Taxonomic Studies on Dung Beetles (Coleoptera: Scarabaeidae: Coprinae) of Dhanusha District, Nepal

THESIS

Submitted to the Central Department of Zoology, Institute of Science and Technology, Tribhuvan University, Kathmandu, Nepal for the degree of Doctor of Philosophy in Zoology

By Shyam Prasad Mahto November, 2010

CERTIFICATE

This is to certify that **Mr. Shyam Prasad Mahto** worked under my supervision and guidance for the Ph.D. degree on the problem entitled "**Taxonomic Studies on Dung Beetles (Coleoptera: Scarabaeidae: Coprinae) of Dhanusha District, Nepal**". This is his original work and not submitted in any journals of other publication or for awarding any other degree.

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ABSTRACT

The present paper deals with 45 species of 12 genera of Coprinae under Scarabaeidae from Dhanusha district of Nepal. A check-list of 104 species under 17 genera of dung beetles is presented from Nepal. Out of 45 species, 40 species under 12 genera are recorded for the first time from Dhanusha district. One genus, Chironitis Lansberge is recorded for the first time from Nepal. Sixteen species under seven genera (Gymnopleurus parvus Macl., Catharsius birmanensis L., C. capucinus F., Copris magicus Har., C. sinicus Hope, C. repertus Walk., Phalops divisus Wied., Onthophagus tarandus F., O. sternalis Arrow, O. atropolitus d' Orb., O. armatus Bl., O. purpurascens Bouc., O. mopsus F., O. duporti Bouc., Onitis philemon F., and Chironitis indicus Lansb) are recorded for the first time from Nepal,. Out of total 17 genera, the genus Onthophagus Latr. appears to be the most predominant in Nepal being represented by 51 species, while some of the genera Scarabaeus L., Gymnopleurus Illg., Sisyphus Latr., Heliocopris Burm., Phalops Er., and Drepanocerus Kirby appear to be extremely uncommon, each being represented by only few species. Detailed descriptions of the genera, species and keys for identifications have been given in the text along with suitable illustrations.

TABLE OF CONTENTS

Title page	I
Certificate	II
Acknowledgement	III
Abstract	IV
Table of contents	V
List of abbreviations	VIII
List of map	X
List of tables	X
List of graph	X
Publication (a part) of the present work	X
CHAPTER I	
1. INTRODUCTION	1
1.1 Rationale and justification of the study	2
1.2 Characters of taxonomic importance	3
1.2.1. Head	3
1.2.2. Clypeus	3
1.2.3. Antennae	4
1.2.4. Mouth-parts	4
1.2.5. Labrum	4
1.2.6. Mandibles	4
1.2.7. Maxillae	4
1.2.8. Labium	5
1.2.9. Prothorax	5
1.2.10. Scutellum	5
1.2.11. Elytra	5
1.2.12. Prosternum	6
1.2.13. Mesosternum	6
1.2.14. Metasternum	6
1.2.15. Legs	6
1.2.16. Trasi	7
1.2.17. Abdomen	7
1.2.18. Wings	8

1.3 Horns and secondary sexual characters	8
1.4 Colouration	10
1.5 Male genitalia	10
1.6 Female gnitalia	11
1.7 Classification	12
CHAPTER II	
2. OBJECTIVES	14
CHAPTER III	
3. REVIEW OF LITERATURE	15
3.1. Taxonomic part	15
3.2. Review of works done in Nepal	19
3.3. Genitalia	20
Chapter IV	
4. Materials and Methods	22
4.1. Collection	23
4.2. Cleaning	23
4.3. Preservation	23
4.4. Dissection	23
4.5. Identification	24
4.6. Measurements	24
CHAPTER V	
5. RESULTS AND DISCUSSION	25
5.1. Systematic contents	25
5.1.1. List of dung beetles recorded from Dhanusha district (Nepal)	25
5.1.2. Check-list of Dung Beetles Recorded from Nepal	27
5.2. Detail systematic account of the dung beetles recorded from Dhanusha district, Nepal	33
5.3. Observation	134
5.3.1. Habit and habitat	134

5.3.2. Behaviour	134	
5.3.3. Coprophagous dung beetles	135	
5.3.4. Carrion feeding dung beetles	136	
5.3.5. Species feeding on decaying vegetable matters	136	
5.3.6 Abundance and seasonal occurrence	136	
CHAPTER VI		
6. SUMMARY AND CONCLUSIONS	138	
6.1. Summary	138	
6.2. Conclusions	139	
CHