bilobed. Antennae 10-segmented, club 3-segmented. Pronotum transverse, angulate on sides. Fore tibia bi- or

tridentate, claws large, strongly arcuate, toothed beneath medially. Mesosternum prolonged into a projection.

Distribution : Throughout India.

Elsewhere : Africa, Asia and Australia.

Subfamily RUTELINAE

7. *Anomala dimidiata* (Hope)

1831. *Euchlora dimidiata* Hope, *Gray's Zool. Misc.*, : 23.

1917. *Anomala dimidiata* : Arrow, *Fauna Brit. India* (Lamellicornia : Rutelinae) 2 : 232-233.

1972. *Anomala dimidiata* : Machatschke, *Coleopt. Cat.*, Scarab. Melolonthidae : 130.

Material examined : Umaria district, BTR, Tala, 10.viii.2005 (1 ex.); 11.viii. 2005(1 ex.); 15.viii.2005 (1 ex.); 16.viii. 2005 (2 exs.); 17.viii. 2005 (2 ex.); coll. K. Chandra.

Diagnosis : Length : 26 mm; breadth : 14 mm. Form broadly, oval, upper surface deep metallic green, lower surface and legs blue- black or blue-green. Clypeus densely and frons less densely punctate, pronotum moderately closely punctate, and coarsely confluent at sides; scutellum finely punctate; elytra finely and closely punctate, with slight traces of longitudinal lines, broadest behind middle, pygidium moderately finely and transversely rugose. In Male, pygidium not hairy and teeth of fore femur short and sharp.

Distribution : India : Madhya Pradesh (Seoni, Chindwara, Umaria), Assam, Bihar, Himachal Pradesh, Jammu & Kashmir, Punjab, Manipur, Meghalaya, Sikkim, Uttarakhand, Uttar Pradesh and West Bengal.

Subfamily CETONIINAE

8. *Coenochilus nitidus* Arrow

1910. *Coenochilus nitidus* Arrow, *Fauna Brit. India*, (Lamellicornia : Cetoniinae) 1 : 210.

Material examined : Umaria district, BTR, Tala, 15.viii.2005 (2 exs.), coll. K. Chandra.

Diagnosis : Length : 19 mm; breadth 5.7-6.4 mm. Body elongate, black and very shining, metasternum thickly clothed with short silky yellow pubescence and the legs long and slender. Head rugose, with front margin broad and feebly emarginated; eyes large and prominent. Pronotum hexagonal with angles very blunt and the base slightly emarginate, with a slight impressed median line, obliterated in front and deeper behind the middle.

Distribution : India : Madhya Pradesh (Umaria) and Maharashtra.

9. *Heterorrhina elegans* (Fabricius)

1781. *Cetonia elegans* Fabricius, *Spec. Ins.*, I : 56.

1842. *Cetonia elegans*, Westwood, *Arcana Ent.*, 1 : 56

1910. *Heterorrhina elegans*: Arrow, *Fauna Brit. India*, (Lamellicornia : Cetoniinae) I : 93.

Material examined : Umaria district, BTR, Tala, 12.viii.2005 (1 ex.), coll. K. Chandra.

Diagnosis : Form elongate, with the surface very smooth and moderately convex above; Emerald green, blue fiery red, indigo or black with the sides of the hind coxae orange and the antennae legs the sutural margins of the elytra posterior and the apical calli black. Clypeus sparingly punctured, quadrate and parallel sided, with the front margins minutely notched. Pronotum narrow in front and feebly punctured at the sides. Scutellum unpunctured, and the elytra are almost smooth at the side and apices Sternal process narrow, curved and blunt. In male, the front tibiae unarmed; the hind tibiae bear the long hairs near the extremity.

Distribution : India : Madhya Pradesh (Seoni and Umaria), Bihar, Jharkhand, Karnataka, Tamil Nadu and West Bengal.

Elsewhere : Sri Lanka.

ANNEXURE-1

The following species were earlier recorded by Chandra and Ahirwar (2005) from Bandhavgarh Tiger Reserve.

Family SCARABAEIDAE

Subfamily APHODINAE

1. *Aphodius moestus* Fabricius

2. *Aphodius crenatus* Harold

Subfamily HYBOSORINAE

3. *Hybosorus orientalis* Westwood

4. *Phaeochrous* sp.

Subfamily TROGINAE

5. *Trox* sp.

Subfamily SCARABAEINAE

6. *Catharsius pithecius* (Fabricius)

7. *Catharsius molossus* (Linnaeus)
8. *Catharsius sagax* (Queensland)
9. *Copris imitans* Felsche
10. *Copris repertus* Walker
11. *Drepanocerus setosus* (Wiedemann)
12. *Gymnopleurus sinuatus* (Olivier)
13. *Heliocopris bucephalus* (Fabricius)
14. *Liatongus rhadamistus* (Fabricius)
15. *Onthophagus bonasus* (Fabricius)
16. *Onthophagus catta* (Fabricius)
17. *Onthophagus cervus* (Fabricius)
18. *Onthophagus dama* (Fabricius)
19. *Onthophagus fasciatus* Boucomont
20. *Onthophagus ramosus* (Wiedman)
21. *Onthophagus pactolus* (Fabricius)
22. *Onthophagus quadridentatus* (Fabricius)
23. *Onthophagus sagittarius* (Fabricius)
24. *Onthophagus tarandus* (Fabricius)
25. *Oniticellus cinctus* (Fabricius)
26. *Oniticellus spinipes* Roth
27. *Onitis philemon* (Fabricius)

Subfamily MELOLONTHINAE

28. *Apogonia* sp.
29. *Schizonycha ruficollis* (Fabricius)

Subfamily RUTELINAE

30. *Adoretus bicaudatus* Arrow
31. *Adoretus lasiopygus* Burmeister
32. *Adoretus duvauceli* Blanchard
33. *Mimela inscripta* (Nonfried)
34. *Mimela macleayana* (Vigors)

35. *Rhinyptia meridionalis* Arrow
 36. *Singhala robusta* (Ohaus)
 37. *Pachyrrhinadoretus frontatus* (Burm.)

Subfamily DYNASTINAE

38. *Heteronychus lioderes* Redtenbacher
 39. *Alissonotum simile* Arrow
 40. *Dipelicus cantator* Arrow
 41. *Xylotrupes gideon* (Linnaeus)

Subfamily CETONIINAE

42. *Clinteria klugi* (Hope)
 43. *Chiloloba acuta* (Wied.)
 44. *Oxycetonia versicolor* (Fabricius)

SUMMARY

A total of 53 species of Scarabaeid beetles so far reported from Bandhavgarh Tiger Reserve are included in the present account.

REFERENCES

- Arrow, G.J. 1910. *The Fauna of British India including Ceylon and Burma*. Col. Lamellicornia, 1 (Cetoniinae & Dynastinae). Taylor & Francis London, V-XIV, 322 pp.
- Arrow, G.J. 1917. *The Fauna of British India including Ceylon and Burma*. Col. Lamellicornia, II (Rutelinae) Taylor and Francis, London, V-XIII, 387 pp + 7 fig + 5 pls.
- Arrow, G.J. 1931. *The Fauna of British India including Ceylon and Burma*. Col. Lamellicornia, III (Coprinae). Taylor and Francis, London XII, 428 pp + 61 figs + 19 pls, map.
- Chandra, K. 2000. Inventory of Scarabaeid beetles (Coleoptera) from Madhya Pradesh, India. *Zoo's Print Journal*, 15(11) : 359-362.
- Chandra, K. and Ahirwar, S.C. 2005. Scarabaeid beetles of Bandhavgarh National Park, Madhya Pradesh. *Zoos' Print Journal*, 20(8) : 1961-64.
- Chandra, K. and Ahirwar, S.C. 2007. Insecta : Coleoptera : Scarabaeidae. In : *Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series, 15(Part-1) : 273-300.*

INSECTA : LEPIDOPTERA : RHOPALOCERA AND GRYPOCERA

K. CHANDRA, R.M. SHARMA AND M.L. KOSHITA

Zoological Survey of India, Central Regional Station, Jabalpur-482002, M.P.

INTRODUCTION

Butterflies are an integral part of the forest ecosystem and show distinct patterns of habitat utilization. They are very much habitat sensitive and turn away from the degraded or deteriorating habitats. These marvels of nature play an important role in conserving floristic diversity and controlling floral distribution pattern. They are dependent on both flowering and non flowering plants for feeding and egg laying. The larval stages are host-plant specific, thus can survive only when food plants are in abundance. Therefore, they are ideal for field studies and their various ecological requirements make them excellent indicators of environmental change.

Fortunately, conservation areas provide much needed protection and desired environment for butterflies to thrive. Baseline data of protected areas are of immense value as they provide the foundation for a meaningful approach in diversity analyses and conservation strategies.

Studies on butterflies of Central India dates back to Betham (1890 & 1891). Subsequent monumental works and fauna volumes include several species from Madhya Pradesh and Chhattisgarh (Evans, 1932; Talbot, 1939 and 1947; Wynter-Blyth, 1957). In recent past, several workers have studied butterflies from some districts and conservation areas of M.P. & Chhattisgarh (Singh, 1977; Gupta, 1987; Chaudhury, 1995; Chandra *et al.*, 2000a, 2000b; 2002; Singh & Chandra, 2002; Siddiqui and Singh, 2004 and Chandra, 2006). Singh & Koshta (2007) have enumerated 135 species from Madhya Pradesh & Chhattisgarh. However, there is no comprehensive published account on butterflies of Bandhavgarh National Park barring a list of 102 species (excluding doubtful occurrence) by Satyendra Tiwari in the Definitive Guide on Bandhavgarh by Choudhary & Khan (2002) a popular publication. It is estimated that the Indian region harbours 1641 species of butterflies representing roughly 9.50 % of the total world species (Varshney, 2006). Recently, Chandra *et al* (2007) check listed 174 species of butterflies from Madhya Pradesh and Chhattisgarh which accounts for 10.58 % of the Indian species and Bandhavgarh harbours a little over 60 % of the state's butterfly diversity.

The present account of 102 species belonging to 72 genera under 8 families is based on the faunistic surveys conducted by the scientists of Central Regional Station, Jabalpur during 2002-2006 and studies conducted by others especially Tiwari (2002). Descriptions depicting the diagnostic features of the species dealt here are excluded from the account as access to such details can be had from the earlier monumental works.

The nomenclature followed here is after (Varshney, 1993, 1994 & 1997) for families other than Hesperidae. Smetacek (2006 & 2007) is followed in case of family Hesperidae. The species included with (*) mark were identified / recorded by Tiwari (2002) from the area, thus the collection data under these species is not given.

List of Butterflies from Bandhavgarh Tiger Reserve

Order LEPIDOPTERA

Suborder RHOPALOCERA

Family PAPILIONIDAE

Subfamily PAPILIONINAE

Tribe LEPTOCIRCINI

- | | |
|---------------------------------------|------------------------|
| 1. * <i>Graphium agamemnon</i> Linn | The Tailed Jay |
| 2. * <i>Graphium sarpedon</i> (Linn.) | The Common Blue Bottle |
| 3. * <i>Pathysa nomius</i> (Esper) | The Spot Swordtail |

Tribe Papilionini

- | | |
|--|--------------------|
| 4. <i>Papilio polytes romulus</i> Cramer | The Common Mormon |
| 5. * <i>Papilio polymenstor</i> Cramer | The Blue Mormon |
| 6. <i>Papilio demoleus demoleus</i> Linnaeus | The Lime Butterfly |
| 7. * <i>Chilasa clytia</i> (Linn.) | The Common Mime |

Tribe Troidini

- | | |
|---|------------------|
| 8. <i>Pachliopta hector</i> (Linn.) | The Crimson Rose |
| 9. * <i>Pachliopta aristolochiae</i> (Fab.) | The Common Rose |

Family PIERIDAE

Subfamily PIERINAE

Tribe Pierini

- | | |
|---|-------------|
| 10. <i>Belonoides aurota aurota</i> (Fabricius) | The Pioneer |
|---|-------------|

- | | |
|--|-----------------------|
| 11. <i>Cepora nerissa phryne</i> (Fabricius) | The Common Gull |
| 12. <i>Delias eucharis</i> (Drury) | The Common Jezebel |
| 13. * <i>Appias libythea</i> Fab. | The Striped Albatross |
| 14. * <i>Appias albina</i> Boisduval | The Common Albatross |
| 15. * <i>Appias indra</i> (Moore) | The Plain Puffin |
| 16. * <i>Leptosia nina</i> (Fab.) | The Psyche |

Tribe Colotini

- | | |
|---|-----------------------|
| 17. * <i>Ixias marianne</i> (Cramer) | The White Orange Tip |
| 18. * <i>Ixias pyrene sesia</i> (Fabricius) | The Yellow Orange Tip |
| 19. * <i>Pareronia valeria</i> Cramer | The Common Wanderer |

Subfamily COLIADINAE

- | | |
|---|------------------------------|
| 20. <i>Catopsilia pomona</i> (Fabricius) | The Lemon or Common Emigrant |
| 21. <i>Catopsilia pyranthe pyranthe</i> (Linn.) | The Mottled Emigrant |
| 22. <i>Terias hecabe simulata</i> (Moore) | The Common Grass Yellow |
| 23. <i>Terias brigitta rubella</i> (Wallace) | The Small Grass Yellow |
| 24. <i>Terias laeta laeta</i> (Boisduval) | The Spotless Grass Yellow |
| 25. * <i>Terias andersoni</i> Moore | The One Spot Grass Yellow |

Family DANAIDAE

Subfamily DANAINAE

- | | |
|--|-------------------|
| 26. <i>Danaus chrysippus chrysippus</i> (Linnaeus) | The Plain Tiger |
| 27. <i>Danaus genutia</i> (Cramer) | The Striped Tiger |
| 28. * <i>Tirumala limniace</i> (Cramer) | The Blue Tiger |

Subfamily EUPLOEINAE

- | | |
|---------------------------------------|-----------------|
| 29. <i>Euploea core core</i> (Cramer) | The Common Crow |
|---------------------------------------|-----------------|

Family SATYRIDAE

Subfamily SATYRINAE

Tribe Melanitini

- | | |
|---|--------------------------|
| 30. <i>Melanitis leda ismene</i> (Cramer) | The Common Evening Brown |
|---|--------------------------|

Tribe Lethini

- | | |
|----------------------------------|-----------------------|
| 31. * <i>Lethe europa</i> (Fab.) | The Bamboo Tree Brown |
|----------------------------------|-----------------------|

32. **Lethe rohria* (Fab.) The Common Tree Brown

Tribe Mycalesini

33. **Mycalesis perseus* Fabricius The Common Bush Brown
 34. *Mycalesis mineus* (Linn.) The Dark Brand Bush Brown

Tribe Ypthimini

35. *Ypthima asterope* (Klug) The Common Threering
 36. **Ypthima huebneri* Kirby The Common Fourring
 37. **Ypthima baldus* Fabricius The Common Fivering

Family NYMPHALIDAE

Subfamily BIBLIDINAE

38. **Ariadne merione* (Cramer) The Common Castor

Subfamily ARGYNNINAE

39. *Phalanta phalantha phalantha* (Drury) The Common Leopard

Subfamily NYMPHALINAE

Tribe Vanessidi

40. *Cynthia cardui* (Linnaeus) The Painted Lady
 41. *Precis iphita pluviatilis* Fruhstorfer The Chocolate Pansy
 42. **Junonia hierta* Fab. The Yellow Pansy
 43. *Junonia orithya swinhoi* Butler The Blue Pansy
 44. *Junonia almana almana* (Linnaeus) The Peacock Pansy
 45. *Junonia atlites* (Linnaeus) The Grey Pansy
 46. *Junonia lemonias vaisya* (Fruhstorfer) The Lemon Pansy

Tribe Hypolimini

47. **Kallima inachus huegeli* (Kollar) The Orange Oakleaf
 48. *Hypolimnas misippus* (Linn.) The Danaid Eggfly
 49. **Hypolimnas bolina* (Linnaeus) The Great Eggfly

Subfamily LIMENITIDINAE

Tribe Neptini

50. *Neptis hylas astola* Moore The Common Sailor
 51. **Phaedyma columella* Cramer The Short-Banded Sailor

Tribe **Limenitidini**

52. **Athyma perius* Linn. The Common Sergeant
 53. **Athyma selenophora* (Kollar) The Staff Sergeant
 54. **Moduza procris procris* (Cramer) The Commander

Tribe **Euthaliini**

55. *Symphaedra nais* (Forster) The Baronet
 56. **Euthalia aconthea* Cramer The Common Baron
 57. **Euthalia lubentina* Cramer The Gaudy Baron

Subfamily CHARAXINAE

Tribe **Prothoini**

58. **Charaxes bernardus* Fabricius The Tawny Rajah
 59. **Charaxes solon* (Fab.) The Black Rajah

Subfamily ACRAEINAE

60. *Acraea terpsicore* (Linn.) The Tawny Coster

Family RIODINIDAE

Subfamily RIODININAE

61. *Abisara echerius suffusa* Moore The Plum Judy

Family LYCAENIDAE

Subfamily POLYOMMATINAE

Tribe **Polyommatini**

62. **Prosotas nora* Felder The Common Lineblue
 63. **Jamides celeno* (Cramer) The Common Cerulean
 64. **Catochrysops strabo* (Fab.) The Forget-Me-not
 65. **Lampides boeticus* (Linn.) The Pea Blue
 66. **Leptotes plinius* (Fab.) The Zebra Blue
 67. **Castalius rosimon* (Fab.) The Common Pierrot
 68. **Tarucus nara* Kollar The Rounded Pierrot
 69. **Zizeeria karsandra* Moore The Dark Grass Blue
 70. **Zizina otis* Fab. The Lesser Grass Blue
 71. **Pseudozizeeria maha* (Kollar) The Pale Grass Blue

72. **Zizula hylax* Fab. The Tiny Grass Blue
 73. *Everes lacturnus* Godart. The Indian Cupid
 74. **Talicada nyseus* Guerin Meneville The Red Pierrot
 75. **Euchrysops cnejus* (Fab.) The Gram Blue
 76. **Chilades laius* Stoll The Lime Blue
 77. *Chilades pandava* (Horsfield) The Plains Cupid
 78. **Freyeria trochylus* (Freyer) The Grass Jewel

Subfamily APHNAEINAE

79. *Spindasis vulcanus vulcanus* Fabricius The Common Silverline
 80. *Spindasis elima elima* (Moore) The Scarce Shot Silverline
 81. **Spindasis ictis* Hewitson The Shot Silverline
 82. **Spindasis lohita* Horsfield The Long-Banded Silverline

Subfamily THECLINAE

Tribe Arhopalini

83. *Narathura amantes* (Hewitson) The Large Oak Blue

Tribe Amblyodiini

84. **Amblypodia anita* Hewitson The Leaf Blue

Tribe Deudorigini

85. **Deudorix epijarbus amatus* Fruhstorfer The Common Cornelian
 86. *Virachola isocrates* (Fabricius) The Common Guava Blue
 87. *Rapala iarbus sorya* Koller The Indian Red Flash

Suborder GRYPOCERA

Family HESPERIIDAE

Subfamily COELIADINAE

88. **Hasora chromus* (Fab.) The Common Banded Awl
 89. **Badamia exclamatoris* (Fab.) The Brown Awl

Subfamily PYRGINAE

90. **Celaenorrhinus ambareesa* Moore The Malabar Spotted Flat
 91. **Sarangesa dasahara* (Moore) The Common Small Flat
 92. **Sarangesa. purendra* (Moore) The Spotted Small Flat

93. **Odontoptilum ransonnettii* R.Felder The Golden Angle
 94. *Spialia galba* (Fabricius) The Indian Skipper
- Subfamily HESPERIINAE
95. **Udaspes folus* Cramer The Grass Demon
 96. **Suastus gremius* (Fab.) The Indian Palm Bob
 97. **Matapa aria* (Moore) The Common Redeye
 98. *Telicota ancilla* Herrich-Schaffer The Dark Palm Dart
 99. *Parnara naso bada* (Moore) The Straight Swift
 100. **Borbo cinnara* Wallace The Rice Swift
 101. *Barbo bevani bevani* Moore The Bevan's Swift
 102. *Pelopidas mathias* (Fab) The Small Branded Swift

SYSTEMATIC ACCOUNT

Order LEPIDOPTERA

Suborder RHOPALOCERA

Family PAPILIONIDAE

Subfamily PAPILIONINAE

Tribe **Leptocircini**

1. **Graphium agamemnon* Linn.

The Tailed Jay

1758. *Papilio agamemnon* Linn. *Syst. Nat. ed.* 10 : 462.

1939. *Graphium agamemnon* : Talbot, *Fauna Brit. India, Butterflies*, 1 : 230.

Distribution : South India to Saurashtra, Madhya Pradesh, Maharashtra, Kumaon to Assam.

Elsewhere : Myanmar and Sri Lanka.

2. **Graphium sarpedon* (Linn.)

The Common Blue Bottle

1758. *Papilio sarpedon* Linn. *Syst. Nat. ed.*, 10 : 461

1939. *Graphium sarpedon* : Talbot, *Fauna Brit. India, Butterflies*, 1 : 219

Distribution : South India, Madhya Pradesh, Maharashtra, Kashmir to Assam.

Elsewhere : Myanmar and Sri Lanka.

3. **Pathysa nomius* (Esper)

The Spot Swordtail

1801. *Papilio nomius* Esper, *Die Auslandsche Schmetterlinge* : 210.

1932. *Pathysa nomius* : Evans, *Identification of Indian Butterflies* : 54.

Distribution : Peninsular India to South Bihar, Madhya Pradesh, U.P., H.P. to Sikkim, Assam.

Elsewhere : Myanmar and Sri Lanka.

Tribe Papilionini

4. *Papilio polytes romulus* Cramer

The Common Mormon

1775. *Papilio romulus* Cramer, *Pap. Exot.*, 1 : 67.

1939. *Papilio polytes romulus* : Talbot, *The Fauna of Brit. India Butterflies*, 1 : 178.

Material examined : Umari Dist. BNP, 3 exs, Bathan, 20.ix.2002; 4 exs., Bhitariwah, 21.ix.2002, 3exs., Sita Mandap, 22.ix.2002; 2 exs, Fort, 24.ix.2002, Coll. M.L. Koshta & Party; 1ex., Parasi, 25.ix.2002; 1 ex, Laxmandhara, 26.ix.2002; 1ex. Mahavan Pond, 27.ix.2002; 1 ex, Sher Marg, 28.ix.2002, Coll. R. K. Singh & Party; 2 exs., Ganesh Pahari, 29.ix.2002, 1 ex, Ghoari, 30.ix.2002, Coll. R. K. Singh & Party; 2 exs. Bamera, 1.x.2002, Coll. R.K. Singh & Party; 2 exs., Andhiari Jhiriya, 2.x.2002; 1 ex, Kallwah, 4.x.2002, Coll. R.K. Singh & Party ; 1 ex., On way to Umari, 3.ii.2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Myanmar and Sri Lanka.

5. **Papilio polymenstor* Cramer

The Blue Mormon

1775. *Papilio polymenstor* Cramer, *Pap. Exot.*, i : 83.

1939. *Papilio polymenstor* : Talbot, *Fauna Brit. India, Butterflies*, 1 : 126.

Distribution : South India, Madhya Pradesh, South Bihar, Western Ghats to Mumbai, Sikkim.

Elsewhere : Sri Lanka.

6. *Papilio demoleus demoleus* Linnaeus
The Lime Butterfly

1758. *Papilio demoleus* Linnaeus, *Syst. Nat.* (ed.x) : 464.

1939. *Papilio demoleus demoleus* : Talbot, *The Fauna of British India, Butterflies*, 1 : 189.

Material examined : Umaria Dist. BNP, 1 ex, Bathan, 20.ix.2002; 1ex, Bhitariwah, 21.ix.2002; 2exs., Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party; 1 ex, Laxmandhara, 26.ix.2002; 2 exs. Mahavan Pond, 27.ix.2002; 2 exs, Sher Marg, 28.ix.2002, Coll. R.K. Singh & Party; 1ex, Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; Coll. M.L. Koshta & Party; 1ex, Bamera, 1.x.2002; 2 exs, Khallwah, 4.x.2002; 1ex., Andhiari, Jhiriya, 2.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Myanmar and Sri Lanka.

7. **Chilasa clytia* (Linn.)
The Common Mime

1758. *Papilio clytia* Linnaeus, *Syst. Nat. ed. 10* : 479.

1889. *Chilasa clytia* : Hampson, *J. Asiatic Soc. Bengal*, 1 vii : 363.

1993. *Chilasa clytia* : Varshney, *Oriental Insects*, 27 : 353.

Remarks : It is an endangered species.

Distribution : South India, Maharashtra, Madhya Pradesh, Himachal Pradesh to Sikkim, Assam.

Elsewhere : Myanmar and Sri Lanka.

Tribe Troidini

8. *Pachiliopta hector* (Linn.)
The Crimson Rose

1758. *Papilio hector* Linnaeus, *Syst. Nat. ed.10* : 459.

1939. *Polydorus hector* : Talbot, *Fauna Brit. India Butterflies*, 1 : 83.

1993. *Pachliopta hector* : Varshney, *Oriental Insects*, 27 : 354.

Material examined : Umaria Dist. BNP, 1 ex, Sita Mandap, 22.ix.2002, M.L. Koshta & Party; 1 ex, Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; 1ex, Bamera, 1.x.2002, Coll. R.K. Singh & Party.

Distribution : South India, Maharashtra, Madhya Pradesh, South Bihar, Bengal, Orissa.

Elsewhere : Myanmar and Sri Lanka.

9. **Pachliopta aristolochiae* (Fab.)

The Common Rose

1775. *Papilio aristolochiae* Fabricius, *Syst. Ent.* : 443.

1932. *Tros aristolochiae* : Evans, *Identification of Indian Butterflies* : 44.

1939. *Polydorus aristolochiae* : Talbot, *Fauna Brit. India Butterflies*, 1 : 86.

1993. *Pachliopta aristolochiae* : Varshney, *Oriental Insects*, 27 : 354.

Distribution : Throughout India.

Elsewhere : Myanmar and Sri Lanka.

Family PIERIDAE

Subfamily PIERINAE

Tribe Pierini

10. *Belenois aurota aurota* (Fabricius)

The Pioneer

1793. *Papilio aurota* Fabricius, *Syst. Ent.* : 197.

1904. *Anapheis mesentina* : Moore : 158.

1932. *Anapheis aurota* : Hemming : 283.

1932. *Belenois mesentina* : Evans, *Identification of Indian Butterflies* : 71.

1993. *Belenois aurota* : Varshney, *Oriental Insects*, 27 : 358.

Material examined : Umaria Dist. BNP, 1 ex Fort, 24.x.2002, Coll. M.L. Koshta & Party.

Distribution : Throughout India (except N.E. India).

Elsewhere : Nepal, Pakistan and Sri Lanka.

11. *Cepora nerissa phryne* (Fabricius)

The Common Gull

1775. *Papilio phryne* Fabricius, *Syst. Ent.*, : 473.

1939. *Cepora nerissa phryne* : Talbot, *The Fauna of Brit. India*, Butterflies, 1 : 362.

Material examined : Umaria Dist. BNP, 1 ex, Bhitariwah, 21.ix.2002, 2 exs, Fort, 24.ix.2002, Coll. M.L. Koshta & Party; 1ex, Manpur, 30.i.2004, Coll. Y.N. Gupta & Party.

Distribution : Through out India (including Andaman & Nicobar Islands).

Elsewhere : Bhutan, Nepal, Sri Lanka and Myanmar.

12. *Delias eucharis* (Drury)

The Common Jezebel

1773. *Papilio eucharis* Drury, *Illustr. Nat. Hist.*, Pl x, figs. 5, 6

1939. *Delias eucharis* : Talbot, *Fauna Brit. India Butterflies*, 1 : 352.

Material examined : Umaria Dist. BNP, 1 ex Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India (except the desert tracts).

Elsewhere : Sri Lanka, North Myanmar.

13. **Appias libythea* Fab.

The Striped Albatross

1775. *Papilio libythea* Fabricius, *Syst. Ent.* : 471.

1939. *Appias libythea* : Talbot, *Fauna Brit. India Butterflies*, 1 : 394.

1993. *Appias libythea* : Varshney, *Oriental Insects*, 27 : 359.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

14. **Appias albina* Boisduval

The Common Albatross

1939. *Appias albina* : Talbot, *Fauna Brit. India Butterflies*, 1 : 400.

1993. *Appias albina* : Varshney, *Oriental Insects*, 27 : 359.

Distribution : South India, Central India to Sikkim.

Elsewhere : Sri Lanka, Myanmar.

15. **Appias indra* (Moore)**The Plain Puffin**

1857. *Pieris indra* Moore, *Cat. Lep. Muc. E.C.I.* 1 : 74.

1939. *Appias indra* : Talbot, *Fauna Brit. India Butterflies*, 1 : 391.

1993. *Appias indra* : Varshney, *Oriental Insects*, 27 : 359.

Distribution : South India, Maharashtra, Central India, N.E. India.

Elsewhere : Myanmar and Nepal.

16. **Leptosia nina* (Fab.)**The Psyche**

1793. *Papilio nina* Fabricius, *Ent. Syst.* 3 : 194.

1939. *Leptosia nina* : Talbot, *Fauna Brit. India Butterflies*, 1 : 305.

1993. *Leptosia nina* : Varshney, *Oriental Insects*, 27 : 360.

Distribution : Throughout India (including Andaman & Nicobar Islands).

Elsewhere : Sri Lanka.

Tribe Colotini17. **Ixias marianne* (Cramer)**The White Orange Tip**

1779. *Papilio marianne* Cramer, *Pap. Exot.* 3 : 41.

1939. *Ixias marianne* : Talbot, *The Fauna of Brit. India*, Butterflies, 1 : 440.

Distribution : Peninsular India to Saurashtra, M.P. Punjab, Bengal.

Elsewhere : Sri Lanka.

18. **Ixias pyrene sesia* (Fabricius)**The Yellow Orange Tip**

1777. *Papilio sesia* Fabricius, *Gen. Ins.* : 257.

1939. *Ixias pyrene sesia* : Talbot, *The Fauna of Brit. India*, Butterflies, 1 : 445.

Distribution : Peninsular India to Saurashtra, M.P. Bengal, N.W. Himalayas to Assam.

Elsewhere : Baluchistan, Myanmar.

19. **Pareronia valeria* Cramer**The Common Wanderer**

1776. *Papilio valeria* Cramer, *Pap. Exot.*, : 133-56.

1939. *Valeria valeria* : Talbot, *Fauna Brit. India Butterflies*, 1 : 485.

1993. *Pareronia valeria* : Varshney, *Oriental Insects*, 27 : 362.

Distribution : Throughout India.

Elsewhere : Myanmar.

Subfamily COLIADINAE

20. *Catopsilia pomona* (Fabricius)**The Lemon or Common Emigrant**

1775. *Papilio pomona* Fabricius, *Syst. Ent.*, : 479.

1932. *Catopsilia pomona* : Evans, *Identification of Indian Butterflies* : 75.

Material examined : Umaria Dist. BNP, 3 exs, Bathan, 20. ix. 2002, Coll. M.L. Koshta & Party; 2exs, Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party; 1 ex, Laxmam dhara, 26.ix.2002; 1 ex., Mahavan Pond, 27.ix.2002, Coll. R.K. Singh & Party; 1 ex., Sher Marg, Hardiha, 28.ix.2002, Coll. R.K. Singh & Party; 1 ex.. Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; 2 exs., Gohari, 30.ix.2002, R.K. Singh & Party; 1 ex., Andhiari Jhiriya, 2.x.2002, 2 exs, Madauli, 3.x.2002, Coll. R.K. Singh & Party; 1 ex., Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

21. *Catopsilia pyranthe pyranthe* (Linn.)**The Mottled Emigrant**

1758. *Papilio pyranthe* Linnaeus, *Syst. Nat. ed. 10* : 469.

1881. *Catopsilia pyranthe* : *Lep. Ceylon*, 1 : 124.

1939. *Catopsilia pyranthe* : Talbot, *Fauna Brit. India Butterflies*, 1 : 497.

Material examined : Umaria Dist. BNP, 3 exs, Bathan, 20. ix. 2002, Coll. M.L. Koshta & Party; 2exs, Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party; 2 exs, Laxman dhara, 26.ix.2002; 1 ex., Mahavan Pond, 27.ix.2002, Coll. R.K.Singh & Party; 2 exs., Sher Marg, Hardiha, 28.ix.2002, Coll. R.K.Singh & Party; 5 exs. Bamera Dam, 1.x.2002, Coll. R.K.Singh & Party; 1 ex., Kallwah, 4.x.2002, Coll. R.K.Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

22. *Terias hecabe simulata* (Moore)

The Common Grass Yellow

1881. *Terias simulata* Moore, *Lep. Ceylon*, 1 : 119.

1939. *Eurema hecabe simulata* : Talbot, *The Fauna of Brit. India*, Butterflies, 1 : 530.

Material examined : Umaria Dist. BNP, 4 exs., Bathan, 20.ix.2002, Coll. M.L. Koshta & Party; 2exs, Fort, 24.ix.2002, Coll. M.L. Koshta & Party; 5 exs., Parasi, 25.ix.2002, 3 exs, Laxman dhara, 26.ix.2002, Coll. R.K. Singh & Party; 3 exs., Mahavan Pond, 27.ix.2002, Coll. R.K. Singh & Party; 4 exs., Gohari 30.ix.2002, Coll. R.K. Singh & Party; 1 ex., Andhiari, Jhiriya, 2.x.2002, 1 ex, Madauli, 3.x.2002 Coll. R.K. Singh & Party; 1 ex., Bhadar, Barhi Road, 31.i.2004, Coll. Y.N. Gupta & Party; 1 ex., Garhpuri Dam, 2.ii.2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

23. *Terias brigitta rubella* (Wallace)

The Small Grass Yellow

1867. *Terias rubella* Wallace, *Trans. ent. Soc. Lond.*, (3) 4 : 323.

1939. *Eurema brigitta rubella* : Talbot, *The Fauna of Brit. India*, Butterflies, 1 : 515.

Material examined : Umaria Dist. BNP, 1ex. Bathan, 20.ix.2002, Coll. M.L. Koshta & Party; 1ex. Mahavan Pond, 27.ix.2002, Coll. R.K. Singh & Party; 1 ex., Gohadi, 25.i.2004, Coll.Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Pakistan and Myanmar.

24. *Terias laeta laeta* (Boisduval)

The Spotless Grass Yellow

1836. *Terias laeta* Boisduval, *Spec. Gen. Lep.*, 1 : 674.

1939. *Eurema laeta laeta* : Talbot, *The Fauna of Brit. India*, Butterflies, 1 : 517.

Material examined : Umaria Dist. BNP, 1 ex., Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 2 exs., Kuchvali, 4.ii.2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Pakistan and Myanmar.

25. **Terias andersoni* Moore
The One Spot Grass Yellow

1886. *Terias andersoni* Moore, : 47.

1939. *Eurema andersoni andersoni* : Talbot, *The Fauna of British India, Butterflies*, 1 : 535.

1993. *Terias andersoni* Varshney, *Oriental Insects*, 27 : 364.

Distribution : Peninsular India, Madhya Pradesh, North India, Sikkim to Assam.

Elsewhere : Sri Lanka, Myanmar, Sumatra and North Borneo.

Family DANAIIDAE

Subfamily Danainae

26. *Danaus chrysippus chrysippus* (Linnaeus)
The Plain Tiger

1758. *Papilio chrysippus* Linnaeus, *Syst., Nat. ed.* 10; 1 : 471.

1947. *Danaus chrysippus chrysippus* : Talbot, *The Fauna of Brit. India, Butterflies*, 2 : 20.

Material examined : Umaria Dist., BNP, 1ex Hardiha, 23.ix. 2002, Coll. M.L. Koshta & Party; 2 exs, Gohari, 30.ix.2002, 1ex. Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

27. *Danaus genutia* (Cramer)
The Striped Tiger

1779. *Papilio genutia* Cramer, *Pap. Exot.*, 3 : 23.

1882. *Danais genutia* : Distant, *Rhopalocera Malayana* : 18.

Material examined : Umaria Dist., BNP, 2 exs, Bathan, 20.ix.2002, M.L. Koshta & Party; 1 ex, Mahavan Pond, 27.ix.2002, 3exs, Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 1ex., Bamera, 1.x.2002, 7 exs, Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

28. **Tirumala limniace* (Cramer)**The Blue Tiger**

1775. *Papilio limniace* Cramer, *Pap. Exot.*, 1 : 92.

1883. *Danais limniace* : de Niceville, *Butterflies of India Burma & Ceylon*, 1 : 47.

1993. *Tirumala limniace* : Varshney, *Oriental Insects*, 27 : 366.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

Subfamily EUPLOEINAE

29. *Euploea core core* (Cramer)**The Common Crow**

1780. *Papilio core* Cramer, *Pap. Exot.*, 3 : 133.

1947. *Euploea core core* : Talbot, *The Fauna of Brit. India*, *Butterflies*, 2 : 67.

Material examined : Umaria Dist., BNP, 2 exs, Bathan, 20.ix.2002; 1 ex Sita Mandap, 22.ix.2002, 1 ex, Fort, 24.ix.2002, M.L. Koshta & Party; 2 exs, Laxmandhara, 26.ix.2002; 1 ex. Mahavan Pond, 27.ix.2002; 2 exs, Sher Marg, 28.ix.2002, Coll. R. K. Singh & Party; 6 exs. Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 1 ex Madauli camp, 3.x.2002; 7 exs, Kallwah, 4.x.2002, Coll. R.K. Singh & Party; 1 ex, Gohadi, 25.01.2004, 1 ex, Sehravali, 29.01.2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

Family SATYRIDAE

Subfamily SATYRINAE

Tribe Melanitini

30. *Melanitis leda ismene* (Cramer)**The Common Evening Brown**

1775. *Papilio ismene* Cramer, *Pap. Exot.*, 1 : 40.

1947. *Melanitis leda ismene* : Talbot, *The Fauna of Brit. India*, *Butterflies*, 2 : 366.

1987. *Melanitis leda ismene* : Gupta & Shukla, *Rec. zool. Surv. India*, Occ. Pap. No. 106 : 23.

Material examined : Umaria Dist., BNP, 1 ex, Bandhavgarh Fort, 24.ix.2002, Coll. M.L. Koshta & Party; 1 ex., Kallwah, 4.x.2002, Coll. R.K. Singh & Party; 4 exs., Bhadar, Barhi Road, 31.i. 2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India including Andaman and Nicobar Islands, except the extreme North West.

Elsewhere : Sri Lanka and Myanmar, Malay Peninsula and Archipelago.

Tribe **Lethini**

31. **Lethe europa* (Fab.)

The Bamboo Tree Brown

1775. *Papilio europa* Fabricius, *Syst. Ent.*, no. 247 : 500.

1883. *Lethe europa* : de Niceville, *Butterflies of India Burma & Ceylon*, 1 : 149.

1947. *Lethe europa* : Talbot, *Fauna Brit. India Butterflies*, 2 : 197.

1994. *Lethe europa* : Varshney, *Oriental Insects*, 28 : 153.

Distribution : South India, Maharashtra, M.P., Dehradun to Assam, North India very common.

Elsewhere : Myanmar.

32. **Lethe rohria* (Fab.)

The Common Tree Brown

1787. *Papilio rohria* Fabricius, *Mant. Ins.*, ii : 45.

1883. *Lethe rohria* : de Niceville, *Butterflies of India Burma & Ceylon*, 1 : 156.

1947. *Lethe rohria* : Talbot, *Fauna Brit. India Butterflies*, 2 : 200.

1994. *Lethe rohria* : Varshney, *Oriental Insects*, 28 : 153.

Distribution : South India, Maharashtra, M.P., Kashmir to Assam.

Elsewhere : Myanmar.

Tribe **Mycalesini**

33. **Mycalesis perseus* Fabricius

The Common Bush Brown

1775. *Papilio perseus* Fabricius, *Syst. Ent.*, : 488.

1883. *Mycalesis perseus* : de Niceville, *Butterflies of India Burma & Ceylon*, 1 : 120.

1994. *Mycalesis perseus* : Varshney, *Oriental Insects*, 28 : 157.

Distribution : South India to Bengal, Konkan, H.P., M.P., U.P. to Assam.

Elsewhere : Myanmar.

34. *Mycalesis mineus* (Linn.)**The Dark Brand Bush Brown**

1767. *Papilio mineus* Linnaeus, *Syst. Nat.*, 1 : 768.

1883. *Mycalesis mineus* : de Niceville, *The Butterflies of India, Burma & Ceylon*, 1 : 117.

1994. *Mycalesis perseus* : Varshney, *Oriental Insects*, 28 : 157.

Material examined : Umaria Dist., BNP, 1 ex., Parasi, 25.ix.2002, Coll. R.K. Singh & Party.

Distribution : Peninsular India South of Mumbai, Konkan, M.P., Bengal, H.P. to Assam.

Elsewhere : Myanmar.

Tribe **Ypthimini**35. *Ypthima asterope* (Klug)**The Common Threering**

1832. *Hipparchia asterope* Klug. *Symb. Phys.* Pl.xxix.

1947. *Ypthima asterope* : Talbot, *Fauna of British India, Butterflies*, 2 : 324.

1994. *Ypthima asterope* : Varshney, *Oriental Insects*, 28 : 159.

Material examined : Umaria Dist., BNP, 4 exs, Ganesh, Pahari, 29.ix.2002; 3 exs, Gohari, 30.ix.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Baluchistan, China, Syria, Africa.

36. **Ypthima huebneri* Kirby**The Common Fourring**

1871. *Ypthima huebneri* Kirby, *Cat. Diurn. Lep.*, : 95

1883. *Ypthima huebneri* : de Niceville, *The Butterflies of India, Burma & Ceylon*, 1 : 226

1947. *Ypthima huebneri* : Talbot, *Fauna Brit. India Butterflies*, 2 : 329

1994. *Ypthima huebneri* : Varshney, *Oriental Insects*, 28 : 159

Distribution : Throughout India.

Elsewhere : Myanmar, Malay Peninsula, Sumatra, Java, Celebes.

37. **Ypthima baldus* Fabricius
The Common Fivering

1775. *Ypthima baldus* Fabricius, *Syst. Ent.*, : 829

1947. *Ypthima baldus* : Talbot, *Fauna Brit. India Butterflies*, 2 : 337

1994. *Ypthima baldus* : Varshney, *Oriental Insects*, 28 : 159

Distribution : Central, Western and Southern India, H.P., Assam.

Elsewhere : Myanmar

Family NYMPHALIDAE

Subfamily BIBLIDINAE

38.**Ariadne merione* (Cramer)
The Common Castor

1777. *Papilio merione* Cramer, *Pap. Ex.*, 2 :

1886. *Ergolis merione* : de Niceville, *The Butterflies of India, Burma & Ceylon*, 2 : 8.

1957. *Ergolis merione* : Wynter-Blyth, *Butterflies of the Indian Region*: 232.

1994. *Ariadne merione* : Varshney, *Oriental Insects*, 28 : 167.

Distribution : Throughout India except arid North & N.W. region.

Elsewhere : Sri Lanka and Myanmar.

Subfamily ARGYNNINAE

39. *Phalanta phalantha phalantha* (Drury)
The Common Leopard

1770. *Papilio phalantha* Drury, *Exot. Inst.* 1 : 41.

1987. *Phalanta phalantha phalantha*: Gupta and Shukla, *Rec. zool. Surv. India. Occ. Pap. No.* 106 : 30.

Material examined : Umaria Dist., BNP, 1 ex, Bathan, 20.ix.2002; 3 exs, Fort, 24.ix.2002, M.L.Koshta & Party; 2 exs., Mahavan Pond, 27.ix.2002; 2 exs, Sher Marg, 28.ix.2002, Coll. R.K. Singh & Party; 1 ex., Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; 1 ex., Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 5 exs., Bamera Dam, 1.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

Subfamily NYMPHALINAE

Tribe **Vanessidi**40. *Cynthia cardui* (Linnaeus)**The Painted Lady**

1758. *Papilio cardui* Linnaeus, *Syst. Nat.* ed. 10, 1 : 475.

1987. *Cynthia cardui* : Gupta and Shukla, *Rec. zool. Surv. India, Occ. Pap. No.* 106 : 27.

Material examined : Umaria Dist., BNP, 1 ex., Garhpuri Dam, 2.ii.2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

41. *Precis iphita pluviatilis* Fruhstorfer**The Chocolate Pansy**

1900. *Precis pluviatilis* Fruhstorfer, *Berl. ent. Z. Berlin*, 45 : 22.

1987. *Precis iphita pluviatilis* : Gupta & Shukla, *Rec. zool. Surv. India, Occ. Pap. No.* 106 : 32.

Material examined : Umaria Dist., BNP, 1 ex, Fort, 24.ix.2002, M.L. Koshta & Party; 1 ex., Sehraivali, 29.i.2004, Coll. Y.N. Gupta & Party; 1 ex., Garhpuri, 2.ii.2004, Coll. Y.N. Gupta & Party; 1 ex., Patour, 5.ii.2004, Coll. Y.N. Gupta & Party.

Distribution : South and Central India, Himalayas as far as Kashmir, N.E. India.

Elsewhere : Myanmar.

42. **Junonia hierta* Fab.**The Yellow Pansy**

1798. *Papilio hierta* Fabricius, *Ent. Syst. Suppl.* : 424.

1932. *Precis hierta* : Evans, *Identification of Indian Butterflies* : 176.

1994. *Junonia hierta* : Varshney, *Oriental Insects*, 28 : 176.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

43. *Junonia orithya swinhoei* Butler**The Blue Pansy**

1885. *Junonia swinhoei* Butler, *Ann. Mag. nat. Hist.* (5) 16 : 309.

1987. *Precis orithya swinhoei* : Gupta and Shukla, *Rec. zool. Surv. India, Occ. Pap. No.*, : **106** : 33.

1994. *Junonia orithya* : Varshney, *Oriental Ins.*, **28** : 176.

Material examined : Umaria Dist., BNP, 1 ex., Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; 1 ex., Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 1 ex., Bamera Dam 1.x.2002, Coll. R.K. Singh & Party; 2 exs., Kallwah, 4.x.2002, Coll. R.K. Singh & Party; 1 ex., Garhpuri Dam, 2.ii.2004, Coll. Y.N. Gupta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

44. *Junonia almana almana* (Linnaeus)

The Peacock Pansy

1758. *Papilio almana* Linnaeus, *Syst. Nat.*, ed **10** : 472.

1987. *Precis almana almana* : Gupta & Shukla, *Rec. zool. Surv. India, Occ. Pap. No.* **106** : 35.

1994. *Junonia almana* : Varshney, *Oriental Ins.*, **28** : 176.

Material examined : Umaria Dist., BNP, 1 ex., Parasi, 25.ix.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

45. *Junonia atlites* (Linnaeus)

The Grey Pansy

1763. *Papilio atlites* Linnaeus, *Centur. Ins.*, : 24.

1987. *Precis atlites* : Gupta and Shukla, *Rec. zool. Surv. India, Occ. Pap. No.* **106** : 34.

1994. *Junonia atlites* : Varshney, *Oriental Ins.* **28** : 176.

Material examined : Umaria Dist. BNP, 2exs, Bhitariwah, 21.ix.2002, Coll. M.L. Koshta & Party 1 ex., Laxman dhara, 26.ix.2002, Coll. R.K. Singh & Party; 1 ex. Mahavan Pond, 27.ix.2002, 1 ex, Sher Marg, 28.ix.2002; 1 ex., Andhiari Jhiriya, 2.x.2002, Coll. R.K. Singh & Party; 4 exs, Madauli, 3.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

46. *Junonia lemonias vaisya* (Fruhstorfer)**The Lemon Pansy**

1912. *Precis vaisya* Fruhstorfer, In Seitz; *The Macrolepidoptera of the World*, 9 : 520.

1987. *Precis lemonias vaisya*: Gupta & Shukla, *Rec. zool. Surv. India, Occ. Pap. No.* 106 : 34.

1994. *Junonia lemonias* : Varshney, *Oriental Ins.*, 28:176.

Material examined : Umaria Dist., BNP, 1 ex, Bathan, 20.ix.2002; 1 ex, Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party; 1 ex., Parasi, 25.ix.2002, Coll. R.K. Singh & Party; 1 ex., Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 1 ex., Bamera Dam, 1.x.2002, Coll. R.K. Singh & Party; 2 exs., Andhiari Jhiriya, 2.x.2002, Coll. R.K. Singh & Party.

Distribution : South and Central India, Saurashtra, Himalayas as far west as Kashmir, Assam, Bengal.

Elsewhere : Myanmar.

Tribe Hypolimini47. **Kallima inachus huegeli* (Kollar)**The Orange Oakleaf**

1848. *Papilio hugelii* Kollar, in *Hugel's Kaschmir*, 4(2) : 432.

1932. *Kallima inachus huegeli*: Evans, *The identifications of Indian Butterflies*, : 175.

Distribution : Extending from Mussoorie in the west to Upper Assam in the east, Himalayas as far west as Kashmir, Uttar Pradesh, Orissa, Madhya Pradesh, South Bihar, Eastern Ghats as far as the River Godavari.

48. *Hypolimnas misippus* (Linn.)**The Danaid Eggfly**

1764. *Papilio misippus* Linnaeus, *Mus. Ulr.*, : 264.

1886. *Hypolimnas misippus* : de Niceville, *The Butterflies of India, Burma & Ceylon*, 2 : 126.

Material Examined : Umaria Dist., BNP, 1 ex., Fort, 24.ix.2002, Coll. M.L. Koshta & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

49. **Hypolimnas bolina* (Linnaeus)

The Great Eggfly

1758. *Papilio bolina* Linnaeus, *Syst. Nat.* (ed 10) 1 : 479.

1987. *Hypolimnas bolina* : Gupta & Shukla, *Rec. zool. Surv. India, Occ. Pap. No.*, 106 : 29.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

Subfamily Limenitidinae

Tribe Neptini

50. *Neptis hylas astola* Moore

The Common Sailor

1872. *Neptis astola* Moore, *Proc. zool. Soc. Lond.* : 560.

1987. *Neptis hylas astola*: Gupta and Shukla, *Rec. zool. Surv. India, Occ. Pap. No.*, 106 : 36.

Material examined : Umaria Dist., BNP, 1 ex, Fort, 24.ix.2002, M.L. Koshta & Party; 1 ex., Madauli, 3.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

51. **Phaedyma columella* Cramer

The Short-Banded Sailor

1994. *Phaedyma columella* : Varshney, *Oriental Insects*, 28 : 179.

Distribution : South, Central and Western, Northern and N.E. India, West Bengal, South Bihar.

Elsewhere : Bhutan, Nepal and Myanmar.

Tribe Limenitidini

52. **Athyma perius* Linn.

The Common Sergeant

1758. *Papilio perius* Linnaeus, *Sys. Nat.*, ed. 10 : 471.

1886. *Athyma perius* : De Niceville, *The Butterflies of India, Burma & Ceylon*, 2 : 166.

1994. *Athyma perius* : Varshney, *Oriental Insects*, **28** : 180.

Distribution : Throughout India (including Andaman Islands).

Elsewhere : Bhutan, Nepal and Myanmar.

53. **Athyma selenophora* (Kollar)

The Staff Sergeant

1844. *Limenitis selenophora* Kollar, *Hungels Kaschmir*, **4(2)** : 426.

1995. *Parathyma selenophora* : Chaudhury, *Fauna of conservation Areas 6 : Fauna of Indravati Tiger Reserve; Zool. Surv. India* : 49.

1994. *Athyma selenophora* : Varshney, *Oriental Ins.*, **28** : 180.

Distribution : Madhya Pradesh, Chhattisgarh, Assam and Sikkim.

Elsewhere : Myanmar, Tenasserim and extending to Malaya Peninsula.

54. **Moduza procris procris* (Cramer)

The Commander

1777. *Papilio procris* Cramer, *Pap. Exot.*, **2** : pl. 106

1932. *Limenitis procris procris* : Evans, *The Identification of Indian Butterflies* : 161.

1994. *Moduza procris* : Varshney, *Oriental Ins.*, **28** : 181.

Distribution : Peninsular India, Central India, Dehradun to Bengal, Assam.

Elsewhere : Sri Lanka and Myanmar.

Tribe Euthaliini

55. *Symphaedra nais* (Forster)

The Baronet

1771. *Papilio nais* Forster, *Nov. Spec. Ins. Cent.*, **1** : 73.

1987. *Euthalia nais* : Gupta & Shukla, *Rec. zool. Surv. India, Occ. Pap. No.*, **106** : 38.

1994. *Symphaedra nais* : Varshney, *Oriental Ins.*, **28** : 184.

Material examined : Umaria Dist. BNP, 1 ex, Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party; 2 exs., Hardiha, 23.ix.2002, Coll. M.L. Koshta & Party; 5 exs, Sher Marg, 28.ix.2002; 1 ex., Bamera Dam 1.x.2002, Coll. R. K. Singh & Party 1 ex., Kuchvahi, 4.ii.2004, Coll. M.L. Koshta & Party ;1 ex., Patour, 5.ii.2004, Coll. Y. N. Gupta & Party.

Distribution : Wide spread in India, S. India, Central India to Duns, H.P. and Sikkim.

Elsewhere : Sri Lanka.

56. **Euthalia aconthea* Cramer
The Common Baron

1857. *Adolias garuda* Moore, *Cat. Lep. Mus. E. I.C.*, 1 : 186

1886. *Euthalia garuda* : de Niceville, *Butterflies of India Burma & Ceylon* 2 : 216.

1994. *Euthalia aconthea* : Varshney, *Oriental Insects*, 28 : 184.

Remarks : It is an endangered species.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

57. **Euthalia lubentina* Cramer
The Gaudy Baron

1777. *Papilio lubentina* Cramer, *Pap. Exot.*, 2 : pl.clv,

1886. *Euthalia lubentina* : De Niceville, *Butterflies of India Burma & Ceylon*, 2 : 220

1994. *Euthalia lubentina* : Varshney, *Oriental Insects*, 28 : 186

Remarks: It is an endangered species.

Distribution : Peninsular India, Mumbai, Madhya Pradesh, West Bengal, Oudh, N.E. India, Himalayas from Kangra eastwards.

Elsewhere : Sri Lanka, Myanmar.

Subfamily Charaxinae

Tribe Prothoini

58. **Charaxes bernardus* Fabricius
The Tawny Rajah

1932. *Charaxes polyxena* : Evans, *Identification of Indian Butterflies* : 141

1994. *Charaxes bernardus* : Varshney, *Oriental Insects*, 28 : 190.

Distribution : Peninsular India, Central India, Mussoorie to Assam.

Elsewhere : Sri Lanka, Myanmar.

59. **Charaxes solon* (Fab.)**The Black Rajah**

1793. *Papilio solon* Fabricius, *Ent. Syst.*, 3 : 69.

1886. *Charaxes solon* : De Niceville, *Butterflies of India Burma & Ceylon*, 2 : 280.

1994. *Charaxes solon* : Varshney, *Oriental Insects*, 28 : 190.

Distribution : Throughout India except extreme N.W.

Elsewhere : Sri Lanka, Myanmar.

Subfamily Acraeinae

60. *Acraea terpsicore* (Linn.)**The Tawny Coster**

1775. *Papilio violae* Fabricius, *Syst. Ent.*, (3) 1 : 460.

1947. *Acraea violae* : Talbot, *The Fauna of Brit. India*, *Butterflies*, 2 : 466.

1994. *Acraea terpsicore* : Varshney, *Oriental Ins.*, 28 : 191.

Material examined : Umaria Dist., BNP, 1 ex, Bathan, 20.ix.2002; 1 ex, Bhitariwah, 21.ix.2002; 3 exs., Hardiha, 23.ix.2002, Coll. M.L. Koshta & Party; 2 exs., Parasi, 25.ix.2002, Coll. R.K. Singh & Party; 5 exs., Sher Marg, Hardiha, 28.ix.2002, Coll. R.K. Singh & Party; 1 ex., Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; 4 exs., Bamera Dam, 1.x.2002, 2exs, Madauli, 3.x.2002, Coll. R.K. Singh & Party; 3 exs., Kallwah, 4.x.2002, Coll. R.K. Singh & Party; 1 ex., Manpur, 30.i.2004, Coll. Y.N. Gupta & Party.

Distribution : Peninsular India, Central India, Indo-Gangetic plains up to the lower hills of Himalaya and including Lakshadweep Islands.

Elsewhere : Nepal and possibly Myanmar.

Family RIODINIDAE

Subfamily Riodininae

61. *Abisara echerius suffusa* Moore**The Plum Judy**

1882. *Abisara suffusa* Moore, *Proc. zool. Soc. Lond.*, : 244.

1987..*Abisara echerius suffusa* : Gupta and Shukla, *Rec. zool. Surv India, Occ. Pap. No.*, 106 : 40.

Material examined : Umaria Dist., BNP, 1 ex., Andhiari Jhiriya, 2.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Nepal, Bhutan and Myanmar.

Family LYCAENIDAE

Subfamily POLYOMMATINAE

Tribe Polyommagini

62. **Prosotas nora* Felder

The Common Lineblue

1860. *Lycaena nora* Felder, *Sitz. Ak. Wiss. Wien, Math. Nat. Cl.*, **40** : 458.

1890. *Nacaduba nora* : De Niceville, *Butterflies of India Burma & Ceylon*, **3** : 147.

1997. *Prosotas nora* : Varshney, *Oriental Insects*, **31** : 91.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

63. **Jamides celeno* (Cramer)

Common Cerulean

1932. *Jamides celeno* : Evans, *Identification of Indian Butterflies* : 237.

1997. *Jamides celeno* : Varshney, *Oriental Insects*, **31** : 93.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

64. **Catochrysops strabo* (Fab.)

Forget-Me- not

1793. *Hesperia strabo* Fabricius, *Ent. Syst.*, **3** : 287

1890. *Catochrysops strabo* : De Niceville, *Butterflies of India Burma & Ceylon*, **3** : 177

1997. *Catochrysops strabo* : Varshney, *Oriental Insects*, **31** : 93.

Distribution: Throughout India.

Elsewhere : Sri Lanka, Myanmar.

65. **Lampides boeticus* (Linn.)**The Pea Blue**

1767. *Papilio boeticus* Linnaeus, *Syst. Nat. ed.*, 12 : 789.

1907. *Polyommatus boeticus* : Bingham, *Fauna Brit. India Butterflies*, 2 : 432.

1962. *Lampides boeticus* : Cantlie, *The Lycaenidae portion of Brigadier Evans, The Identification of Indian Butterflies*, 1932 : 69

1997. *Lampides boeticus* : Varshney, *Oriental Insects*, 31 : 94

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

66. **Leptotes plinius* (Fab.)**The Zebra Blue**

1793. *Hesperia plinius* Fabricius, *Ent. Syst.*, 3 : 284.

1890. *Tarucus plinius* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 194.

1932. *Syntarucus plinius* : Evans, *Identification of Indian Butterflies* : 217.

1997. *Leptotes plinius* : Varshney, *Oriental Insects*, 31 : 94.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

67. **Castalius rosimon* (Fab.)**The Common Pierrot**

1775. *Papilio rosimon* Fabricius, *Syst. Ent.*: 523.

1890. *Castalius rosimon* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 197.

1997. *Castalius rosimon* : Varshney, *Oriental Insects*, 31 : 94.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

68. **Tarucus nara* Kollar**The Rounded Pierrot**

1848. *Lycaena nara* Kollar, *Hugel's Kaschmir*, 4 : 421

1890. *Tarucus nara* : De Niceville, *Butterflies of India Burma & Ceylon* , 3 : 190

1997. *Tarucus nara* : Varshney, *Oriental Insects*, 31 : 95

Distribution : Mumbai, Saurashtra, M.P., Rajasthan, Punjab.

Elsewhere : N.W.Frontier, Province, Sind.

69. **Zizeeria karsandra* Moore

The Dark Grass Blue

1865. *Polyommatus karsandra* Moore, *Proc. Zool. Soc. Lond.*, : 505.

1890. *Zizeeria karsandra* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 117.

1997. *Zizeeria karsandra* : Varshney, *Oriental Insects*, 31 : 95.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

70. **Zizina otis* Fab.

The Lesser Grass Blue

1787. *Papilio otis* Fabricius, *Mant. Ins.*, 2 : 73.

1890. *Zizeeria otis* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 119.

1997. *Zizina otis* : Varshney, *Oriental Insects*, 31 : 95.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

71.**Pseudozizeeria maha* (Kollar)

The Pale Grass Blue

1848. *Lycaena maha* Kollar, in Huegel's *Kaschmir und das Reic Siek.*, 4(2) : 422.

1907. *Zizeeria maha* : Bingham, *Fauna Brit. India, Butterflies*, 2 : 355.

1997. *Pseudozizeeria maha* : Varshney, *Oriental Insects*, 31 : 96.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

72. **Zizula hylax* Fab.

The Tiny Grass Blue

1775. *Papilio hylax* Fabricius, *Syst. Ent.* : 526.

1987. *Zizula hylax* : Gupta and Shukla, *Rec. zool.Surv. India, Occ. Pap. No. 106* : 50.

1997. *Zizula hylax* : Varshney, *Oriental Insects*, 31 : 96.

Distribution : Throughout India including Andaman Nicobar and Lakshadweep Islands.

Elsewhere : Sri Lanka, Pakistan, Nepal and Myanmar.

**73. *Everes lacturnus* Godart.
The Indian Cupid**

1997. *Everes lacturnus* : Varshney, *Oriental Insects*, 31 : 96.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Pakistan, Nepal and Myanmar.

**74. **Talicauda nyseus* Guerin Meneville
The Red Pierrot**

1843. *Polyommatus nyseus* Guerin ,*Dellessert's Souv. D'us Voy. Dans l'Inde* : 78.

1890. *Talicauda nyseus* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 135.

1997. *Talicauda nyseus* : Varshney, *Oriental Insects*, 31 : 97.

Distribution : Peninsular India, Central India, Khasi and Naga Hills.

Elsewhere : Sri Lanka, Myanmar.

**75. **Euchrysops cnejus* (Fab.)
The Gram Blue**

1798. *Hesperia cnejus* Fabricius, *Ent. Syst. Suppl.*, : 430.

1890. *Catochrysops cnejus* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 17.

1962. *Euchrysops cnejus* : Cantlie, *The Lycaenidae portion (except the Arhopala group) of Brigadier Evans, The Identification of Indian Butterflies*, 1932 : 65 1997. *Euchrysops cnejus* : Varshney, *Oriental Insects*, 31 : 104.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

**76. **Chilades laius* Stoll
The Lime Blue**

1780. *Papilio laius* Stoll, *Pap. Ex.*, 4 : 62.

1890. *Chilades laius* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 89.

1997. *Chilades laius* : Varshney, *Oriental Insects*, 31 : 107.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

77. *Chilades pandava* (Horsfield)

The Plains Cupid

1932. *Euchrysops pandava* : Evans, *The Identification of Indian Butterflies* : 235.

1997. *Chilades pandava* : Varshney, *Oriental Insects*, 31 : 107.

Material examined : Umaria Dist., BNP, 3exs, Laxman dhara, 1.x.2002, R.K.Singh & Party.

Distribution : Throughout India.

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

78. **Freyeria trochylus* (Freyer)

The Grass Jewel

1844. *Lycaena trochylus* Freyer, *Neuere Beeitrage Schmett*, 5 : 98.

1890. *Chilades trochylus* : De Niceville, *Butterflies of India Burma & Ceylon*, 3 : 91.

1997. *Freyeria trochylus* : Varshney, *Oriental Insects*, 31 : 107.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

Subfamily APHNAEINAE

79. *Spindasis vulcanus vulcanus* Fabricius

The Common Silverline

1775. *Papilio vulcanus* Fabricius, *Syst. Ent.* : 519

1890. *Aphnaeus vulcanus* : deNiceville, *Butterflies of India Burma & Ceylon*, 3 : 349

1957. *Spindasis vulcanus* : Wynter-Blyth, *Butterflies of the Indian Region* : 332

1997. *Spindasis vulcanus* : Varshney, *Oriental Insects*, 31 : 110.

Material examined : Umaria Dist., BNP, 4 exs, Bhitrah, 21.ix.2002, M.L. Koshta & Party; 1 ex, Gohari, 30.ix.2002; 1 ex, Bamera dam, 1.x.2002, R.K. Singh & Party.

Distribution : Throughout India except desert tracts.

Elsewhere : Sri Lanka, Java.

80. *Spindasis elima elima* (Moore)

The Scarce Shot Silverline

1877. *Aphnaeus elima* Moore, *Ann. Mag. nat. Hist.*, (4) 20 : 51.

1997. *Spindasis elima elima* : Gupta, *State Fauna Series 3 : Fauna of West Bengal, Zool. Surv. India* : 468.

Material examined : Umaria Dist., BNP, 3exs, Bhitavah, 21.ix.2002, M.L. Koshta & Party.

Remarks : It is an endangered species.

Distribution : South India, Madhya Pradesh, Maharashtra, Haryana, Himachal Pradesh, Manipur, Orissa, Sikkim, Uttar Pradesh and West Bengal.

Elsewhere : Pakistan.

81. **Spindasis ictis* Hewitson

The Shot Silverline

1865. *Aphaenus ictis* Hewitson, Ill. *Diurn. Lep.*, : 61.

1997. *Spindasis ictis ictis* : Gupta, *State Fauna Series 3 : Fauna of West Bengal, Zool. Surv. India* : 458.

1997. *Spindasis ictis* : Varshney, *Oriental Insects*, 31 : 110.

Distribution : Madhya Pradesh; Jammu & Kashmir; Karnataka; Orissa; Uttar Pradesh and West Bengal.

Elsewhere : Pakistan, Sri Lanka.

82. **Spindasis lohita* Horsfield

The Long- Banded Silverline

1890. *Aphnaeus lohita*: de Niceville, *Butterflies of India Burma & Ceylon*, 3 : 348.

1957. *Spindasis lohita* : Wynter-Blyth, *Butterflies of the Indian Region* : 333.

1997. *Spindasis lohita* : Varshney, *Oriental Insects*, 31 : 110.

Remarks : It is an endangered species.

Distribution : South India, Madhya Pradesh, West Bengal, Orissa, Mussoorie to Assam.

Elsewhere : Sri Lanka, Myanmar, Malay Peninsula, Java Sumatra, Philippines.

Subfamily THECLINAE

Tribe Arhopalini

83. *Narathura amantes* (Hewitson)**The Large Oak Blue**

1862. *Amblypodia amantes* Hewitson, *Cat. Lycaenidae B.M.* : 4.

1890. *Arhopala amantes* : de Niceville, *The Butterflies of India, Burma and Ceylon*, 3 : 239.

1932. *Amblypodia amantes amantes* : Evans, *The Identification of Indian Butterflies*, : 264.

Material examined : Umaria Dist., BNP, Parasi, 25.ix.2002; 1 ex., Madauli Camp, 3.x.2002, Coll. R.K. Singh & Party.

Distribution : South India to Madhya Pradesh, South Bihar, Dehradun to Assam.

Elsewhere : Sri Lanka, Myanmar.

Tribe Amblypodiini

84. **Amblypodia anita* Hewitson**The Leaf Blue**

1862. *Amblypodia anita* Hewitson, *Cat. Lycaenidae B.M.* : 14

1890. *Amblypodia anita* : deNiceville, *Butterflies of India Burma & Ceylon*, 3 : 211.

1997. *Amblypodia anita* : Varshney, *Oriental Insects*, 31 : 117.

Distribution : Peninsular India, M.P., Orissa, Bihar, West Bengal, Sikkim, N.E. India & Andaman.

Elsewhere : Sri Lanka, Myanmar.

Tribe Deudorigini

85. **Deudorix epijarbus amatius* Fruhstorfer**The Common Cornelian**

1857. *Dipsas epijarbus* Moore, *Cat.Lep. Mus. E.I.C.* : 40.

1890. *Deudorix epijarbus* : De Niceville, *The Butterflies of India, Burmah & Ceylon*, 3 : 449.

1932. *Deudorix epijarbus amatius* : Evans, *The Identification of Indian Butterflies* : 295.

1997. *Deudorix epijarbus amatius* : Varshney, *Oriental Insects*, 31 : 128.

Distribution : Throughout India including Andaman and Nicobar Islands (except the desert tracts and very high elevations in the Himalayas).

Elsewhere : Sri Lanka, Myanmar, Malay Peninsula, Borneo, Celebes.

86. *Virachola isocrates* (Fabricius)**The Common Guava Blue**

1793. *Hesperia isocrates* Fabricius, *Syst. Ent.*, 3 : 266

1890. *Virachola isocrates* : de Niceville, *Butterflies of India Burma & Ceylon*, 3 : 477.

Material examined : Umaria Dist., BNP, 1 ex., Tala guest house, 28.ix.2002; 1 ex, Bamera dam, 1.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout the plains of India, except the desert tracts and Assam.

Elsewhere : Sri Lanka.

87. *Rapala iarbus sorya* Koller**The Indian Red Flash**

1787. *Papilio iarbus* Fabricius, *Mant. Ins.* 2 : 68

1890. *Rapala iarbus* : deNiceville, *Butterflies of India Burma & Ceylon*, 3 : 468.

1932. *Rapala iarbus* : Evans, *Identification of Indian Butterflies* : 299

1957. *Rapala melampus* : Wynter-Blyth, *Butterflies of the Indian Region* : 362.

1997. *Rapala iarbus* : Varshney, *Oriental Insects*, 31 : 130.

Material examined : Umaria Dist., BNP, 1 ex., Madauli Camp, 3.x.2002, Coll. R.K. Singh & Party; 1 ex., Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : South India, Mumbai, M.P., South Bihar, Orissa, Saurashtra, Kutch, Kumaon.

Elsewhere : Sri Lanka.

Suborder GRYPOCERA

Family HESPERIIDAE

Subfamily COELIADINAE

88. **Hasora chromus* (Fab.)**The Common Banded Awl**

1782. *Papilio chromus* Cramer, *Lepidoptera indica*.

1932. *Hasora chromus* : Evans, *The Identification of Indian Butterflies* : 316.

2006. *Hasora chromus* : Smetacek, *Bionotes*, 8 : 92.

Distribution : India.

Elsewhere : Sri Lanka, Baluchistan, Myanmar.

89. **Badamia exclamatoris* (Fab.)

The Brown Awl

1775. *Papilio exclamatoris* : Fabricius. *Syst. Ent.*, 530.

1932. *Badamia exclamatoris* : Evans, *The Identification of Indian Butterflies* : 321.

2006. *Badamia exclamatoris* : Smetacek, *Bionotes*, 8 : 92.

Distribution : Throughout India.

Elsewhere : Sri Lanka, Myanmar.

Subfamily Pyrginae

90. **Celaenorrhinus ambareesa* Moore

The Malabar Spotted Flat

1932. *Celaenorrhinus ambareesa* Evans, *The Identification of Indian Butterflies* : 324.

2006. *Celaenorrhinus ambareesa* : Smetacek, *Bionotes*, 8 : 93.

Distribution : South India, Western India, M.P. and Bengal.

91. **Sarangesa dasahara* (Moore)

The Common Small Flat

1932. *Sarangesa dasahara* Evans, *The Identification of Indian Butterflies* : 342.

2006. *Sarangesa dasahara* : Smetacek, *Bionotes*, 8 : 93.

Distribution : South India, Western India, M.P. Kangra to Assam, U.P.

Elsewhere : Sri Lanka, Myanmar.

92. **Sarangesa purendra* (Moore)

The Spotted Small Flat

1932. *Sarangesa purendra* : Evans, *The Identification of Indian Butterflies* : 342.

2006. *Sarangesa purendra* : Smetacek, *Bionotes*, 8 : 93.

Distribution : North Kanara to Sind, Madhya Pradesh, Kangra to Kumaon.

93. **Odontoptilum ransonnettii* R.Felder**The Golden Angle**

1949. *Caprona ransonnettii ransonnettii* (Felder), Evans, *A Catalogue of the HesperIIDae from Europe, Asia and Australia in the Brit. Mus. (nat. Hist.)* : 166.

2006. *Odontoptilum ransonnettii* : Smetacek, *Bionotes*, 8 : 94.

Distribution : Peninsular India, M.P., Haryana and Assam.

Elsewhere : Sri Lanka, Myanmar.

94. *Spialia galba* (Fabricius)**The Indian Skipper**

1793. *Hesperia galba* Fabricius, *Ent. Syst.*, 3(1) : 352.

1987. *Spialia galba*: Gupta & Shukla, *Rec. zool. Surv. India, Occ.Pap. No. 106* : 54.

2006. *Spialia galba* Smetacek, *Bionotes*, 8 : 94.

Material examined : Umaria Dist., BNP, 2 exs., Bhitariwah, 21.ix.2002, Coll. M. L. Koshta & Party; 1 ex., Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party; 1 ex., Bandhavgarh Fort, 24.ix.2002, Coll. M.L. Koshta & Party; 3 exs., Mahavan Pond, 27.ix.2002, Coll. R.K. Singh & Party; 1 ex., Ganesh Pahari, 29.ix.2002, Coll. R.K. Singh & Party; 2 exs., Gohari, 30ix.2002, Coll.R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

Subfamily HESPERIINAE

95. **Udaspes folus* Cramer**The Grass Demon**

1779. *Papilio folus* Cramer, *Pap. Exot.*, 1 : pl 74.

1932. *Udaspes folus* : Evans, *The Identification of Indian Butterflies* : 370.

2007. *Udaspes folus* : Smetacek, *Bionotes*, 9 : 13.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

96. **Suastus gremius* (Fab.)**The Indian Palm Bob**

1798. *Suastus gremius* Fabricius, Butler, 1869, *Catalogue of the Lepidoptera in the British Museum described by Fabricius*

1932. *Suastus gremius* Evans, *The Identification of Indian Butterflies* : 365

2007. *Suastus gremius* : Smetacek, *Bionotes*, 9 : 13

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

97. **Matapa aria* (Moore)

The Common Redeye

1865. *Ismene aria* Moore, *Proc. zool. Soc. Lond.*, : 784.

1997. *Matapa aria*: Ghosh & Chaudhury, *State Fauna Series*, 3 : *Fauna of West Bengal, Zool. Surv. India.* : 302.

2007. *Matapa aria* : Smetacek, *Bionotes*, 9 : 15

Distribution : South India, Madhya Pradesh, Assam, Sikkim, Uttar Pradesh and West Bengal.

Elsewhere : Oriental region.

98. *Telicota ancilla* Herrich-Schaffer

The Dark Palm Dart

1869. *Telicota ancilla* Herrich-Schaffer, *Stett. Ent. Ztg.*, : 79.

1997. *Telicota ancilla* : Ghosh & Chaudhury, *State Fauna Series*, 3 : *Fauna of West Bengal, Zool. Surv. India.* : 307.

2007. *Telicota ancilla* : Smetacek, *Bionotes*, 9 : 16.

Material examined : Umaria Dist. BNP, 3 exs., Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : Throughout India.

Elsewhere : Sri Lanka.

99. *Parnara naso bada* (Moore)

The Straight Swift

1878. *Hesperia bada* Moore, *Proc. zool. Soc. Lond.*, : 685.

1997. *Parnara naso bada* : Ghosh & Chaudhury, *State Fauna Series*, 3 : *Fauna of West Bengal, Zool. Surv. India* : 312.

2007. *Parnara naso* : Smetacek, *Bionotes*, 9 : 16.

Material examined : Umaria Dist., BNP, 1 ex, Laxman dhara, 26.ix.2002, R.K. Singh & Party.

Distribution : South India, Central India; Kashmir, Sikkim and West Bengal.

Elsewhere : Oriental and Palaeartic regions.

100. **Borbo cinnara* Wallace

The Rice Swift

1866. *Borbo cinnara* : Wallace, Waterhouse, G.A., What butterfly is that? : A handbook of known Australian species.

2007. *Borbo cinnara* : Smetacek, *Bionotes*, 9 : 16.

Distribution : South India, Madhya Pradesh, Himachal Pradesh, Manipur, Sikkim, West Bengal and Andaman and Nicobars.

Elsewhere : Palaeartic, Oriental, Papuan and Australian regions.

101. *Barbo bevani bevani* Moore.

The Bevan's Swift

1878. *Borbo bevani* Moore : Seitz, A. 1909, Macrolepidoptera of the World.

1957. *Borbo bevani* : Wynter-Blyth, *Butterflies of the Indian Region* : 486.

2007. *Borbo bevani* : Smetacek, *Bionotes*, 9 : 16.

Material examined : Umaria Dist., BNP, 1 ex., Hardiha, 23.ix.2002, Coll. M.L. Koshta & Party; 1 ex, Laxman dhara, 26.ix.2002; 1 ex., Kallwah, 4.x.2002, Coll. R.K. Singh & Party.

Distribution : South India to M.P., U.P., Bengal, Assam.

Elsewhere : Myanmar.

102. *Pelopidas mathias* (Fab)

The Small Branded Swift

1798. *Hesperia mathias* Fabricius, *Ent. Syst. Suppl.*, : 433.

1997. *Pelopidas mathias* : Ghosh & Chaudhury, *State Fauna Series 3 : Fauna of West Bengal, Zool. Surv. India* : 313.

2007. *Pelopidas mathias*: Smetacek, *Bionotes*, 9: 16.

Material examined : Umaria Dist.,BNP, 3 exs., Bhitariwah, 21.ix.2002, Coll. M.L. Koshta & Party; 7exs.,Sita Mandap, 22.ix.2002, Coll. M.L. Koshta & Party 1 ex.,

Bandhavgarh Fort, 24.ix.2002, Coll. M.L. Koshta & Party; 1 ex., Parasi, 25.ix.2002; 1 ex, Laxman dhara, 26.ix.2002; 3 exs., Mahavan Pond, 27.ix.2002, Coll. R.K. Singh & Party; 3 exs., Ganesh Pahari, 29.ix.2002; 2 exs, Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 2 exs., Gohari, 30.ix.2002, Coll. R.K. Singh & Party; 4 exs, Bamera dam, 1.x.2002; 2 exs., Kallwah, 4.x.2002., Coll. R.K. Singh & party.

Distribution : Throughout India.

Elsewhere : Sri Lanka and Myanmar.

SUMMARY

The present account of butterflies from Bandhavgarh Tiger Reserve includes 102 species of 72 genera spread over eight families *viz.* Papilionidae 9 spp, Pieridae 16 spp, Danaidae 4 spp, Satyridae 8 spp, Nymphalidae 23 spp, Riodinidae 1 sp., Lycaenidae 26 spp, and Hesperidae 15 spp. The species richness analysis shows that the family Lycaenidae is predominant followed by Nymphalidae, Pieridae and Hesperidae.

REFERENCES

- Betham, J.A. 1890. The Butterflies of the Central Provinces. *J. Bombay nat. Hist. Soc*, **5** : 19-28; 151-161; 279-286.
- Betham, J.A. 1891. The Butterflies of the Central Provinces. *J. Bombay nat. Hist. Soc.*, **6** : 175-183; 318-331.
- Chandra, K., Singh, R.K. and Koshta, M.L. 2000a. On a collection of Butterflies (Lepidoptera: Rhopalocera) from Sidhi District, Madhya Pradesh, India. *Rec. Zool. Surv. India*, **98**(4) : 11-23.
- Chandra, K., Singh, R.K. and Koshta, M.L. 2000b. On a collection of Butterfly Fauna from Pachmarhi Biosphere Reserve. *Proceedings of National Seminar on Biodiversity Conservation & Management with Special Reference on Biosphere Reserve, EPCO, Bhopal, November* : 72-77.
- Chandra, K., Chaudhary, L.K., Singh, R.K. and Koshta, M.L. 2002. Butterflies of Pench Tiger Reserve, Madhya Pradesh. *Zoos' Print Journal*, **17**(10) : 908-909.
- Chandra, K. 2006. The Butterflies (Lepidoptera : Rhopalocera) of Kangerghati National Park (Chhatisgarh). *Advancement in Indian Entomology : Productivity and Health, Vol., II* : 83-88.

- Chandra, K. Sharma, R.M. Singh, Ajit and Singh, R.K. 2007. A Checklist of Butterflies from Madhya Pradesh and Chhattisgarh States, India. *Zoo's Print Journal*, **22(8)** : 2790-2798.
- Chaudhury, M. 1995. Insecta : Lepidoptera. *Fauna of Indravati Tiger Reserve, Zoological Survey of India, Fauna of Conservation Area*, **6** : 45-52.
- Choudhary, L.K. and Khan, S.A. 2002. The Definitive Guide, Bandhavgarh, Fort of the Tiger. Wild Atlas Books : 1-113.
- Evans, W.H. 1932. *The Identification of Indian Butterflies. Bombay Natural History Society, Bombay* : 455, 32 pl.
- Gupta, I.J. & Shukla, J.P.N. 1987. Butterflies from Bastar district (Madhya Pradesh, India). *Rec. zool. Surv.India, Occasional Paper No.*, **106** : 1-74.
- Siddiqui, A. and Singh, S.P. 2004. A checklist of the butterfly diversity of Panna Forest (M.P.). *National Journal of Life Sciences*, **1(2)** : 403-406.
- Singh, R.K. 1977. On a collection of Butterflies (Insecta) from Bastar district, Madhya Pradesh, India, *Newsletter Zoological Survey of India*, **3(5)** : 323-326.
- Singh, R.K, and Chandra, K. 2002. An inventory of Butterflies of Chhatisgarh. *J. Tropical Forestry*, **18(1)** : 67-74.
- Singh, R.K, and Koshta, M.L. 2007. Insecta: Lepidoptera: Rhopalocera (Butterflies) *Zoological Survey of India, Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series*, **15(Pt.1)** : 301-345
- Smetacek, P. 2006. Checklist of South Asian Skipper Butterflies (Lepidoptera : Hesperiiidae). *Bionotes*, **8(4)** : 92-95.
- Smetacek, P. 2007. Checklist of South Asian Skipper Butterflies (Lepidoptera: Hesperiiidae). *Bionotes*, **9(1)** : 13-17.
- Talbot, G. (1939). *The Fauna of British India including Ceylon and Burma, Butterflies* Second Edition, Taylor & Francis Ltd., London, **1** : 600.
- Talbot, G. 1947. *The Fauna of British India including Ceylon and Burma, Butterflies* Second Edition, Taylor & Francis Ltd., London, **2** : 506.
- Tiwari, 2002. In : Choudhary, L.K. and Khan. S.A. 2002. The Definitive Guide, Bandhavgarh, Fort of the Tiger. *Wild Atlas Books* : 1-113.
- Varshney, R.K. 1993. Index Rhopalocera Indica. Part III. Genera of Butterflies from India and Neighbouring countries (Lepidoptera : (A) Papilionidae, Pieridae and Danaidae) *Oriental Insect*, **27** : 347-372.

- Varshney, R.K. 1994. Index Rhopalocera Indica. Part III. Genera of Butterflies from India and Neighbouring countries (Lepidoptera: (B) Satyridae, Nymphalidae, Libytheidae and Riodinidae) *Oriental Insect*, **28** : 151-198.
- Varshney, R.K. 1997. Index Rhopalocera Indica. Part III. Genera of Butterflies from India and Neighbouring countries (Lepidoptera : (C) Lycaenidae) *Oriental Insect*, **31** : 83-138. A, B, C.
- Varshney, R.K. 2006. An estimate of the Numbers of Butterfly species in the Indian Region. *Bionotes*, **8(3)** : 61-63.
- Wynter-Blyth, M.A. 1957. *Butterflies of the Indian Region*. Bombay Natural History Society, Bombay : 1-523

INSECTA : LEPIDOPTERA : HETEROCERA

KAILASH CHANDRA

Central Regional Station, Zoological Survey of India, Jabalpur, M.P.

INTRODUCTION

Chandra and Nema (2007) reported 313 species of moths from Madhya Pradesh and Chhattisgarh. Subsequently, Chandra and Nema (In Press) provided an account of 48 species belonging to 42 genera under 10 families (see Annexure) from Bandhavgarh National Park. Further explorations and studies of unidentified collection from the area added 12 species belonging to 12 genera and 8 families raising the number of species known from the Tiger Reserve to 60.

List of additional records of Moths from Bandhavgarh Tiger Reserve

Family SPHINGIDAE

1. *Macroglossum* Sp.

Family GEOMETRIDAE

2. *Chrysocraspeda conversata* Walker
3. *Somatina anthophilata* Guen'ee

Family SATURNIIDAE

4. *Antheraea paphia* (Linnaeus)

Family PYRALIDAE

5. *Botyodes asialis* Guenee
6. *Omphisa anastomosalis* Guen'ee

Family LASIOCAMPIDAE

7. *Parasa* sp.

Family LYMANTRIDAE

8. *Orvasca subnotata* Walker

Family ARCTIIDAE

9. *Cyana puella* Drury

Family NOCTUIDAE

10. *Acontia transversa* Guen'ee

11. *Ophiusa coronata* Fabricius

12. *Thermesia rubricans* (Boisduval)

SYSTEMATIC ACCOUNT

Order LEPIDOPTERA

Suborder HETEROCERA

Family SPHINGIDAE

1. *Macroglossum* sp.

1758. *Macroglossum*, Scop., *Intr. Hist. Nat.*, : 414.

1937. *Macroglossum*, Bell & Scott, *Fauna Brit. India*, Moths, 5 : 345.

Material examined : Umaria district, Bandhavgarh Tiger Reserve (BTR), Tala, 27.9.2002 (1ex.). coll. R.K. Singh & party.

Diagnostic characters : Wing expanse : 52 mm. Antennae gradually thickening to a club, male with tufts of cilia. Fore wings narrow, grey to dark grey or black, with transverse, often sinuous fasciae. Hind wings usually blackish with a broad yellow or orange medial to sub-basal band. Thorax and abdomen very broad, the latter rather flattened. Abdomen often with lateral and sub-ventral yellow or white patches.

Distribution : India : Madhya Pradesh, Assam, Gujarat, Sikkim, Southern Peninsula, West Himalaya, Maharashtra and Uttar Pradesh and West Bengal.

Elsewhere : Pakistan, Sri Lanka, Bhutan, Bangladesh, and China.

Family GEOMETRIDAE

2. *Chrysocraspeda conversata* Walker

1861. *Hyria conversata* Walker, *List Specimens lipid. Insects Colln Br. Mus.* 22 : 666.

1997. *Chrysocraspeda conversata*, Holloway, *the Moths of Borneo, the Malayan Nature Journal*, 51(1-4) : 28.

Material examined : Umaria, Bandhavgarh Tiger Reserve, Tala, 29.ix.2002 (1ex.), coll. R.K. Singh & party.

Diagnostic characters : Wing expanse : 20 mm. More fluorescent mauvish pink rather than reddish, with a distinct buff diffuse dark area at the hind-wing angle. Male less heavily marked with pink than the female, with the central zone of the hind wing, and to a lesser extent, the forewing broadly yellow.

Distribution : Throughout India including Madhya Pradesh (Umaria).

Elsewhere : Borneo and Sumatra.

3. *Somatina anthophilata* Guen'ee

1857. *Somatina anthophilata*, Guen'ee, *Phal.* ii : 11.

1861. *Somatina anthophilata*, Walker, *Cat.* Xxii : 514.

1886-1889. *Somatina anthophilata*, Cotes and Swinhoe, *A catalogue of Moths of India* : 585.

1895. *Somatina anthophilata*, Hampson, *Fauna Briti. India*, Moths, 3 : 464.

Material examined : Photograph was taken during day collection in Tala Range, BTR on 13.viii. 2005.

Diagnostic characters : Wing expanse : Male : 34 mm, Female : 36 mm; Colour white, with slight rufous and fuscous suffusion. Fore wing with the costa ferruginous, a medial sinuous line angled below costa, with another line beyond it produced to points beyond the angles of cell and approaching the medial line below the cell, the area between them usually tinged with rufous and with a cell-spot, a sub-marginal wavy line produced to a point below costa, then usually obsolescent, the area beyond it rufous as far as the marginal rufous band of triangular marks, not extending to the costa. Hind wing with cell-speck and traces of wavy medial and post-medial line.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umaria) and Andamans.

Elsewhere : Myanmar and Sri Lanka.

Family SATURNIIDAE

4. *Antheraea paphia* (Linnaeus)

1758. *Phalaena bombyx paphia* Linnaeus, *Syst. Nat. Ed.* x, 1 : 596.

1773. *Phalaena mylitta*, Drury, *Ill. Exot. Ins.* ii, pl. 5 fig. 1.

1881. *Antheraea mylitta*, Moore, *Wardle's Wild Silks of India* : 5.

1886- 1889. *Antheraea mylitta*, Cotes and Swinhoe, *A catalogue of Moths of India* : 228.

1892. *Antheraea paphia*, Hampson, *Fauna Briti. India*, Moths, 1 : 18.

Material examined : Cocoons of *Antheraea paphia* were collected from Tala Range, BTR on 16. viii. 2005.

Diagnostic characters : Head, thorax and abdomen pale brown; collar being reddish or yellowish; the costal brown and grey fascia of fore wing reaching the apex; the hyaline and ocellated spot much larger, the inner lunule and post-medial line bright pink; the sub-marginal line of the hind wing much nearer the margin; no marginal yellow line.

Distribution : Throughout India including Madhya Pradesh (Chhindwara and Umaria).

Elsewhere : Sri Lanka and China.

Family PYRALIDAE

5. *Botyodes asialis* Guenee

1854. *Botyodes asialis* Guenee, *Delt. & Pyr.*, : 321.

1896. *Botyodes asialis*, *Fauna Briti. India*, Moths, 1V : 325-326.

Material examined : Umaria District, Bandhavgarh Tiger Reserve, Tala, 2.x.2002 (1 ex.), coll. R.K.Singh & Party; 10.viii.2005 (1ex.), coll. K. Chandra & party.

Diagnostic characters : Wing expanse : 50 mm. Orange yellow. Fore wing with fulvous speck below median nervure near base, an oblique maculate fulvous ante-medial line; an interrupted sinuous post-medial line inwardly oblique from vein 5 to 2; a highly sinuous sub-marginal line, with the area beyond it fulvous at apex; hind wing marginal area fulvous with a grey tinge, narrowing to anal angle and with its inner edge sinuous.

Distribution : Throughout India including Madhya Pradesh (Chhindwara and Umaria).

Elsewhere : Baluchistan, Sri Lanka and Myanmar and Borneo.

6. *Omphisa anastomosalis* Guen'ee

1854. *Omphisa anastomosalis*, Guen. *Delt and Pyr.* : 373.

1886-1889. *Omphisa illisalis*, Cotes and Swinhoe, *A catalogue of Moths of India* : 601.

1896. *Omphisa anastomosalis*, Hampson, *Fauna Briti. India*, Moths, 4 : 382.

Material examined : Umaria District, Bandhavgarh Tiger Reserve, Tala , 3.x.2002 (1ex.), coll. R.K. Singh & party.

Diagnostic characters : Wing expanse : 32 mm., Colour white, the head, thorax and abdomen suffused with ochreous and rufous, leaving some paired pale spots on dorsum. Fore wing with rufous suffusion on basal area extending below median nervure to middle of wing, hyaline patches at middle and end of cell, with a rufous-edged ochreous spot between them, a large rufous-edged ochreous patch beyond the cell, the outer area more or less irrorated and suffused with rufous the veins rufous, a curved post-medial rufous line with an irregularly dentate line beyond it enclosing a series of hyaline patches, a marginal rufous line. Hind wing with the base rufous, a dark-edged rufous irregular discocellular mark with line from it to inner margin, the outer area irrorated with rufous, two irregularly waved rufous post-medial lines, the apex, anal angle, and a marginal line rufous.

Distribution : India : Madhya Pradesh (Hoshangabad, Mandla and Umaria), Sikkim, Khasis, Tamil Nadu and Andamans.

Elsewhere : Sri Lanka, Myanmar, Java, China, and Duke of York Island.

Family LASIOCAMPIDAE

7. *Parasa* sp.

1859. *Parasa* Moore, *Lep. E. I. Co.* : 413.

1859. *Neaera*, Herr.-Schaiffer, *Samml. Aussereur. Schmett.*, I, fig. 176.

1894. *Parasa*, Hampson, *Fauna Brit. India Moths*, 1 : 387.

Material examined : Umaria district, Bandhavgarh Tiger Reserve, Tala, 27.ix.2002 (1ex.), coll. R.K. Singh & Party.

Diagnostic characters : Wing expanse : 38 mm. Antennae of male bipectinated, the distal half serrated, palpi projecting beyond frontal tuft. Fore wing rounded at apex, veins 7, 8, 9 stalked the veinlet in cell forked or the lower discocellular absent, the fork of the veinlet replacing it. Hind wing with veins 6 and 7 on a short stalk or from cell.

Distribution : Throughout India including Madhya Pradesh (Mandla).

Elsewhere : N. America, W. and S. Africa, Madagascar, Japan, China, Sri Lanka, Java, and Myanmar.

Family LYMANTRIDAE

8. *Orvasca subnotata* Walker

1865. *Orvasca subnotata* Walker, *List lipid. Insects Colln Br. Mus.*, 32 : 502.

1882. *Somena subnotata*, Moore, *Lep. Ceyl.*, li : 87.

1886. *Somena subnotata*, Cotes & Swinhoe., *Cat. Moths of India* : 142.

1994. *Euproctis polydorus*, Schintlmeister : 133.

1999. *Orvasca subnotata*, Holloway, *The Malayan Nature Journal*, Malaysian Nature Society, 53 (1&2) : 54.

Material examined : Umaria district. Bandhavgarh Tiger Reserve, Tala, 24.i.04 (1ex).

Diagnostic characters : Wing expanse : 32 mm. Colour yellow and light. Fore wing vinous brown, irrorated with dark scales, which colour extends as two spurs across the yellow marginal area below the apex and to centre of margin, but sometimes not reaching the margin, costa often yellow. Hind wing yellow, with a broad yellow margin.

Distribution : India : Madhya Pradesh (Bhopal, Jagdalpur and Umaria) and Chhattisgarh.

Elsewhere : Oriental tropics to Borneo and Sumatra.

Family ARCTIIDAE

9. *Cyana puella* Drury

1773. *Cyana puella* Drury, *Ill. Exot. Ins.* li, : 3, pl. 2fig.

1894. *Cyana puella* : Hampson, *Fauna Brit. India Moths*, 1 : 57.

Material examined : Umaria district. Bandhavgarh Tiger Reserve, Tala, 24.i.04 (1ex).

Diagnostic characters : Wing expanse : Male- 28 mm. Female- 36 mm. Head and thorax white, one scarlet band on collar and two on thorax, abdomen with a crimson tinge. Fore wing white, a subbasal scarlet band, antemedial band escurved below the costa, the post medial band incurved and somewhat irregular. Hind wing pale crimson.

Distribution : India : Madhya Pradesh (Mandla, Seoni, Hoshangabad and Umaria), Himachal Pradesh, Maharashtra and S. India.

Elsewhere : Sri Lanka, Nepal and Java.

Family NOCTUIDAE

10. *Acontia transversa* Guen'ee

1852. *Xanthodes transversa* Guen'ee, *Noct.* 2 : 211.

1888. *Xanthodes flava*, Cotes & Swinhoe., *Cat. Moths of India* : 283.

1894. *Acontia transversa*, Hampson, *Fauna Brit. India, Moths*, 2 : 323.

Material examined : Umaria District, Bandhavgarh Tiger Reserve, Tala, 28.x..2007 (1ex.), coll. R.M. Sharma & Party.

Diagnostic characters : Bright canary-yellow; palpi and legs red-brown; vertex of thorax tinged with rufous. Fore wing with ante and post-medial highly angulated rufous lines, sometimes wavy, the latter touching a sub-marginal angled line; a large bright rufous triangular patch occupying the whole outer area; a black sub-apical speck; cilia rufous. Hind wing slightly suffused with red-brown, the outer margin rufous.

Wing expanse : 40-44 mm.

Distribution : Throughout India including Madhya Pradesh (Seoni and Umariya).

Elsewhere : Java, China, Myanmar, and Sri Lanka.

11. *Ophiusa coronata* Fabricius (Plate 23)

1792-98. *Ophiusa coronata* Fabricius, *Syst. Ent.*, 1 : 596.

1888. *Thyas coronata*, Cotes & Swinhoe, *Cat. Moths of India* : 397.

1894. *Ophiusa coronata*, Hampson, *Fauna Brit. India*, Moths, 2 : 502.

1993. *Ophiusa coronata*, Gujrati & et. al, *J. Insect science*, 2 : 264 -266.

Material examined : Photograph of the damaged specimen was taken during day collection at Shermarg Tiraha, BTR on 12.viii. 2005.

Diagnostic characters : Wing expanse : 90 mm. Head and thorax pale reddish-brown; abdomen orange, segments fringed with black. Fore wing irrorated with dark specks; a short sub-basal dark line. Hind wing orange, with broad and sub-marginal fuscous black bands not reaching inner margin, the latter widest towards costa. Underside orange; the costal and outer areas of both wings dark-speckled, and with a slight reddish suffusion; a black patch near outer angle of fore wing.

Distribution : Throughout India including Madhya Pradesh (Seoni, Sidhi and Umariya), Andaman & Nicobar Islands.

Elsewhere : Myanmar, Sri Lanka, Java and Australia.

12. *Thermesia rubricans* (Boisduval)

1833. *Ophiusa rubricans* Boisduval, *Fauna Ent. Madag. Lep.*, : 106.

1852. *Thermesia rubricans*, Guen'ee, *Noct.*, iii : 356.

1858. *Azazia rubricans*, Walker, *Cat.*, Xv : 1576.

1894. *Thermesia rubricans*, Hampson, *Fauna Brit. India*, Moths, 2 : 534.

Material examined : Umariya District, Bandhavgarh Tiger Reserve, Tala, 24.ix.2002 (1ex.); 27.ix.2002 (1ex.); coll. R.K. Singh & Party.

Diagnostic characters : Wing expanse : 45 mm. Colour rufous or grey-brown; palpi chestnut. Fore wing with indistinct sub-basal curved line; a white speck in cell; the reniform very large, with two dark specks on it; a post-medial rufous line, very highly angled below the costa and joined by a dark apical streak. Hind wing with rufous medial line, post-medial series of specks, and marginal rufous line. Underside much suffused with red; a white spot at end of cell.

Distribution : Throughout India including Madhya Pradesh (Jabalpur, Seoni and Umaria).

Elsewhere : Java, Pacific Islands and Africa.

ANNEXURE

Order LEPIDOPTERA

Suborder HETEROCERA

Family SPHINGIDAE

1. *Clanis* sp.
2. *Hippotion boerhaviae* (Fabricius)
3. *Marumba dyras dyras* (Walker)
4. *Nephele didyma* (Fabricius)
5. *Oxyamabalyx* sp.
6. *Psilogamma menephron menephron* (Cramer)
7. *Rhyncholaba acteus* (Cramer)
8. *Theretra alecto alecto* (Linnaeus)
9. *Theretra boisduvali* (Bagh.)
10. *Theretra oldenlandiae oldenlandiae*(Fabricius)

Family GEOMETRIDAE

11. *Antitrygodes cunceilinea* (Walker)
12. *Godonela translineata* Walker
13. *Hyposidra talaca* (Walker)

Family NOTODONTIDAE

14. *Antheua servula* Drury
15. *Cerura liturata* Walker

16. *Phalera raya* Moore

17. *Spatalia argentifera* (Walker)

Family URANIIDAE

18. *Micronia aculeata* Guen'ee

Family SATURNIIDAE

19. *Actias selene* (Hubner)

Family PYRALIDAE

20. *Cirrhochriza brizoalis* (Walker)

21. *Cnaphalocrocis medinalis* (Guen'ee)

22. *Diaphania bivitalis* (Guen'ee)

23. *Euclasta defamatalis* Walker

24. *Hymenia recurvalis* (Fabricius)

25. *Maruca testulalis* (Geyer)

26. *Nymphula fluctuosalis* Zeller

27. *Sameodes cancellalis* Zeller

28. *Synclera traducalis* (Zeller)

29. *Tyspanodes linealis* Moore

Family LASIOCAMPIDAE

30. *Estigena pardalis* Walker

31. *Lebeda* sp.

Family ARCTIIDAE

32. *Cretonotus gangis* (Linnaeus)

33. *Cretonotus lactineus* Cramer

34. *Olepa ricini* (Fabricius)

Family HYPsiIDAE

35. *Asota caricae* (Fabricius)

Family NOCTUIDAE

36. *Cetola dentata* Walker

37. *Chrysodeixis erisoma* (Doubleday)

38. *Episparis varialis* (Walker)

39. *Ercheia multilinea* Swinhoe
40. *Grammodes geometrica* (Fabricius)
41. *Helicoverpa armigera* (Hubner)
42. *Helicoverpa assulta* Guen'ee
43. *Ophiusa triphaenoides* Walker
44. *Ophiusa honesta* (Hubner)
45. *Ophiusa joviana*(Cramer)
46. *Spirama retorta* Cramer
47. *Spodoptera litura* (Fabricius)
48. *Trigonodes hyppasia* (Cramer)

SUMMARY

The paper deals with additional record of 12 species of moths belonging to 12 genera and eight families from Bandhavgarh Tiger Reserve, Madhya Pradesh. The total number of species so far known from the area stands at 60.

REFERENCES

- Bell, T.R.D. and Scott, F.B. 1937. *Fauna of British India, Moths-5* : 1-533.
- Chandra, K. and Nema, D.K. 2007. Insecta : Lepidoptera: Heterocera (Moths) *In : Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series, 15(Part-1)* : 347-418.
- Chandra, K. and Nema, D.K. 2008 (*In press*). Moths of Bandhavgarh National Park, Madhya Pradesh. *Rec. zool. Surv. India, 108(Part-1)*.
- Cotes, E.C. and Swinhoe, C. 1886-1889. *A catalogue of Moths of India* : 1-801.
- Hampson, G. F. 1894. *Fauna of British India*, Dr. W. Junk B.V Publishers, The Hague Moths-1 : 1-527.
- Hampson, G.F. 1894. *Fauna of British India*, Dr. W. Junk B.V. Publishers, The Hague Moths-2 : 1-528.
- Hampson, G.F. 1895. *Fauna of British India*, Dr. W. Junk B.V. Publishers, The Hague Moths-3 : 1-517.
- Hampson, G.F. 1896. *Fauna of British India*, Dr. W. Junk B.V. Publishers, The Hague Moths-4 : 1-595.

ACARI : TETRANYCHIDAE (Mites)

Y.N. GUPTA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

Since there is no information available on the tetranychid mites of Bandhavgarh Tiger Reserve, one survey was undertaken by the author to ascertain the diversity of plant mites in the Reserve and collected 8 species belonging to the family Tetranychidae under three genera.

List of Mites recorded from Bandhavgarh Tiger Reserve

Family TETRANYCHIDAE

1. *Eutetranychus orientalis* (Klein)
2. *Oligonychus biharensis* (Hirst)
3. *Oligonychus indicus* (Hirst)
4. *Oligonychus mangiferus* (Rahman & Sapro)
5. *Oligonychus sacchari* (McGregor)
6. *Tetranychus macfarlanei* Baker and Pritchard.
7. *Tetranychus neocaledonicus* Andre'
8. *Tetranychus urticae* Koch

SYSTEMATIC ACCOUNT

Family TETRANYCHIDAE

Genus *Eutetranychus* Banks

1. *Eutetranychus orientalis* (Klein)

1940. *Anychus ricini*, Rahman and Sapra, *Proc. Indian Acad sci.*, **11** : 184

1985. *Eutetranychus orientalis*, Gupta, *Handbook : Plant mites of India, Zool. Surv. India, Calcutta*, 66-67.

Material examined : 8 exs., 31.i.2004, Pataur, Dist. Umaria, ex. wild plant. Coll. Y.N. Gupta.

Diagnosis : Dorsal striae on propodosoma parallel and lobed. Dorsal setae short, broad and set on small tubercles. Lateral setae longer than dorsomedian setae, slightly spatulate. In case of male tarsus I with I sensory and II tactile; tarsus II with I sensory and II tactile setae; tibia II with I sensory and 5 tactile setae in the case of female. Aedeagus hook like with distal bent longer than dorsal margin of shaft which is slightly concave.

Distribution : INDIA : Assam, Delhi, Gujarat, Haryana, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Uttar Pradesh, West Bengal.

Elsewhere : Israel, Turkey, Jordan, Iran, Egypt, Cyprus, Sudan, South Africa, Afghanistan, Pakistan, Taiwan, Thailand, East Transvaal.

Remarks : This is a serious pest of large variety of trees in India.

Genus *Oligonychus* Berlese

2. *Oligonychus biharensis* (Hirst)

1925. *Paratetranychus biharensis* Hirst, *Proc. Zool. Soc. Lond.*, 69.

1955. *Oligonychus biharensis*, Pritchard and Baker, *Pacific Coast Ent. Soc. Mem. Ser.*, **2** : 364-365.

1985. *Oligonychus biharensis*, Gupta, *Handbook, Plant mites of India, Zool. Surv. India, Calcutta*, 83-84.

Material examined : 37 exs., 3.ii.2004, Kuchwahi vill. Dist. Umaria, ex. Neem; 40 exs., 3.ii.2004; Dist. Umaria, on way to Umaria, ex. Palas. Coll. Y.N. Gupta.

Diagnosis : Dorsal idiosomal setae thin, rather tapering at distal end and one and half times longer than the interval between their longitudinal bases. Aedeagus with the axis parallel to that of the shaft. Dorsal margin of axis convex with up bending down ward. The female can be distinguished from other members of this group by having the peritreme retrose distally.

Distribution : India : Madhya Pradesh, Andaman and Nicobar isls., Bihar, Gujarat, Karnataka, Kerala, Tamil Nadu, West Bengal.

Elsewhere : Antigua, Brazil, Hawaii, Mauritius, Philippines, Thailand, Taiwan.

Remarks : A numerous white spots appear on the infested leaves of mango.

3. *Oligonychus indicus* (Hirst)

1923. *Paratetranychus indicus* Hirst, *Proc. Zool. Soc. Lond.*, 990.

1955. *Oligonychus indicus*, Pritchard and Baker, *Pacific Coast Ent. Soc. Mem. Ser.*, 2 : 354-355.

1994. *Oligonychus indicus*, Gupta & Gupta, *Mem. zool. Surv. India*, 18(1) : 104-105.

Material examined : 20 exs., 4.ii.2004 Kuchwahi, Dist. Umaria, ex. wild plants, Coll. Y.N. Gupta.

Diagnosis : Body grayish green with black blotches scattered over dorsum. Dorsal body setae longer than the interval between their longitudinal bases. Aedeagus is distinctive in having the distal knob very small. The bend of aedeagus forms an acute angle with axis of the shaft.

Distribution : India : Madhya Pradesh, Andhra Pradesh, Bihar, Delhi, Haryana, Karnataka, Meghalaya, Orissa, Punjab, Tamil Nadu, Uttar Pradesh, West Bengal.

Elsewhere : Pakistan.

Remarks : This is a serious pest of sugarcane, maize and sorghum leaves. The leaves of severely infested spots turn red, as if burnt, which dry up and fall off.

4. *Oligonychus mangiferus* (Rahman & Sapra)

1940. *Paratetranychus mangiferus* Rahman and Sapra, *Proc. Indian Acad. Sci.*, 11(B) : 192.

1955. *Oligonychus mangiferus*, Pritchard & Baker, *Pacific Coast Ent. Soc. Mem. Ser.*, 2 : 330. Bandhavgarh.

1994. *Oligonychus mangiferus*, Gupta and Gupta, *Mem. zool., Surv. India*, 18(1) : 108-110.

Material examined : 30 exs., 4.ii.2004, Kuchwahi, Dist. Umaria, ex. Mango, coll. Y.N. Gupta.

Diagnosis : Dark red dorso laterally and pale red medio dorsally. Male with bent portion of aedeagus triangularly tapering to an acute angle with the shaft. Peritreme at the distal end anastomosing Medio ventral setae slightly longer in size.

Distribution : India : Madhya Pradesh, Bihar, Haryana, Himachal Pradesh, Delhi, Karnataka, Kerala, Orissa, Punjab, West Bengal.

Elsewhere : Egypt, Hawaii, Mauritius and Peru.

Remarks : This is an important pest of mango and grape vine in India.

5. *Oligonychus sacchari* (McGregor)

1942. *Paratetranychus sacchari* McGregor, *J. Univ. Puerto Rico*, 26 : 91.

1955. *Oligonychus sacchari*, Pritchard and Baker, *Pacific Coast Ent. Soc. Mem. Ser.*, 2 : 355-357.

1994. *Oligonychus sacchari*, Gupta and Gupta, *Mem. zool. Surv. India*, **18**(1) : 114-115.

Material examined : 2 exs., 2.ii.2004, Garhpuri Dam, Dist. Umaria, ex. Mango, coll. Y.N. Gupta.

Diagnosis : Dorsal idiosomal setae set on tubercles and twice as long as the interval between their longitudinal bases. Medioventral setae of moderate size. Aedeagus bends dorsal tapering strong sigmoid, tip turned down.

Remarks : This species occurs on bamboo (*Bambusa aurandinacea*) and sugarcane (*Saccharum officinarum*).

6. *Tetranychus macfarlanei* Baker and Pritchard.

1960. *Tetranychus macfarlanei* Baker and Pritchard, *Hilgardia*, **29** : 537.

1961. *Tetranychus macfarlanei*, Bindra and Kittur, *Indian. J. Ent.* **23** : 71.

1994. *Tetranychus macfarlanei*, Gupta and Gupta, *Mem. zool. Surv. India*, **18**(1) : 131-132.

Material examined : 15 exs., 2.ii.2004, Garhpuri Dam, Dist. Umaria, ex. Brinjal, coll. Y.N. Gupta.

Diagnosis : Idiosomal setae long and pubescent, tibia I of male with 4 sensory and 9 tactile setae, tarsus I with 4 tactile setae, proximal to duplex setae; tibia II with 7 tactile setae, tarsus II with I sensory and 5 tactile setae, proximal to duplex setae. Aedeagal knob tiny with anterior and posterior angulation. Tibia I of female with I sensory and nine tactile setae, tarsus I with 4 tactile setae in line with proximal pair of duplex setae; tabia II with I sensory and 6 tactile setae, tarsus II with I sensory and 4 tactile setae proximal to duplex setae.

Distribution : India : Madhya Pradesh, Andaman Nicobar Isls., Rajasthan, Gujarat, Tamil Nadu, Karnataka; Uttar Pradesh, West Bengal.

Elsewhere : Mauritius.

Remarks : The infestation is more on mature crops than on the young ones. It disappears with rains.

7. *Tetranychus neocaledonicus* Andre'

1933. *Tetranychus neocaledonicus* Andre', *Bull. Mus. Natn. Hist. Nat. Paris*, (2) **5** : 302.

1940. *Tetranychus cucurbitae* Rahman & Sapra, *Proc. India, Acad. Sci.*, **11B** : 79.

1985. *Tetranychus neocaledonicus*, Gupta, *Handbook, Plant Mites of India, Zool. Surv. India, Calcutta*, 125-126.

Material examined : 10 exs., 4.ii.2004, Kuchwahi, Dist. Umaria, coll. Y.N. Gupta.

Diagnosis : In male, tibia I with 3 sensory and 8 tactile setae, tarsus I with 2 sensory and 4 tactile setae proximal to duplex setae, tibia II with 7 tactile setae. Aedeagal knob in male berry like and the anterior rounded projection is better developed than the rounded posterior projection.

Distribution : India : Madhya Pradesh, Assam, Bihar, Delhi, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Meghalaya, Orissa, Punjab, Rajasthan, Uttar Pradesh, West Bengal.

Elsewhere : Africa, Figi, Bhamas, Hawaii, Venezuela, Puerto Rico, U.S.A.

Remarks : This species has been found to be pest of major crops in India and infests mostly vegetables.

8. *Tetranychus urticae* Koch

1936. *Tetranychus urticae* Koch, *Deutsche, Crustacea, Myriapoda, Arachnida, Fasc.*, 1 : 10.

1985. *Tetranychus urticae*, Gupta, *Handbook, Plant mites of India, Zool. Surv. India* : 115.

1994. *Tetranychus urticae*, Gupta and Gupta, *Mem. zool. Surv. India*, 139-142.

Material examined : 15 exs., 2.ii. 2004, Garhpuri, Dist. Umaria, ex. Brinjal, coll. Y.N.Gupta.

Diagnosis : Greenish or yellowish mite with large spots on either side of the body. Axis of the aedeagal knob parallel with axis of shaft. Female's striae bears dorsal lobes, which are large, rounded and some being oblong.

Distribution : India : Madhya Pradesh, Meghalaya, Kerala, Karnataka, Uttar Pradesh, West Bengal.

Elsewhere : Cosmopolitan.

Remarks : This mite has been reported to attack brinjal in West Bengal producing similar symptoms as *T. neocaledonicus*.

SUMMARY

The collection of plant mites from Bandhavgarh Tiger Reserve includes 8 species belonging to three genera under a single family Tetranychidae.

REFERENCES

- Gupta, S.K. and Gupta, Y.N. 1978. On a collection of Tetranychid mites from Madhya Pradesh, India with a description of a new *Eotetranychus* (Acari : Trombidiformes) *Indian J. Acar.*, **3** : 87-97.
- Gupta, S.K. 1985. Handbook, Plant mites of India, *Zool. Surv. India, Calcutta* : 1-520.
- Gupta, S.K. and Gupta, Y.N. 1994. A taxonomic review of Indian Tetranychidae (Acari : Prostigmata) with description of new species, redescription of known species and keys to genera and species. *Mem. zool. Surv. India*, **18**(1) : 185-188.
- Gupta, Y.N. 1997. New record of some Tetranychid mites (Acari : Tetranychidae) from Chhindawara District, Madhya Pradesh. *Rec. zool. Surv. India*, **96**(1-4) : 185-188.
- Sadana, G.L. 1985. Plant feeding mites of India, *Kalyani Publication Ludhiana* : 1-99.

PISCES

J. Thilak

Central Regional Station, Zoological Survey of India, Jabalpur-482002.

INTRODUCTION

Bandhavgarh Tiger Reserve lies in the catchment of Charanganga, Daman, Janad, Bhadar, Umrar, Chachahi and Chamkuli streams of which the first five are perennial in nature. A number of old tanks constructed by cutting sand stone rock exist on the Bandhavgarh plateau are good means for collecting rain water. Charanganga River rising from the north-eastern slope of Bandhavgarh hill near Sheshshaiya is fed by the seepage water of some of these tanks. There are about 100 water holes, 55 of which are artificial and the rest are natural. Most of these are located in Tala range. Kalwah, Magadhi and Khitauli ranges are poorer in water sources (Dwivedi, 2003).

The studies on fish fauna of Madhya Pradesh have been carried out by some of the workers viz. Hora (1938), Hora & Nair (1941), Swarup (1953), Dubey & Mehra (1959), Soni (1959, 1960), Malviya (1961), Dubey & Verma (1965), Mathur & Mishra (1976), Tilak & Sinha (1979), Karmakar & Datta (1988), Saxena (1988), Sen (1995). Recently, Sharma (2007), Chandra & Sharma (2007) provided the consolidated account on fish fauna of Madhya Pradesh.

More than 750 species of fresh water fishes are known from India. Presently 175 species of fresh water fishes are known from Madhya Pradesh and Chhattishgarh. The present study resulted in recording 17 species belonging to 5 orders, 7 families and 13 genera from Bandhavgarh Tiger Reserve.

Systematic list of fishes recorded from the Tiger Reserve

Class PISCES

Order CYPRINIFORMES

Family CYPRINIDAE

Genus *Chela* Hamilton Buchanan

1. *Chela (Chela) cachius* (Hamilton Buchanan)

Genus *Esomus* Swainson

- 2.
- Esomus danricus*
- (Hamilton Buchanan)

Genus *Danio* Hamilton Buchanan

- 3.
- Danio rerio*
- (Hamilton Buchanan)

Genus *Rasbora* Bleeker

- 4.
- Rasbora daniconius daniconius*
- (Hamilton Buchanan)

Genus *Barilius* Hamilton Buchanan

- 5.
- Barilius bendelisis bendelisis*
- (Hamilton Buchanan)

Genus *Puntius* Hamilton Buchanan

- 6.
- Puntius conchoni*
- (Hamilton Buchanan)

- 7.
- Puntius sophore*
- (Hamilton Buchanan)

- 8.
- Puntius ticto ticto*
- (Hamilton Buchanan)

Genus *Labeo* Cuvier

- 9.
- Labeo rohita*
- (Hamilton Buchanan)

- 10.
- Labeo ariza*
- (Hamilton Buchanan)

Family HOMALOPTERIDAE

Genus *Noemacheilus* Van Hasselt

- 11.
- Noemacheilus botia*
- (Hamilton Buchanan)

Order SILURIFORMES

Family BAGRIDAE

Genus *Rita* Bleeker

- 12.
- Rita rita*
- (Hamilton Buchanan)

Family SILURIDAE

Genus *Ompok* Lacepede

- 13.
- Ompok bimaculatus*
- (Bloch)

Order CHANNIFORMES

Family CHANNIDAE

Genus *Channa* Scopoli

- 14.
- Channa striatus*
- (Bloch)

- 15.
- Channa orientalis*
- (Schneider)

Order PERCIFORMES
 Family ANABANTIDAE
 Genus *Anabas* Cuvier

16. *Anabas testudineus* (Bloch)

Order MASTACEMBELIFORMES
 Family MASTACEMBELIDAE
 Genus *Mastacembelus* Scopoli

17. *Mastacembelus armatus armatus* (Lacepede)

SYSTEMATIC ACCOUNT

1. *Chela (Chela) cachi* (Hamilton Buchanan)

1822. *Cyprinus cachi* Hamilton, Fish. Ganges, : 258, 384.

1878. *Perilampus atpar*, Day, Fish. India, : 598, pl. 151, fig. 6; 1889, Day, *Fauna Brit. India, Fish*, 1 : 359.

1958. *Chela (Chela) cachi*, Silas, *J. Bombay nat. Hist. Soc.*, 55 (1) : 667.

1981. *Chela (Chela) cachi*, Jayaram, *Handbk. Freshw. Fish. India* : 72, 73, fig. 40.

Material examined : 43 exs., 26-x-07 ; Son River, Maseera Ghat, district Umaria ; 39 exs., 29-x-07; Barbaspur, district Umaria; 4 exs., 30-x-07; Kari Mati Dam, district Umaria; all coll. R.M Sharma and party.

Diagnostic characters : Cleft of mouth moderately oblique, directed upwards. Pectoral fin elongate, not reaching anal fin. Body silvery with a burnished lateral band. Dorsal and caudal fin yellow.

Distribution : India : Madhya Pradesh (Jabalpur, Narsinghpur, Raisen, Rajgarh, Rewa, Satna, Ujjain and Umaria). Throughout India.

Elsewhere : Bangladesh, Myanmar, Nepal, Pakistan.

2. *Esomus danricus* (Hamilton Buchanan)

1822. *Cyprinus danricus* Hamilton, *Fish. Ganges* : 325, 390, pl. 16, fig. 88.

1878. *Nauria danrica*, Day, *Fish. India*, : 583, pl. 145, fig. 7; 1889, Day, *Fauna Brit. India, Fish*., 1 : 334, fig. 106.

1981. *Esomus danricus*, Jayaram, *Handbk. Freshw. Fish. India* : 77, 78, text fig. 41.

Material examined : 2exs., 8.ix.1972; Bandhavgarh, district Umaria; coll. H.S Sharma and party.

Diagnostic characters : Mouth obliquely directed upwards. Barbels 2 pairs, maxillary pairs reaching to base of pelvic fin or even up to caudal fin. Lateral line absent or nearly so, piercing only up to 4 to 6 anterior scales. Body pale olive above, silvery below, with a broad black lateral band which sometimes may be absent.

Distribution : India : Madhya Pradesh (Chhindwara, Hoshangabad, Jabalpur, Khandwa, Raisen, Rewa, Satna, Shahdol, Umaria, Mandla, Chambal river), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Orissa, Punjab, Tamil Nadu, Uttar Pradesh, West Bengal.

Elsewhere : Bangladesh, Malaya, Malaya-Archipelago, Myanmar, Nepal, Pakistan, Sri Lanka. Thailand.

3. *Danio rerio* (Hamilton Buchanan)

1822. *Cyprinus rerio* Hamilton, *Fish. Ganges*, : 323.

1981. *Danio (Brachydanio) rerio*, Jayaram, *Handbk. Freshw. Fish. India*, : 80-82.

1991. *Danio rerio*, Barman, *Rec. zool. Surv. India, Occ. Paper No.*, 137 : 57-60.

Material examined : 4exs., 8.ix.1972; Bandhavgarh, district Umaria; coll. H.S.Sharma and party. 15exs., 23-x-07; Bandhavgarh, Panpatha, district. Umaria; 4exs., 27-x-07; Charan Ganga, Bandhavgarh, district Umaria; 7exs., 28-x-07; Dhasmakha, Bandhavgarh, district. Umaria; 5exs., 31-x- 07; Garhpuri, Bandhavgarh, district. Umaria; all coll. R.M. Sharma and party.

Diagnostic characters : Barbels two pairs, rostral pair longer than the diameter of eye and maxillary pair reaching end of opercle. Body with four metallic blue bands separated by three narrow silvery ones along sides, forming three bands on caudal fin. Anal fin with three bands across their rays.

Distribution : India : Madhya Pradesh (Chhindwara, Hoshangabad, Jabalpur, Mandla, Raisen, Rajgarh, Rewa, Satna, Shahdol, Umaria, Mandla and Chambal river), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Kerala, Meghalaya, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh, West Bengal.

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

4. *Rasbora daniconius daniconius* (Hamilton Buchanan)

1822. *Cyprinus daniconius* Hamilton. *Fish Ganges*, : 327, pl. 15, fig. 89.

1878. *Rasbora daniconius*, Day, *Fish. India*, : 584, pl. 146, fig.2 and 3; 1889, Day, *Fauna. Br. India, Fish.*, 1 : 336.

1981. *Rasbora daniconius daniconius*, Jayaram, *Handbk. Freshw. Fish. India*, : 84, 85, fig. 43.

Material examined : 48 exs., 23-x-07; Bandhavgarh, Panpatha, district. Umaria; 1 ex., 24-x-07; Guruvahi village pond, Panpatha, district. Umaria; 35 exs., 25-x-07; Bamera Dam, Panpatha, district. Umaria; 13 exs, 27-x-07; Charan Ganga, Bandhavgarh, district. Umaria; 22exs., 28-x-07; Dhasmakha, Bandhavgarh, district. Umaria ; 37 exs., 30-x-07; Karimati Dam, district. Umaria; 17exs., 31-x-07; Garhpuri, Bandhavgarh, district. Umaria; all coll. R.M. Sharma and Party.

Diagnostic characters : Dorsal profile more convex than ventral profile. Barbels absent. Pectoral fin not reaching pelvic fin base. Body greenish yellow above, silvery on sides with a blue-black lateral band more or less distinct extending from posterior margin of eye to base of caudal fin. Caudal fin lobes often tipped grey.

Distribution : India : Madhya Pradesh (Betul, Bhopal, Chhindwara, Damoh, Gwalior, Hoshangabad, Jabalpur, Mandla, Narsinghpur, Raisen, Rajgarh, Rewa, Satna, Shahdol, Umaria and Chambal river). Throughout India.

Elsewhere : Bangladesh, Malay-Archipelago, Myanmar, Nepal, Pakistan, Sri Lanka, Zanzibar.

5. *Barilius bendelisis bendelisis* (Hamilton Buchanan)

1807. *Cyprinus bendelisis* Hamilton, *Journ. Mysore*, 3 : 345, pl. 32.

1981. *Barilius bendelisis bendelisis*, Jayaram, *Handbk. Freshw. Fish. India* : 88.

Material examined : 2exs., 8.ix.1972; Bandhavgarh, district Umaria; coll. H.S.Sharma and party; 3exs, 27-x-07; Charan Ganga, Bandhavgarh, district. Umaria; 7 exs, 28-x-07; Dhasmakha, Bandhavgarh, district. Umaria; all coll. R.M. Sharma and party.

Diagnostic characters : Barbels 2 pairs, short, rostral pair sometimes absent. Caudal fin forked, lower lobe slightly longer. Pre dorsal scales 20. Body salty grey above, purplish silvery below. Young specimens have vertical bands on sides which become indistinct in adult specimens. Each scale with a black spot at its base in adult specimen. No spot in young specimens.

Distribution : Madhya Pradesh (Betul, Chhindwara, Hoshangabad, Jabalpur, Mandla, Narsinghpur, Rewa, Shahdol, Umaria and Chambal river). Throughout India except Kerala.

Elsewhere : Bangladesh, Myanmar, Nepal, Pakistan, SriLanka.

6. *Puntius conchoni* (Hamilton Buchanan)

1822. *Cyprinus conchoni* Hamilton, *Fish. Ganges* : 317, 389.

1878. *Barbus conchoni*us, Day, *Fish. India*,: 576, Pl.143, fig. 7; 1889, Day, *Fauna Br. India, Fish.*, 1 : 325.

1991. *Puntius conchoni*us, Jayaram, *Rec. zool. Surv. India, Occ. Paper No.*, 135 : 27-29

Material examined : 2 exs, 28-x-07; Dhasmakha, Bandhavgarh, district. Umaria; 1 ex , 30-x-07; Karimati Dam, district Umaria; all coll. R.M. Sharma and party.

Diagnostic characters : Barbels absent. Lateral line incomplete, ceasing after 9 to 10 scales. Body yellowish brown on dorsal surface and on sides, yellowish white below. A large black spot on lateral line just above anal fin. Fins orange. Dorsal fin with its upper half blackish.

Distribution : India : Madhya Pradesh (Betul, Bhopal, Chhindwara, Hashangabad, Jabalpur, Khandwa, Narsinghpur, Raisen, Rajgarh, Rewa, Satna, Shahdol, Umaria and Chambal river), Andhra Pradesh, Assam, Bihar, Jammu, Kashmir, Manipur, Nagaland, Orissa, Rajasthan, South India, Tripura, Uttar Pradesh, West Bengal; Brahmaputra, Cauvery, Ganga, Mahanadi river systems.

Elsewhere : Bangladesh, Nepal, Pakistan.

7. *Puntius sophore* (Hamilton Buchanan)

1822. *Cyprinus sophore* Hamilton, *Fish. Ganges* : 310, 389, fig. 86.

1844. *Leuciscus stigma* Valenciennes, *Hist. nat. poiss.*, 17:93, pl. 489.

1878. *Barbus sophore*, Day, *Fish. India* : 566, Pl. 143, fig. 4; 1889, Day, *Fauna Br. India, Fish.*, 1 : 309.

1924. *Barbus carletoni* Fowler, *Proc. Acad. Nat. sci. Philad.*, 76 : 90.

1991. *Puntius sophore*, Jayaram, *Rec. zool. Surv. India, Occ. Paper No.* 135 : 15-20

Material examined : 10 exs., 23-x-07; Bandhavgarh, Panpatha, district. Umaria; 1 ex., 24-x-07; Guruvahi village pond, Panpatha, district. Umaria; 11 exs., 26-x-07; Son River, Maseera Ghat, district. Umaria; 1 ex., 27-x-07; CharanGanga, Bandhavgarh, district. Umaria; 6 exs., 28-x-07; Dhasmakha, district. Umaria; 29 exs., 29-x-07; Barbaspur, district Umaria; 23 exs., 30-x-07; Karimati Dam, district. Umaria; all coll. R.M. Sharma and party.

Diagnostic characters : Dorsal profile more convex than ventral profile. Barbels absent. Lateral line complete. Silvery, often with scarlet, lateral band; a rounded black blotch at the root of caudal fin on 22 to 24th scale, another at the base of 4 to 6th ray of dorsal fin. Fins light yellow and black tipped.

Distribution : India : Madhya Pradesh (Bhopal, Gwalior, Hoshangabad, Jabalpur, Khandwa, Mandla, Narsinghpur, Rewa, Satna, Shahdol, Umaria and Chambal river), Throughout India

Elsewhere : Bangladesh, China, Myanmar, Nepal, Pakistan, Sri Lanka, Yunnan.

8. *Puntius ticto ticto* (Hamilton Buchanan)

1822. *Cyprinus ticto* Hamilton, *Fish. Ganges* : 314, 389, pl. 8, fig. 87.

1878. *Barbus ticto*, Day, *Fish. India* : 576, pl. 144, fig. 7; 1889, Day, *Fauna Bri. India, Fish.*, 1 : 325.

1991. *Puntius ticto*, Jayaram, *Rec. zool. Surv. India, Occ. Paper No. 135* : 22-26.

Material examined : 11 exs., 31-x-07; Garhpuri, Bandhavgarh, district. Umaria; coll. R.M. Sharma and party.

Diagnostic characters : No barbels. Dorsal spine moderately strong, serrated. Lateral line may be complete or incomplete. Body silvery with two black blotches along the lateral line, the anterior one extending over 3rd and 4th scales and the posterior one over 18th and 19th scales of the lateral line.

Distribution: India : Madhya Pradesh (Chhindwara, Gwalior, Hoshangabad, Indore, Jabalpur, Narsinghpur, Rewa, Satna, Shahdol, Umaria and Chambal river), Throughout.

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

9. *Labeo rohita* (Hamilton Buchanan)

1822. *Cyprinus rohita*, Hamilton *Fish. Ganges*, : 301, 388, pl. 36, fig. 85.

1878. *Labeo rohita*, Day, *Fish. India.*, : 538, pl. 127, fig. 4; 1889, Day, *Fauna Brit. India, Fish.*, 1 : 262.

1981. *Labeo rohita*, Jayaram, *Handbk. Freshw. Fish. India* : 118, 120.

Material examined : 1 ex., 30-x-07; Karimati Dam, district. Umaria; coll. R.M. Sharma and party.

Diagnostic characters : Snout not truncated, without any lateral lobe. Lips thick, fringed, with a distinct inner fold above and below. Barbels 2 pairs. Pectoral fin as long as head without snout. Body bluish or brownish on dorsal surface, silvery on sides and beneath. Fins sometimes black.

Distribution : India : Madhya Pradesh (Bhopal, Jabalpur, Rewa, Umaria and Chambal river), Throughout India (not reported from Western ghats in the natural state).

Elsewhere : Bangladesh, Myanmar, Nepal, Pakistan.

10. *Labeo ariza* (Hamilton Buchanan)

1807. *Cyprinus ariza* Hamilton, *Journey Mysore*, 3 : 344, Pl. 31.

1878. *Labeo ariza*, Day, *Fish. India.*: 544, pl. 132, fig. 5; 1889, Day, *Fauna Br. India, Fish.*, 1 : 272.

1981. *Labeo ariza*, Jayaram, Handbk. *Freshw. Fish. India* : 117, 120.

Material examined : 1ex., 17-ix-1972; Bandhavgarh, CharanGanga nala, district Umaria; coll. H. Khajuria and party.

Diagnostic characters : One pair of very short maxillary barbels. Dorsal fin inserted slightly posterior to tip of pectoral fin. Pectoral fin not reaching pelvic fin. Body grey above and silvery below.

Distribution : India : Madhya Pradesh (Hoshangabad, Gwalior, Datia, Bhopal, Rewa, Jabalpur, Ratlam, Sagar, Shahdol, Sidhi, Anuppur, Khandwa, Barwani, Khargone, Dindori, Pipariya, Dewas, Mandla, Narsinghpur, Ujjain, Mandsour, Bhind, Umaria, Betul) Chhattisgarh, South India, Cauvery and Krishna river systems.

Elsewhere : Pakistan, Nepal, Bangladesh, Myanmar.

11. *Noemacheilus botia* (Hamilton Buchanan)

1822. *Cobitis botia* Hamilton, *Fish. Ganges* : 350, 394.

1987. *Noemacheilus botia*, Menon, *Fauna of India, Pisces*, 4(1) : 141-144.

Material examined : 2exs., 8.ix.1972; Bandhavgarh, district Umaria; coll. H.S. Sharma and party; 4 exs., 23-x-07; Bandhavgarh, Panpatha, district. Umaria; 1ex., 26-x-07; Son River, Maseera Ghat, district. Umaria; 5 exs., 27-x-07; CharanGanga, Bandhavgarh, district. Umaria; 4 exs., 28-x-07; Dhasmakha, Bandhavgarh, district. Umaria; 4exs, 30-x-07; Karinati Dam, Bandhavgarh, district. Umaria; 33 exs., 31-x-07; Garhpuri, Bandhavgarh, district. Umaria; all coll. R.M. Sharma and party

Diagnostic characters : Barbels 3 pairs, maxillary pair reaching to below posterior margin of eye. Lateral line complete. Body grayish with 10 to 14 short, vertical bars on lateral line and a number of irregular blotches above it, often forming bands over back. A black ocellus on upper part of the caudal fin base. Caudal fin bears 5-7 posteriorly directed V- shaped dark bands. Dorsal fin orange with rows of black spots.

Distribution : India : Madhya Pradesh (Bhopal, Hoshangabad, Indore, Jabalpur, Mandla, Rewa, Satna, Umaria and Chambal river), Andhra Pradesh, Assam, Chhattisgarh. Throughout north India.

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

12. *Rita rita* (Hamilton Buchanan)

1822. *Pimelodus rita* Hamilton, *Fish. Ganges*, : 165, 376, pl. 24 and 25, fig. 53.

1981. *Rita rita*, Jayaram, *Handbk. Freshw. Fish. India* : 190, 191.

Material examined : 1ex., 30-x-07; Karimati Dam, district. Umaria; coll. R.M. Sharma and party.

Diagnostic characters : Barbels 3 pairs, maxillary pair nearly reaching the end of head, mandibular pair extending to end of head, nasal pair very short. Dorsal fin spine very strong, serrated posteriorly, as long as or 1/3 longer than head. Pectoral fin spine denticulated on both sides, shorter than dorsal spine. Body pale brown above and on sides, dull beneath.

Distribution : India : Madhya Pradesh (Hoshangabad, Jabalpur, Khandwa, Rewa, Umaria and Chambal river), Chhattisgarh, Bihar, Uttar Pradesh, West Bengal, Most rivers of North India.

Elsewhere : Bangladesh, Myanmar, Nepal, Pakistan.

13. *Ompok bimaculatus* (Bloch)

1878 *Callichrous bimaculatus*, Day, *Fish. India* : 476, pl. 110, figs 4 and 5; 1889, Day, *Fauna Br. India, Fish.*, 1 : 331.

1981. *Ompok bimaculatus*, Jayaram, *Handbk. Freshw. Fish. India* : 208, 209; fig. 102.

Material examined : 1 ex., 30-x-07; Karimati Dam, district. Umaria; coll. R.M. Sharma and party.

Diagnostic characters : Barbels two pairs, maxillary pair extending to middle of pectoral fin or the commencement of anal fin. Dorsal fin short without any spine. Pectoral with a moderately strong spine, serrated or entire. Anal fin very long, ceasing close to, but not continuous with caudal fin. Body silvery, shot with purple. A black spot on shoulder behind gill openings and above middle of pectoral fin. Occasionally the caudal fin tips, black.

Distribution : India : Madhya Pradesh (Hoshangabad, Jabalpur, Rewa, Umaria and Chambal river), Throughout.

Elsewhere : Bangladesh, Borneo, China, East Indies, Java, Malaya, Myanmar, Nepal, Pakistan, Sri Lanka, Sumatra, Thailand, Vietnam.

14. *Channa striatus* (Bloch)

1878. *Ophiocephalus striatus*, Day, *Fish. India.*: 366; 1889. Day, *Fauna Br. India, Fish.*, 2 : 363.

1981. *Channa striatus*, Jayaram, *Handbk. Freshw. Fish. India*, : 307.

Material examined : 1ex., 23-x-07; Bandhavgarh, Panpatha, district. Umaria; 3exs., 24-x-07; Guruvahi village pond, Panpatha, district. Umaria; 1ex., 25-x-07 ; Bamera Dam, Panpatha, district Umaria; 1ex., 27-x-07; Charan Ganga, Bandhavgarh, district.

Umaria; 3exs., 29-x-07; Barbaspur, Bandhavgarh, district. Umaria; 3 exs., 30-x-07; Karimati Dam, district Umaria; 5exs., 31-x-07; Garhpuri, Bandhavgarh, district Umaria; all coll. R.M. Sharma and party.

Diagnostic characters : Body dark grayish or blackish on dorsal surface, dirty white or yellowish white below. Bands of grey or black from sides to abdomen. Young specimens have sometimes a large black ocellus at the end of base of dorsal fin.

Distribution : India : Madhya Pradesh (Bhopal, Indore, Jabalpur, Rewa, Umaria and Chambal river), Throughout.

Elsewhere : Bangladesh, China, Malaya, Malaya Archipelago, Myanmar, Pakistan, Philippines, Sri Lanka, Thailand.

15. *Channa orientalis* Schneider

1822. *Ophiocephalus gachua* Hamilton, *Fish. Ganges*, : 68, 367, pl. 21, fig. 21.

1981. *Channa orientalis* Jayaram, *Handbk. Freshw. Fish. India*, : 306, 307.

Material examined : 3exs., 23-x-07; Bandhavgarh, Panpatha, district. Umaria; 5exs., 24-x-07; Guruvahi village pond, Panpatha, district. Umaria; 1ex., 26-x-07; Son river, Maseera ghat, district. Umaria; 2exs., 28-x-07; Dhasmakha, Bandhavgarh, district. Umaria; 1ex., 31-x-07; Garhpuri, Bandhavgarh, district. Umaria; all coll. R.M. Sharma and party.

Diagnostic characters : Pelvic fins less than half length of pectoral fins. Dorsal surface dirty greenish becoming dull white or brown on sides and beneath. Some darkish spots on body and fins. Pectoral fin with vertical bars on its rays.

Distribution : India : Madhya Pradesh (Betul, Bhopal, Damoh, Hoshangabad, Jabalpur, Mandla, Rajgarh, Rewa, Shahdol, Umaria districts, Chambal river, Kanha Tiger Reserve), Throughout.

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

16. *Anabas testudineus* (Bloch)

1889. *Anabas scandens* Day, *Fauna Brit. India, Fish.*, 2 : 367 fig. 120.

1981. *Anabas testudineus*, Jayaram, *Handbk. Freshw. Fish. India* : 379.

Material examined : 4exs., 31-x-07; Garhpuri, Bandhavgarh, district. Umaria; coll. R.M. Sharma and party.

Diagnostic characters : A single dorsal fin longer than anal fin. Spinous part much longer than soft part. Nine to ten anal spines. Lateral line interrupted, 28-32 scales.

Caudal fin rounded. Body light to dark green on dorsal surface and greenish yellow to orange below. 4 wide vertical bands on body and a black spot on caudal peduncle.

Distribution : India : Madhya Pradesh (Umariya, Hoshangabad, Jabalpur, Khandwa, Barwani, Khargone, Bhopal). Throughout.

Elsewhere : Bangladesh, China, Indo-China, Malaya, Malaya Archipelago, Myanmar, Pakistan, Philippines, Polynesia, Singapore, Sri Lanka, Thailand, Vietnam.

17. *Mastacembelus armatus armatus* Lacepede.

1800. *Macrogathus armatus* Lacepede, *Hist. nat. poiss.*, 2 : 283, 286.

1878. *Mastacembelus armatus*, Day, *Fish. India*, 340, 73, fig. 2; 1889, Day, *Fauna Br. India, Fish.*, 2 : 334.

1981. *Mastacembelus armatus armatus*, Jayaram, *Handbk. Freshw. Fish. India* : 388. 389.

Material examined : 1 ex., 28-x-07; Dhasmakha, Bandhavgarh, district. Umariya; 2 exs., 31-x-07; Garhpuri, Bandhavgarh, district. Umariya; all coll. R.M. Sharma and party.

Diagnostic characters : Body elongate, cylindrical and eel-like. Cleft of mouth narrow. A long fleshy appendage to snout. A single long dorsal fin with 32 to 39 stumpy free spines, origin of soft part behind anal fin origin. Vertical fins confluent. Anal fin with 3 spines. A row of black spots along base of soft dorsal fin.

Distribution : India : Madhya Pradesh (Bhopal, Chhindwara, Hoshangabad, Jabalpur, Mandla, Narsinghpur, Raisen, Rajgarh, Rewa, Satna, Umariya and Chambal river) Throughout.

Elsewhere : Bangladesh, Cambodia, China, Hainan Island, Java, Malaya, Myanmar, Nepal, Pakistan, Sri Lanka, Sumatra, Thailand, Tonkin, Vietnam.

SUMMARY

This paper deals with a systematic account of fishes collected from Bandhavgarh Tiger Reserve, Umariya district of Madhya Pradesh. 17 species of fishes are dealt with under 5 orders, 7 families and 13 genera.

REFERENCES

Barman, R.P. 1991. A taxonomic revision of the Indo-Burmese species of *Danio* Hamilton Buchanan (Pisces: Cyprinidae) *Rec. zool. Surv. India, Occ. Paper No.*, 137 : i-viii + 1-91, text-figs 20.

- Chandra, K, and Sharma, R.M. 2007. Ichthyofaunal Diversity of Madhya Pradesh and Chhattisgarh, In: *Freshwater Fish Diversity of Central India*. ed. Lakra, W.S. & Sarkar, U.K, pp.110-117. Proc. Workshop on Conservation Assessment of Freshwater Fish Diversity for Central India, Organised by National Bureau of Fish Genetic Resources, Lucknow, (U.P) at Bhopal, M.P.
- Day, F. 1875-88. The fishes of India; being a natural history of fishes known inhabit the seas and freshwaters of India, Burma and Ceylon. Text and atlas in 4 parts, including the supplement London, xx, 1-816. pls. 197.
- Day, F.1889. The Fauna of British India, including Ceylon and Burma. *Fishes*. 1 : 1-548; 2 : 1-509. London, Taylor and Francis.
- Dubey, G.P and Mehra. R.K. 1959 (1962) Fish and fisheries of Chambal River. *Proc. First All India Congr. Zool.*, : 647-664. 1 map.
- Dubey, G.P and Verma, M.N 1965. A preliminary study of the fish fauna of Madhya Pradesh. *The Vikram. J. Vikram. Univ.* 8(4) : 1-8.
- Dwivedi, A.P. 2003. Protected areas of Madhya Pradesh (Bandhavgarh Tiger Reserve). Published by Principal Chief Conservator of Forests (Wild Life) : 29-42.
- Fowler, H.W. 1924. Notes and descriptions of Indian freshwater fishes. *Proc. Acad. Nat. Sci. Philad.*, 76 : 67-101.
- Hamilton, F. 1822. *An account of the fishes found in the river Ganges and its branches*. 1-VII, 1-405, pls. 1-39. Archibald, Constable & Co., Edinburgh Hurst, Robinson & Co., London.
- Hora. S.L. 1935. Notes on fishes in the Indian Museum. XXIV. Loaches of the genus *Noemacheilus* from eastern Himalayas with descriptions of a new species from Burma and Siam. *Rec. Indian Mus.*, 37 : 49-67. figs. 1-2. 1 pl.
- Hora. S.L. 1938. Notes of fishes in the Indian Museum xxxvii. On a collection of fish Bailadila range. Bastar State. Central Provinces. *Rec. Indian. Mus.*, 40(3) : 237-241.
- Hora. S.L and Nair, K.K 1941. Fishes of the Satpura Range. Hoshangabad District. Central Provinces. *Rec. Indian. Mus.*, 43(3) : 361-373.
- Jayaram. K.C. 1977. Aid to the identification of Siluroid fishes of India, Burma, Sri Lanka, Pakistan and Bangladesh. Bagridae. *Rec. zool. Surv. India, Occ. Paper No.*, 8 : 1-41.
- Jayaram, K.C. 1979. Aid to the identification of Siluroids. 2. Siluridae, Schilbeidae, Pangasiidae, Amblycipitidae, Akysidae. *Rec. zool. Surv. India, Occ. Paper No.*, 14 : 1-62.

- Jayaram, K.C 1980 Aid to the identification of the Siluroid fishes of India, Burma, SriLanka, Pakistan and Bangladesh. 4. Clariidae, Heteropneustidae, Chacidae and Olyridae, *Rec. zool. Surv. India, Occ. Paper No.*, **23** : 1-23.
- Jayaram, K.C. 1981. The freshwater fishes of India, Pakistan, Bangladesh, Burma and SriLanka. A Handbook, Calcutta, *Zool. Surv. India* :1-475, 13 pls.
- Jayaram, K.C 1991. Revision of the genus *Puntius* Hamilton from the Indian Region (Pisces : Cypriniformes, Cyprinidae, Cyprininae) *Rec. zool. Surv. India, Occ. Paper No.*, **135** : 1-178.
- Kamarkar, A.K and Datta. A.K 1988. On a collection of fish from Bastar District. Madhya Pradesh. *Rec. zool. Surv. India, Occ. Paper No.*, **98** : 1-50.
- Lacepede, B.G.S. 1798-1803. *Hist. nat. Poiss.* Vols. I-V.
- Malviya, R.B 1961. A list of fishes from Jabalpur, M.P. *Proc. Nat. Acad. Sci. India. Sec. B.* **31**(3) : 349-354.
- Mathur, D.S and Mishra. S.K. 1976. Addition to the fish fauna of Jabalpur district (M.P). *Newsl. zool. Surv. India.*, **2**(4) : 156- 158.
- Menon, A.G.K. 1987. The fauna of India and adjacent countries. *Pisces*, **4**(1) : 1-x, + 259. pls. 16.
- Misra, K.S. 1962. An aid to the identification of the common commercial fishes of India and Pakistan. *Rec. Indian. Mus.*, **57**(1-4) : 1-320.
- Misra, K.S 1976. Fauna of India and the adjacent countries. *Pisces*, **3** : i-xxii + 438. pls. 21.
- Misra, K.S. 1976. The Fauna of India and the adjacent countries. *Pisces*, **3** : i-xxi + 367. pls. 15.
- Saxena, R.M. 1988. A checklist of fishes of Rewa district. Madhya Pradesh (India). *Cheetal*, **29** (1) : 40-50.
- Sen, T.K 1995. *Pisces. In : Fauna of Kanha Tiger Reserve, Fauna of Conservation Areas*, **7** : 41- 45. *Zool. Surv. India*.
- Sen, T.K. 1995. *Pisces. In : Fauna of Indravati Tiger Reserve, Fauna of Conservation Areas*, **6** : 61-70. *Zool. Surv. India*.
- Sen, T.K. and Jayaram, K.C. 1982. The Mahseer fishes of India – A Review. *Rec. zool. Surv. India. Occ. Paper No.*, **39** : 1-38.
- Sharma, H.S. 2007. Freshwater fishes. Fauna of Madhya Pradesh (including Chhattisgarh), *State Fauna Series*, **15**(Part -1) : 147-244. *Zool. Surv. India*.

- Silas, E.G. 1958. Studies on cyprinids fishes of the Oriental genus *Chela* Hamilton.. *Bombay nat. Hist. Soc.* **55** (1) : 54-99.
- Soni, D.D. 1959. (1962). Fish fauna of Bhopal lower lake. *Proc. First All India Congr. Zool.*, : 639-641.
- Soni, D.D. 1960. Fish fauna of Bhopal Upper Lake. *Proc. Indian Sci.* **47**(3) : 477.
- Swarup, H. 1953. Fish fauna of Sagar lake. *Saugar Univ. J.* **1**(2) : 239-244.
- Tilak, R. and Sinha, N.K. 1979. A check-list of Fishes from Madhya Pradesh India). *Zool. Jb., Syst.*, **106** : 175-196.
- Valenciennes, A. (in C. & V.). 1844. *Hist. nat. Poiss.*, **18** : Paris (Levrault).

APPENDIX

AMPHIBIA

Order/Family/Species

Order ANURA

Family BUFONIDAE

1. *Bufo melanosticus* Schneider

Common Indian Toad

Family MICROHYLIDAE

2. *Microhyla ornata* Dumeril & Bibron

Ornate Microhylid

3. *Kaloula pulchra* Gray

Painted Frog

Family RANIDAE

4. *Rana cyanophlyctis* Schneider

Skipping Frog

5. *Rana crassa* Jerdon / *Hoplobatrachus crassus* (Jerdon)

Jerdon's Bull Frog

6. *Rana limnocharis* Boie / *Fejervarya limnocharis* (Gravenhorst)

Cricket Frog

7. *Tomopterna rolandi* Dubois / *Sphaerothea rolandi* (Dubois)

8. *Tomopterna breviceps* (Schneider) / *Sphaerothea breviceps* (Schneider)

Burrowing Frog

Family RACOPHORIDAE

9. *Polypedates maculatus* (Grey)

Tree Frog

REFERENCES

- Chanda, S.K. 1995. Amphibia. In : *Fauna of Kanha Tiger Reserve, Conservation Area Series, 7* : 47-49. Zoological Survey of India.
- Chandra, P.K. and Ray, S. 2007. Fauna of Madhya Pradesh including Chhattisgarh, part-1, Amphibia- Madhya Pradesh : 113-134. Zoological Survey of India.
- Gajbe, P. 2003. New Record of painted Frog *Kolula taprobanica* Parker from Shahdol district, Madhya Pradesh. *Cobra, 52* : 17-18.
- Gajbe, P. 2003. Herpetofunal diversity of Dindori district, Madhya Pradesh. *Cobra, 54* : 6-8.
- Saksena, D.N., A.K. Sarkar and Tewari, K.K. 1988. Anura fauna of Gwalior and Chambal divisions of Madhya Pradesh. *Journal of Hydrobiology, 4(1)* : 25-27.

REPTILIA

KAILASH CHANDRA AND R. P. GUPTA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

Class Reptilia comprises the cold-blooded amniotic vertebrates which are exothermic or poikilothermic secretive creatures with a crawling mode of locomotion. A total of 660 species and subspecies of reptiles are found in Indian Region (Sharma, 1998, 2002 & 2007) of which, 76 species and subspecies are recorded from Madhya Pradesh (Chandra & Gajbe, 2005).

The inventory of reptiles from the Reserve area includes 21 species under 9 families. Twenty out of 21 species were observed by survey teams of Zoological Survey of India during 2004 to 2007, while one species, Common fat-tailed Gecko/East Indian Leopard Gecko (*Eublepharis hardwickii*) has been earlier reported (Khajuria, 1986).

List of Reptiles of Bandhavgarh Tiger Reserve

S. Species No.	Order/Family	Common Name
	Order TESTUDINES	
	Family TRIONYCHIDAE	
1.	<i>Aspideretes gangeticus</i> (Cuvier, 1825)	Indian Soft-shell Turtle
	Order SQUAMATA	
	Suborder SAURIA	
	Family EUBLEPHARIDAE	
2.	<i>Eublepharis hardwickii</i> Grey 1827	Common fat-tailed Gecko
	Family GEKKONIDAE	
3.	<i>Hemidactylus flaviviridis</i> Ruppell 1835	Yellow-Bellied House Gecko

SYSTEMATIC ACCOUNT

Class REPTILIA

Order TESTUDINES

Family TRIONYCHIDAE

1. *Aspideretes gangeticus* (Cuvier 1825)

Indian Soft-shell Turtle

1825. *Trionyx gangeticus* Cuvier, *Oss. Foss.*, 5 : 186, 203, 206, pls. 11, 12.

2003. *Aspideretes gangeticus* : Das, *J. Bom. nat. Hist. Soc.*, 100 (2&3) : 459.

Locality : Tala near Ram Talaiya.

Diagnostic characters : Carapace olive-green above, sometimes vermiculated with yellowish. Head greenish, with a black longitudinal streak from between the eyes on to the nape and three oblique black streaks on either side diverging from it, below whitish. Four plastral callosities, in old individuals sometimes a fifth upon the entoplastron.

Distribution : India : Ganga, Sind and Mahanadi rivers.

Elsewhere : Bangladesh, Nepal and Pakistan.

Habit and Habitat : The species is highly aquatic, omnivorous, feeds on aquatic vegetation, fish, molluscs, frogs and crustaceans. It is a prominent scavenger.

Status : Vulnerable.

Order SQUAMATA

Suborder SAURIA

Family EUBLEPHARIDAE

2. *Eublepharis hardwickii* Grey 1827

Common fat-tailed Gecko/East Indian Leopard Gecko

1827. *Eublepharis hardwickii* Gray, *Phil Mag.* (2) 2 : p.56.

2003. *Eublepharis hardwickii* : Das, *J. Bom. nat. Hist. Soc.*, 100 (2 & 3) : 462.

Locality : Past record. (Khajuria, 1986).

Diagnostic Characters : U-Shaped mark across the nape which extends to the tip of the snout through the upper labials; tail is also having such bands; belly is whitish. Head covered above with irregular polygonal scales. Standard length 110 mm, tail length 85 mm.

Distribution : India : Bihar, Orissa, Bengal, Tamil Nadu, Madhya Pradesh and Uttar Pradesh.

Habitat and Habitat : Insectivorous, nocturnal and terrestrial.

Status : Rare.

Family GEKKONIDAE

3. *Hemidactylus flaviviridis* Ruppell 1835

Yellow-Bellied House Gecko

1835. *Hemidactylus flaviviridis* Ruppell, *Neue Wirb. Faun. Abyss* : p. 18, pl. 6, Fig. 2.

2003. *Hemidactylus flaviviridis* : Das, *J. Bom. nat. Hist. Soc.*, 100 (2 & 3) : 466.

Locality : Tala – seen several times in the vicinity of Biodiversity Training Centre.

Diagnostic characters : Large and robust gecko with a pale-grey or greenish-grey, brown or olive dorsum; back with wavy, dark cross bands which are clearly visible during the day; belly yellowish. Head covered with minute granules, which become more prominent and large on the broad snout; ear-opening sub-circular. Upper labials 12-15 and lower labials 10-12, standard length 42-90 mm; tail length 38-90 mm.

Distribution : Most of India, but widely in North India.

Elsewhere : Arabia, Iran, Pakistan, and Shores of the red Sea.

Habit and Habitat : Insectivorous, generally nocturnal but can be seen during day time also. lives in the buildings, most agile, pugnacious and a marked climber.

Status : Very common.

4. *Hemidactylus brookii* Gray 1845

Spotted House Gecko

1845. *Hemidactylus brookii* Gray, *Cat. Liz. Brit. Mus.* : 153.

2003. *Hemidactylus brookii* : Das, *J. Bom. nat. Hist. Soc.*, 100 (2&3) : 466.

Locality : One individual was seen inside the Badi Gufa.

Diagnostic characters : Head moderately large, snout obtusely pointed, 8 to 10 upper and 7 to 9 lower labials. Back with conical tubercles arranged in regular rows, colour

brown or varying shades of grey with brown spots, whitish below. Femoral and preanal pores vary from 15 to 27.

Distribution : Throughout the Indian sub-region.

Elsewhere : From Borneo and South China through much of tropical Asia and the northern half of Africa.

Habit and Habitat : Insectivorous. Occurs on trees, rocks, under stones and in human dwellings.

Status : Very common.

Family AGAMIDAE

5. *Calotes versicolor* (Daudin 1802)

Garden Lizard

1802. *Agama versicolor* Daudin, *Hist. Nat. Rep.*, 3 : 395.

2003. *Calotes versicolor* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 460.

Locality : Several times seen in Tala village and Mahaman.

Diagnostic characters : Light brown or greyish above, uniform or with more or less distinct dark brown transverse spots or bars upon the back and sides; or variegated with dark brown; dark streaks radiating from the eye. Tail with light and dark annuli. Dirty whitish below, often streaked with dark brown or black. The throat may have a black transverse bar; nuchal and dorsal crest continuous.

Distribution : India : Eastern Rajasthan, Madhya Pradesh, Maharashtra, and Western Uttar Pradesh.

Elsewhere : Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka.

Habit and Habitat : Arboreal, plentiful in vicinity of streams, riversides, gardens, desert oases. Mainly insectivorous but can take vegetable matter.

Status : Very common.

6. *Sitana ponticeriana* Cuvier 1829

Fan Throated Lizard

1829. *Sitana ponticeriana* Cuvier, *Guerin Icon. Reg. Anima. Rep.* : pl. 10, fig. 2.

2003. *Sitana ponticeriana* : Das, *J. Bom. nat. Hist. Soc.*, 100(2&3) : 462.

Locality : Tala Range

Diagnostic characters : Light or dark brown above with a series of dark brown, black-edged, rhomboidal spots along the middle of the back; a more or less distinct light line along each side of the spots and sometimes a light vertebral line dividing them also seen. Flanks, top of head and upper surfaces of limbs with or without dark markings. Whitish below.

Distribution : Throughout India except wet areas.

Elsewhere : Nepal, Pakistan, Sri Lanka.

Habit and Habitat : It inhabits all biotopes except the forests receiving heavy rainfall and deserts. The preferred habitat is rocky terrain, scrubby jungles and sandy country.

Status : Common.

Family SCINCIDAE

7. *Mabuya carinata* (Schneider 1801)

Common Keeled Grass Skink Or Common Skink or Brhminy Skink

1801. *Scincus carinatus* Schneider, *Hist. Amphib.*, 2 : 183.

2003. *Mabuya carinata* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 470.

Locality : Very common in T.R. and observed at many locations.

Diagnostic characters : Brown to olive or bronzy above, uniform or with dark brown or black spots, or longitudinal streaks along the lateral margins of the scales. Sides darker brown or chestnut, with or without light spots. A light dorso-lateral line starting from above the eye and continued to the base of the tail. Lower parts whitish or yellow.

Distribution : Throughout India except North western India and West Bengal.

Elsewhere : Nepal.

Habit and Habitat : Diurnal, terrestrial, insectivorous, occasionally feeds on small vertebrates.

Status : Very common.

8. *Mabuya macularia* (Blyth 1853)

Bronze Grass Skink or Little Skink

1853. *Euprepes macularia* Blyth, *J. Asiat. Soc. Beng.*, 22 : 652.

2003. *Mabuya macularia* : Das, *J. Bom.nat. Hist. Soc.*, 100(2 & 3) : 470.

Locality : Very common in TR and observed in Many locations.

Diagnostic characters : Head small, snout short not depressed; eye small. Frontonasal not broader than long; ear opening oval, slightly smaller than eye. 6 to 7 upper and 7 lower labials. 28 to 30 rows of scales round the body. Dorsal scales with 5 to 7 low keels; lateral scales smooth, 12 to 17 lamellae under the fourth toe. Tail round. The colour pattern of this species varies. The general body colour is brown with or without spot.

Distribution : Throughout India.

Elsewhere : Myanmar, Pakistan, Thailand, North Vietnam, South Vietnam, Malaysia.

Habit and Habitat : Diurnal, terrestrial and insectivorous.

Status : Very common.

Family VARANIDAE

9. *Varanus bengalensis* (Daudin, 1802)

Bengal Monitor Lizard

1802. *Tupinambis bengalensis* Daudin Hist Nat. Report, 3 : 67.

2003. *Varanus bengalensis* : Das, J. *Bom. nat. Hist. Soc.*, 100 (2&3) : 472.

Locality : A dead specimen was seen on Umaria Road.

Diagnostic characters : It is a medium-sized, dark brown monitor, about 72-75 cm. in head and body length. The tail is very strong, long, compressed and measures about 100 cm. in length. The snout is convex terminally. The nostrils are oblique slits lying midway between the eye and the end of the muzzle. The tongue is very long, forked and protrusible.

Distribution : Throughout India.

Elsewhere : Myanmar, Shri Lanka, Pakistan, Nepal and Uzbekistan.

Habit and Habitat : Diurnal monitor lizard has burrowing habits. It feeds mainly on insects, small mammals, snakes, lizards and vegetable matter.

Status : Endangered.

Suborder SERPENTES

Family BOIDAE

10. *Eryx johnii* (Russell 1801)

Red Sand Boa

1801. *Boa johnii* Russell, *Ind. Serp.*, 2 : 18 & 20, pls. 26 & 27.

2003. *Eryx johnii* : Das, *J. Bom. nat. Hist. Soc.*, **100(2&3)** : 472.

Locality : Tala Range.

Diagnostic characteristic : Thick bodied, head not broader than neck; with a wide shovel-shaped scale at the tip of the snout. Eyes small but distinct; has vertical pupil. Very blunt tail with rounded tip resembles the head - giving rise to the belief that it has two heads. Colour variable, reddish- brown, dark brown, speckled grey or yellow, black-banded tail. Belly white, spotted with brown.

Distribution : India : Throughout drier zones of the peninsula and the northwest.

Elsewhere : Nepal and Pakistan.

Habit & Habitat : Nocturnal, prefers dry places and sandy soil. Usually very docile. Often lives in rodent burrows. Diet and method of killing prey similar to that of the common Sand Boa.

Status : Rare

11. *Eryx conicus* (Schneider 1801)

Common Sand Boa

1801. *Boa conica* Schneider, *Hist. Amphibia* ii : 268.

2003. *Eryx conicus* : Das, *J. Bom. nat. Hist. Soc.*, 100 (2&3) : 472.

Locality : Tala Range.

Diagnostic characters : Short and thick-bodied, scales of head and tail strongly keeled. Small eye has vertical pupil. Tail very short. Colour variable: reddish-brown, yellowish-white, dark brown or black white; large irregular dark brown, black edged blotches are connected on back. Underside yellowish -white. Scales in 40-55 rows, strongly keeled on head and tail. Ventral 162-196, distinctly narrower than width of belly; anal tripartite; sub caudal 14-24 entire. Supra-labials 12-14; top of head has small scales; scale between eyes 8-10; scale around eyes 10-15. Mental groove absent.

Distribution : Throughout India excluding Northeast, Andaman and Nicobar.

Elsewhere : Bangladesh, Sri Lanka, Nepal, Pakistan.

Habit & Habitat : Nocturnal, sluggish but strong, burrower in loose sand or loose silty soil, pugnacious and bites savagely, inflicting painful bites. Its food comprises small mammals, birds, reptiles, amphibians and large insects; kills the prey by constriction.

Status : Rare

12. *Python molurus* (Linnaeus 1758)
Indian Rock Python

1758. *Coluber molurus* Linn, *Syst. Nat.*, 10th ed. : 225.

2003. *Python molurus* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 472.

Locality : Ram Talaiya, Two Young ones and an adult were seen twice in Damna village.

Diagnostic characters : Body length ranges from 2.5-4.5 m. Head distinct from the neck and has symmetrical shields. The eyes have vertical pupils. The scales on the body are smooth and are arranged in 60-75 rows. Tail rather short. The colour of the body varies from pale grey to yellow above and yellowish below. A dorsal series of large walnut coloured crown saddlers alternate with pinkish laterals.

Distribution : Throughout India.

Elsewhere : Nepal, Pakistan, Sri Lanka.

Habit and Habitat : Inhabits the dense as well as open forests with rocky outcrops near marshes or streams. Feeds mainly on warm-blooded prey, ranging in size from mice and birds to jackals, civets and even deer and wild boar.

Status : Protected under Schedule- I(II), Indian Wildlife (Protection) Act (1972, as amended up to 2006).

Family COLUBRIDAE

13. *Amphiesma stolatum* (Linnaeus 1758)
Striped Keelback

1758. *Coluber stolatus* Linn., *Syst. Nat.*, 10th ed. : 219.

2003. *Amphiesma stolatum* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 473.

Locality : Near Biodiversity Training Centre.

Diagnostic characters : Olive-greenish or brownish above with black spots or reticulated cross-bars intersected by two dorso-laterals yellow or buff stripes; on the hind part of the body the stripes are best marked and the black spots least evident, the green colour being almost uniform dark-olive. Lower parts whitish. Top of head olive, uniform or the shields edged with black, lips yellowish.

Distribution : Throughout India.

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

Habit and Habitat : Paddy fields, ponds edges, thick grass and bushes are favoured places. Diurnal and spends nights sleeping under rocks, within holes or the branches of trees or bushes. Frogs are the main diet but also takes toads, small lizards and rodents.

Status : Common.

14. *Ahaetulla nasuta* (Lacepede,1789)

Common Green Whip Snake

1789. *Coluber nasuta* Lacepede, *Hist. Nat. Serp.*, 1 : 100; 2 : 277, pl. 4.

2003. *Ahaetulla nasuta* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 473.

Locality : Tala Range.

Diagnostic characters : Verdant green above, the interstitial skin black and white, forming oblique lines, best marked on the anterior half of the body. Pale green below, a white or yellow line along the outer margin of the ventrals. Lips sometimes yellowish, throat white, sometimes bluish. Snout acuminate, terminating in a pointed dermal appendage.

Distribution : Throughout India.

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

Habit and Habitat : Diurnal. Lives in scrub jungle, dry deciduous, moist deciduous, evergreen forests.

Status : Common.

15. *Lycodon aulicus* (Linnaeus 1758)

Common Wolf Snake

1758. *Coluber aulicus* Linn., *Mus. Adolph. Frieder.*, 1 : 29.

2003. *Lycodon aulicus*, Sharma, *Hand book Indian Snakes* : 123.

Locality : Seen in water Tank at Biodiversity Training Centre.

Diagnostic characters : Snout more or less spatulate projecting beyond the lower jaw. Body colouration brown or greyish-brown above, with 12-19 white cross-bars which expand laterally or bifurcate, enclosing triangular patches; the bars may be pure white or heavily speckled with brown, they are sometimes reduced to short vertebral spots. Upper lip white or spotted with brown.

Distribution : India : Madhya Pradesh, Maharashtra and South India.

Elsewhere : Bangladesh, Nepal, Pakistan and Sri Lanka.

Habit and Habitat : Nocturnal most often seen near and in human habitations, feeds on skinks, geckos, lizards and frogs.

Status : One of the commonest snakes of the Indian plains.

16. *Ptyas mucosa* (Linnaeus, 1758)

Indian Rat Snake

1758. *Coluber mucosus* Linn., *Mus. Ad. Frid.*, 1 : 37.

2003. *Ptyas mucosa*; Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 480.

Locality : Near Manaman Village.

Diagnostic characters : Body olive-green, brown, yellowish or greyish above, with irregular but strongly marked black crossbars on the posterior half of the body. Yellowish-white below, the posterior ventral and subcaudals edged with black. Maxillary teeth 20-25. Scales in 16 or 17 rows at mid-body; V. 190-213, C. 100-146, A. 2.

Distribution : India : Madhya Pradesh, North Maharashtra, Part of Rajasthan and Uttar Pradesh.

Elsewhere : Bangladesh, Nepal, and Pakistan.

Habit and Habitat : Diurnal in habits but in populated areas may not be commonly seen out during the day. Mainly eat rodents; also feed on frogs, lizards, birds and even small snakes.

Status : Common.

17. *Xenochrophis piscator* (Schneider 1799)

Checkered Keelback

1799. *Hydrus piscator* Schneider, *Hist. Amph.*, 1 : 247.

2003. *Xenochrophis piscator*, Sharma, *Hand book Indian Snakes* : 138.

Locality : Damna villalge.

Diagnostic characters : Body olivaceous or yellowish above, whitish or yellowish below. Maxillary teeth 22-28, gradually enlarged posteriorly, nostrils directed slightly upwards. Scales in 19 rows, more or less distinctly keeled, except the outer one or two rows, which are smooth.

Distribution : Throughout India.

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

Habit and Habitat : Occurs in lakes, ponds, wells, rivers, streams and flooded rice-fields, active in day and night. Young water snakes feed on tadpoles and aquatic insects. As they grow older take fish, frogs and occasionally rodents and birds.

Status : Common.

Family ELAPIDAE

18. *Bungarus caeruleus* (Schneider 1801)

Common Indian Krait

1801. *Pseudoboa caerulea* Schneider, *Hist. Amph.*, 2 : 284.

2003. *Bungarus caeruleus*, Sharma, *Hand book Indian Snakes* : 188.

Locality : Dead specimen found on Manpur Road.

Diagnostic characters : Length usually less than 2 m. Black or bluish-black above with narrow white crossbars, which are least distinct on the anterior part of the body, or entirely absent. The eyes are small and very dark which makes the pupil almost invisible.

Distribution : Most of India including Andaman and Nicobar Islands.

Elsewhere : Bangladesh, Pakistan and Sri Lanka.

Habit and Habitat : Nocturnal. Inhabits fields, low scrub jungles and human habitations. Feeds mainly on snakes, lizards and rodents.

Status : Common.

19. *Naja naja* (Linnaeus 1758)

Spectacled Cobra or Binocellate Cobra

1758. *Coluber naja* Linn., *Syst. Nat.*, 10th ed. : 221.

2003. *Naja naja* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 482.

Locality : Seen near Mahaman vill.

Diagnostic characters : Colour variable, generally brownish to blackish. Head not very distinct from the neck, dilatible into a hood, the anterior ribs being elongate. A monocle or spectacle mark or no mark present on the hood. Eyes moderate, pupil round. Scales smooth, in 19-25 rows, no occipital shields.

Distribution : Throughout India.

Elsewhere : Africa, Malaysia, and Southern Asia.

Habit and Habitat : Found in all types of country, plains, open fields and even in the areas of thickly populated human habitations. Evening hours are preferred for moving about and hunting. Feeds on insects, lizards, frogs, toads, small snakes, rodents and birds.

Status : Uncommon.

20. *Naja oxiana* (Eichwald 1831)

Black Cobra

1831. *Tommyris oxiana* Eichwald, *Zool. Soc.* iii : 171.

2003. *Naja oxiana*; Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 482.

Locality : Tala Range.

Diagnostic characters : Young - Light greyish or brownish above, uniform or with dark reticulations chiefly to the interstitial skin; or with dark transverse or chevron-shaped cross-bars. The bars on the hood are blacker than those on the body and extend across the under surface; belly skittish. Adult - Brownish or blackish, usually without any other distinct markings, lighter below than above.

Distribution : Very common in India up to 5000 feet.

Habit and Habitat : Found almost anywhere in heavy jungles to open cultivated land. Feeds on insects, lizards, frogs, toads, small snakes, rodents and birds.

Status : Uncommon.

Family VIPERIDAE

21. *Daboia russelli* (Shaw 1797)

Russell's Viper

1797. *Coluber russelli* Shaw, *Nat. Misc.*, 8, pl. 291.

2003. *Daboia russelli* : Das, *J. Bom. nat. Hist. Soc.*, 100(2 & 3) : 472.

Locality : Tala Range.

Diagnostic characters : Body length 3-4 feet but occasionally can reach up to 6 feet. Scales in 27-33 rows, supranasal strongly crescentic. Snout obtuse, with distinct canthus, nostrils very large. Light brown above, with 3 longitudinal series of large rounded or oval spots, which are usually brown in the centre, have a black margin and are edged again with white.

Distribution : Throughout India up to 3000 m.

Elsewhere : Myanmar, Indo-China, Pakistan, Sri Lanka.

Habit and Habitat : Dry and semi-arid tracts and open country. Nocturnal and feeds on snakes, lizards, mice, rodent and other arthropods.

Status : Uncommon, venomous snake species.

SUMMARY

The inventory of reptiles from the Tiger Reserve based on the observations during the faunistic surveys includes 21 species under 9 families.

REFERENCES

- Chandra, K and Gajbe, P. 2005. An Inventory of the Herpetofauna of Madhya Pradesh and Chhattisgarh, *Zoo's Print Journal*, **20**(3) : 1812-1819.
- Choudhay, L.K. & Khan, S.A. 2002. Bandhavgarh Tiger Reserve, Fort of the Tiger, Wild Atlas Book, Bhopal : 1-116.
- Das, I. 2003. Growth of knowledge on the reptiles of India, with an introduction to Systematics, Taxonomy and Nomenclature. *J. Bom. nat. Hist. Soc.*, **100**(2 & 3) : 446-501.
- Ingle, M. 2002. Ecology and status of the ophiofauna of eight district of Madhya Pradesh. *Cobra*, **50** : 1-17.
- Khajuria, H. 1986. On habits of some Central Indian Lizards with morphological notes on *Eublepharis hardwickii* Gray, *Rec. zool. Surv. India*, **83**(1-2) : 19-23.
- Negi, H.S. 2004. First Record of the Copperheaded Snake *Elaphe radiata* from Madhya Pradesh. *J. Bombay Nat. Hist Soc.*, **101**(1) : 166.
- Sanyal, D.P. & Sur, S. (1995). Reptelia. In : *Fauna of Kanha Tiger Reserve, Conservation Areas Series*, **7** : 51-62. Zoological Survey of India.
- Sharma, R.C. 1976. Three new records of Reptiles from M. P., India, *Newsl. zool Surv. India* **2**(3) : 101-102.
- Sharma, R.C. 1998. *The Fauna of India and the adjacent countries*, Reptilia vol. I. (Testudines and Crocodilians) : 1-196.
- Sharma, R.C. 2002. *The Fauna of India and the adjacent countries*, Reptilia vol. II. (Sauria) : 1-430.

- Sharma, R.C. 2003. *Hand book Indian Snakes* : 1-292. (Published-Director Zoological Survey of India, Kolkata).
- Sharma, R.C. 2007. *Fauna of India, Reptelia*, vol. III (Serpentes). Zoological Survey of India, Kolkata, : 1-410.
- Smith, M.A. 1935. *The fauna of British India including Ceylon and Burma, Reptilia and Amphibia, Vol. 2 (Sauria)*. Taylor & Francis, London, 440 pp.
- Smith, M.A. 1943. *The fauna of British India including Ceylon and Burma, Reptilia and Amphibia, Vol. 3 (Serpentes)*. Taylor & Francis, London, 583 pp.
- Whitaker, R. and Captain, A. 2004. *Snakes of India. The Field Guide* : 1-480. Draco Books, Chennai, India.

AVES

KAILASH CHANDRA AND R.P. GUPTA

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

Bandhavgarh Tiger Reserve (BTR) is one of the most famous and well managed protected areas of India, lies in the Vindhya Landscape of Central India, Madhya Pradesh. The protected area has an old history of conservation and exhibits rich faunal diversity. Earlier, it was a game sanctuary of descendants of Rewa's King.

STUDY AREA AND METHODS

Representative areas from different habitats of the Bandhavgarh Tiger Reserve were selected for the bird observations to have complete profile of bird diversity. The surveys were conducted from 2004 to 2007. Birds were observed with the help of 7 X 50 and 8X42 binoculars and the identifications were made with the help of Ali & Ripley (1968-1974), Ali (1996) and Grimmett *et al.* (2000). The common names, scientific names of the birds by evolutionary sequence have been followed as per Manakadan and Pittie (2001).

The following localities were selected for observations :

Biodiversity Training Centre, Tala Gate, T2 Camp, Khitoli Dam, Jamuniha, Siddh Baba, Rajbahra, Chakradhara, Charanganga, Bandhavgarh Hill, Neelgay Tiraha, Dinosaur Point, Bathan, Mahaman, Sitamandap, Baidhani, Patiha, Magdhi, Dhabhadol, Khitoli Reservoir, Gohani Beat, Bamera Dam, Kila Road, Tala Village etc. Besides, past records were taken in to account to arrive at the final enumeration of birds occurring in the reserve.

A total of 1224 species of birds occur in India (Islam & Rahhmani, 2002) of which 488 species and subspecies are reported from Madhya Pradesh (Chandra & Singh, 2004). Hewetson (1956) published the observations on bird life of Madhya Pradesh and included the list of 308 species. Choudhary and Khan (2002) in his book "Bandhavgarh : Fort of the Tiger" listed 241 species of birds from Bandhavgarh Tiger Reserve. Altogether, 252 species belonging to 169 genera under 63 families of 17 orders are

recorded from Bandhavgarh Tiger Reserve (Table-1 & Fig. 1) which comes to approximately 51% of state diversity.

Table-1. List of Birds observed in Bandhavgarh Tiger Reserve

S. No.	Scientific Name/Taxonomy	Common Name
Order PODICIPEDIFORMES		
Family PODICIPEDIDAE		
1.	<i>Tachybaptus ruficollis</i> (Pallas, 1764)	Little Grebe
Order PELECANIFORMES		
Family PHALACROCORACIDAE		
2.	<i>Phalacrocorax niger</i> (Vieillot, 1817)	Little Cormorant
3.	<i>Phalacrocorax carbo</i> (Linnaeus, 1758)	Great Cormorant
Family ANHINGIDAE		
4.	<i>Anhinga malanogaster</i> Pennant, 1769	Darter
Order CICONIIFORMES		
Family ARDEIDAE		
5.	<i>Egretta garzetta</i> (Linnaeus, 1766)	Little Egret
6.	<i>Ardea cinerea</i> Linnaeus, 1758 Grey	Heron
7.	<i>Ardea purpurea</i> Linnaeus, 1766	Purple Heron
8.	<i>Casmerodius albus</i> (Linnaeus, 1758)	Large Egret
9.	<i>Mesophoyx intermedia</i> (Wagler, 1829)	Median Egret
10.	<i>Bubulcus ibis</i> (Linnaeus, 1758)	Cattle Egret
11.	<i>Ardeola grayii</i> (Sykes, 1832)	Indian Pond-Heron
12.	<i>Butorodes striatus</i> (Linnaeus, 1758)	Little Green-Heron
13.	<i>Ixobrychus cinnamomeus</i> (Gmelin, 1789)	Chestnut Bittern
14.	<i>Dupetor flavicollis</i> (Latham, 1790)	Black Bittern
Family CICONIDAE		
15.	<i>Mycteria leucocephala</i> (Pennant, 1769)	Painted Stork
16.	<i>Anastomus oscitans</i> (Boddeart, 1783)	Asian Openbill-Stork

- | | | |
|-----|--|-----------------------|
| 17. | <i>Ciconia nigra</i> (Linnaeus, 1758) | Black Stork |
| 18. | <i>Ciconia episcopus</i> (Boddaert, 1783) | White-necked Stork |
| 19. | <i>Leptoptilos javanicus</i> (Horsfield, 1821) | Lesser Adjutant-Stork |

Family THRESKIORNITHIDAE

- | | | |
|-----|---|---------------------|
| 20. | <i>Threskiornis melanocephalus</i> (Latham, 1790) | Oriental White Ibis |
| 21. | <i>Pseudibis papillosa</i> (Temminck, 1824) | Black Ibis |
| 22. | <i>Platalea leucorodia</i> , Linnaeus, 1758 | Eurasian Spoonbill |

Order ANSERIFORMES

Family ANATIDAE

- | | | |
|-----|--|-----------------------|
| 23. | <i>Dendrocygna javanica</i> (Horsfield, 1821) | Lesser Whistling Duck |
| 24. | <i>Anser anser</i> (Linnaeus, 1758) | Grey-leg Goose |
| 25. | <i>Anser indicus</i> (Latham, 1790) | Bar-headed Goose |
| 26. | <i>Tadorna ferruginea</i> (Pallas, 1764) | Brahminy Shelduck |
| 27. | <i>Sarkidiornis melanotos</i> (Pennant, 1769) | Comb Duck |
| 28. | <i>Nettapus coromandelianus</i> (Gmelin, 1789) | Cotton Teal |
| 29. | <i>Anas acuta</i> Linnaeus, 1758 | Northern Pintail |
| 30. | <i>Anas crecca</i> Linnaeus, 1758 | Common Teal |
| 31. | <i>Rhodonessa rufina</i> (Pallas, 1773) | Red-crested Pochard |
| 32. | <i>Aythya ferina</i> (Linnaeus, 1758) | Common Pochard |

Order FALCONIFORMES

Family ACCIPITRIDAE

- | | | |
|-----|---|--------------------------------|
| 33. | <i>Pernis ptilorhynchus</i> (Temminck, 1821) | Oriental Honey Buzzard |
| 34. | <i>Elanus caerules</i> (Desfontanes, 1789) | Black-shoulder Kite |
| 35. | <i>Milvus migrans</i> (Boddart, 1783) | Black Kite |
| 36. | <i>Ichthyophaga ichthyaetus</i> (Horsfield, 1821) | Greater Grey-headed Fish-Eagle |
| 37. | <i>Neophron percnopterus</i> (Linnaeus, 1758) | Egyptian Vulture |
| 38. | <i>Gyps bengalensis</i> (Gmelin, 1788) | Indian White-backed Vulture |
| 39. | <i>Gyps indicus</i> (Scopoli, 1786) | Long-billed Vulture |
| 40. | <i>Sarcogyps calvus</i> (Scopoli, 1786) | Red-headed Vulture |

- | | | |
|-----|--|------------------------|
| 41. | <i>Circaetus gallicus</i> (Gmelin, 1788) | Short-toed Snake-Eagle |
| 42. | <i>Spilornis cheela</i> (Latham, 1790) | Crested Serpent-Eagle |
| 43. | <i>Circus aeruginosus</i> (Linnaeus, 1758) | Western Marsh-Harrier |
| 44. | <i>Circus cynaenus</i> (Linnaeus, 1766) | Hen Harrier |
| 45. | <i>Circus melanoleucos</i> (Pennant, 1769) | Pied Harrier |
| 46. | <i>Accipiter badius</i> (Gmelin, 1788) | Shikra |
| 47. | <i>Accipiter nisus</i> (Linnaeus, 1758) | Eurasian Sparrowhawk |
| 48. | <i>Butastur teesa</i> (Franklin, 1832) | White-eyed Buzzard |
| 49. | <i>Aquila pomarina</i> Brehm, 1831 | Lesser Spotted Eagle |
| 50. | <i>Aquila rapax</i> (Temminck, 1828) | Tawny Eagle |
| 51. | <i>Hieraaetus fasciatus</i> (Vieillot, 1822) | Bonelli's Eagle. |
| 52. | <i>Spizaetus cirrhatus</i> (Gmelin, 1788) | Changeable Hawk-Eagle |

Family PONDIONIDAE

- | | | |
|-----|--|--------|
| 53. | <i>Pondiaon haliaetus</i> (Linnaeus, 1758) | Osprey |
|-----|--|--------|

Family FALCONIDAE

- | | | |
|-----|---|------------------|
| 54. | <i>Falco tinnunculus</i> Linnaeus, 1758 | Common Kestrel |
| 55. | <i>Falco subbuteo</i> Linnaeus, 1758 | Eurasian Hobby |
| 56. | <i>Falco peregrinus</i> Tunstall, 1771 | Peregrine Falcon |

Order GALLIFORMES

Family PHASIANIDAE

- | | | |
|-----|---|-------------------|
| 57. | <i>Francolinus pictus</i> (Jardine & Selby, 1828) | Painted Francolin |
| 58. | <i>Francolinus pondicerianus</i> (Gmelin, 1789) | Grey Francolin |
| 59. | <i>Pardicula asiatica</i> (Latham, 1790) | Jungle Bush-Quil |
| 60. | <i>Gallopardix spadicea</i> (Gmelinn, 1789) | Red Spurfowl |
| 61. | <i>Gallopardix lunulata</i> (Valenciennes, 1825) | Painted Spurfowl |
| 62. | <i>Gallus gallus</i> (Linnaeus, 1758) | Red Junglefowl |
| 63. | <i>Pavo cristatus</i> Linnaeus, 1758 | Indian Peafowl |

Family TURNICIDAE

- | | | |
|-----|---|-------------------|
| 64. | <i>Turnix suscitator</i> (Gmelin, 1789) | Common Buttonquil |
|-----|---|-------------------|

Order GRUIFORMES

Family GRUIDAE

65. *Grus antigone* (Linnaeus, 1758) Sarus Crane

Family RALLIDAE

66. *Amaurornis phoenicurus* (Pennant, 1769) White-brested Waterhen
 67. *Gallinula chloropus* (Linnaeus, 1758) Common Moorhen
 68. *Fulica atra* Linnaeus, 1758 Common Coot

Order CHARADRIIFORMES

Family JACANIDAE

69. *Hydrophasianus chirugus* (Scopoli, 1786) Pheasant-tailed Jacana
 70. *Metopidius indicus* (Latham, 1790) Bronze-winged Jacana

Family ROSTRATULIDAE

71. *Rostratula benghalensis* (Linnaeus, 1758) Greater Painted-Snipe

Family CHARADRIIDAE

72. *Charadrius dubius* Scopoli, 1786 Little Ringed Plover
 73. *Vannellus malabaricus* (Boddaert, 1783) Yellow-wattled Lapwing
 74. *Vannellus duvaucelii* (Lesson, 1826) River Lapwing
 75. *Vannellus indicus* (Boddaert, 1783) Red-wattled Lapwing

Family SCOLOPACIDAE

76. *Gallinago gallinago* (Linnaeus, 1758) Common Snipe
 77. *Tringa erythropus* (Pallas, 1764) Spotted Redshank
 78. *Tringa nebularia* (Gunner, 1767) Common Greenshank
 79. *Tringa ochropus* Linnaeus, 1758 Green Sandpiper
 80. *Tringa glareola* Linnaeus, 1758 Wood Sandpiper
 81. *Actitis hypoleucos* Linnaeus, 1758 Common Sandpiper
 82. *Calidris minuta* (Leisler, 1812) Little Stint
 83. *Calidris temminckii* (Leisler, 1812) Temminck's Stint

Family RECURVIROSTRIDAE

84. *Himantopus himantopus* (Linnaeus, 1758) Black-winged stilt

Family BURHINIDAE

85. *Burhinus oedicnemus* (Linnaeus, 1758) Stone-Curlew
 86. *Esacus recurvirostris* (Cuvier, 1829) Great Stone-Plover

Family LARIDAE

87. *Sterna aurantia* J.E. Gray, 1831 River Tern
 88. *Sterna acuticauda* J.E. Gray, 1831 Black-bellid Tern

Order COLUMBIFORMES

Family PTEROCLIDAE

89. *Pterocles indicus* (Gmelin, 1789) Painted Sandgrouse

Family COLUMBIDAE

90. *Columba livia* Gmelin, 1789 Blue Rock Pigeon
 91. *Streptopelia orientalis* (Latham, 1790) Oriental Turtle-Dove
 92. *Streptopelia senegalensis* Linnaeus, 1766 LittleBrown dove
 93. *Streptopelia chinensis* (Scopoli, 1786) Spotted Dove
 94. *Streptopelia tranquebarica* (Hermann, 1804) Red Collared-Dove
 95. *Streptopelia decaocto* (Frisvaldszky, 1838) Eurasian Collared-Dove
 96. *Chalcophaps indica* (Linnaeus, 1758) Emerald Dove
 97. *Treron phoenicoptera* (Latham, 1790) Yellow-legged Green-Pigeon

Order PSITTACIFORMES

Family PSITTACIDAE

98. *Psittacula eupatria* (Linnaeus, 1766) Alexandrine Parakeet
 99. *Psittacula krameri* (Scopoli, 1769) Rose-ringed Parakeet
 100. *Psittacula cyanocephala* (Linnaeus, 1766) Plum-headed Parakeet

Order CUCULIFORMES

Family CUCULIDAE

101. *Clamator jacobinus* (Boddaert, 1783) Pied Crested Cuckoo
 102. *Hierococcyx varius* (Vahl, 1797) Brainfever Bird
 103. *Cuculus micropterus* Gould, 1838 Indian Cuckoo
 104. *Cuculus canorus* Linnaeus, 1758 Common Cuckoo

- | | |
|---|-------------------------|
| 105. <i>Cacomantis passerinus</i> Vahl, 1797 | Indian Plaintive cuckoo |
| 106. <i>Surniculus lugubris</i> (Horsfield, 1821) | Drongo Cuckoo |
| 107. <i>Eudynamys scolopacea</i> (Linnaeus, 1758) | Asian Koel |
| 108. <i>Phaenicophaeus leschenaultii</i> (Lesson, 1830) | Sirkeer Malkoha |
| 109. <i>Centropus sinensis</i> (Stephens, 1815) | Greater Coucal |

Order STRIGIFORMES

Family STRIGIDAE

- | | |
|---|---------------------|
| 110. <i>Otus bakkamoena</i> Pennant, 1769 | Collared Scops-Owl |
| 111. <i>Bubo bubo</i> (Linnaeus, 1758) | Eurasian Eagle -Owl |
| 112. <i>Ketupa zeylonensis</i> (Gmelin, 1788) | Brown Fish-Owl |
| 113. <i>Strix ocellata</i> (Lesson, 1839) | Mottled Wood- Owl |
| 114. <i>Glaucidium radiatum</i> (Tickell, 1833) | Jungle Owlet |
| 115. <i>Athene brama</i> (Temminck, 1821) | Spotted Owlet |
| 116. <i>Ninox scutulata</i> (Raffles, 1822) | Brown Hawk-Owl |

Order CAPRIMULGIFORMES

Family CAPRIMULGIDAE

- | | |
|---|------------------------|
| 117. <i>Caprimulgus indicus</i> Latham, 1790 | Indian Jungle Nightjar |
| 118. <i>Caprimulgus asiaticus</i> Latham, 1790 | Common Indian Nightjar |
| 119. <i>Caprimulgus affinis</i> Horsfield, 1821 | Franklin's Nightjar |

Order APODIFORMES

Family APODIDAE

- | | |
|---|-------------------------------|
| 120. <i>Zoonavena sylvatica</i> (Tickell, 1846) | White-rumped Needletail-Swift |
| 121. <i>Apus affinis</i> (J.E. Gray, 1830) | House Swift |

Family HEMIPROCNIDAE

- | | |
|---|--------------------|
| 122. <i>Hemiprocne coronata</i> (Tickell, 1833) | Crested Tree-Swift |
|---|--------------------|

Order CORACIIFORMES

Family ALCEDINIDAE

- | | |
|---|-------------------------|
| 123. <i>Alcedo atthis</i> (Linnaeus, 1758) | Small Blue Kingfisher |
| 124. <i>Halcyon capensis</i> (Linnaeus, 1766) | Stork-billed Kingfisher |

125. *Halcyon smyrnensis* (Linnaeus, 1758) White-breasted Kingfisher
126. *Ceryle rudis* (Linnaeus, 1758) Lesser Pied Kingfisher
- Family MEROPIDAE
127. *Nyctornis athertoni* (Jardine & Selby, 1828) Blue-bearded Bee-eater
128. *Merops orientalis* Latham, 1801 Small Bee-eater
129. *Merops philippinus* Linnaeus, 1766 Blue-tailed Bee-eater
- Family CORACIIDAE
130. *Coracias benghalensis* (Linnaeus, 1758) Indian Roller
- Family UPUPIDAE
131. *Upupa epops* Linnaeus, 1758 Common Hoopoe
- Family BUCEROTIDAE
132. *Ocyrceros birostris* (Scopoli, 1786) Indian Grey Hornbill
133. *Anthracoceros coronatus* (Boddaert, 1783) Malabar Pied Hornbill
- Order PICIFORMES**
- Family CAPITONIDAE
134. *Megalaima zeylanica* (Gmelin, 1788) Brown-headed Barbet
135. *Megalaima haemacephala* (P.L.S. Muller, 1776) Coppersmith Barbet
- Family PICIDAE
136. *Jynx torquilla* Linnaeus, 1758 Eurasian Wrineck
137. *Dendrocopos nanus* (Vigors, 1832) Brown-capped Pygmy Woodpecker
138. *Dendrocopos mahrattensis* (Latham, 1801) Yellow-fronted Pied Woodpecker
139. *Celeus brachyurus* (Vieillot, 1818) Rufous Woodpecker
140. *Picus xanthopygaeus* (J.E. Gray & G.R. Gray, 1846) Little Scaly-bellied Green Woodpecker
141. *Dinopium benghalense* (Linnaeus, 1758) Lesser Golden-backed Woodpecker
142. *Chrysocolaptes festivus* (Boddaert, 1783) Black-shouldered Woodpecker

Order PASSERIFORMES**Family Pittidae**

143. *Pitta brachyura* (Linnaeus, 1766) Indian Pitta

Family ALAUDIDAE

144. *Mirafra assamica* Horsfield, 1840 Bengal Bush-Lark
 145. *Eremopterix grisea* (Scopoli, 1786) Ashy-crowned Sparrow-Lark
 146. *Ammomanes phoenicurus* (Franklin, 1831) Rufous-tailed Finch-Lark

Family HIRUNDINIDAE

147. *Riparia paludicola* (Vieillot, 1817) Plain Martin
 148. *Hirundo concolor* Sykes, 1893 Dusky Crag-Martin
 149. *Hirundo rustica* Linnaeus, 1758 Common Swallow
 150. *Hirundo smithii* Leach, 1818 Wire-tailed Swallow
 151. *Hirundo daurica* Linnaeus, 1771 Red-rumped Swallow
 152. *Hirundo fluvicola* Blyth, 1855 Streaked-throated Swallow

Family MOTACILLIDAE

153. *Dendronanthus indicus* (Gmelin, 1789) Forest Wagtail
 154. *Motacilla alba* Linnaeus, 1758 White Wagtail
 155. *Motacilla maderspatensis* Gmelin, 1789 Large Pied Wagtail
 156. *Motacilla citreola* Pallas, 1776 Citrine Wagtail
 157. *Motacilla flava* Linnaeus, 1758 Yellow Wagtail
 158. *Motacilla cinerea* (Tunstall, 1771) Grey Wagtail
 159. *Anthus rufulus* Vieillot, 1818 Paddyfield Pipit
 160. *Anthus campestris* (Linnaeus, 1758) Tawny Pipit
 161. *Anthus similes* Jerdon 1840 Brown Rock Pipit
 162. *Anthus hodgsoni* Richmond, 1907 Oriental Tree Pipit

Family CAMPEPHAGIDAE

163. *Coracina macei* (Lesson, 1830) Large Cuckoo-Shrike
 164. *Coracina melaschistos* (Hodgson, 1836) Black winged cuckoo-shrike
 165. *Coracina melanoptera* (Rüppell, 1839) Black-headed Cuckoo-Shrike
 166. *Pericrocotus roseus* (Vieillot, 1818) Rosy Minivet

167. *Pericrocotus cinnamomeus* (Linnaeus, 1766) Small Minivet
 168. *Pericrocotus erythropygius* (Jerdon, 1840) White bellied Minivet
 169. *Pericrocotus ethologus* Bangs & Phillips, 1914 Long-tailed Minivet
 170. *Pericrocotus flammeus* (Forester, 1781) Scalet Minivet
 171. *Tephrodornis pondicerianus* (Gmelin, 1789) Common Wood-Shrike

Family PYCNONOTIDAE

172. *Pycnonotus cafer* (Linnaeus, 1766) Red-vented Bulbul

Family IRENIDAE

173. *Aegithina tiphia* (Linnaeus, 1758) Common Iora
 174. *Chloropsis cochinchinensis* (Gmelin, 1788) Jerdon's Chloropsis
 175. *Chloropsis aurifrons* (Temminck, 1829) Gold-fronted Chloropsis

Family LANIIDAE

176. *Lanius cristatus* Linnaeus, 1758 Brown Shrike
 177. *Lanius vittatus* Valenciennes, 1826 Bay-backed Shrike
 178. *Lanius schach* Linnaeus, 1758 Rufous-backed Shrike
 179. *Lanius meridionalis* Temminck, 1820 Southern Grey Shrike

Family MUSCICAPIDAE

Subfamily TURDINAE

180. *Luscinia svecica* (Linnaeus, 1758) Bluethroat
 181. *Monticola cinclorhynchus* (Vigors, 1832) Blue-headed Rock-Thrush
 182. *Monticola solitarius* (Linnaeus, 1758) Blue Rock-Thrus
 183. *Zoothera citrina* (Latham, 1790) Orange-headed Thrush
 184. *Zoothera dauma* (Latham, 1790) Scaly Thrush
 185. *Turdus unicolor* Tickell's, 1833 Tickell's Thrus
 186. *Luscinia calliope* (Pallas, 1776) Siberian Rubythroat
 187. *Copsychus saularis* (Linnaeus, 1758) Oriental Magpie-Robin
 188. *Saxicoloides fulicata* (Linnaeus, 1776) Indian Robin
 189. *Phoenicurus ochruros* (Gmelin, 1774) Black Redstart
 190. *Saxicola torquata* (Linnaeus, 1766) Common Stonechat

191. *Saxicola caprata* (Linnaeus, 1766) Pied Bushchat
 192. *Saxicola ferrea* Gray, 1846 Grey Bushchat

Subfamily TIMALIINAE

193. *Pellorneum ruficeps* Swainson, 1832 Spotted Babbler
 194. *Dumetia hyperythra* (Franklin, 1831) Rufous-bellied Babbler
 195. *Chrysomma sinense* (Gmelin, 1789) Yellow-eyed Babbler
 196. *Turdoides malcolmi* (Sykes, 1832) Large Grey Babbler
 197. *Turdoides striatus* (Dumont, 1823) Jungle Babbler

Subfamily SYLVIINAE

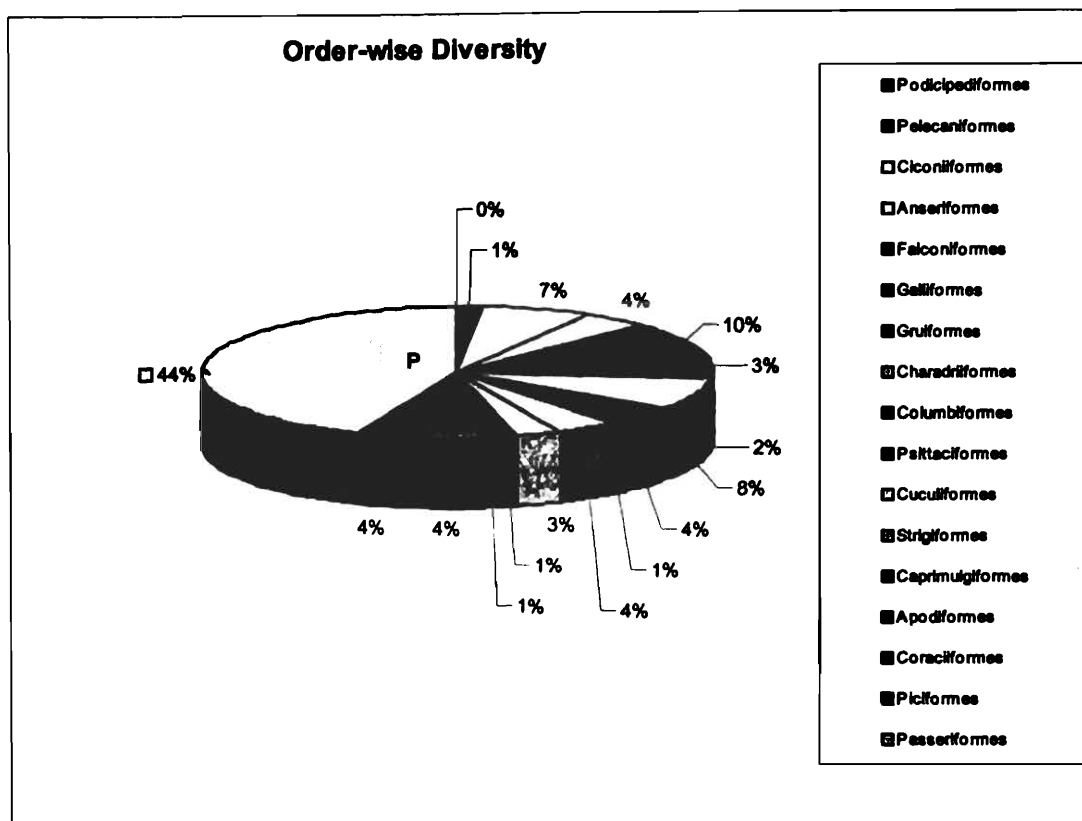
198. *Cisticola juncidis* (Rafinesque, 1810) Streaked Fantail-Warbler
 199. *Prinia hodgsonii* Blyth, 1844 Franklin's Prinia
 200. *Prinia sylvatica* Jerdon, 1840 Jungle Prinia
 201. *Acrocephalus dumetorum* Blyth, 1849 Blyth's Reed-Warbler
 202. *Acrocephalus stentorus* (Hemprich & Ahrenberg, 1833) Indian Great Reed-Warbler
 203. *Orthotomus sutorius* (Pennant, 1769) Common Tailorbird
 204. *Phylloscopus collybita* (Vieillot, 1817) Common Ciffchaff
 205. *Phylloscopus fasciatus* (Blyth, 1842) Dusky Warbler
 206. *Phylloscopus affinis* (Tickell, 1833) Tickell's Warbler
 207. *Phylloscopus griseolus* Blyth, 1847 Olivaceous Leaf-Warbler
 208. *Phylloscopus inornatus* (Blyth, 1842) Yellow-browed Warbler
 209. *Phylloscopus trochiloides* (Sundevall, 1837) Greenish-Leaf Warbler
 210. *Phylloscopus reguloides* (Blyth, 1842) Blyth's Leaf-Warbler
 211. *Sylvia curruca* (Linnaeus, 1758) Common Lesser Whitethroat

Subfamily MUSCICAPINAE

212. *Muscicapa daurica* Pallas, 1811 Asian Brown Flycatcher
 213. *Ficedula parva* (Bechstein, 1792) Red-throated Flycatcher
 214. *Ficedula superciliaris* (Jerdon, 1840) Ultramarine Flycatcher
 215. *Eumyias thalassina* (Swainson, 1838) Verditer Flycatcher

216. *Cyornis tickelliae* Blyth, 1843 Tickell's Blue-Flycatcher
 217. *Culicicapa ceylonensis* (Swainson, 1820) Grey-headed Flycatcher
- Subfamily MONARCHINAE
218. *Terpsiphone paradisi* (Linnaeus, 1758) Asian Paradise-Flycatcher
 219. *Hypothymis azurea* (Boddaert, 1783) Black-naped Monarch-Flycatcher
- Subfamily RHIPIDURINAE
220. *Rhipidura aureola* Lesson, 1830 White-browed Fantail-Flycatcher
- Family PARIDAE
221. *Parus major* Linnaeus, 1758 Great Tit
- Family SITTIDAE
222. *Sitta castanea* Lesson, 1830 Chestnut-bellied Nuthatch
- Family CERTHIIDAE
223. *Salpornis spilonotus* (Franklin, 1831) Spotted Creeper
- Family DICAIEIDAE
224. *Dicaeum agile* (Tickell, 1833) Thick-billed Flowerpecker
 225. *Dicaeum erythrorhynchos* (Latham, 1790) Tickell's Flowerpecker
- Family NECTARINIIDAE
226. *Nectarinia asiatica* (Latham, 1790) Purple Sunbird
- Family ZOSTEROPIDAE
227. *Zosterops palpebrosus* (Temminck, 1824) Oriental White-eye
- Family EMBERIZIDAE
- Subfamily EMBERIZINAE
228. *Melophus lathami* (Gray, 1831) Crested Bunting
 229. *Emberiza sterwarti* (Blyth 1854) White-capped Bunting
- Family FRINGILLIDAE
230. *Carpodacus erythrinus* (Pallas, 1770) Common Rosefinch
- Family ESTRILDIDAE
231. *Lonchura striata* (Linnaeus, 1766) White-rumped Munia
 232. *Lonchura punctulata* (Linnaeus, 1758) Spotted Munia

233. *Lonchura malacca* (Linnaeus, 1766) Black-headed Munia
Family PASSERIDAE
Subfamily PASSERINAE
234. *Passer domesticus* (Linnaeus, 1758) House Sparrow
235. *Petronia xanthocollis* (Burton, 1838) Yellow-throated Sparrow
Subfamily PLOCEINAE
236. *Ploceus philippinus* (Linnaeus, 1766) Baya Weaver
Family STURNIDAE
237. *Sturnus malabaricus* (Gmelin, 1789) Grey-headed Starling
238. *Sturnus pagodarum* (Gmelin, 1789) Brahminy Starling
239. *Sturnus roseus* (Linnaeus, 1758) Rosy Starling
240. *Sturnus contra* Linnaeus, 1758 Asian Pied Starling
241. *Acridotheres tristis* (Linnaeus, 1766) Common Myna
242. *Acridotheres fuscus* (Wagler, 1827) Jungle Myna
Family ORIOLIDAE
243. *Oriolus oriolus* (Linnaeus, 1758) Eurasian Golden Oriole
244. *Oriolus xanthornus* (Linnaeus, 1758) Black-headed Oriole
Family DICRURIDAE
245. *Dicrurus macrocercus* Vieillot, 1817 Black Drongo
246. *Dicrurus leucophaeus* Vieillot, 1817 Ashy Drongo
247. *Dicrurus caerulescens* (Linnaeus, 1758) White-bellied Drongo
248. *Dicrurus hottentottus* (Linnaeus, 1766) Spangled Drongo
249. *Dicrurus paradiseus* (Linnaeus, 1766) Greater Racket-tailed Drongo
Family CORVIDAE
250. *Dendrocitta vagabunda* (Latham, 1790) Indian Treepie
251. *Corvus splendens* Vieillot, 1817 House Crow
252. *Corvus macrorhynchos* Wagler, 1827 Jungle Crow



Pie Chart showing the Percentage of Birds of Different orders

Out of 252 species of birds recorded from the Reserve, the major chunk belongs to Passeriformes (44 %) followed by Falconiformes (10%) and by Charadriiformes (8%). Raptors are represented by 31 species out of which 24 are diurnal (Falconiformes) and 7 are nocturnal (Strigiformes).

Species of Conservation interest observed in the Reserve

S. No.	Critically Endangered (IUCN, 2 008)	Zoological Name
1.	White-backed Vulture	<i>Gyps benghalensis</i>
2.	Slender-billed Vulture	<i>Gyps indicus</i>
3.	Red-headed Vulture	<i>Sarcogyps calvus</i>
	Vulnerable	
4.	Lesser Adjutant	<i>Leptoptilos javanicus</i>
	Near Threatened	
5.	Darter	<i>Anhinga melanogaster</i>
6.	Painted Stork	<i>Mycteria leucocephala</i>
7.	Orential White Ibis	<i>Threskiornis melanocephalus</i>
8.	Greater Grey-headed Fish-Eagle	<i>Ichthyophaga ichthyaetus</i>
9.	Black-bellid Tern	<i>Sterna acuticauda</i>
10.	Malabar Pied Hornbill	<i>Anthracoceros coronatus</i>

SYSTEMATIC ACCOUNT

Order PODICIPEDIFORMES

Family PODICIPEDIDAE

1. *Tachybaptus ruficollis* (Pallas, 1764)**Little Grebe**

1968. *Tachybaptus ruficollis* : Ali & Ripley, *H. B. No. 25, Vol. 1* : 6.

Observation localities : Bamera Dam.

Status and distribution : Resident. Found throughout the Indian Union.

Habitat : Jheels, village tanks, rain filled ditches, ponds.

Food : Aquatic insects and larvae, tadpoles, frogs, crustaceans.

Order PELECANIFORMES

Family PHALACROCORACIDAE

2. *Phalacrocorax niger* (Veillot, 1817)**Little Cormorant**

1968. *Phalacrocorax niger* : Ali & Ripley, *H. B. No. 28, Vol. 1* : 41.

Observation localities : Khitoli Dam.

Status and distribution : Resident. Found throughout India.

Habitat : Lakes, rivers, canals, village tanks.

Food : Mainly fish; to a lesser extent also frogs, tadpoles and crustaceans.

3. *Phalacrocorax carbo* (Linnaeus, 1758)**Great Cormorant**

1968. *Phalacrocorax niger* : Ali & Ripley, *H. B. No. 26, Vol. 1* : 37.

Observation localities : Bamera Dam.

Status and distribution : Resident Migrant. Throughout India up to over 3000 m.

Habitat : Inhabits large inland waters, sand banks, tidal lagoons, etc.

Food : Almost exclusively fish.

Family ANHINGIDAE

4. *Anhinga melanogaster* Pennant, 1769**Darter**

1968. *Anhinga melanogaster* : Ali & Ripley, *H. B. No. 29, Vol 1 : 43.*

Observation localities : Tala Range

Status and distribution : Resident, Subcontinent, except parts of North-West and north-east and Himalaya.

Habitat : Lake, jheel, ponds, etc.

Food : Fish and Molluscs.

Order CICONIIFORMES

Family ARDEIDAE

5. *Egretta garzetta* (Linnaeus, 1766)**Little Egret**

1968. *Egretta garzetta* : Ali & Ripley, *H. B. No. 49, Vol. 1 : 72.*

Observation localities : Bamera Dam.

Status and distribution : Resident. Found throughout India up to 900 m.

Habitat : Lakes, rivers, marshes, paddy fields, mudflats.

Food : Fishes, frogs, crustaceans, aquatic insects.

6. *Ardea cinerea* Linnaeus, 1758**Grey Heron**

1968. *Ardea cinerea* : Ali & Ripley, *H. B. No. 36, Vol. 1 : 55.*

Observation localities : Dabhadol.

Status and distribution : Resident. Found throughout India.

Habitat : Lakes, marshes, rivers, mangroves, swamps, coastal backwaters and rocky offshore islets.

Food : Fish, frogs, molluscs, crustaceans, aquatic insects, young birds.

7. *Ardea purpurea* Linnaeus, 1766**Purple Heron**

1968. *Ardea purpurea* : Ali & Ripley, *H. B. No. 37, Vol. 1* : 57.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident Migrant. Indian subcontinent, also Andaman & Nicobars.

Habitat : Jheels, reedy lakes and rivers.

Food : Fish, frogs, molluscs, crustaceans, aquatic insects, young birds.

8. *Casmerodius albus* (Linnaeus, 1758)**Large Egret**

1968. *Casmerodius albus* : Ali & Ripley, *H. B. No. 46, Vol. 1* : 69.

Observation localities : Bamera Dam.

Status and distribution : Resident, shifting with water conditions. Found throughout India.

Habitat : Lakes, marshes.

Food : Fishes, frogs, aquatic insects, crustaceans.

9. *Mesophoyx intermedia* (Wagler, 1829)**Median Egret**

1968. *Mesophoyx intermedia* : Ali & Ripley, *H. B. No. 47, 48, Vol. 1* : 71.

Observation localities : Bamera Dam.

Status and distribution : Resident, shifting with water conditions. Found throughout the Indian subcontinent.

Habitat : Jheels, marshes, mangroves, tidal lagoons and coastal backwaters.

Food : Fishes, crustaceans.

10. *Bubulcus ibis* Boddaert, 1758**Cattle Egret**

1968. *Bubulcus ibis* : Ali & Ripley, *H. B. No. 44, Vol. 1* : 66.

Observation localities : All B.T.R.

Status and distribution : Resident. Common throughout India up to 1500 m. in Himalayas.

Habitat : Almost invariably in attendance on grazing animals, domestic and wild.

Food : Mainly insects, to a minor extent tadpoles, frogs and lizards.

11. *Ardeola grayii* (Sykes, 1832)

Indian Pond Heron

1968. *Ardeola grayii* : Ali & Ripley, *H. B. No. 42, Vol. 1* : 63.

Observation localities : All ranges of the Reserve.

Status and distribution : Resident. Found throughout India, up to 1500 m. in Himalayas.

Habitat : Lakes, streams, marshes, paddy fields, village tanks, ditches, wells and mudflats.

Food : Frogs, fishes, crustaceans, aquatic insects.

12. *Butorides striatus* (Linnaeus, 1758)

Little Green Heron

1968. *Butorides striatus* : Ali & Ripley, *H. B. No. 38, Vol. 1* : 59.

Observation localities : Near Siddh Baba.

Status and distribution : Resident. Indian subcontinent, Andamans, Nicobars, Lakshadweep.

Habitat : Inland waters and swamps.

Food : Fish, shrimps, frogs, crabs, water beetles.

13. *Ixobrychus cinnamomeus* (Gmelin, 1789)

Chestnut Bittern

1968. *Ixobrychus cinnamomeus* : Ali & Ripley, *H. B. No. 56, Vol. 1* : 84.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Resident. Found throughout the Indian subcontinent.

Habitat : Reed beds.

Food : Fish, molluscs, etc.

14. *Dupetor flavicollis* (Latham, 1790)**Black Bittern**

1968. *Dupetor flavicollis* : Ali & Ripley, *H. B. No. 58, Vol. 1* : 88.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Resident migrant. Indian subcontinent up to 1200. Absent in Andaman and Nicobar Island.

Habitat : Reedy marshes.

Food : Fishes, frogs, molluscs, and insects.

Family CICONIIDAE

15. *Mycteria leucocephala* (Pennant, 1769)**Painted Stork**

1968. *Mycteria leucocephala* : Ali & Ripley, *H. B. No. 60, Vol. 1* : 93.

Observation localities : Near Patiha Kacchadam (1 subadult and an adult).

Status and distribution : Resident. Found throughout the plains of India.

Habitat : Marshes, inundated fields, lakes, reservoirs, river tanks.

Food : Mainly fish, also reptiles, frogs, crustaceans and insects.

16. *Anastomus oscitans* (Boddaert, 1783)**Asian Openbill-Stork**

1968. *Anastomus oscitans* : Ali & Ripley, *H. B. No. 61, Vol. 1* : 95.

Observation localities : Patiha.

Status and distribution : Resident. Found throughout India.

Habitat : Lakes and marshes, rarely river banks and tidal mud flats.

Food : Molluscs, frogs, fishes and other small animals.

17. *Ciconia nigra* (Linnaeus, 1758)**Black Stork**

1968. *Ciconia nigra* : Ali & Ripley, *H. B. No. 65, Vol. 1* : 102.

Observation localities : Rajbahara Medow & Patiha.

Status and distribution : Winter visitor. Found in Northern India.

Habitat : Marshy areas, rivers, inland waters often in association with white storks.

Food : Fish, frogs, molluscs, insects, young or disabled bird or rodent.

18. *Ciconia episcopus* (Boddaert, 1783)

White-necked Stork

1968. *Ciconia episcopus* : Ali & Ripley, *H. B. No. 62, Vol. 1* : 98.

Observation localities : Patiha.

Status and distribution : Resident. Sparsely distributed throughout the well watered parts of India.

Habitat : Flooded grasslands, fallow, rain filled ponds.

Food : Frogs, reptiles, crabs, molluscs and large insects.

19. *Leptoptilos javanicus* (Horsfield, 1821)

Lesser Adjutant-Stork

1968. *Leptoptilos javanicus* : Ali & Ripley, *H. B. No. 68, Vol. 1* : 107.

Observation localities : Charanganga near Jamuniha.

Status and distribution : Resident migrant. Northern India.

Habitat : Affects well watered tracts- swamps and pools in forest, jheels, and flooded land.

Food : Fish, also reptiles, frogs, crustaceans and locusts.

Family THRESKIORNITHIDAE

20. *Threskiornis melanocephalus* (Latham, 1790)

Oriental White Ibis

1968. *Threskiornis aethiopica* : Ali & Ripley, *H. B. No. 69, Vol. 1* : 110.

2001. *Threskiornis melanocephalus* : Manakadan & Pittie, Standardised Common and Scientific names of the Birds of the Indian Subcontinent. *Buceros*, vol. 6, No. 1 : 2.

Observation localities : Tala Range.

Status and distribution : Resident. Found generally in plains of India.

Habitat : Rivers, lakes, freshwater marshes, tanks, paddy fields.

Food : Mainly fish, frogs, molluscs, aquatic insects.

21. *Pseudibis papillosa* (Temminck, 1824)**Black Ibis**

1968. *Pseudibis papillosa* : Ali & Ripley, *H. B. No. 70, Vol. 1* : 112.

Observation localities : Rajbahara Meadow, Patiha.

Status and distribution : Resident. Throughout India.

Habitat : Lakes, marshes, riverbeds, dry plains, cultivated agricultural fields.

Food : Mainly fishes, frogs and aquatic insects, occasionally lizards and scorpions.

22. *Platalea leucorodia* Linnaeus, 1758**Eurasian Spoonbill**

1968. *Platalea leucorodia*. Ali & Ripley *H.B. No. 116, Vol. 1* : 116.

Observation localities : Magdhi Village, Dabhadol.

Status and distribution : Resident. Except to N-W and N-E India.

Habitat : Chiefly water-bodies.

Food : Aquatic invertebrate and small fishes.

Order ANSERIFORMES

Family ANATIDAE

23. *Dendrocygna javanica* (Horsfield, 1821)**Lesser Whistling-Duck**

1968. *Dendrocygna javanica* : Ali & Ripley, *H. B. No. 88, Vol. 1* : 138.

Observation localities : Khitoli Dam.

Status and distribution : Resident. Throughout India.

Habitat : Flooded grassland and paddy fields, freshwater marshes and shallow pools and lakes.

Food : Largely vegetarian, also small fish, frogs, snails and worms.

24. *Anser anser* (Linnaeus, 1758)**Greylag Goose**

1968. *Anser anser* : Ali & Ripley, *H. B. No. 81, Vol. 1* : 129.

Observation localities : Khitoli Range

Status and distribution : Migrant. North and Central Indian to Manipur south to Chika lake, Orissa and Madhya Pradesh.

Habitat : Large jheels and lakes.

Food : Mainly vegetation – Grass, shoots, crops, aquatic weeds and tubers.

25. *Anser indicus* (Latham, 1790)

Bar-headed Goose

1968. *Anser indicus* : Ali & Ripley, *H.B. No. 82, Vol. 1* : 1131.

Observation localities : Past record : Tayabji (1990)

Status and Distribution : Winter visitor in Subcontinent

Habitat : Near lake, river etc.

Food : Mainly, vegetation–Grass, shoots, crops, aquatic-weeds.

26. *Tadorna ferruginea* (Pallas, 1764)

Brahminy Shelduck

1968. *Tadorna ferruginea* : Ali & Ripley, *H. B. No. 90, Vol. 1* : 141.

Observation localities : Tala Rannge.

Status and distribution : Winter visitor. Throughout India.

Habitat : Open lakes and rivers with extensive shingle banks and mud flats.

Food : Omnivorous, takes grains, tender shoots and tubers, crustaceans and molluscs, aquatic insects, reptiles etc.

27. *Sarkidiornis melanotos* (Pennant, 1769)

Comb Duck

1968. *Sarkidiornis melanotos* : Ali & Ripley, *H. B. No. 115, Vol. 1* : 192.

Observation localities : Khitoli Dam.

Status and distribution : Widespread but generally uncommon resident in India.

Habitat : Lowland pools, lakes and irrigation tanks with plentiful aquatic vegetation.

Food : Mainly vegetarian, also aquatic insects.

28. *Nettapus coromandelianus* (Gmelin, 1789)**Cotton Teal**

1968. *Nettapus coromandelianus* : Ali & Ripley, *H. B. No. 114, Vol. 1* : 190.

Observation localities : Past record. Tayabji (1990).

Status and distribution : Resident. Found throughout India.

Habitat : Vegetation covered pools, irrigation tanks, channels and shallow lagoons.

Food : Mainly vegetarian but also crustaceans and insect larvae.

29. *Anas acuta* Linnaeus, 1758**Northern Pintail**

1968. *Anas acuta* : Ali & Ripley, *H. B. No. 93, Vol. 1* : 149.

Observation localities : Khitoli Dam.

Status and distribution : Winter visitor. Found throughout India.

Habitat : Lakes, marshes, reedy and vegetation covered lakes, wet paddy fields and river.

Food : Mainly vegetarian but also feed on molluscs, worms, water insects.

30. *Anas crecca* Linnaeus, 1758**Common Teal**

1968. *Anas crecca* : Ali & Ripley, *H. B. No. 94, Vol. 1* : 151.

Observation localities : Tala Range.

Status and distribution : Winter visitor. Found throughout India.

Habitat : Tanks, lakes and marshes.

Food : Entirely vegetarian; shoots, tubers and seeds of aquatic plants and grains of wild and cultivated rice.

31. *Rhodonessa rufina* (Pallas, 1773)**Red-crested Pochard**

1968. *Rhodonessa rufina* : Ali & Ripley, *H. B. No. 107, Vol. 1* : 177.

Observation localities : Past record. Tayabji (1990).

Status and distribution : Winter visitor. Common and locally abundant in North India, decreasingly slow in the peninsula.

Habitat : Vegetation covered tanks and jheels.

Food : Shoots and roots of water plants, molluscs, crustaceans, insects, etc.

32. *Aythya ferina* (Linnaeus, 1758)

Common Pochard

1968. *Aythya ferina* : Ali & Ripley, *H. B. No. 108, Vol. 1* : 180.

Observation localities : Past record: Tayabji (1990).

Status and distribution : Winter visitor. Wide spread in India.

Habitat : Lakes and reservoirs with large areas of open water deep enough to allow diving, occasionally on rivers.

Food : Largely vegetarian, occasionally molluscs, aquatic insects and crustaceans.

Order FALCONIFORMES

Family ACCIPITRIDAE

33. *Pernis ptilorhyncus* (Temminck, 1821)

Oriental Honey-Buzzard

1968. *Pernis ptilorhyncus* : Ali & Ripley, *H. B. No. 130, Vol. 1* : 222.

Observation localities : Near Tala Trijunction on Pipal Tree.

Status and distribution : Resident. Throughout the Indian plains, up to 1800 m. in the Himalayas.

Habitat : Well wooded country, also groves in villages, towns and cultivation.

Food : Mainly honey and larvae of bees.

34. *Elanus caeruleus* (Desfontaines, 1789)

Black-shouldered Kite

1968. *Elanus caeruleus* : Ali & Ripley, *H. B. No. 124, Vol. 1* : 212.

Observation localities : Rajbahra Medow.

Status and distribution : Resident. Widespread in India, common in plains and hills.

Habitat : Grassland interspersed with cultivation or with scattered trees, open dry scrub and scrub desert.

Food : Mainly large insects and reptiles.

35. *Milvus migrans* (Boddaert, 1783)

Black Kite

1968. *Milvus migrans* : Ali & Ripley, *H. B. No. 133, Vol. 1* : 227.

Observation localities : Near Mahaman Village.

Status and distribution : Resident. Found throughout India.

Habitat : Around human habitation, mainly in cities, towns and villages, also mountains.

Food : Feeds mainly on refuse and offal, but omnivorous.

36. *Ichthyophaga ichthyaetus* (Horsfield, 1821)

Greater Grey-headed Fish-Eagle

1968. *Ichthyophaga ichthyaetus* : Ali & Ripley, *H. B. No. 175, Vol. 1* : 292.

Observation localities : Jamuniha.

Status and distribution : Resident. Throughout India.

Habitat : Near slow moving rivers, streams, lakes, reservoirs and tidal lagoons in wooded country.

Food : Fish.

37. *Neophron percnopterus* (Linnaeus, 1758)

Egyptian Vulture

1968. *Neophron percnopterus* : Ali & Ripley, *H. B. No. 187, Vol. 1* : 312.

Observation localities : Bandhavgarh Hill.

Status and distribution : Resident. Widespread in Indian plains and hills, up to 2500 m. in Himalayas.

Habitat : Towns, villages and city outskirts, especially around rubbish dumps and slaughter houses.

Food : Mainly carrion.

38. *Gyps bengalensis* (Gmelin, 1788)**Indian White-backed Vulture**

1968. *Gyps bengalensis* : Ali & Ripley, *H. B. No. 185, Vol. 1* : 307.

Observation localities : Mahaman Village.

Status and distribution : Resident. Common and widespread throughout India.

Habitat : Cities, towns and villages near cultivation.

Food : Carrion.

39. *Gyps indicus* (Scopoli, 1786)**Long-billed Vulture**

1968. *Gyps indicus* : Ali & Ripley, *H. B. No. 182, Vol. 1* : 304.

Observation localities : Bandhav Hill.

Status and distribution : Resident. Rajasthan, Gujarat and peninsular India.

Habitat : Open countryside or on outskirts of towns and villages.

Food : Carrion, sometimes at tiger or panther kills in forest.

40. *Sarcogyps calvus* (Scopoli, 1786)**Red-headed Vulture**

1968. *Sarcogyps calvus* : Ali & Ripley, *H. B. No. 178, Vol. 1* : 296.

Observation localities : Mahaman Village.

Status and distribution : Resident. Widespread throughout the Indian Union.

Habitat : Open country near human habitation; also well wooded hills.

Food : Carcasses of small animals.

41. *Circaetus gallicus* (Gmelin, 1788)**Short-toed Snake-Eagle**

1968. *Circaetus gallicus* : Ali & Ripley, *H.B. No 195, Vol 1* : 327.

Observation localities : Near Rajbahra Meadow.

Status and distribution : Resident. Throughout India Except to North-Eastern parts.

Habitat : Open country, cultivation, semi-arid area.

Food : Frogs, reptiles and birds etc.

42. *Spilornis cheela* (Latham, 1790)**Crested Serpent-Eagle**

1968. *Spilornis cheela* : Ali & Ripley, *H. B. No. 197, Vol. 1* : 331.

Observation localities : Call Heard Near Chakradhara Medow.

Status and distribution : Resident. Widespread in Peninsular India south of Gangetic Plain.

Habitat : Forest and well-wooded country in quite high rainfall area.

Food : Mainly snakes but also frogs, lizards, rodents, and weak birds.

43. *Circus aeruginosus* (Linnaeus, 1758)**Western Marsh-harrier**

1968. *Circus aeruginosus* : Ali & Ripley, *H. B. No. 193, Vol. 1* : 324.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Winter visitor. Throughout India.

Habitat : Marshes, flooded ricefields, up to 2000m. hills.

Food : Mice and voles, weakling or wounded birds, lizards, frogs and large insects etc.

44. *Circus cyaneus* (Linnaeus, 1766)**Hen Harrier**

1998. *Circus cyaneus* : Ali & Ripley, *H.B. No.189 Vol 1* : 317.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Winter visitor and passage migrant.

Habitat : Grassland.

Food : Frogs, small birds, mammals, reptiles and large insects.

45. *Circus melanoleucos* (Pennant, 1769)**Pied Harrier**

1968. *Circus melanoleucos* : Ali & Ripley, *H. B. No. 192, Vol. 1* : 323.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Eastern parts of the subcontinent; Assam, Bengal, Madhya Pradesh, Orissa, rare in Karnataka, Tamil Nadu.

Habitat : Open grassland and cultivation in plains and hills.

Food : Frogs, small birds, mammals, reptiles and large insects.

46. *Accipiter badius* (Gmelin, 1788)

Shikra

1968. *Accipiter badius* : Ali & Ripley, *H. B. No. 138, Vol. 1* : 235.

Observation localities : VIP Gate.

Status and distribution : Resident. Found throughout India.

Habitat : Open wooded country and groves around villages and cultivation.

Food : Small mammals, birds, lizards, frogs and large insects.

47. *Accipiter nisus* (Linnaeus, 1758)

Eurasian Sparrowhawk

1968. *Accipiter nisus* : Ali & Ripley, *H. B. No. 148, Vol. 1* : 245.

Observation localities : Bandhav Hill.

Status and distribution : Resident in himalaya, winter in foothill and plain.

Habitat : Wooded Country, open forest, scrub forest and groove in cultivation.

Food : Chiefly birds.

48. *Butastur teesa* (Franklin, 1832)

White-eyed Buzzard

1968. *Butastur teesa* : Ali & Ripley, *H. B. No. 157, Vol. 1* : 257.

Observation localities : Near Gohani Gate.

Status and distribution : Resident. Indian subcontinent.

Habitat : Open dry forest, scrub and cultivation.

Food : Rats and mice, small snakes, lizards, frogs, crabs and large insects etc.

49. *Aquila pomarina* Brehm, 1831**Lesser Spotted Eagle**

1968. *Aquila pomarina* : Ali & Ripley, *H. B. No 171, Vol 1* : 281.

Observation localities : Near Patiha Camp.

Status and distribution : Resident, Punjab, SE, India, east through S. Nepal to NE India and South of Madhya Pradesh, etc

Habitat : Wooded area and cultivation in low land.

Food : Small rodents and frogs.

50. *Aquila rapax* (Temminck, 1828)**Twany Eagle**

1968. *Aquila rapax* : Ali & Ripley, *H. B. No 168, Vol. 1* : 276.

Observation localities : Past record. Tayabji (1990).

Status and distribution : Resident. Assam and Peninsular India etc.

Habitat : Desert, semidesert and cultivations.

Food : Feeds on carrion also on small mammals, birds and reptiles.

51. *Hieraaetus fasciatus* (Vieillot, 1822)**Bonelli's Eagle**

1968. *Hieraaetus fasciatus* : Ali & Ripley, *H. B. No. 163, Vol. 1* : 266.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Resident. Indian subcontinent, up to 2400m in Himalayas, Assam, east of N. Bengal.

Habitat : Well-wooded country.

Food : Large birds and small mammals like hares and carrion.

52. *Spizaetus cirrhatus* (Gmelin, 1788)**Changeable Hawk-Eagle**

1968. *Spizaetus cirrhatus* : Ali & Ripley, *H. B. No. 161, Vol. 1* : 262.

Observation localities : Ramtalaiya.

Status and distribution : Resident. Uncommon and widespread in India, up to 1900 m. in Himalayas.

Habitat : Broad leaved forest, open well wooded country and villages and cultivation in or near forests in foothills and lowlands.

Food : Game birds, small mammals and lizards.

Family PANDIONIDAE

53. *Pandion haliaetus* (Linnaeus, 1758)

Osprey

1968. *Pandion haliaetus* : Ali & Ripley, *H. B. No. 203, Vol. 1* : 336.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Winter visitor. Widespread in India and uncommon winter visitor below 1800 m.

Habitat : Major rivers, lakes, large reservoirs, coastal lagoons and estuaries.

Food : Feeds entirely on fish.

Family FALCONIDAE

54. *Falco tinnunculus* Linnaeus, 1758

Common Kestrel

1968. *Falco tinnunculus* : Ali & Ripley, *H. B. No. 222, Vol. 1* : 368.

Observation localities : Past record (Choudhary and Khan, 2002).

Status and distribution : Resident Migrant. Indian Subcontinent.

Habitat : Grassland, semi-desert, cultivation and rocky regions.

Food : Mice, lizards, and large insects.

55. *Falco subbuteo* Linnaeus, 1758

Eurasian Hobby

1968. *Falco subbuteo* : Ali & Ripley, *H. B. No. 212, Vol. 1* : 352.

Observation localities : Past record. Tayabji (1990).

Status and distribution : Winter Migrant. Widespread in Subcontinent.

Habitat : Well wooded area, open country.

Food : Insects, bats, birds etc.

56. *Falco peregrinus* Tunstall, 1771
Peregrine Falcon

1968. *Falco peregrinus* : Ali & Ripley, *H. B. No. 211, Vol. 1* : 350.

Observation localities : Bandhav Hill Ram-Janki Mandir.

Status and distribution : Resident. Throughout India.

Habitat : Rugged hills, large lakes, rivers, marshes, sea cliffs, coastal lagoons and mangroves.

Food : Waterfowl, pigeons, partridges and other birds.

Order GALLIFORMES

Family PHASIANIDA

57. *Francolinus pictus* (Jardine & Selby, 1828)
Painted Francolin

1969. *Francolinus pictus* : Ali & Ripley, *H. B. No. 241, Vol. 2* : 27.

Observation localities : Rajbahra & Chakradhara Medow.

Status and distribution : Resident. From Gujarat north to S. Uttar Pradesh, east to Orissa and South through the peninsula.

Habitat : Tall thick grassland and cultivation with scattered trees and bushes also thin forest.

Food : Mainly grains, termites and other insects.

58. *Francolinus pondicerianus* (Gmelin, 1789)
Grey Francolin

1969. *Francolinus pondicerianus* : Ali & Ripley, *H. B. No. 245, Vol. 2* : 30.

Observation localities : Rajbahra & Chakradhara Medow.

Status and distribution : Resident. Throughout India except the Northeast.

Habitat : Dry open grass plains and thorn scrub, often under a bush, rock or other shelter.

Food : Seeds and insects.

59. *Perdicula asiatica* (Latham, 1790)**Jungle Bush-Quail**

1969. *Perdicula asiatica* : Ali & Ripley, *H. B. No. 255, Vol. 2* : 45.

Observation localities : Tala Range.

Status and distribution : Resident. From Gujarat east to Orissa, north to Himachal Pradesh and south throughout the peninsula.

Habitat : Dry grass and scrub jungle and both open and fairly dense deciduous forests, preferably on dry and stony ground.

Food : Grass and weed seeds, bajra, millets and small insects.

60. *Galloperdix spadicea* (Gmelin, 1789)**Red Spurfowl**

1969. *Galloperdix spadicea*: Ali & Ripley, *H. B. No. 275, Vol. 2* : 67.

Observation localities : Bhitari Tiraha to Rampur Road.

Status and distribution : Resident. Widespread and locally common from Uttar Pradesh south to the peninsula; foothills up to 1250 m.

Habitat : Dense scrub near cultivation, dry and stony scrub-covered foothills, bamboo thickets and secondary growth.

Food : Seeds and insects.

61. *Galloperdix lunulata* (Valenciennes, 1825)**Painted Spurfowl**

1969. *Perdix lunulata* : Ali & Ripley, *H. B. No. 278, Vol. 2* : 70.

Observation localities : Bhitri Tiraha.

Status and distribution : Resident. Continental and peninsular India.

Habitat : Dry grass and scrub jungle and both open and fairly dense deciduous forests, preferably on dry and stony ground.

Food : Grass and weed seeds, tubers, bajra, millets, land molluscs and small insects.

62. *Gallus gallus* (Linnaeus, 1758)**Red Junglefowl**

1969. *Gallus gallus* : Ali & Ripley, *H. B. No. 299, Vol. 2* : 102.

Observation localities : Very common in Tala Range.

Status and distribution : Resident. Himalayas from Jammu & Kashmir east to Arunachal Pradesh; Northeast and East India; southward through Madhya Pradesh up to northeast Andhra Pradesh.

Habitat : Well watered areas. Undergrowth in moist mixed forest and scrub jungle interspersed with patches of cultivation.

Food : Seeds and insects.

63. *Pavo cristatus* Linnaeus, 1758

Indian Peafowl

1969. *Pavo cristatus* : Ali & Ripley, *H. B. No. 311, Vol. 2* : 123.

Observation localities : Very common in Tala Range.

Status and distribution : Resident. Throughout much of India.

Habitat : In the wild state, in undergrowth in deciduous forest near streams, where semi-feral, lives in villages and cultivation.

Food : Grain, shoots, insects, lizards and snakes.

Order GRUIFORMES

Family TURNICIDAE

64. *Turnix suscitator* (Gmelin, 1789)

Common Buttonquail

1969. *Turnix suscitator* : Ali & Ripley, *H. B. No. 133, Vol. 2* : 133.

Observation localities : Past record (Choudhari and Khan, 2002).

Status and distribution : Resident, from Punjab in west, whole of the continental and peninsular India.

Habitat : In the wild state, in undergrowth in deciduous forest near streams, where semi-feral, lives in villages and cultivation.

Food : Grass, weed seeds and small insects.

Family GRUIDAE

65. *Grus antigone* (Linnaeus, 1758)

Sarus Crane

1969. *Grus antigone* : Ali & Ripley, *H. B. No. 323, Vol. 2* : 141.

Observation localities : Magdhi Village.

Status and distribution : Resident. Recently recorded mainly from Gujarat and Rajasthan east to Eastern Uttar Pradesh and Madhya Pradesh. Formerly ranged from North India east to Assam and south to N. Andhra Pradesh.

Habitat : Open cultivation in well-watered country, marshes, lakes and rivers.

Food : Mainly fish, also crustaceans, large insects, frogs and lizards.

Family RALLIDAE

66. *Amaurornis phoenicurus* (Pennant, 1769)

White-breasted Waterhen

1969. *Amaurornis phoenicurus* : Ali & Ripley, *H. B. No. 343, Vol. 2* : 168.

Observation localities : Charan Ganga River Near Tala Entrance Gate.

Status and distribution : Resident. Throughout the Indian Union up to the base of the Himalayas; Andaman and Nicobar Islands.

Habitat : On the margin of jheels and ponds, marshy ground.

Food : Insects, worms, molluscs, grain and shoots of paddy and marsh plants.

67. *Gallinula chloropus* (Linnaeus, 1758)

Common Moorhen

1969. *Gallinula chloropus* : Ali & Ripley, *H. B. No. 347, Vol. 2* : 175.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout most of the Indian subcontinent except parts of the north-west, north-east and Himalayas.

Habitat : Marshes, lakes, ponds, village tanks and ditches with emergent aquatic vegetation.

Food : Omnivorous, eating vegetable matter and insects.

68. *Fulica atra* Linnaeus, 1758

Common Coot

1969. *Fulica atra* : Ali & Ripley, *H. B. No. 350, Vol. 2* : 180.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout much of the Indian subcontinent, except parts of the north-west, north-east and Himalayas.

Habitat : Lakes and irrigation tanks with large areas of open water and marginal emergent vegetation.

Food : Mainly vegetarian, also molluscs, worms and insects.

Order CHARADRIIFORMES

Family JACANIDAE

69. *Hydrophasianus chirugus* (Scopoli, 1786)

Pheasant-tailed Jacana

1969. *Hydrophasianus chirugus* : Ali & Ripley, *H. B. No. 358, Vol. 2* : 199.

Observation localities : Khitoli Dam.

Status and distribution : Resident. Throughout India, except most of Himalayas.

Habitat : Lakes, tanks and village pools well vegetated with floating aquatic plants.

Food : Mainly vegetarian, also molluscs, aquatic insects.

70. *Metopidius indicus* (Latham, 1790)

Bronze-winged Jacana

1969. *Metopidius indicus* : Ali & Ripley, *H. B. No. 359, Vol. 2* : 201.

Observation localities : Bamera Dam.

Status and distribution : Resident. Mainly from Gujarat and NW Uttar Pradesh east through the Nepal lowlands to NE India and south throughout the peninsula.

Habitat : Lakes, ponds and village tanks well vegetated with floating aquatic plants.

Food : Mainly seeds and roots and also aquatic invertebrates.

Family ROSTRATULIDAE

71. *Rostratula benghalensis* (Linnaeus, 1758)

Greater Painted-Snipe

1969. *Rostratula benghalensis* : Ali & Ripley, *H. B. No. 429, Vol. 2* : 325.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Widespread in India but few records from parts of Northwest, Central and East India.

Habitat : Freshwater marshes, pools and ditches thickly vegetated with reeds and with mud patches.

Food : Crustaceans, insects, molluscs, vegetative matter.

Family CHARADRIIDAE

72. *Charadrius dubius* Scopoli, 1786

Little Ringed Plover

1969. *Charadrius dubius* : Ali & Ripley, *H. B. No. 380, Vol. 2* : 231.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout India.

Habitat : Sand, shingle and mud margins of lakes, pools and rivers, wet grasslands and paddy fields, intertidal areas on seashore, mudflats and tidal creeks.

Food : Small insects, crustaceans and worms.

73. *Vanellus malabaricus* (Boddaert, 1783)

Yellow-wattled Lapwing

1969. *Vanellus malabaricus* : Ali & Ripley, *H. B. No. 370, Vol. 2* : 218.

Observation localities : Bamera Dam.

Status and distribution : Resident. Throughout India.

Habitat : Dry stubbles and fallow fields, stony ground, abandoned cultivation, bare gravel plains and open dry country with very short grass.

Food : Mainly insectivorous.

74. *Vanellus duvaucelii* (Lesson, 1826)

River Lapwing

1969. *Vanellus spinosus* : Ali & Ripley, *H. B. No. 369, Vol. 2* : 216.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident with some nomadic seasonal movements.

Habitat : Near water or river.

Food : Insects, worms, crustaceans.

75. *Vanellus indicus* (Boddaert, 1783)**Red-wattled Lapwing**

1969. *Vanellus indicus* : Ali & Ripley, *H. B. No. 366, Vol. 2* : 212.

Observation localities : Tala Range, Bamera Dam.

Status and distribution : Resident. Throughout India.

Habitat : Any open flat ground near water.

Food : Insects, crustaceans and worms.

Family SCOLOPACIDAE

76. *Gallinago gallinago* (Linnaeus, 1758)**Common Snipe**

1969. *Gallinago gallinago* : Ali & Ripley, *H. B. No. 409, Vol. 2* : 287.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident/Winter visitor partly. Throughout India.

Habitat : Marshes, flooded paddy stubbles, muddy edges of rivers and pools.

Food : Aquatic invertebrates.

77. *Tringa erythropus* (Pallas, 1764)**Spotted Redshank**

1969. *Tringa erythropus* : Ali & Ripley, *H. B. No. 392, Vol. 2* : 255.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor partly. Throughout India.

Habitat : Jheels and tanks inland, as well as tidal creeks and estuaries.

Food : Aquatic invertebrates.

78. *Tringa nebularia* (Gunner, 1767)**Common Greenshank**

1969. *Tringa nebularia* : Ali & Ripley, *H. B. No. 396, Vol. 2* : 261.

Observation localities: Past record (Choudhari & Khan, 2002).

Status and distribution: Migrant. Indian subcontinent, Andaman.

Habitat : Marshes, margins of ponds, lagoons and mudflats.

Food : Insects, molluscs, crustaceans and other invertebrates, also small frogs.

79. *Tringa ochropus* Linnaeus, 1758

Green Sandpiper

1969. *Tringa ochropus* : Ali & Ripley, *H. B. No. 397, Vol. 2* : 263.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Throughout Indian.

Habitat : Jheels, village tanks, puddles, streams and trickles.

Food : Aquatic insects, molluscs, crustaceans and other invertebrates.

80. *Tringa glareola* Linnaeus, 1758

Wood Sandpiper

1969. *Tringa glareola* : Ali & Ripley, *H. B. No. 398, Vol. 2* : 265.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Throughout India.

Habitat : Marshes, village tanks, lakes, wet paddy fields, mudflats and tidal creeks.

Food : Insects, crustaceans and worms.

81. *Actitis hypoleucos* Linnaeus, 1758

Common Sandpiper

1969. *Actitis hypoleucos* : Ali & Ripley, *H. B. No. 401, Vol. 2* : 271.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Throughout India.

Habitat : Village tanks, banks of streams, rivers, canals, lakes, tidal creeks, coastal wetlands.

Food : Insects, crustaceans and worms.

82. *Calidris minuta* (Leisler, 1812)

Little Stint

1969. *Callidris minuta* : Ali & Ripley, *H. B. No. 409, Vol. 2* : 301.

Observation Localities : Past record (Choudhari & Khan, 2002).

Status and Distribution : Winter visitor.

Habitat : Village tanks, banks of streams, rivers, canals, lakes, tidal creeks, coastal wetlands.

Food : Tiny molluscs, crustaceans, insects and worms. Occasionally seeds of marshy plants.

83. *Calidris temminckii* (Leisler, 1812)

Temminck's Stint

1969. *Calidris temminckii* : Ali & Ripley, *H. B. No. 409, Vol. 2* : 303.

Observation Localities : Past record (Choudhari & Khan, 2002).

Status and Distribution : Winter visitor.

Habitat : Freshwater and coastal water.

Food : Tiny Molluscs, crustaceans, insects, and worms. Occasionally seeds of marsh and plants.

Family RECURVIROSTRIDAE

84. *Himantopus himantopus* (Linnaeus, 1758)

Black-winged Stilt

1969. *Himantopus himantopus* : Ali & Ripley, *H. B. No. 430, Vol. 2* : 329.

Observation localities : Near Umaria and Magdhi Village

Status and distribution : Resident. Throughout India.

Habitat : Freshwater and brackish marshes, pools, village tanks, reservoirs, saltpans and shallow margins of lakes.

Food : Fishes, insects and other aquatic invertebrates.

Family BURHINIDAE

85. *Burhinus oedicnemus* (Linnaeus, 1758)

Stone-Curlew

1969. *Burhinus oedicnemus* : Ali & Ripley, *H. B. No. 436, Vol. 3* : 2.

Observation localities : Several times calls were heard in evening hours near Biodiversity Training Centre, Tala.

Status and distribution : Resident. Throughout much of the Indian subcontinent.

Habitat : Desert, stony hills, open dry forest and fields.

Food : Insects, worms, slugs, small reptiles and some times small seeds.

86. *Esacus recurvirostris* (Cuvier, 1829)

Great Stone-Plover

1969. *Esacus recurvirostris* : Ali & Ripley, *H. B. No. 437, Vol. 3* : 5.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Mainly resident but with some local migratory.

Habitat : Desert, stony hills, open dry forest and fields.

Food : Frogs, insects and molluscs.

Family LARIDAE

87. *Sterna aurantia* J.E. Gray, 1831

River Tern

1969. *Sterna aurantia* : Ali & Ripley, *H. B. No. 463, Vol. 3* : 48.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout the Indian subcontinent except the Himalayas, parts of Northwest and Northeast.

Habitat : Large inland waters.

Food : Mostly fish, also crustaceans, tadpoles, water insects.

88. *Sterna acuticauda* J.E.Gray, 1831

Black-bellid Tern

1969. *Sterna acuticauda* : Ali & Ripley, *H. B. No. 469, Vol. 3* : 57

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident, Throughout the Indian Union.

Habitat : Inland freshwater reservoir.

Food : Mainly fish also insect and crustaceans.

Order COLUMBIFORMES

Family PTEROCLIDAE

89. *Pterocles indicus* (Gmelin, 1789)**Painted Sandgrouse**

1969. *Pterocles indicus* : Ali & Ripley, *H. B. No. 492, Vol. 3* : 92.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident locally nomadic, Peninsular India, Aravali Hills, Gujarat, Bihar, Orissa.

Habitat : Bare, stony sparsely-scrubbed foothills and plateau country.

Food : Mostly vegetarian, grass seeds, small insects like termites.

Family COLUMBIDAE

90. *Columba livia* Gmelin, 1789**Blue Rock Pigeon**

1969. *Columba livia* : Ali & Ripley, *H. B. No. 517, Vol. 3* : 125.

Observation localities : Common in all the ranges.

Status and distribution : Resident. Throughout India.

Habitat : Feral birds inhabit villages, towns and cities; wild birds frequent cliffs, gorges and ruins.

Food : Mainly seeds also green shoots.

91. *Streptopelia orientalis* (Latham, 1790)**Oriental Turtle Dove**

1969. *Streptopelia orientalis* : Ali & Ripley, *H. B. No. 531-533, Vol. 3* : 142.

Observation localities : Tala Range.

Status and distribution : Winter visitor. Indian subcontinent, to c. 4000 m in the Himalayas.

Habitat : Open dry country with cultivation and groves of deciduous trees.

Food : Mainly grains, also grass, bamboo and weed seeds.

92. *Streptopelia senegalensis* Linnaeus, 1766**Little Brown Dove**

1969. *Streptopelia senegalensis* : Ali & Ripley, *H. B. No. 541, Vol. 3* : 142.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Indian subcontinent.

Habitat : Dry deciduous biotope.

Food : Mainly grain, also grass, bamboo and weed seeds.

93. *Streptopelia chinensis* (Scopoli, 1786)**Spotted Dove**

1969. *Streptopelia chinensis* : Ali & Ripley, *H. B. No. 537, Vol. 3* : 152.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Throughout India.

Habitat : Gardens, cultivation around villages and towns, open moist deciduous forests.

Food : Mainly grain, also grass, bamboo and weed seeds.

94. *Streptopelia tranquebarica* (Hermann, 1804)**Red Collared-Dove**

1969. *Streptopelia tranquebarica* : Ali & Ripley, *H. B. No. 535, Vol. 3* : 149.

Observation localities : Tala Village.

Status and distribution : Resident. Throughout India.

Habitat : Open country and cultivation with some trees, scrub jungle and light woodland.

Food : Mainly grain, also seeds of grasses and weeds.

95. *Streptopelia decaocto* (Frisvaldszky, 1838)**Eurasian Collared-Dove**

1969. *Streptopelia decaocto* : Ali & Ripley, *H. B. No. 534, Vol. 3* : 147.

Observation localities : Tala Village.

Status and distribution : Resident. Throughout India.

Habitat : Open dry country with cultivation and groves of deciduous trees.

Food : Mainly grain, also grass, bamboo and weed seeds.

96. *Chalcophaps indica* (Linnaeus, 1758)

Emerald Dove

1969. *Chalcophaps indica* : Ali & Ripley, *H. B. No. 542, Vol. 3* : 157.

Observation localities : Bamboo thickets near VIP Gate.

Status and distribution : Resident. Throughout the Indian subcontinent, most of Himalayas and South West India.

Habitat : Open dry country with cultivation and groves of deciduous trees.

Food : Seeds and berries.

97. *Treron phoenicoptera* (Latham, 1790)

Yellow-legged Green-Pigeon

1969. *Treron phoenicoptera* : Ali & Ripley, *H. B. No. 503, Vol. 3* : 106.

Observation localities : Biodiversity Training Centre and near Tala Gate.

Status and distribution : Resident. Throughout peninsular India except much of the northwest, Himalayas and extreme of E. India.

Habitat : Fig and other fruiting trees in deciduous forest, groves around villages and cultivation and overgrown gardens.

Food : Wild figs, other fruits and berries.

Order PSITTACIFORMES

Family PSITTACIDAE

98. *Psittacula eupatria* (Linnaeus, 1766)

Alexandrine Parakeet (Large Indian Parakeet)

1969. *Psittacula eupatria* : Ali & Ripley, *H. B. No. 546, Vol. 3* : 166.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Common and widespread in N. India, sporadic south of 18° N; plains up to 1600 m. in Himalayas and up to 900 m. in peninsular hills.

Habitat : Moist and dry deciduous forest and well wooded areas; parks, gardens and trees around habitation.

Food : Fruits and seeds.

99. *Psittacula krameri* (Scopoli, 1769)

Rose-ringed Parakeet

1969. *Psittacula krameri* : Ali & Ripley, *H. B. No. 549 & 550, Vol. 3* : 169 & 171.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Northern India and peninsular India.

Habitat : Deciduous forest, open woodland, cultivation, gardens and vicinity of habitation.

Food : Fruits and seeds.

100. *Psittacula cyanocephala* (Linnaeus, 1766)

Plum-headed Parakeet

1969. *Psittacula cyanocephala* : Ali & Ripley, *H. B. No. 557, 558, Vol. 3* : 178, 179.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Himalayas east to W. Bengal and south through much of the peninsula, except parts of the northwest and northeast.

Habitat : Moist deciduous forest, well wooded areas and cultivation in forest clearings and at forest edges.

Food : Fruits and seeds.

Order CUCULIFORMES

Family CUCULIDAE

101. *Clamator jacobinus* (Boddaert, 1783)

Pied Crested Cuckoo

1969. *Clamator jacobinus* : Ali & Ripley, *H. B. No. 578, Vol. 3* : 208.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and Distribution : Resident in India. Migratory population in M.P. and Andhra Pradesh.

Habitat : Low land of hills. Lightly wooded country, in dry-moist deciduous country.

Food : Insects.

102. *Hierococcyx varius* Vahl, 1797

Brainfever Bird

1969. *Hierococcyx varius* : Ali & Ripley, *H. B. No. 573, Vol. 3* : 200.

Observation localities : Call heard near Biodiversity Training Centre and Magdhi

Status and distribution : Resident. Throughout much of the Indian subcontinent, except parts of the northwest.

Habitat : Well wooded deciduous and semi-evergreen country, favouring groves, mangroves, orchards, gardens, cultivation.

Food : Fruits and insects.

103. *Cuculus micropterus* Gould, 1838

Indian Cuckoo

1969. *Cuculus micropterus* : Ali & Ripley, *H. B. No. 576, Vol. 3* : 20.

Observation localities : Tala Range.

Status and distribution : Resident and seasonal visitor. Breeds in Himalayas and eastern subcontinent and southward throughout the subcontinent.

Habitat : Forest and well-wooded country.

Food : Insects.

104. *Cuculus canorus* Linnaeus, 1758

Common Cuckoo

1969. *Cuculus canorus* : Ali & Ripley, *H. B. No. 578, Vol. 3* : 208.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident and seasonal local migrant. Breeds in hills of Pakistan, Himalayas, and North, Northeast; breeds also in the peninsula (Madhya Pradesh, Maharashtra, Gujarat).

Habitat : Forest and well-wooded country.

Food : Insects.

105. *Cacomantis passerinus* (Vahl, 1797)**Indian Plaintive Cuckoo**

1969. *Cacomantis passerinus* : Ali & Ripley, *H. B. No. 584, Vol. 3* : 218.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout the subcontinent. Summers in Himalayas and from Himachal Pradesh east to Bhutan.

Habitat : Open forest, groves, wooded gardens, plantations.

Food : Insects.

106. *Surniculus lugubris* (Horsfield, 1821)**Drongo Cuckoo**

1969. *Surniculus lugubris* : Ali & Ripley, *H. B. No. 588, Vol. 3* : 224.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident in near costal region and seen here as summer migrant.

Habitat : Open secondary forest ,plantations, orchards,etc.

Food : Hairy and other caterpillars, soft-bodied insects, and occasionally fruit (*Fiscus sp.*).

107. *Eudynamys scolopacea* (Linnaeus, 1758)**Asian Koel (Indian Koel)**

1969. *Eudynamys scolopacea* : Ali & Ripley, *H. B. No. 590, Vol. 3* : 227.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Throughout India.

Habitat : Open woodland, gardens, orchards, groves around cultivation and villages, parks and areas with scattered trees in towns and cities.

Food : Mainly fruits and berries, also invertebrates and bird eggs.

108. *Phaenicophaeus leschenaultii* Lesson, 1830**Sirkeer Malkoha**

1969. *Phaenicophaeus leschenaultii* : Ali & Ripley, *H. B. No. 598, Vol. 3* : 237.

Observation localities : Umaria Road.

Status and distribution : Resident. North-west India, Uttar Pradesh, Madhya Pradesh to eastern Maharashtra 20° N Latitude.

Habitat : Thorn scrub and *Acacia* bushes in stony places, also semi-desert.

Food : Insects and caterpillars.

109. *Centropus sinensis* (Stephens, 1815)

Greater Coucal

1969. *Centropus sinensis* : Ali & Ripley, *H. B. No. 602, Vol. 3* : 243.

Observation localities : Several times near Tala Gate.

Status and distribution : Resident. Throughout peninsular India including Madhya Pradesh, Andhra Pradesh and Orissa.

Habitat : Tall grasslands, bamboo or scrub jungle, shrub-beries in cultivation and gardens, orchards, groves and thick cover adjacent to wetlands.

Food : Wide variety of small animal prey, also eggs and nestlings.

Order STRIGIFORMES

Family STRIGIDAE

110. *Otus bakkamoena* Pennant, 1769

Collared Scops-Owl

1969 *Otus bakkamoena* : Ali & Ripley, *H. B. No. 622, Vol. 3* : 268.

Observation localities : Jamuniha.

Status and distribution : Resident. Throughout India.

Habitat : Open deciduous forest and groves of trees in or near towns and villages.

Food : Beetles and other insects occasionally mice and lizards.

111. *Bubo bubo* (Linnaeus, 1758)

Eurasian Eagle-Owl

1969. *Bubo bubo* : Ali & Ripley, *H. B. No. 627, Vol. 3* : 273.

Observation localities : Near Chakradhara Medow Tiraha at night.

Status and distribution : Resident. Throughout the sobcontinent.

Habitat : Rocky hills with outscoured steep-sided ravines, and well-wooded country.

Food : Small birds, lizards, rats, mice and large insects.

112. *Ketupa zeylonensis* (Gmelin, 1822)

Brown Fish-Owl

1969. *Ketupa zeylonensis* : Ali & Ripley, *H. B. No. 631, Vol. 3* : 280.

Observation localities : Jamuniha.

Status and distribution : Resident. Mainly from E. Gujarat and NW Uttar Pradesh east to Arunachal Pradesh and south through the subcontinent.

Habitat : Forest and well-wooded areas near water in tropical and subtropical zone.

Food : Mainly fish, frog and crabs.

113. *Strix ocellata* (Lesson, 1839)

Mottled Wood Owl

1969. *Strix ocellata* : Ali & Ripley, *H. B. No. 657, Vol. 3* : 305.

Observation localities : Near Tala Gate on *Legerstomia parviflora* Tree.

Status and distribution : Resident. Throughout India.

Habitat : Wooded plains country, groves of densely foliated ancient trees in village environs.

Food : Small birds, reptiles, mice and insects.

114. *Glaucidium radiatum* (Tickell, 1833)

Jungle Owlet

1969. *Glaucidium radiatum* : Ali & Ripley, *H. B. No. 636, Vol. 3* : 286.

Observation localities : Throughout the reserve.

Status and distribution : Resident. Throughout India, common in plains and hills below 2000 m.

Habitat : Open broadleaved forest and secondary growth, mainly in tropical and subtropical zones.

Food : Mainly insects.

115. *Athene brama* (Temminck, 1821)**Spotted Owlet**

1969. *Athene brama* : Ali & Ripley, *H. B. No. 650, Vol. 3* : 302.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout India except parts of the northeast and Himalayas.

Habitat : Villages, towns, cities, ruins, cultivation and groves of old trees.

Food : Mainly insects.

116. *Ninox scutulata* (Raffles, 1822)**Brown Hawk-Owl**

1969. *Ninox scutulata* : Ali & Ripley, *H. B. No. 642, Vol. 3* : 292.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Indian Union from the Himalayan foothills at Dehradun eastward to NE. Kerala and Andaman and Nicobar islands.

Habitat : Plains and up to c. 1500 m elevation, in forest and well-wooded country with groves of trees along streams and nalas, often close to habitation.

Food : Small birds, lizards, rats, mice and large insects.

Order CAPRIMULGIFORMES**Family CAPRIMULGIDAE**117. *Caprimulgus indicus* Latham, 1790**Indian Jungle Nightjar**

1970. *Caprimulgus indicus* : Ali & Ripley, *H. B. No. 671, Vol. 4* : 10.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout India.

Habitat : Open scrub, and dry and moist-deciduous forest, from plains level up to c. 2300 m.

Food : Mainly flying insects.

118. *Caprimulgus asiaticus* Latham, 1790
Common Indian Nightjar

1970. *Caprimulgus asiaticus* : Ali & Ripley, *H. B. No. 680, Vol. 4* : 21.

Observation localities : In night on Chakradhara Road to Sheshshaiya.

Status and distribution : Resident. Widespread in India, foothills up to 1500 m.

Habitat : Thinly wooded and scrub country, fallow cultivation with thickets, young plantations and overgrown gardens in rural areas in dry plains and foothills.

Food : Mainly flying insects.

119. *Caprimulgus affinis* Horsfield, 1821
Franklin's Nightjar

1970. *Caprimulgus affinis* : Ali & Ripley, *H. B. No. 682, Vol. 4* : 23.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout India.

Habitat : Open forest, grassland with rocky out-crops, stony hillsides and ravines with scattered scrub.

Food : Mainly flying insects.

Order APODIFORMES

Family APODIDAE

120. *Zonavena sylvatica* (Tickell, 1846)
White rumped Needletail-Swift

1970. *Chaetura sylvatica* : Ali & Ripley, *H. B. No. 692, Vol. 4* : 37.

2001. *Zonavena sylvatica* : Manakadan & Pittie, *Buceros*, Vol. 6, No. 1 : 11.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Himalayas, Sikkim, W. Bengal, Assam, M. P., Maharashtra, Goa, Tamil Nadu and Kerala.

Habitat : Evergreen and moist-deciduous fiotope, from plains level to c.1700m.

Food : Insects.

121. *Apus affinis* (J.E. Gray, 1830)

Indian House Swift

1970. *Apus affinis* : Ali & Ripley, *H. B. No. 703, Vol. 4* : 51.

Observation localities : Biodiversity Training Centre, Tala.

Status and distribution : Resident. Throughout the Indian subcontinent except parts of the North-east.

Habitat : Habitation, cliffs and ruins.

Food : Insects.

Family HEMIPROCNIDAE

122. *Hemiprocne coronata* (Tickell, 1833)

Crested Tree-Swift

1970. *Hemiprocne coronata* : Ali & Ripley, *H. B. No. 709, Vol. 4* : 58

Observation localities : Sehara Dadra.

Status and distribution : Resident. Throughout the Indian subcontinent except parts of the northwest.

Habitat : Villages, towns, cities, cliffs, forts and ruins.

Food : Insects.

Order Coraciiformes

Family Alcedinidae

123. *Alcedo atthis* (Linnaeus, 1758)

Small Blue Kingfisher

1970. *Alcedo atthis* : Ali & Ripley, *H. B. No. 723, Vol. 4* : 76.

Observation localities : Near Bathan Talab.

Status and distribution : Resident. Throughout India.

Habitat : Streams, rivers, canals, ditches, ponds and lakes; also mangrove swamps and the seashore in winter.

Food : Mainly fish, tadpoles and invertebrates.

124. *Halcyon capensis* (Linnaeus, 1766)**Stork-billed Kingfisher**

1970. *Halcyon capensis* : Ali & Ripley, *H. B. No. 730, Vol. 4* : 84.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. From Uttar Pradesh and Gujarat east through much of the subcontinent.

Habitat : Deeply shaded lakes, slow moving rivers, streams and irrigation channels in well-wooded country.

Food : Mainly fish, also crabs, reptiles, frogs, occasionally young birds and eggs.

125. *Halcyon smyrnensis* (Linnaeus, 1758)**White-breasted Kingfisher**

1970. *Halcyon smyrnensis* : Ali & Ripley, *H. B. No. 736, 737, Vol. 4* : 89.

Observation localities : Sighted at many places.

Status and distribution : Resident. Throughout India.

Habitat : Wide-ranging, often far from water, cultivation, forest-edge, gardens, dry deciduous forest, streams, rivers, pools, canals, village tanks, coasts.

Food : Fish, tadpoles, lizard, grasshoppers and other insects.

126. *Ceryle rudis* (Linnaeus, 1758)**Lesser Pied Kingfisher**

1970. *Ceryle rudis* : Ali & Ripley, *H. B. No. 719, Vol. 4* : 71.

Observation localities : Bamera Dam.

Status and distribution : Resident. Throughout India, common below 1800 m.

Habitat : Slow-moving streams and rivers, ponds, lakes, canals, irrigation tanks, ditches.

Food : Fish, tadpoles, frogs, aquatic insects.

Family MEROPIDAE

127. *Nyctyornis athertoni* (Jardine & Selby, 1828)**Blue-bearded Bee-eater**

1970. *Nyctyornis athertoni* : Ali & Ripley, *H. B. No. 753, Vol. 4* : 112.

Observation localities : Tala Range.

Status and distribution : Resident. Suitable biotopes in peninsular india.

Habitat : Secondary evergreen and moist-deciduous forest.

Food : Flying insects, mainly bees, wasps, dragonflies and beetles.

128. *Merops orientalis* Latham, 1801

Small Green Bee-eater

1970. *Merops orientalis* : Ali & Ripley, *H. B. No. 750, Vol. 4* : 109.

Observation localities : Near Tala Gate- Charanganga River.

Status and distribution : Resident. Throughout India.

Habitat : Open country with scattered trees, cultivation; on coasts, favours sandy areas above high-water mark; also semi-desert and grazing land.

Food : Mainly flying insects.

129. *Merops philippinus* Linnaeus, 1766

Blue-tailed Bee-eater

1970. *Merops philippinus* : Ali & Ripley, *H. B. No. 748, Vol. 4* : 106.

Observation localities : Near Tala Gate Charanganga River.

Status and distribution : Resident. Northern India through Uttar Pradesh, Bengal, patchily throughout peninsula south to Karnataka.

Habitat : Vicinity of water in more wooded forest, near jheels, tanks.

Food : Flying insects, mainly hymenoptera.

Family CORACIIDAE

130. *Coracias benghalensis* (Linnaeus, 1758)

Indian Roller

1970. *Coracias benghalensis* : Ali & Ripley, *H. B. No. 755, Vol. 4* : 116.

Observation localities : Common in many places.

Status and distribution : Resident. Throughout India.

Habitat : Cultivation, open woodlands, gardens.

Food : Insects.

Family UPUPIDAE

131. *Upupa epops* Linnaeus, 1758**Common Hoopoe**

1970. *Upupa epops* : Ali & Ripley, *H. B. No. 763, Vol. 4* : 124.

Observation localities : Rajbahra & Chakradhara Meadow.

Status and distribution : Resident. Throughout India except parts of NW.

Habitat : Open country, cultivation and villages.

Food : Insects.

Family BUCEROTIDAE

132. *Ocyrceros birostris* (Scopoli, 1786)**Indian Grey Hornbill**

1970. *Tockus birostris* : Ali & Ripley, *H. B. No. 767, Vol. 4* : 130.

Observation localities : Common in many places

Status and distribution : Resident. Wide-spread in India and locally common up to 1000 m.

Habitat : Open deciduous forest, groves, gardens, cultivation, roadside avenues and orchards.

Food : Fruits, insects, lizards, young mice.

133. *Anthracoceros coronatus* (Boddaert, 1783)**Malabar Pied Hornbill**

1970. *Anthracoceros coronatus* : Ali & Ripley, *H. B. No. 775, Vol. 4* : 142.

Observation localities : Near Neelgai Tiraha.

Status and distribution : Resident. Andhra Pradesh and Madhya Pradesh; Western ghats, E. India.

Habitat : Open forest and large fruit trees near villages.

Food : Fallen fruit, termites and other insects, also fish and nestling birds.

Order PICIFORMES

Family CAPITONIDAE

134. *Megalaima zeylanica* (Gmelin, 1786)**Brown-headed Barbet**

1970. *Megalaima zeylanica* : Ali & Ripley, *H. B. No. 780, Vol. 4* : 150.

Observation localities : All ranges of the reserve.

Status and distribution : Resident. Lower Himalayas; continental India east through Madhya Pradesh, Orissa south to Godavari River.

Habitat : Well-wooded and dry deciduous trees, especially fig; open forest, groves near habitation and gardens.

Food : Fruits and berries, flying termites.

135. *Megalaima haemacephala* (P.L.S. Muller, 1776)

Coppersmith Barbet

1970. *Megalaima haemacephala* : Ali & Ripley, *H. B. No. 792, Vol. 4* : 163.

Observation localities : Tala.

Status and distribution : Resident. Throughout India.

Habitat : Deciduous forest, open wooded country, cultivation, groves.

Food : Figs and other fruits.

Family PICIDAE

136. *Jynx torquilla* Linnaeus, 1758

Eurasian Wrineck

1970. *Jynx torquilla* : Ali & Ripley, *H. B. No. 797, Vol. 4* : 170.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter migrant.

Habitat : Summer in open forest and winter in open scrub, and cultivation edges.

Food : Ants and their eggs.

137. *Dendrocopos nanus* (Vigors, 1832)

Brown-capped Pygmy Woodpecker

1970. *Dendrocopos nanus* : Ali & Ripley, *H. B. No. 852, Vol. 4* : 231.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. North India from Punjab, Rajasthan and Gujarat, east to Bengal, south through the peninsula.

Habitat : Light deciduous forest and trees near cultivation, bamboo and secondary forest.

Food : Mainly insects and grubs.

138. *Dendrocopos mahrattensis* (Latham, 1801)

Yellow-fronted Pied Woodpecker

1970. *Dendrocopos mahrattensis* : Ali & Ripley, *H. B. No. 847, Vol. 4* : 226.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout India except Himalayas and most of Northeast India.

Habitat : Open woodland, open country with scattered trees.

Food : Insects and grubs.

139. *Celeus brachyurus* (Vieillot, 1818)

Rufous Woodpecker

1970. *Celeus brachyurus* : Ali & Ripley, *H. B. No. 803, Vol. 4* : 178.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. West to Orissa, Madhya Pradesh, northern Andhra to 18° N Latitude.

Habitat : Forest, secondary growth.

Food : Ants, termites, rotten logs, cow dung.

140. *Picus xanthopygaeus* (J. E. Gray & G.R. Gray, 1846)

Little Scaly-bellied Green Woodpecker

1970. *Picus xanthopygaeus* : Ali & Ripley, *H. B. No. 808, Vol. 4* : 184.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. More or less throughout peninsular India.

Habitat : Semi-evergreen, moist-deciduous and mixed bamboo biotope.

Food : Insects, ants, termites, beetles, etc.

141. *Dinopium benghalense* (Linnaeus, 1758)**Lesser Golden-backed Woodpecker**

1970. *Dinopium benghalense* : Ali & Ripley, *H. B. No. 819, Vol. 4* : 197.

Observation localities : Common in many places.

Status and distribution : Resident. Subcontinent up to Orissa and Madhya Pradesh, N. Maharashtra, Gujarat, Rajasthan.

Habitat : Light forest, plantations, groves.

Food : Mainly ants, also ripe fruits, flower nectar.

142. *Chrysocolaptes festivus* (Boddaert, 1783)**Black-shouldered Woodpecker**

1970. *Chrysocolaptes festivus* : Ali & Ripley, *H. B. No. 858, Vol. 4* : 239.

Observation localities : Near Umaria road Sanyasi baba.

Status and distribution : Resident. Practically all peninsular India except for western and eastern India.

Habitat : Light deciduous forest, scrub and scattered trees.

Food : Insects and grubs.

Order PASSERIFORMES

Family PITTIDAE

143. *Pitta brachyura* (Linnaeus, 1766)**Indian Pitta**

1970. *Pitta brachyura* : Ali & Ripley, *H. B. No. 867, Vol. 4* : 252.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident migrant. Throughout India.

Habitat : Deciduous and evergreen forest, bamboo and scrub jungle, thickly vegetated ravines.

Food : Insects, worms and grubs.

Family ALAUDIDAE

144. *Mirafra assamica* Horsfield, 1840**Bengal Bush-Lark**

1972. *Mirafra assamica* : Ali & Ripley, *H. B. No. 873, Vol. 5* : 5.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Southern Orissa, Madhya Pradesh and Andhra, south to Tamil Nadu and Kerala.

Habitat : Stony scrub and fallow cultivation.

Food : Seeds and small insects.

145. *Eremopterix grisea* (Scopoli, 1786)**Ashy-crowned Sparrow-Lark**

1972. *Eremopterix grisea* : Ali & Ripley, *H. B. No. 878, Vol. 5* : 9.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Widespread throughout India but apparently absent from Himalayas.

Habitat : Uncultivated tracts with scattered thorn bushes and grass clumps, cultivation and fallow and ploughed fields around villages, stony scrub and dry tidal mudflats.

Food : Seeds and insects.

146. *Ammomanes phoenicurus* (Franklin, 1831)**Rufous-tailed Finch-Lark**

1972. *Ammomanes phoenicurus* : Ali & Ripley, *H. B. No. 882, Vol. 5* : 14.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. The greater part of peninsular and continental India, north to the Ganga River and south to a line from Hugli through Bellary (parallel to 15° N Latitude).

Habitat : Open, stony scrub and bush country, ploughed fields, fallow land and the neighbourhood of cultivation.

Food : Seeds, grains, insects.

Family HIRUNDINIDAE

147. *Riparia paludicola* (Vieillot, 1817)**Plain Martin**

1972. *Riparia paludicola* : Ali and Ripley, *H. B. No. 911, Vol. 5* : 51.

Observatio localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident, Madhya Pradesh, Bihar, Orissa etc.

Habitat : Riverine tracts, Vertical sandy banks along the streams, and alluvial cliffs-potential nesting-sites.

Food : Diptera and small beetles.

148. *Hirundo concolor* Sykes, 1893**Dusky Crag-Martin**

1972. *Hirundo concolor* : Ali and Ripley, *H. B. No. 914, Vol. 5* : 55.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident, distributed patchily.

Habitat : Rocky hills and crag and ancient fortifications.

Food : Diptrous insects, small flying insects.

149. *Hirundo rustica* Linnaeus, 1758**Common Swallow**

1972. *Hirundo rustica* : Ali & Ripley, *H. B. No. 916, Vol. 5* : 57.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. In winter, throughout the Indian union.

Habitat : Cultivation, towns, villages, lakes and rivers in open country; usually near water in winter.

Food : Insects.

150. *Hirundo smithii* Leach, 1818**Wire-tailed Swallow**

1972. *Hirundo smithii* : Ali & Ripley, *H. B. No. 921, Vol. 5* : 63.

Observation localities : Near Tala Gate Charanganga River.

Status and distribution : Summer (breeding) visitor.

Habitat : Open country and cultivation near lakes, rivers and canals, also wet paddy fields in summer.

Food : Mainly flying insects.

151. *Hirundo daurica* Linnaeus, 1771

Red-rumped Swallow

1972. *Hirundo daurica* : Ali & Ripley, *H. B. No. 925, Vol. 5* : 68.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout much of the Indian subcontinent, except parts of the northwest and northeast.

Habitat : Summer in upland cultivation and grassy hills, winters in open country and forest clearings.

Food : Mainly flying insects.

152. *Hirundo fluvicola* Blyth, 1885

Streaked-throated Swallow

1972. *Hirundo fluvicola* : Ali & Ripley, *H.B. No. 922, Vol. 5* : 57

Observation localities : Khitoli Dam.

Status and distribution : Resident. Indus plains; widespred in N and C India.

Habitat : Cultivation and open country near water.

Food : Dipteran insects, small flying insects.

Family MOTACILLIDAE

153. *Dendronanthus indicus* (Gmelin, 1789)

Forest Wagtail

1973. *Motacilla indica* : Ali & Ripley, *H. B. No. 1874, Vol. 9* : 273.

2001. *Dendronanthus indicus* : Manakadan & Pittie, *Buceros*, vol. 6, No. 1 : 13.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. North-east and South-west India, to southernmost part of peninsula, Passage migrant to Madhya Pradesh.

Habitat : Broadleaved forest, plantations.

Food : Insects.

154. *Motacilla alba* Linnaeus, 1758

White Wagtail

1973. *Motacilla alba* : Ali & Ripley, *H. B. No. 1885, Vol. 9* : 288.

Observation localities : Near Mahaman Village.

Status and distribution : Winter visitor. Throughout peninsular India.

Habitat : Summers by streams and rivers; winters near marshes, canals, lakes, rivers.

Food : Mainly insects.

155. *Motacilla maderaspatensis* Gmelin, 1789

Large Pied Wagtail

1973. *Motacilla maderaspatensis* : Ali & Ripley, *H. B. No. 1891, Vol. 9* : 296.

Observation localities : Charanganga Near Tala Gate.

Status and distribution : Resident. Throughout peninsular India, from Himalayan foothills, south through Kutch to Kanyakumari.

Habitat : Banks of rivers, pools, lakes, canals and around irrigation barrages.

Food : Mainly insects.

156. *Motacilla citreola* Pallas, 1776

Citrine Wagtail

1973. *Motacilla citreola* : Ali & Ripley, *H. B. No. 1883, Vol. 9* : 284.

Observation localities : Near Rajbahra Medow Dam.

Status and distribution : Winter visitor. Throughout northern India, south to Kutch, Madhya Pradesh and east to Bengal, Assam.

Habitat : Breeds in high-altitude wet grassland, winters at freshwater wetlands.

Food : Mainly insects.

157. *Motacilla flava* Linnaeus, 1758**Yellow Wagtail**

1973. *Motacilla flava* : Ali & Ripley, *H. B. No. 1875, 1876, Vol. 9* : 276, 278.

Observation localities : Near Rajbahra Meadow Dam.

Status and distribution : Winter visitor. Widespread in India.

Habitat : Moist grassy areas and cultivation.

Food : Mainly insects.

158. *Motacilla cinerea* (Tunstall, 1771)**Grey Wagtail**

1973. *Motacilla cinerea* : Ali & Ripley, *H. B. No. 1884, Vol. 9* : 285.

Observation localities : Near Bathan Talab.

Status and distribution : Winter visitor. Throughout peninsular India.

Habitat : Fast flowing, rocky mountain streams in summer, slower streams in the lowlands and foothills in winter.

Food : Mainly insects.

159. *Anthus rufulus* Vieillot, 1818**Paddyfield Pipit**

1973. *Anthus rufulus* : Ali & Ripley, *H. B. No. 1859, Vol. 9* : 253.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout most of the subcontinent, except parts of the North-west, North-east, Himalayas and Kerala.

Habitat : Short grassland, green fodder, crops, stubbles, ploughed and fallow fields.

Food : Mainly insects.

160. *Anthus campestris* (Linnaeus, 1758)**Tawny Pipit**

1973. *Anthus campestris* : Ali & Ripley, *H. B. No. 1861, Vol. 9* : 256.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Mainly North-west India but scattered throughout lowlands.

Habitat : Dry open country including semi-desert, fallow and plough.

Food : Mainly insects and seeds.

161. *Anthus similis* Jerdon, 1840

Brown Rock Pipit

1973. *Anthus similis* : Ali & Ripley, *H. B. No. 1867, Vol. 9* : 265.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Gujarat, Madhya Pradesh, East to North Bengal.

Habitat : Dry grass, scrub, rocky or scrub covered slopes.

Food : Insects, berries.

162. *Anthus hodgsoni* Richmond, 1907

Oriental Tree Pipit

1973. *Anthus hodgsoni* : Ali & Ripley, *H. B. No. 1852, Vol. 9* : 243.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Practically entire Indian peninsula up to Kerala.

Habitat : Open forest, scrub with scattered trees, groves and cultivation.

Food : Mainly insects, grass and weed seeds.

Family Campephagidae

163. *Coracina macei* (Lesson, 1830)

Large Cuckoo-Shrike

1971. *Coracina macei* : Ali & Ripley, *H. B. No. 1072, Vol. 6* : 14.

Observation localities : Kila.

Status and distribution : Resident. Throughout peninsular India except northwest a line from Kutch to Kumaon.

Habitat : Woodland, secondary forest, scrub, gardens, groves.

Food : Insects, berries, wild figs.

164. *Coracina melaschistos* (Hodgson, 1836)

Black-winged cuckoo-shrike

1971. *Coracina melaschistos* : Ali & Ripley, *H. B. No. 1079, Vol. 6* : 19.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Migrant. Practically throughout subcontinent.

Habitat : Open deciduous forest and scrub jungle.

Food : Insects.

165. *Coracina melanoptera* (Rüpell, 1839)

Black-headed Cuckoo-Shrike

1971. *Coracina melanoptera* : Ali & Ripley, *H. B. No. 1079, Vol. 6* : 22.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Mainly Himalayan foothills from Himachal Pradesh east to West Bengal and south throughout much of the peninsula.

Habitat : Light broadleaved forest, secondary growth.

Food : Insects, also berries such as *Lantana*.

166. *Pericrocotus roseus* (Vieillot, 1818)

Rosy Minivet

1971. *Pericrocotus roseus* : Ali & Ripley, *H. B. No. 1089, Vol. 6* : 37.

Observation localities : Tala.

Status and distribution : Resident. East Himalayas, North East Hill states up to 1800 m. N. Indian palins, sporadically in the peninsula.

Habitat : Deciduous or evergreen lightly wooded country.

Food : Insects.

167. *Pericrocotus cinnamomeus* (Linnaeus, 1766)**Small Minivet**

1971. *Pericrocotus cinnamomeus* : Ali & Ripley, *H. B. No. 1093, Vol. 6* : 42.

Observation localities : Near Jamuniha.

Status and distribution : Winter vagrant. Maharashtra, Madhya Pradesh, Kerala, Tamil Nadu and Andaman Islands.

Habitat : Light forest, groves, plantations, scrub with scattered small trees, orchards, gardens.

Food : Insects and their larvae.

168. *Pericrocotus erythropygius* (Jerdon)**White-bellied Minivet**

1971. *Pericrocotus erythropygius* : Ali & Ripley, *H. B. No. 1096, Vol. 6* : 45.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Gujarat, C. Rajasthan east to Bihar and south to C. Maharashtra and Andhra Pradesh through Madhya Pradesh.

Habitat : Deciduous forest, dry scrub with grassy ground.

Food : Insects, spiders.

169. *Pericrocotus ethologus* Bangs & Phillips, 1914**Long-tailed Minivet**

1971. *Pericrocotus ethologus* : Ali & Ripley, *H. B. No. 1085, Vol. 6* : 32.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution: Resident. Winter : Himalayan foothills and NW. Subcontinent. Straggler to sind, Gujarat, Maharashtra and Madhya Pradesh.

Habitat : Open deciduous forest.

Food : Insects, spiders and various larvae as well as buds of acacias and fruits.

170. *Pericrocotus flammeus* (Forster, 1781)**Scarlet Minivet**

1971. *Pericrocotus flammeus* : Ali & Ripley, *H. B. No. 1081, Vol. 6* : 27.

Observation localities : Near T2 Camp.

Status and distribution : Resident. From western Madhya Pradesh to Orissa, Bihar, West Bengal and northern Andhra Pradesh.

Habitat : Open tropical, subtropical and lower temperate forest.

Food : Insects and their larvae.

171. *Tephrodornis pondicerianus* (Gmelin, 1789)

Common Wood-Shrike

1971. *Tephrodornis pondicerianus* : Ali & Ripley, *H. B. No. 1070, Vol. 6* : 11.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Throughout India except parts of the northwest, part from a line Cambay to Kumaon and Himalayas.

Habitat : Dry country, open broadleaved forest, secondary growth, avenues along side canals and roads, gardens and forest plantations.

Food : Insects, caterpillars.

Family PYCNONOTIDAE

172. *Pycnonotus cafer* (Linnaeus, 1766)

Red-vented Bulbul

1971. *Pycnonotus cafer* : Ali & Ripley, *H. B. No. 1127, Vol. 6* : 86.

Observation localities : Common in many places.

Status and distribution : Resident. NW India to Central India, Madhya Pradesh, south to Jagdalpur to Mumbai.

Habitat : Deciduous forest, secondary growth, gardens, roadside avenues and light scrub.

Food : Fruits, berries and insects.

Family IRENIDAE

173. *Aegithina tiphia* (Linnaeus, 1758)

Common Iora

1971. *Aegithina tiphia* : Ali & Ripley, *H. B. No. 1099, Vol. 6* : 50.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. From Saurashtra, plains of Uttar Pradesh, Bihar, south to 20° N Latitude, east to W. Bengal through Orissa and Madhya Pradesh.

Habitat : Broadleaved forest, open country, groves.

Food : Insects and their larvae.

174. *Chloropsis cochinchinensis* (Gmelin, 1788)

Jerdon's Chloropsis

1971. *Chloropsis cochinchinensis* : Ali & Ripley, *H. B. No. 1107, Vol. 6* : 60.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. From S. Gujarat north to C. Uttar Pradesh, east to W. Bengal and south through the peninsula.

Habitat : Forest edges, groves, open forest, gardens, isolated large trees near villages or in cultivation.

Food : Insects and berries.

175. *Chloropsis aurifrons* (Temminck, 1829)

Gold-fronted Chloropsis

1971. *Chloropsis aurifrons* : Ali & Ripley, *H. B. No. 1103, Vol. 6* : 55.

Observation localities : Behind Biodiversity Training Centre on Mahua Tree.

Status and distribution : Resident. Himalayas from N. Uttar Pradesh east to Arunachal Pradesh and south to Chhota Nagpur, Bihar, Orissa and Rajmahal Hills through Madhya Pradesh.

Habitat : Broadleaved evergreen and deciduous forest and secondary growth.

Food : Insects and berries.

Family LANIIDAE

176. *Lanius cristatus* Linnaeus, 1758

Brown Shrike

1972. *Lanius cristatus* : Ali & Ripley, *H. B. No. 949, Vol. 5* : 98.

Observation localities : Near Siddh Baba.

Status and distribution : Winter visitor. Throughout India.

Habitat : Dry-deciduous and semi-evergreen biotope.

Food : Insects, sickly or fledgling birds, baby mice, lizard, etc.

177. *Lanius vittatus* Valenciennes, 1826

Bay-backed Shrike

1972. *Lanius vittatus* : Ali & Ripley, *H. B. No. 940, Vol. 5* : 85.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Mainly from NW India east to W. Bengal and south throughout most of the peninsula. Breeding from February-September.

Habitat : Dry country, open scrub and bushes at the edge of cultivation and acacia groves.

Food : Insects, small reptiles, mammals and birds.

178. *Lanius schach* Linnaeus, 1758

Rufous-backed Shrike

1972. *Lanius schach* : Ali & Ripley, *H. B. No. 946, Vol. 5* : 93.

Observation localities : Near Siddh Baba.

Status and distribution : Resident. Throughout much of the subcontinent, southward up to Karnataka.

Habitat : Bushes in cultivation, gardens, canal side and roadside tree plantations, orchards, open forest and tall grassland with scattered trees.

Food : Insects, small reptiles, mammals and birds.

179. *Lanius meridionalis* Temminck, 1820

Southern Grey Shrike

1972. *Lanius meridionalis* : Ali & Ripley, *H. B. No. 933, Vol. 5* : 78.

Observation localities : Near Siddh Baba.

Status and distribution : Resident. Mainly N, NW and Western Subcontinent.

Habitat : Scrub and open forest.

Food : Insectivorous.

Family MUSCICAPIDAE

Subfamily TURDINAE

180. *Luscinia svecica* (Linnaeus, 1758)**Bluethroat**

1973. *Erithacus svecica* : Ali & Ripley, *H. B. No. 164, Vol. 8* : 218.

2001. *Luscinia svecica* : Manakadan & Pittie, *Buceros, Vol. 6, No. 1* : 16

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. North and Central India south to Londa and Nagpur, east to Jalpaiguri.

Habitat : Summers in dense undergrowth in moist oak, mixed deciduous or coniferous forest or in forest clearings; winters in evergreen forest, and tea and coffee plantations.

Food : Insects.

181. *Monticola cinclorhynchus* (Vigors, 1832)**Blue-headed Rock-Thrush**

1973. *Monticola cinclorhynchus* : Ali & Ripley, *H. B. No. 1723, Vol. 9* : 67.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Tapti River, Madhya Pradesh, Uttar Pradesh and south to Maharashtra, Karnataka.

Habitat : Elephant grass, grass and reedbeds along rivers.

Food : Insects.

182. *Monticola solitarius* (Linnaeus, 1758)**Blue Rock-Thrush**

1973. *Monticola solitarius* : Ali & Ripley, *H. B. No. 1726, Vol. 9* : 73.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor in India.

Habitat : Breeds on open rocky slopes, winters in dry rocky areas.

Food : Chiefly insects, spiders, centipeds, lizards and small frogs.

183. *Zoothera citrina* (Latham, 1790)**Orange-headed Thrush**

1973. *Zoothera citrina* : Ali & Ripley, *H. B. No. 1734, Vol. 9* : 89.

Observation localities : Near Bhitari Tiraha.

Status and distribution : Resident and partial migrant. Peninsular India from southern Gujarat east to W. Bengal and south through much of the subcontinent.

Habitat : Damp and shady places, often near water, in forest, ravines, plantations, bamboo thickets and scrub.

Food : Insects and worms.

184. *Zoothera dauma* (Latham, 1790)**Scaly Thrush**

1973. *Zoothera dauma* : Ali & Ripley, *H. B. No. 1741, Vol. 9* : 97.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident Migrant. Himalayas to Murree and Kashmir to Arunachal Pradesh, Manipur. Winter from c. 1800 m down to the foothills, terai and sparingly south to M. P., eastern Maharashtra, Orissa, Bihar and southern Bengal.

Habitat : Forest of kharshu oak and silver fir, inwinter denxe forest with grasy clearings, dense jungle, sal forest, bamboo brakes, mango topes, etc.

Food : Insects and berries.

185. *Turdus unicolor* Tickell's, 1833**Tickell's Thrush**

1973. *Turdus unicolor* : Ali & Ripley, *H. B. No. 1748, Vol. 9* : 108.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident, Summer in Himalayas; winter mainly farther east and south in India.

Habitat : Open forest and well -wooded areas.

Food : Insects, earthworms, berries and fruits.

186. *Luscinia calliope* (Pallas, 1776)
Siberian Rubythroat

1973. *Erithacus calliope* : Ali & Ripley, *H. B. No. 1643*, Vol. 8 : 215.

2001. *Luscinia calliope* : Manakadan & Pittie, *Buceros*, Vol. 6, No. 1 : 16.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Assam, Nagaland, Manipur, Madhya Pradesh, south to the Chittagong region and eastern India.

Habitat : Dense scrub in the vicinity of water, hedges near village, underbrush along sides of country roads, long grass, sugarcane or reeds and sometimes tea gardens.

Food : Insects and their larvae.

187. *Copsychus saularis* (Linnaeus, 1758)
Oriental Magpie-Robin

1973. *Copsychus saularis* : Ali & Ripley, *H. B. No. 1661*, Vol. 8 : 239.

Observation localities : Near Tala Gate.

Status and distribution : Resident. Most of India, except parts of northwest, northeast and Himalayas.

Habitat : Mainly gardens and groves, open dry broadleaved forest and secondary growth.

Food : Insects and worms.

188. *Saxicoloides fulicata* (Linnaeus, 1776)
Indian Robin

1973. *Saxicoloides fulicata* : Ali & Ripley, *H. B. No. 1719*, Vol. 9 : 62.

Observation localities : Common in many places.

Status and distribution : Resident. Most of India, except the northeast and Himalayas.

Habitat : Dry, stony areas with sparse scrub, arid stony ridges, cultivation, deserted buildings.

Food : Insects.

189. *Phoenicurus ochruros* (Gmelin, 1774)**Black Redstart**

1973. *Phoenicurus ochruros* : Ali & Ripley, *H. B. No. 1672, Vol. 8* : 255.

Observation localities : Near Tala Gate.

Status and distribution : Winter visitor. Winters in foothills of Himalayas and Assam, south through much of India.

Habitat : Meadows, stony ground with scrub, dwarf juniper forest, cultivation, gardens, plantations.

Food : Insects.

190. *Saxicola torquata* (Linnaeus, 1766)**Common Stone Chat**

1973. *Saxicola torquata* : Ali & Ripley, *H. B. No. 1697, Vol. 9* : 28.

Observation localities : Bathan.

Status and distribution : Winter visitor. Throughout India, except most of the south.

Habitat : Summer in open country with bushes, winters in scrub, reedbeds and cultivation.

Food : Insects.

191. *Saxicola caprata* (Linnaeus, 1766)**Pied Bush Chat**

1973. *Saxicola caprata* : Ali & Ripley, *H. B. No. 1701, Vol. 9* : 34.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Indian subcontinent.

Habitat : Cultivation, scattered bushes, reeds and tall grass around canals and tanks.

Food : Insects.

192. *Saxicola ferrea* Gray, 1846**Grey Bushchat**

1973. *Saxicola ferrea* : Ali & Ripley, *H. B. No. 1705, Vol. 9* : 37.

Observation localities : Past record (Choudhari & Khan, 2002), Occurrence doubtful.

Status and distribution : Resident. Lower Himalayas to E. India

Habitat : Open scrub-covered hill sides particularly along fringes of forest.

Food : Insects and some seeds.

Subfamily TIMALIINAE

193. *Pellorneum ruficeps* Swainson, 1832

Spotted Babbler

1971. *Pellorneum ruficeps* : Ali & Ripley, *H. B. No. 1154, Vol. 6* : 117.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. The hills of Indian peninsula, Narmada River to Bihar, south through Western Ghats up to Palghat Gap.

Habitat : Dense thickets, bamboo and undergrowth in broadleaved forest, secondary growth, sholas and ravines.

Food : Insects.

194. *Dumetia hyperythra* (Franklin, 1831)

Rufous-bellied Babbler

1971. *Dumetia hyperythra* : Ali & Ripley, *H. B. No. 1222, Vol. 6* : 181.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Himalayan foothills through Uttar Pradesh to West Bengal, south to a line Hyderabad-Jalna-Mhow-Jhansi.

Habitat : Reed beds, tall grass along rivers, canals and marshes, scrub jungles.

Food : Insects.

195. *Chrysomma sinense* (Gmelin, 1789)

Yellow-eyed Babbler

1971. *Chrysomma sinense* : Ali & Ripley, *H. B. No. 1231, Vol. 6* : 190.

Observation localities : Common at many places in meadows.

Status and distribution : Resident. Most of India, except parts of far northeast, northwest and Himalayas.

Habitat : Tall grass and bushes, reeds, thickets and sugarcane fields.

Food : Insects.

196. *Turdoides malcolmi* (Sykes, 1832)

Large Grey Babbler

1971. *Turdoides malcolmi* : Ali & Ripley, *H. B. No. 1258, Vol. 6* : 220.

Observation localities : Common in many places.

Status and distribution : Resident. Central, northwest, west and south India.

Habitat : Scrub, cultivation and gardens.

Food : Insects.

197. *Turdoides striatus* (Dumont, 1832)

Jungle Babbler

1971. *Turdoides striatus* : Ali & Ripley, *H. B. No. 1262, Vol. 6* : 226.

Observation localities : Common in many places.

Status and distribution : Resident. Most of India, except parts of northwest, northeast and N. Himalayas, coastal parts of Goa, Karnataka and Kerala.

Habitat : Deciduous forest, cultivation, gardens, plantations.

Food : Insects.

Subfamily SYLVIINAE

198. *Cisticola juncidis* (Rafinesque, 1810)

Streaked Fantail-Warbler

1973. *Cisticola juncidis* : Ali & Ripley, *H. B. No. 1498, Vol. 8* : 33.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Himalayan foothills and south throughout much of the subcontinent, except parts of the northeast, northwest and southeast.

Habitat : Fields and dry and marshy grassland.

Food : Insects.

199. *Prinia hodgsonii* Blyth, 1844**Franklin's Prinia**

1973. *Prinia hodgsonii* : Ali & Ripley, *H. B. No. 1503, Vol. 8* : 42.

Observation localities : Common in the reserve.

Status and distribution : Resident. Indian Peninsula.

Habitat : Scrub jungle with coarse grass and thorn bushes, mango groves and deciduous forest with rank under growth, gradens.

Food : Chiefly insects and carries.

200. *Prinia sylvatica* Jerdon, 1840**Jungle Prinia**

1973. *Prinia sylvatica* : Ali, Ali & Ripley, *H. B. No. 1521, Vol. 8* : 64.

Observation localities : Common in the reserve.

Status and distribution : Resident. Indian Peninsula from Madhya Pradesh, Maharashtra and south to Kanyakumari.

Habitat : Scrub, tall grass, open country.

Food : Insects.

201. *Acrocephalus dumentorum* Blyth, 1849**Blyth's Reed-Warbler**

1973. *Acrocephalus dumentorum* : Ali & Ripley, *H. B. No. 1556. Vol. 8* : 109.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor and passage migrant

Habitat : Bushes and trees at edges of forest, cultivation and wooded area

Food : Insect.

202. *Acrocephalus stentorus* (Hemprich & Ahrenberg 1833)**Indian Great Reed-Warbler**

1973. *Acrocephallus stentorus* : Ali and Ripley, *H. B. No. 1550 Vol. 8* : 101

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Breeds locally in India. Widespread in winter.

Habitat : Reeds beds and bushes around wetlands.

Food : Grasshoppers and other insects.

203. *Orthotomus sutorius* (Pennant, 1869)

Common Tailor Bird

1973. *Orthotomus sutorius* : Ali & Ripley, *H. B. No. 1535, Vol. 8* : 81.

Observation localities : 3-4 times seen in Tala Range.

Status and distribution : Resident. India from Himalayan foothills to Kanyakumari, except parts of the north-east.

Habitat : Gardens, edges of cultivation, deciduous scrub, forest edges, orchards and irrigated plantations.

Food : Mainly insects, also flower nectar.

204. *Phylloscopus collybita* (Vieillot, 1817)

Common Chiffchaff

1973. *Phylloscopus collybita* : Ali & Ripley, *H. B. No. 1575, Vol. 8* : 136.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Migrant. Throughout northern plains India.

Habitat : Bushes and forest.

Food : Insects.

205. *Phylloscopus fasciatus* (Blyth, 1842)

Dusky Warbler

1973. *Phylloscopus fasciatus* : Ali & Ripley, *H. B. No. 1586, Vol. 8* : 150.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter Visitor, Himalayan foothill, South through Uttar Pradesh.

Habitat : Forages in low bushes or on the ground.

Food : Insects, *Ficus* seed and weed seeds.

206. *Phylloscopus affinis* (Tickell, 1833)**Tickell's Warbler**

1973. *Phylloscopus affinis* : Ali & Ripley, *H. B. No. 1579, Vol. 8* : 142.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Migrant. Himalayan foothills south through the peninsula to the southern-most hills, east through Assam and Manipur.

Habitat : Scrub and secondary jungle and well-wooded country.

Food : Weevils, small beetles, midges and other insects.

207. *Phylloscopus griseolus* Blyth, 1847**Olivaceous Leaf-Warbler**

1973. *Phylloscopus griseolus* : Ali & Ripley, *H. B. No. 1581, Vol. 8* : 136.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Migrant. Northern Peninsula from Rajasthan and Gujarat through M. P. to lower Bengal, south to Maharashtra and A. P.

Habitat : Rocky or stony hillsides with a few bushes, desolate scree studded with tufts of grass, juniper forest and willows along river beds.

Food : Insects.

208. *Phylloscopus inornatus* (Blyth, 1842)**Yellow-browed Warbler**

1973. *Phylloscopus inornatus* : Ali & Ripley, *H.B. No. 1590, Vol. 8* : 153.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor, Himalayas and Peninsular India.

Habitat : Groves and open country.

Food : Insects.

209. *Phylloscopus trochiloides* (Sundevall, 1837)**Greenish Leaf-Warbler**

1973. *Phylloscopus trochiloides* : Ali & Ripley, *H. B. No. 1602, Vol. 8* : 169.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Migrant. Summer in Himalayas from Garhwal and Kumaon to A. P. between 2900 and 4200m. Nagaland, N. Cachar at c. 1800m. Winter in Himalayas south to lower Bengal and throughout Assam, also Andaman Islands.

Habitat : Various types of mixed forest and open cultivated country.

Food : Insects.

210. *Phylloscopus reguloides* (Blyth, 1842)

Blyth's Leaf Warbler

1973. *Phylloscopus reguloides* : Ali and Ripley, H. B. No. 8 : 175.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and Distribution : Breeds in Himalayas; winter in foothills and plain.

Habitat : Subtropical and sal forest.

Food : Insects.

211. *Sylvia curruca* (Linnaeus, 1758)

Common Lesser Whitethroat

1973. *Sylvia curruca* : Ali & Ripley, H. B. No. 1567, Vol. 8 : 126.

Observation localities : Sighted at many places in the reserve.

Status and distribution : Resident. Indian peninsula.

Habitat : Semi-desert and drier areas of the Subcontinent.

Food : Insects.

Subfamily MUSCICAPINAE

212. *Muscicapa daurica* Pallas, 1811

Asian Brown Flycatcher

1972. *Muscicapa daurica* : Ali & Ripley, H. B. No. 1407, Vol. 7 : 145.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Most of peninsular India.

Habitat : Open, mixed deciduous forest, teak plantations, bamboo jungles, near streams.

Food : Chiefly dipterous insects.

213. *Ficedula parva* (Bechstein, 1792)

Red-throated Flycatcher

1972. *Ficedula parva* : Ali & Ripley, *H. B. No. 1411, 1412, Vol. 7* : 154, 156.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Breeds in Himalayas, winters mainly in SW India and NE India, Orissa, eastern Madhya Pradesh and Andhra Pradesh, becoming scarcer farther south.

Habitat : Forest.

Food : Insects.

214. *Ficedula superciliaris* (Jerdon, 1840)

Ultramarine Flycatcher

1972. *Ficedula superciliaris* : Ali & Ripley, *H. B. No. 1421, Vol. 7* : 168.

Observation localities : Behind Biodiversity Training Centre.

Status and distribution : Winter visitor. Central India from Delhi to Northern Maharashtra, Madhya Pradesh, North-western Andhra to Orissa to W. Bengal and SE Karnataka.

Habitat : Open deciduous forest, village groves and gardens.

Food : Insects.

215. *Eumyias thalassina* (Swainson, 1838)

Verditer Flycatcher

1972. *Muscicapa thalassina* : Ali & Ripley, *H. B. No. 1445, Vol. 7* : 198.

2001. *Eumyias thalassina* : Manakadan & Pittie, *Buceros*, Vol. 6 (1) : 21.

Observation localities : Behind Biodiversity Training Centre on Mahua Tree.

Status and distribution : Winter visitor. Himalayan foothills south throughout peninsula.

Habitat : Open forest, forest clearing, groves, gardens and mangroves.

Food : Insects.

216. *Cyornis tickelliae* Blyth, 1843

Tickell's Blue Flycatcher

1972. *Muscicapa tickelliae* : Ali & Ripley, *H. B. No. 1442, Vol. 7* : 193.

2001. *Cyornis tickelliae* : Manakadan & Pittie, *Buceros*, Vol. 6 (1) : 21.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Mainly from Gujarat and N. Uttar Pradesh east to W. Bengal and south through the peninsula.

Habitat : Open dry forest, bushes along streams and rivers, groves, wooden gardens, scrub and bamboo.

Food : Insects.

217. *Culicicapa ceylonensis* (Swainson, 1820)

Grey-headed Flycatcher

1972. *Culicicapa ceylonensis* : Ali & Ripley, *H. B. No. 1449, Vol. 7* : 204.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. Foothills of Himalayas south to most of peninsula west to Kutch and south about the Krishna River.

Habitat : Forests and groves.

Food : Insects.

Subfamily MONARCHINAE

218. *Terpsiphone paradisi* (Linnaeus, 1758)

Asian Paradise Flycatcher

1972. *Terpsiphone paradisi* : Ali & Ripley, *H. B. No. 1461, Vol. 7* : 218.

Observation localities : Bamboo thickets near VIP Gate.

Status and distribution : Resident/partly winter visitor in northern part. Indian peninsula from Kathiawar, W. Rajasthan, Madhya Pradesh to southern peninsula to Kerala.

Habitat : Forest and well-wooded areas.

Food : Insects.

219. *Hypothymis azurea* (Boddaert, 1783)
Black-naped Monarch Flycatcher

1972. *Hypothymis azurea* : Ali & Ripley, *H. B. No. 1465, Vol. 7* : 223.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident but erratic winter movements. Mainly from Gujarat and Central Uttar Pradesh, east to Arunachal Pradesh, and south through the subcontinent to Kerala.

Habitat : Tropical broadleaved forest, well wooded areas, secondary growth, coffee and cardamom plantations.

Food : Flies and midges, also larger insects like cicadas.

Subfamily RHIPIDURINAE

220. *Rhipidura aureola* Lesson, 1830
White-browed Fantail Flycatcher

1972. *Rhipidura aureola* : Ali & Ripley, *H. B. No. 1451, Vol. 7* : 207.

Observation localities : Common in the reserve.

Status and distribution : Resident, subject to local movements in winter. Himalayan foothills to W. Bengal and south through Gujarat, Madhya Pradesh, Central Maharashtra and east to Orissa.

Habitat : Forest and wooded areas.

Food : Insects.

Family PARIDAE

221. *Parus major* Linnaeus, 1758
Great Tit

1973. *Parus major* : Ali & Ripley, *H. B. No. 1794, Vol. 9* : 169.

Observation localities : Commonly seen at many places in the reserve.

Status and distribution : Resident. Himalayan foothills, east to Arunachal Pradesh; widespread in NE and throughout peninsular India.

Habitat : Deciduous forest, groves, trees around cultivation and gardens.

Food : Insects.

Family SITTIDAE

222. *Sitta castanea* Lesson, 1830**Chestnut-bellied Nuthatch**1973. *Sitta castanea* : Ali & Ripley, *H. B. No. 1830, Vol. 9* : 215.*Observation localities* : Near Kila road.*Status and distribution* : Resident. Lower Himalayas up to c. 1800 m, paractically throughout the Subcontinent.*Habitat* : Deciduous forest and light woods.*Food* : Insects, grubs, seeds and nuts.

Family CERTHIIDAE

223. *Salpornis spilonotus* (Franklin, 1831)**Spotted Creeper**1973. *Salpornis spilonotus* : Ali and Ripley, *H. B. No. 1841, Vol. 9* : 229.*Observation Localities* : Past record (Choudhari & Khan, 2002).*Status and Distribution* : Resident. North and Central India.*Habitat* : Open deciduous forest and groves.*Food* : Insects and spiders.

Family DICAIEIDAE

224. *Decaeum agile* (Tickell, 1833)**Thick-billed Flowerpecker**1974. *Decaeum agile* : Ali & Ripley, *H. B. No. 1892 & 1894, Vol. 10* : 2.*Observation localities* : Past record (Choudhari & Khan, 2002).*Status and distribution* : Resident. Subcontinent.*Habitat* : Dry to moist-deciduous or semi-evergreen biotope, on flowering or fruiting trees and shrubs in forest and cultivated country.*Food* : Chiefly figs of peepul, banyan, gulair and berries of lantana, also insects, spiders and flower, fruit nectar.

225. *Dicaeum erythrorhynchos* (Latham, 1790)**Tickell's Flowerpecker**

1974. *Dicaeum erythrorhynchos* : Ali & Ripley, *H.B. No. 1899, Vol. 10* : 10.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Subcontinent excepting desert parts.

Habitat : Moist-deciduous biotope, forest plantations, groves, orchards and scrub jungle.

Food : Berries and fruit, nectar, spiders and small insects.

Family NECTARINIIDAE

226. *Nectarinia asiatica* (Latham, 1790)**Purple Sunbird**

1974. *Nectarinia asiatica* : Ali & Ripley, *H.B. No. 1917, Vol. 10* : 35.

Observation localities: common in the reserve

Status and distribution : Resident. Throughout the Indian Union.

Habitat : Gardens, groves, cultivated and scrub country, light deciduous forest.

Food : Insects and spiders, and largely flower nectar.

Family ZOSTEROPIDAE

227. *Zosterops palpebrosus* (Temminck, 1824)**Oriental White-eye**

1974. *Zosterops palpebrosus* : Ali & Ripley, *H. B. No. 1933, Vol. 10* : 57.

Observation localities : Common in many places.

Status and distribution : Resident. Subcontinent excepting desert parts, Andamans and Nicobar Is.

Habitat : Forest, groves gardens, orchards and mangrove.

Food : Insects, caterpillars, berries, buds, seeds and nectar.

Family EMBERIZIDAE

Subfamily EMBERIZINAE

228. *Melophus lathami* (Gray, 1831)**Crested Bunting**

1974. *Melophus lathami* : Ali & Ripley, *H. B. No. 2060, Vol. 10* : 232.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Northeast and Central India, Madhya Pradesh, Maharashtra, Orissa, Bihar and Andhra Pradesh.

Habitat : Dry grassy and rocky hillside, scattered trees.

Food : Insects.

229. *Emberiza sterwarti* (Blyth, 1854)**White-capped Bunting**

1974. *Emberiza sterwarti* : Ali and Ripley, *H.B. No. 2048, Vol. 10* : 216.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and Distribution : Breeds in Pakistan and W Himalaya. Winter visitor in plain of Punjab, Haryana, Uttar Pradesh, Rajasthan and Madhya Pradesh.

Habitat : Dry grassy and rocky slope.

Food : Mainly seeds of grass.

Family FRINGILLIDAE

230. *Carpodacus erythrinus* (Pallas, 1770)**Common Rosefinch**

1974. *Carpodacus erythrinus* : Ali & Ripley, *H. B. No. 2011, Vol. 10* : 166.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident Migrant. In winter, continental and peninsular India.

Habitat : Willows along streams and thorny scrub.

Food : Mostly seeds, flowerbuds, fruits and berries, insects recorded once.

Family ESTRILDIDAE

231. *Lonchura striata* (Linnaeus, 1766)**White-rumped Munia**

1974. *Lonchura striata* : Ali & Ripley, *H. B. No. 1968*, Vol. 10 : 108.

Observation localities: Past record. Tayabji (1990).

Status and distribution : Resident. India Peninsula from southern Bihar, southern M. P. and southern Gujarat, Kerala and Tamil Nadu.

Habitat : Scrub and lightly wooded country about cultivation, deciduous jungle, cultivation and gardens.

Food : Seeds of grass, bamboo, etc. Insects are fed to nestlings.

232. *Lonchura punctulata* (Linnaeus, 1758)**Spotted Munia**

1974. *Lonchura punctulata* : Ali & Ripley, *H. B. No. 1974*, Vol. 10 : 113.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Most of India except parts of northeast and northwest.

Habitat : Cultivation, gardens, secondary forest, bush covered hill-sides.

Food : Small berries and seeds.

233. *Lonchura malacca* (Linnaeus, 1766)**Black-headed Munia**

1974. *Lonchura malacca* : Ali & Ripley, *H. B. No. 1978*, Vol. 10 : 118.

Observation localities : Gohani Beat near Transect Line on Bamboo trees.

Status and distribution : Resident. Central India from Raipur, Pachmarhi, Mumbai and south to Kanyakumari.

Habitat : Cultivation, grass fields, marshes, tall grassland.

Food : Seeds and insects.

Family PASSERIDAE

Subfamily PASSERINAE

234. *Passer domesticus* (Linnaeus, 1758)**House Sparrow**

1974. *Passer domesticus* : Ali & Ripley, *H. B. No.* 1938, Vol. 10 : 63.

Observation localities : Commonly seen at many places in the reserve.

Status and distribution : Resident. The whole of India.

Habitat : Human habitation, cultivation, edge of forest.

Food : Seeds and insects.

235. *Petronia xanthocollis* (Burton, 1838)**Yellow-throated Sparrow**

1974. *Petronia xanthocollis* : Ali & Ripley, *H.B. No.* 1949, Vol. 10 : 80.

Observation localities : Twice seen near dinosaur rock.

Status and distribution : Resident. Throughout India.

Habitat : Open dry forest, thorn scrub, hedges, trees at the edge of cultivation, riverain forest.

Food : Seeds and insects.

Subfamily PLOCEINAE

236. *Ploceus philippinus* (Linnaeus, 1766)**Baya Weaver**

1974. *Ploceus philippinus* : Ali & Ripley, *H.B. No.* 1957, Vol. 10 : 88.

Observation localities : Near Mahaman Village.

Status and distribution : Resident. Most of India, except parts of the northwest, northeast and Himalayas.

Habitat : Cultivation, paddy fields, grassland and scrub with scattered trees and mangroves.

Food : Seeds and insects.

Family STURNIDAE

237. *Sturnus malabaricus* (Gmelin, 1789)**Grey-headed Starling**

1972. *Sturnus malabaricus* : Ali & Ripley, *H.B. No. 987, Vol. 5* : 152.

Observation localities : Tala Gate.

Status and distribution : Resident. Continental and peninsular India.

Habitat : Thinly wooded country and secondary jungle.

Food : Insects, fruits and berries.

238. *Sturnus pagodarum* (Gmelin, 1789)**Brahminy Starling**

1972. *Sturnus pagodarum* : Ali & Ripley, *H. B. No. 994, Vol. 5* : 160.

Observation localities : Tala Gate.

Status and distribution : Resident. Throughout India, except parts of northwest and northeast.

Habitat : Cultivation, groves, open forest, grassland and dry thorny shrub.

Food : Insects, fruits and nectar.

239. *Sturnus roseus* (Linnaeus, 1758)**Rosy Starling**

1972. *Sturnus roseus* : Ali & Ripley, *H.B. No. 996, Vol. 5* : 163.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Winter visitor. India eastward to Bihar, straggling into W. Bengal, Assam and southward throughout the Peninsula.

Habitat : Open cultivation, grassland and semi-desert.

Food : Insects, berries, flower-nectar, fruits and cereal grains.

240. *Sturnus contra* Linnaeus, 1758**Asian Pied Starling**

1972. *Sturnus contra* : Ali & Ripley, *H.B. No. 1002, Vol. 5* : 172.

Observation localities : Seen several times in Tala pearching on electric wires.

Status and distribution : Resident. Northeast, Central and Southeast India.

Habitat : Damp grassland, cultivation, near habitation or grazing animals.

Food : Insects, grain, fruit, flower nectar.

241. *Acridotheres tristis* (Linnaeus, 1766)

Common Myna

1972. *Acridotheres tristis* : Ali & Ripley, *H.B. No. 1006, Vol. 5* : 177.

Observation localities : Common in many places.

Status and distribution : Resident. Throuout India.

Habitat : Cultivation, villages, towns and cities.

Food : Insects, fruit, flower nectar.

242. *Acridotheres fuscus* (Wagler, 1827)

Jungle Myna

1972. *Acridotheres fuscus* : Ali & Ripley, *H.B. No. 1009, Vol. 5* : 183.

Observation localities : Past record : Tayabji (1990).

Status and distribution : Resident. Throughout lower Himalayas east to Arunachal Pradesh, Uttar Pradesh, northern Madhya Pradesh, Orissa, Bihar to W. Bengal.

Habitat : Cultivation, plantations, forest edges and scrub.

Food : Insects, seeds and fruits.

Family ORIOLIDAE

243. *Oriolus oriolus* (Linnaeus, 1758)

Eurasian Golden Oriole

1972. *Oriolus oriolus* : Ali & Ripley, *H.B. No. 953, Vol. 5* : 103.

Observation localities : Tala.

Status and distribution : Resident and also summer visitor. Most of India.

Habitat : Deciduous woodland, groves, orchards and trees at the edge of cultivation.

Food : Seeds, fruits, berries and insects.

244. *Oriolus xanthornus* (Linnaeus, 1758)**Black-headed Oriole**

1972. *Oriolus xanthornus* : Ali & Ripley, *H.B. No. 959, Vol. 5* : 110.

Observation localities : Tala Range

Status and distribution : Resident. Peninsular India south of Gangetic plain, Madhya Pradesh east to Andhra Pradesh.

Habitat : Open broad-leaved forest, groves, well-wooded country and gardens.

Food : Insects and fruits.

Family DICRURIDAE

245. *Dicrurus macrocercus* Vieillot, 1817**Black Drongo**

1972. *Dicrurus macrocercus* : Ali & Ripley, *H. B. No. 963, Vol. 5* : 117.

Observation localities : Common throughout the reserve.

Status and distribution : Resident. Throughout peninsular India south of a line from Kutch eastward through Madhya Pradesh, Orissa to SW Bengal.

Habitat : Open cultivation, around villages, towns and cities.

Food : Insects, flower nectar, occasionally small birds.

246. *Dicrurus leucophaeus* Vieillot, 1817**Ashy Drongo**

1972. *Dicrurus leucophaeus* : Ali & Ripley, *H. B. No. 966, Vol. 5* : 119.

Observation localities : Tala Range.

Status and distribution : Resident migrant. Plains and hills south to Kerala, Andamans.

Habitat : Moist-deciduous, semi-evergreen and pine forest, plantations, etc.

Food : Mainly Insects, occasionally reptiles and small birds.

247. *Dicrurus caerulescens* (Linnaeus, 1758)**White-bellied Drongo**

1972. *Dicrurus caerulescens* : Ali & Ripley, *H. B. No. 967, Vol. 5* : 122.

Observation localities : Tala Range.

Status and distribution : Resident. Sub-continent.

Habitat : Clearings and edges of light forest, well wooded country, gardens and tea and rubber plantations.

Food : Insects, flower nectar.

248. *Dicrurus hottentottus* (Linnaeus, 1766)

Spangled Drongo

1972. *Dicrurus hottentottus* : Ali & Ripley, *H.B. No. 973, Vol. 5* : 131.

Observation localities : Past record (Choudhari & Khan, 2002).

Status and distribution : Resident. Himalayan foothills from Punjab east to Arunachal Pradesh, south through the Northeast Indian hills, eastern Madhya Pradesh and Chhattisgarh (Bastar and Balaghat dist.), Eastern and Western Ghats, Kerala.

Habitat : Broadleaved evergreen and moist deciduous forest.

Food : Insects, flower nectar.

249. *Dicrurus paradiseus* (Linnaeus, 1766)

Greater Racket-tailed Drongo

1972. *Dicrurus paradiseus* : Ali & Ripley, *H.B. No. 976, Vol. 5* : 137.

Observation localities : Several times in Tala Range.

Status and distribution : Resident. Northern India from lower Himalayas to Manipur-Mizo, southeast to 17° N Latitude.

Habitat : Broadleaved forest and bamboo jungle.

Food : Moths, large insects, nectar.

Family CORVIDAE

250. *Dendrocitta vagabunda* (Latham, 1790)

Indian Treepie

1972. *Dendrocitta vagabunda* : Ali & Ripley, *H. B. No. 1032, Vol. 5* : 218.

Observation localities : Common in many places.

Status and distribution : Resident. The Himalayan submontane tract eastward to NEFA, southward through Assam, W. Bengal, Uttar Pradesh, Madhya Pradesh, Andhra Pradesh to 17° N Latitude.

Habitat : Open wooded country, gardens, groves, roadside avenues.

Food : Fruits, nectar, invertebrates, small animals, bird eggs and nestlings.

251. *Corvus splendens* Vieillot, 1817

House Crow

1972. *Corvus splendens* : Ali & Ripley, *H. B. No. 1049, Vol. 5* : 244.

Observation localities : Common throughout the reserve.

Status and distribution : Resident. Throughout India except parts of northwest, northeast and Himalayas.

Habitat : Human habitation in villages, towns and cities.

Food : Grain, invertebrates, nestlings.

252. *Corvus macrorhynchos* Wagler, 1827

Jungle Crow

1972. *Corvus macrorhynchos* : Ali & Ripley, *H. B. No. 1057, Vol. 5* : 256.

Observation localities : Common throughout the reserve.

Status and distribution : Resident. Most of India, south to Kanyakumari.

Habitat : Around human habitation in well-wooded country and at forest edges.

Food : Grain, invertebrates, carrion.

SUMMARY

Altogether, 252 species of birds belonging to 169 genera under 63 families of 17 orders are recorded from Bandhavgarh Tiger Reserve, which comes to approximately 51% of state diversity.

REFERENCES

- Ali, S. 1996. *The books of Indian Birds, B.N.H.S.* Oxford University Press, Bombay : 1-354.
- Ali, S. & Ripley, S.D. 1968-1974 *Handbook of the Birds of India and Pakistan*. Vol. 1 to 10. Oxford University Press, Bombay.
- Chandra, K. and Singh, R.K. 2004. Avifauna of Madhya Pradesh and Chhattisgarh. *Zoos' Print Journal*, **19**(7) : 1534-1539.
- Choudhary, L.K. and Khan, S.A., 2002. *Bandhavgarh Fort of the Tiger. The Definitive Guide*. Wild Atlas Book : 104-109.
- Grimmett, R, Inskipp, C. and Inskipp, T. 2000. *Pocket Guide to the Birds of Indian Subcontinent* (Reprinted). Oxford University Press, New York.
- Hewetson, C.E., 1956. Observations on the bird life of Madhya Pradesh. *J. Bombay nat. Hist. Soc.*, **53**(4) : 595-646.
- Islam, M.Z.I. and Rahmani, A.R., 2002. Threatned Birds of India. *Buceros*, **7**(1 & 2) : 1-102.
- Manakadan, R. and Pittie, A., 2001. Standardised Common and Scientific names of the Birds of the Indian Subcontinent. *Buceros*, **6**(1) : 1-37.
- Tyaliji, H.N. 1990. Record of some birds from Bandhavgarh National Park previously unrecorded in this area. *Newsletter for Birdwatchers*, **30**(5 x 6) : 12.

MAMMALIA

D.K. HARSHEY

Zoological Survey of India, Central Regional Station, Jabalpur-482002

INTRODUCTION

The present account provides the detailed information on mammals of Bandhavgarh Tiger Reserve. This information was gathered from scattered research papers of Agrawal (2002), Brander (1923), Ellerman & Morrison Scott (1951), Sinha & Singh (1982), Dwivedi (1984), Sinha (1977, 1984), Jayson (1990), Gopal, (1992, 1994), Lad & Gopal (1992) Shrivastav (1995), Gurung & Singh (1996), Saxena, (1996), Kushwaha & Kumar (1999), Choudhary & Khan (2002), Harshey & Chandra (2002) and some Project Reports of Forest Department of Madhya Pradesh written for the Working Plans together with sightings/ collections made by the survey parties of Central Regional Station, Zoological Survey of India from 2004 & 2006. The material present in National Zoological Collections of Zoological Survey of India, too was utilized in the compilation of the list.

The exercise resulted in the enumeration of 42 species belonging to 37 genera of 21 families and 9 orders. The nomenclature followed here is after Wilson and Reeder (2005).

ABBREVIATIONS

E : English; H : Hindi; CR : Critical; DD : Data Deficient; EN : Endangered; IK : Insufficiently Known; VU : Vulnerable; R : Rare; LRnt : Lower Risk near threatened; LRlc or LC : Lower Risk Least concern; NE : Not Evaluated.

SYSTEMATIC LIST

Order SORICOMORPHA

Family SORICIDAE

1. *Suncus murinus* (Linnaeus)
2. *Suncus etruscus* (Savi)

Order SCANDENTIA

Family TUPAIIDAE

3. *Anathana ellioti* (Waterhouse)

Order CHIROPTERA.

Suborder MEGACHIROPTERA

Family PTEROPODIDAE

4. *Cynopterus sphinx* (Vahl)
 5. *Pteropus giganteus* (Brünnich).
 6. *Rousettus leschenaulti* (Desmarest)

Suborder MICROCHIROPTERA

Family MEGADERMATIDAE

7. *Megaderma lyra* E. Geoffroy

Family VESPERTILIONIDAE

8. *Pipistrellus coromandra* (Gray)

Order PRIMATES

Family CERCOPITHECIDAE

9. *Macaca mulatta* (Zimmermann)
 10. *Semnopithecus entellus* (Dufresne)

Order CARNIVORA

Family CANIDAE

11. *Canis aureus* Linnaeus
 12. *Canis lupus* Linnaeus
 13. *Vulpes bengalensis* (Shaw)
 14. *Cuon alpinus* (Pallas)

Family URSIDAE

15. *Melursus ursinus* (Shaw)

Family MUSTELIDAE

16. *Mellivora capensis* (Schreber)
 17. *Lutrogale perspicillata* (I. Geoffroy Saint-Hilaire).

Family VIVERRIDAE

- 18. *Viverricula indica* (Desmarest)
- 19. *Paradoxurus hermaphroditus* (Pallas)

Family HERPESTIDAE

- 20. *Herpestes edwardsii* (E. Geoffroy Saint-Hilaire)
- 21. *Herpestes smithii* Gray

Family HYAENIDAE

- 22. *Hyaena hyaena* (Linnaeus)

Family FELIDAE

- 23. *Felis chaus* Schreber
- 24. *Prionailurus bengalensis* (Kerr)
- 25. *Panthera pardus* (Linnaeus)
- 26. *Panthera tigris* (Linnaeus)

Order PHOLIDOTA

Family MANIDAE

- 27. *Manis crassicaudata* Gray

Order ARTIODACTYLA

Family SUIDAE

- 28. *Sus scrofa* Linnaeus

Family CERVIDAE

- 29. *Muntiacus muntjak* (Zimmermann)
- 30. *Axis axis* (Erxleben)
- 31. *Rusa unicolor* (Kerr)

Family BOVIDAE

- 32. *Tetracerus quadricornis* (Blainville)
- 33. *Boselaphus tragocamelus* (Pallas)
- 34. *Gazella bennettii* (Sykes)

Order LAGOMORPHA

Family LEPORIDAE

- 35. *Lepus nigricollis* F. Cuvier

Order RODENTIA

Family SCIURIDAE

36. *Petaurista phillipensis* (Elliot)
37. *Funambulus palmarum* (Linnaeus)
38. *Funambulus pennantii* Wroughton

Family HYSTRICIDAE

39. *Hystrix indica* Kerr

Family MURIDAE

40. *Rattus rattus* (Linnaeus, 1758)
41. *Mus booduga* Gray
42. *Bendicota bengalensis* (Gray and Hardwicke)

SYSTEMATIC ACCOUNT

Order SORICOMORPHA

Family SORICIDAE

1. *Suncus murinus* (Linnaeus)

1766. *Suncus murinus* Linnaeus, *Syst. Nat.*, 12th ed., 1 : 74.

Common Name : E. : House Shrew, Grey Musk shrew; H. : Chhuchhundar.

Distribution : Throughout India.

Elsewhere : It ranges from southern Asia and Afghanistan to the Malay Archipelago and southern Japan. This species has been introduced into northern and eastern Africa and the Middle East.

Status : CAMP (India) Report (1998): LR1c; CITES : No special status; IUCN-Globaly (2008) : LC.

Remarks : This species is listed as an invasive species and is not protected. It is trapped and poisoned in domestic areas. Dogs may also be used to eliminate this species in areas of abundance ("IUCN Invasive Species Specialist Group and Global Invasive Species Data Base", 2004).

2. *Suncus etruscus* (Savi)

1822. *Suncus etruscus* Savi, *Nuovo Giorn. de Letterati, Pisa*, 1 : 60.

Common Name : E. : White-toothed Pygmy Shrew.

Distribution : Throughout India.

Elsewhere : S. Europe and N. Africa (Morocco, Algeria, Tunisia, Egypt); Arabian Peninsula and Asia Minor to Iraq, Turkmenistan, Afghanistan, Pakistan, Nepal, Bhutan, Myanmar, Thailand and Yunnan, China, Sri Lanka.

Status : CAMP (India) Report (1998): LRlc (India); IUCN-Globally (2008) : LC.

Order SCANDENTIA

Family TUPAIIDAE

3. *Anathana ellioti* (Waterhouse)

1850 *Tupaia ellioti*. Waterhouse *Proc. Zool. Soc. Lond.*, 1849 : 107 [1850].

Common Name : E. : Madras Tree Shrew.

Distribution : *India* : Indian or Madras tree shrews are found on the Indian subcontinent south of the Ganges River (Roonwal and Mohnot 1977). *Anathana ellioti pallida* is found in Central India primarily in Madhya Pradesh, Chhattisgarh (Raipur) northwest of the Ganges River (Lyon 1913 in Roonwal and Mohnot 1977).

In BTR : Found in Tala Range. Uncommon.

Status : CAMP (India) Report (1998) : LRnt; IUCN-Globally (2008) : LC.

Order CHIROPTERA

Suborder MEGACHIROPTERA

Family PTEROPODIDAE

4. *Cynopterus sphinx* (Vahl)

1797. *Vespertilio sphinx* Vahl, *Skr. Nat. Selsk. Copenhagen*, 4 (1) : 123.

Common Name : E. : Short-nosed Fruit Bat; H. : Chota Badur.

Distribution : *India* : Throughout India.

Elsewhere : Sri Lanka, S China, SE Asia, W Malaysia, Sumatra, adjacent small islands; perhaps Borneo.

In BTR : Commonly found in Tala and Khitoli Ranges.

Status : CAMP (India) Report (1998) : LRlc (India);IWPA : Schedule V; IUCN-Globally (2008) : LC.

5. *Pteropus giganteus* (Brünnich).

1782. *Vespertilio giganteus* Brünnich. *Dyrenes Historie*, 1 : 45.

Common Name : E. : Indian Flying Fox; H. : Badur.

Distribution : India : Throughout India.

Elsewhere : Maldive Islands, Sri Lanka, Pakistan, Myanmar, Tsinghai (China).

In BTR : Commonly encountered in Tala and Panpatha.

Status : CAMP (India) Report (1998) : LRnt; CITES : Appendix II; IUCN-Globally (2008) : LC; IWPA : Schedule V.

6. *Rousettus leschenaulti* (Desmarest)

1820. *Pteropus Leschenaulti* Desmarest, *Mammalogie, in Encyclop. Méthod.*, 1 : 110.

Common Name : E. : Leschenault's Rousette, Fulvus fruit Bat.

Distribution : India : Throughout India.

Elsewhere : Sri Lanka; Pakistan to Vietnam and S China; Sumatra, Java, Bali, and Mentawai Isls. (Indonesia).

In BTR : Sighted in Panpatha, Tala and Khitoli Ranges.

Status : CAMP (India) Report (1998): LRlc; WPA : Schedule V; IUCN-Globally (2008) : LC

Suborder MICROCHIROPTERA

Family MEGADERMATIDAE

7. *Megaderma lyra* E. Geoffroy

1810. *Megaderma lyra* E. Geoffroy, *Ann. Mus. Hist. Nat. Paris*, 15 : 190.

Common Name : E. : Greater False Vampire Bat, Indian False Vampire.

Distribution : India : Throughout India.

Elsewhere : Afghanistan to S China, south to Sri Lanka and W Malaysia.

In BTR : Very common.

Status : CAMP (India) Report (1998): LR1c; IUCN-Globally (2008): LC.

Family VESPERTILIONIDAE

8. *Pipistrellus coromandra* (Gray)

1838. *Scotophilus coromandra* Gray, *Mag. Zool. Bot.*, 2 : 298 (Pondicherry India).

Common Name : Indian Pipistrelle.

Distribution : India : Widely distributed in Peninsular India, north to Jammu and Kashmir, east to northeastern states including Tripura.

Elsewhere : Afghanistan, Pakistan, Sri Lanka, Nepal, Bhutan, Myanmar, S, China, Thailand, Vietnam.

In BTR : Sighted in Tala Range.

Status : CAMP (India) Report (1998) : LRnt (India); IUCN-Globally (2008) : LC.

Order PRIMATES

Family CERCOPITHECIDAE

9. *Macaca mulatta* (Zimmermann)

1780. *Cercopithecus mulatta*. Zimmermann. *Geogr. Gesch. Mensch. Vierf. Thiere*, 2 : 195.

Common Name : E. : Rhesus Monkey; H. : Bandar.

Distribution : India: Throughout India.

Elsewhere : *Macaca mulatta* are most commonly found in Western Afghanistan, to Northern Thailand.

In BTR : Very common.

Status : CAMP (India) Report (1998) : LR1c; CITES-Appendix II; IUCN-Globally (2008) : LC; IWPA : Schedule II.

10. *Semnopithecus entellus* (Dufresne)

1797. *Simia entellus* Dufresne, *Bull. Sci. Soc. Philom. Paris, ser. 1*, 7 : 49.

Common Name : E. : Langur, Entellus Monkey : H.; Langur, Hanuman.

Distribution : India : Throughout India.

Elsewhere : Bangladesh, China, Indonesia, Nepal, Pakistan, Sri Lanka.

In BTR : Common.

Status : CAMP (India) Report (1998) : LR1c; CITES-Appendix I; IUCN-Globally (2008) : LC; IWPA : Schedule II.

Order CARNIVORA

Family CANIDAE

11. *Canis aureus* Linnaeus

1758. *Canis aureus* Linnaeus, *Syst. Nat.*, 10th ed., 1 : 40.

Common Name : E. : Golden Jackal; H : Gidar or Sial.

Distribution : India : Almost throughout the country.

Elsewhere : North and East Africa, south to Senegal, Nigeria, and Tanzania. South East Europe. South West Asia, Central Asia, Iran, Afghanistan, South Asia to Thailand and Sri Lanka.

In BTR : Sighted in Tala Range.

Status : CAMP (India) Report (1998): LR1c; CITES-Appendix III (India); IUCN-Globally (2008) : LC; IWPA : Schedule II.

12. *Canis lupus* Linnaeus

1758. *Canis lupus* Linnaeus, *Syst. Nat.*, 10th ed., 1 : 39.

Common Name : E. : Gray Wolf; H.; Bheria.

Distribution : India : Throughout the country except extreme south.

Elsewhere : Throughout the N. hemisphere: North America south to 20deg N. in Oaxaca (Mexico); Europe; Asia, including the Arabian Peninsula and Japan, excluding Indochina and S. India.

In BTR : Past record (Project Tiger Guide on net).

Status : CAMP (India) Report (1998) : LR1c; CITES- Appendix I; IUCN-Globally (2008) : LC ; IWPA : Schedule I.

13. *Vulpes bengalensis* (Shaw)

1800. *Canis bengalensis* Shaw, *Gen. Zool. Syst. Nat. Hist.*, 1(2), Mammalia, p. 330.

Common Name : E. : Indian Fox; H. : Lomri.

Distribution : India : Throughout.

Elsewhere : Pakistan, S. Nepal.

In BTR : Common.

Status : CAMP (India) Report (1998) : LRnt; CITES - Appendix III (India); IUCN-Globally (2008) LC; IWPA : Schedule II.

14. *Cuon alpinus* (Pallas)

1811. *Canis alpinus* Pallas *Zoogr. Rosso-Asiat.*, 1 : 34.

Common Name : E. : Wild dog, Red dog, Dhole; H. : Son Kutta, Jangli Kutta.

Distribution : India : Forested parts of Peninsular India, south of the Ganges up to an elevation of 2240m, excepting the western desert.

Elsewhere : Java, Sumatra; Malaysia; mountain forest areas of the N. Pakistan through Tibet, Indochina and China to Korea and Ussuri region (Russia), and mountains of S. Siberia and N. Mongolia.

In BTR : A pack of 8 to 10 individuals was sighted in Tala Range.

Status : CAMP (India) Report (1998) : LRnt; CITES - Appendix II; IUCN-Globally (2008) : En; IWPA : Schedule II.

Family URSIDAE

15. *Melursus ursinus* (Shaw)

1791. *Bradypus ursinus* Shaw, *Nat. Misc.*, 2 (unpaged) pl. 58.

Common Name : E. : Sloth Bear.

Distribution : India : Throughout India in suitable localities.

Elsewhere : Sri Lanka; India, north to the Indian desert and to the foothills of the Himalayas.

In BTR : Past records. (Kushwaha and Kumar, 1999).

Status : CAMP (India) Report (1998) : VU; CITES - Appendix I; IUCN-Globally (2008) – LC ; IWPA : Schedule I.

Family MUSTELIDAE

16. *Mellivora capensis* (Schreber)

1776. *Viverra capensis* Schreber, *Die Säugethiere*, 3(18) : pl. 125[1776]; text, 3 (26) : 450 [1777].

Common Name : E. : Honey Badger.

Distribution : India : Peninsular India and West Bengal except Malabar Coast.

Elsewhere : Savanna and steppe from Nepal, and Turkmenistan west to Lebanon, south of the Mediterranean to South Africa.

In BTR : Past records. (Kushwaha and Kumar, 1999).

Status : CAMP (India) Report (1998) : LRnt ; CITES - Appendix II; IUCN-Globally (2008) : LC; IWPA : Schedule I.

17. *Lutrogale perspicillata* (I. Geoffroy Saint-Hilaire).

1826. I. Geoffroy Saint-Hilaire, In Bory de Saint-Vincent, *Dict. Class. Hist. Nat. Paris*, 9 : 51.

Common Name : E. : Smooth-coated Otter.

Distribution : India : Andhra Pradesh; Arunachal Pradesh; Assam, Bihar, Karnataka, Kerala, Madhya Pradesh, Chhattisgarh, Meghalaya, Orissa.

Elsewhere : Afghanistan, Bangladesh, China, Indonesia (Sumatra, Java, and Borneo), Iraq, Malaysia, Nepal, Pakistan, Thailand, Vietnam.

In BTR : Sighted in Tala Range near the pond.

Status : CAMP (India) Report (1998) : NE; CITES: Appendix II; IUCN-Globally (2008) : VU; IWPA : Schedule II.

Family VIVERRIDAE

18. *Viverricula indica* (Desmarest)

1804. *Civetta indica* Desmarest, *Tabl. Méth. Hist. Nat., in, Nouv. Dict. Hist. Nat.*, 24 : 9, 17.

Common Name : E. : Small Indian Civet; H. : Kasturi.

Distribution : India : Throughout India.

Elsewhere : Bangladesh, Myanmar, Cambodia, China, Hong Kong, Indonesia (Sumatra, Java, Kangean Isl, Sumbawa, Bali), Laos, Malaysia, Pakistan, Sri Lanka, Taiwan, Thailand, Vietnam. Introduced to Yemen, Zanzibar, Socotra, Madagascar, the

Comoro Isls, and the Philippines; scattered distribution: on many SE Asian islands due to introductions.

In BTR : Occurs in Tala and Magdhi Range.

Status : CAMP (India) Report (1998) : LRnt ; CITES : Appendix III (India); IWPA : Schedule II, Part II.

19. *Paradoxurus hermaphroditus* (Pallas)

1777. *Viverra hermaphrodita* Pallas. In Schreber, *Die Säugethiere*, 3(25) : 426.

Common Name : E. : Asian Palm Civet, Toddy Cat; H. : Lakati, Khatas.

Distribution : India : Almost throughout India.

Elsewhere : Bhutan, Cambodia, China, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, New Guinea, Philippine Isls, Singapore, Sri Lanka, Thailand, Vietnam; scattered records in Sulawesi, Moluccas, and Aru Isls, probably resulting from introductions.

In BTR : Sighted in Khitoli Range.

Status : CAMP (India) Report (1998) : LRlc ; CITES : Appendix III (India); IUCN-Globally (2008) : LC; IWPA : Schedule II, Part II.

Family HERPESTIDAE

20. *Herpestes edwardsii* (E. Geoffroy Saint-Hilaire)

1818. *Ichneumon edwardsii* (E. Geoffroy Saint-Hilaire.). *Descrip. de L'Egypte*, 2 : 139.

Common Name: Indian Gray Mongoose; H.: Mangus, Newla.

Distribution : India : Assam, Bihar, Madhya Pradesh, Chhattisgarh, Orissa, Sikkim, West Bengal.

Elsewhere : Afghanistan, Bahrain, Indonesia, Iran, Japan, Kuwait, Malaya (introduced; Wells, 1989), Nepal, Pakistan, Saudia Arabia, Sri Lanka. Populations believed to be introductions on Ryukyu Isls, Mauritius, and Reunion Isl (Corbet and Hill, 1980).

In BTR : Common. Found in Panpatha Sanctuary and Kallawah Range.

Status : CAMP (India) Report (1998) : LRlc; CITES : Appendix III (India); IUCN-Globally (2008) : LC; IWPA : Schedule IV.

21. *Herpestes smithii* Gray

1837. *Herpestes Smithii* Gray, *Mag. Nat. Hist. [Charlesworth's]*, 1 : 578.

Common Name : E. : Ruddy Mongoose, H. : Newla.

Distribution : India : Madhya Pradesh, Chhattisgarh, Rajasthan, east to West Bengal, Southwards through Eastern Ghats and Western Ghats.

Elsewhere : Sri Lanka.

In BTR : Past record (Gurung & Singh, 1996).

Status : CAMP (India) Report (1998) LRlc; CITES : Appendix III (India); IWPA: Schedule IV.

Family HYAENIDAE

22. *Hyaena hyaena* (Linnaeus)

1758. *Canis hyaena* Linnaeus, *Syst. Nat.* 10th ed., 1 : 40.

Common Name : E. : Striped Hyena; H. : Lakkar Bagha.

Distribution : India : Throughout India in forested tracks.

Elsewhere : Afghanistan, Algeria, Egypt, Ethiopia, Iran, Iraq, Israel, Kenya, Libya, Mali, Morocco, Nepal, Nigeria, Pakistan, Saudi Arabia, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, republics of the former USSR, Yemen.

In BTR : Sighted in Tala Range.

Status : CAMP (India) Report (1998) : LRnt; IUCN: Globally (2008) : EN; IWPA : Schedule III.

Family FELIDAE

23. *Felis chaus* Schreber

1777. *Felis chaus* Schreber, *Die Säugethiere*, 2(13) : pl. 110. B[1777]; text, 3 (24) : 414 [1777].

Common Name : E. : Jungle Cat; H. : Khatas, Jangli Billi.

Distribution : India : Bihar, Chhattisgarh, Gujarat, Jammu and Kashmir, Madhya Pradesh, Rajasthan, South of Krishna river in South India, Uttar Pradesh, West Bengal.

Elsewhere : Afghanistan, Algeria, Arabia, Benin, China, Egypt, Iran, Iraq, Israel, Kenya, Malawi, Morocco, Mozambique, Myanmar, Nepal, Pakistan, Sri Lanka, Syria, Thailand, republics of the former USSR, Vietnam, Yemen, Zambia, Zimbabwe.

In BTR : Sighted in Khitauli Range

Status : CAMP (India) Report (1998) : LRnt; CITES - Appendix II; IUCN-Globally (2008) : LC; IWPA : Schedule II, Part II.

24. *Prionailurus bengalensis* (Kerr)

1792. *Felis bengalensis* Kerr In Linnaeus, *Anim. Kingdom*, 1 : 151.

Common Name : E. : Leopard Cat.; H. : Jangli Blii.

Distribution : India : Andhra Pradesh, Assam, Karnataka, Kerala, Madhya Pradesh, Chhattisgarh Maharashtra, Manipur, Orissa, Tamil Nadu, Tripura, West Bengal.

Elsewhere : Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Japan (Tsushima and Iriomote Isls), Korea, Laos, Malaysia, Myanmar, Nepal, Pakistan, Philippine Isls, Taiwan, Thailand, republics of the former USSR, and Vietnam.

In BTR : Past record.

Status : CAMP (India) Report (1998) : LRnt; CITES- Appendix I; IUCN-Globally (2008) : LC; IWPA : Schedule I, Part I.

25. *Panthera pardus* (Linnaeus)

1758. [*Felis*] *Pardus* Linnaeus, *Syst. Nat.*, 10th ed., 1 : 41.

Common Name : E. : Leopard, Panther; H. : Tendua.

Distribution : India : Throughout India in suitable habitats.

In BTR : Past record. (Choudhary and Khan, 2002).

Status : CAMP (India) Report (1998) : CR; CITES : Appendix I; IUCN-Globally (2008)- LC; IWPA : Schedule I, Part I.

26. *Panthera tigris* (Linnaeus)

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

Common Name : E. : Tiger; H. : Sher.

Distribution : India : Throughout India in suitable habitats.

Elsewhere : Bangladesh, Bhutan, China, Laos, India, Indonesia (Sumatra), Korea, Malaysia, Myanmar, Nepal, Thailand, Vietnam, and republics of the former USSR. Formerly found in Afghanistan, Pakistan, Iran, and Indonesia (Java and Bali).

In BTR : Past record. (Choudhary and Khan, 2002).

Status : CAMP (India) Report (1998) : EN; CITES - Appendix I; IUCN-Globally (2008) : EN; IWPA : Schedule I, Part I.

Order PHOLIDOTA

Family MANIDAE

27. *Manis crassicaudata* Gray

1827. *Manis crassicaudata* Gray, *In Griffith et al., Anim. Kingdom*, 5 : 282.

Common Name : Indian Pangolin.

Distribution : India : Andhra Pradesh, Bihar, Delhi, Gujrat, Karnataka, Kerala, Madhya Pradesh, Chhattisgarh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal.

Elsewhere : Bangladesh, Pakistan and Sri Lanka.

In BTR.: Past record (Kushwaha and Kumar, 1999).

Status : CAMP (India) Report (1998) : LRnt; IUCN : Globally (2008) : NT.

Order ARTIODACTYLA

Family SUIDAE

28. *Sus scrofa* Linnaeus

1758. *Sus scrofa* *Syst. Nat.*, 10th ed., 1 : 49.

Common Name : E. : Wild Boar ; H. : Jangli Suar.

Distribution : India : Throughout India including Andaman Isls.

Elsewhere : N. Africa; Europe, S. Russia and China south to Middle East, Sri Lanka, and Indonesia (Sumatra, Java east to Bali and Sumbawa Isls), Norway, Sweden, South Africa, Lesser Sunda Isls, Australia, USA, West Indies, Central and South America and numerous oceanic islands, including and Mauritius (Indian Ocean); Hawaiian, Galapagos and Fiji Isls (Pacific Ocean).

In BTR : Common.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : LC; IWPA: Schedule III.

Family CERVIDAE

29. *Muntiacus muntjak* (Zimmermann)

1780. *Cervus muntjak* Zimmermann, *Geogr. Gesch. Mensch. Vierf. Thiere*, 2 : 131.

Common Name : E. : Indian Muntjac, Barking Deer; H. : Kakar.

Distribution : India : Almost throughout the country except Jammu and Kashmir.

Elsewhere : Sri Lanka; NE Pakistan; Nepal; Bhutan; Bangladesh; S. China (Yunnan, Guangxi, Hainan Isl) south through Indochina to Peninsular Malaysia, Sumatra, Borneo, Java, Bali, Lombok and many smaller Indonesian islands.

In BTR : Sighted in Tala and Panpatha Sanctuary.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : LR/lc; IWPA : Schedule III.

30. *Axis axis* (Erxleben)

1777. *Cervus axis* Erxleben, *Syst. Regn. Anim.*, 1 : 312.

Common Name : E. : Spotted Deer, Axis Deer; H. : Chital, Chitra.

Distribution : India : Peninsular India, northwards to Kumaon and Sikkim including West Bengal. Introduced in Andaman Islands.

Elsewhere : Nepal, Sri Lanka, introduced to the former Yugoslavia, republics of the former USSR, Australia, Hawaiian Isls and Texas (USA), Brazil, Argentina and Uruguay.

In BTR : Very common. Observed in most of the areas of the Reserve.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : LC; IWPA : Schedule IV.

31. *Rusa unicolor* (Kerr)

1792. *Cervus unicolor* Kerr, *In Linnaeus, Anim. Kingdom*, p. 300.

Common Name : E. : Sambar; H. : Sambar.

Distribution : India : Northeastern states, Uttar Pradesh southwards to Tamil Nadu.

Elsewhere : Sri Lanka east to South China, Hainan Island and Taiwan; south to Peninsular Malaysia, Sumatra, Borneo, Siberut, Sipora, and Pagi and Nias Islands; introduced to Australia and New Zealand.

In BTR : Common.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : VU; IWPA : Schedule III.

Family BOVIDAE

32. *Tetracerus quadricornis* (Blainville)

1816. *Cerophorus quadricornis* Blainville, *Bull. Sci. Soc. Philom. Paris*, 75.

Common Name : E. : Four-horned Antelope ; H. : Chausingha.

Distribution : India : Bihar, Gujrat, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh.

Elsewhere : Nepal.

In BTR : Not very common. Observed in Tala Range.

Status : CAMP (India) Report (1998) : LRnt; IUCN (2008) : VU; IWPA : Schedule I, Part I.

33. *Boselaphus tragocamelus* (Pallas)

1766. *Antilope tragocamelus* Pallas, *Misc. Zool.*, p. 5.

Common Name. E. : Blue Bull, H. : Nilgai.

Distribution : India : Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh, Uttaranchal.

Elsewhere : E. Pakistan, Nepal and introduced into Texas (USA).

In BTR : Observed in Tala Range.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : LC; IWPA : Schedule III.

34. *Gazella bennettii* (Sykes)

1831. *Antelope bennettii* Sykes, *Proc. Zool. Soc. London Paris 1830-31* : 104 (1831).

Common Name : E. : Indian Gazelle, Chinkara; H. : Chinkara.

Distribution : India : Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Thar desert (Rajasthan), Uttar Pradesh, Uttaranchal.

Elsewhere : Iran to Pakistan.

In BTR : Found throughout the Reserve.

Status : CAMP (India) Report (1998) : LRlc; IUCN (2008) : LC; IWPA : Schedule I.

Order LAGOMORPHA

Family LEPORIDAE

35. *Lepus nigricollis* F. Cuvier

1823. *Lepus nigricollis* F. Cuvier, *Dict. Sci. Nat.*, 26 : 307.

Common Name : E. : Indian Hare, Black napped hare; H. : Kharghosh.

Distribution : India : Throughout the country.

Elsewhere : Bangladesh, Nepal, Pakistan, Sri Lanka. They have been introduced into Java, Mauritius, and Seychelles.

In BTR : Found in most of the ranges.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : LR/lc; IWPA : Schedule IV.

Order RODENTIA

Family SCIURIDAE

36. *Petaurista philippensis* (Elliot)

1839. *Petromys philippensis* Elliot *Madras J. L. H. Sci* 10 : 217.

Common Name : E. : Red Giant Flying Squirrel, Common Giant flying Squirrel.

Distribution : India : Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Nagaland, Orissa, Punjab, Tamil Nadu, Uttar Pradesh.

Elsewhere : Afghanistan, China, Indo-China, Indonesia, Malaysia, Myanmar, Nepal, Sri Lanka, and Thailand.

In BTR : Sighted in Tala range.

Status : CAMP (India) Report (1998) : LRlc; IUCN-Globally (2008) : LC; IWPA : Schedule II.

37. *Funambulus palmarum* (Linnaeus)

1766. *Sciurus palmarum* Linnaeus, *Syst. Nat.*, 12th ed., 1 : 86.

Common Name : E. : Indian Palm Squirrel; H. : Gilheri.

Distribution : India : North Maharashtra to West Bengal, South to Tamil Nadu.

Elsewhere : Sri Lanka.

In BTR : Common.

Status : CAMP (India) Report (1998) : LR1c; IUCN-Globally (2008) : LC; IWPA; Schedule V.

38. *Funambulus pennantii* Wroughton

1905. *Funambulus pennantii* Wroughton, *J. Bombay Nat. Hist. Soc.*, 16 : 411.

Common Name : E. : Northern Palm Squirrel; H. : Gilhari

Distribution : India : North, Northeast, west and central India, Andaman islands.

Elsewhere : SE Iran through Pakistan to Nepal and Perhaps adjacent Afghanistan.

In BTR : Common.

Status : CAMP (India) Report (1998) : LR1c; IUCN-Globally (2008) : LC; IWPA; Schedule V.

Family HYSTRICIDAE

39. *Hystrix indica* Kerr

1792. *Hystrix indica* Kerr, *In* Linnaeus, *Anim. Kingdom*, p. 213.

Common Name : E. : Indian Crested Porcupine; H. : Sehi.

Distribution : India : Almost throughout India, except north eastern states.

Elsewhere : Bhutan, Bangladesh, Nepal, Sri Lanka, Pakistan, Israel, Iran and Saudia Arabia.

In BTR : Sighted in Tala range in a cave.

Status : CAMP (India) Report (1998) : LR-1c; IUCN-Globally (2008) : LC; IWPA : Schedule IV.

Family MURIDAE

40. *Rattus rattus* (Linnaeus)

1758. *Rattus rattus* Linnaeus, *Syst. Nat.*, 10th ed., 1 : 61.

Common Name : House Rat.

Distribution : India : Practically Throughout country.

Elsewhere : Introduced worldwide in the tropics and temperate zones.

In BTR : Common.

Status : CAMP (India) Report (1998) : LR-lc; IUCN-Globally (2008) : LC; IWPA : Schedule V.

41. *Mus booduga* Gray

1837. *Leggada booduga* Gray, *Mag. Nat. Hist. [Charlesworth's]*, 1 : 586.

Common Name : Little Indian Field Mouse.

Distribution : India : Throughout country.

Elsewhere : Sri Lanka, S. Nepal, and C. Myanmar.

In BTR : Found near villages in the Reserve.

Status : CAMP (India) Report (1998) : LR-lc; IUCN-Globally (2008) : LC; IWPA : Schedule V.

42. *Bandicota bengalensis* (Gray and Hardwicke)

1833. *Bandicota bengalensis* Gray and Hardwicke, *Illustr. Indian Zool.*, pl. 21.

Common Name : Lesser Bandicoot Rat.

Distribution : India : Throughout the country.

Elsewhere : Approximate natural range: Sri Lanka, peninsular India to Pakistan, Kashmir, Nepal, NE India (Assam), Bangladesh, and Myanmar. Introduced to Penang Isl off the W. coast of Malay Peninsula, Sumatra and Java (Musser and Newcomb, 1983), and Saudi Arabia.

In BTR : Common.

Status : CAMP (India) Report (1998) : LR-lc; IUCN-Globally (2008) : LC; IWPA : Schedule V.

SUMMARY

Present paper deals with 42 species of mammals from Bandhavgarh Tiger Reserve based on the actual sightings and past published records. This is not the exhaustive list and further additions are most likely on intensive explorations.

REFERENCES

- Agrawal, V.C. 2000. Taxonomic Studies on Indian Muridae and Hystricidae (Mammalia : Rodentia). *Rec. zool. Surv. India, Occ. Paper No. 180* : 1-177.
- Alfred, J.R.B., Sinha, N. K. and Chakraborty, S. 2002. Checklist of Mammals of India. *Rec. zool. Surv. India, Occ. Paper No., 199* : 1-289.
- Blanford, W.T. 1888-1891. The Fauna of British India Mammalia. *Taylor and Francis, London.*
- Brander, A.A.D. 1906. Wild Animal of Central India. Edward Arnold, London.
- Chodhary, L.K. and Khan, S.A. 2002. Bandhavgarh – Fort of The Tiger : 1-113.
- Chundwat, 2005. *In* : It's Not just the foreign hand, *Tehlka* 22 Oct. 2005. (Online).
- Champion, H.G. and Seth, S.K. 1986. *A revised survey of the forests types of India.* Manager of Govt. of India Publication, Delhi.
- Dwivedi, G. D. 1984. Rastriya Udhyan Bandhavgarh may Vanya Prani Avlokan. *Cheetal, 25(4)* : 35-39 (in Hindi).
- Ellerman, J.R. 1961. The Fauna of British India including Pakistan and Ceylon. Mammalia - 3 (Rodentia). Govt. of India, Delhi.
- Ellerman, J. R. and Morrison Scott, T.C.S. 1951. Checklist of Palaearctic and India Mammals. *British Museum (Nat. Hist.). London.*
- Gopal, R. 1991. Ethylogical observations on sloth bear (*Melursus ursinus*). *Indian Forestry, 117(10)* : 915-919.
- Gopal, R. 1992. An assessment of population increase of tiger and some prey animals *Journal of Tropical Forestry, 8(1)* : 335-342.
- Gopal, R. 1994. Comparison of species diversity in wild animals of Bandhavgarh Tiger Reserve. *Journal of Tropical Forestry, 10(1)* : 65-71.
- Harshey, D.K. and Chandra, K. 2002. Mammals of Madhya Pradesh and Chhattishgarh. *Zoos Print Journal, 16(12)* : 659-668.

- Honacki, J.H., K.E. Kinman and J.W. Koepl (eds.). 1982. Mammal species of the world : A taxonomic and geographic reference. Allen Press, Inc. and The Association of Systematics Collections, Lawrence, Kansas : 1-694.
- IUCN (Globally, 2008) 2004. Invasive Species Specialist Group, Global Invasive Species Data Base. <http://www.issg.org/database/species/ecology>. (Online)
- Lad, P.M. and Gopal, Rajesh. 1992. The status of Gaur (*Bos gaurus*) in Bandhavgarh Tiger Reserve. *Journal of Tropical Forestry*, 8(1) : 84-85.
- Kushwaha, R.B.S. and Kumar, V. 1999. Status of fauna in protected areas of M.P. The case study of Satpura, Bandhavgarh, Indrawati and Madhav Tiger Reserves. *Cheetal*, 38(1): 21-35.
- Morris, Ralph 1925. Wild animals of Central India. *J. Bombay nat. Hist. Soc.*, 30(3) : 535-556.
- Nowak, R. 1999. *Walker's Mammals of the world*. Baltimore and London : The Johns Hopkins University Press..
- Roonwal, M.L. and Monhot, S.M. 1977. *Primates of South Asia*. Haward University Press, Cambridge, London.
- Saxena , R.1996. A note on status of four-horned antelope in Madhya Pradesh. *Journal of Tropical Forestry*, 12(4) : 246-247.
- Singh, Abhay 1995. Bandhavgarh Tiger Reserve. *Journal Sanctuary Asia*, 15(2) : 15-29.
- Sinha, N.K. 1977. Wildlife in Bandhavgarh Tiger Reserve. *Cheetal*, 19(2 & 3) : 3-12.
- Sinha, N.K. and Singh, R.K. 1982. Tiger Reserve of Madhya Pradesh. *Cheetal*, 24(2) : 62-69.
- Wilson, E.D., and Reeder, D.M. 2005. *Mammal Species of the World : A Taxonomical and Geographical Reference*. 3rd Ed. John Hopkins University Press, Baltimore, USA.

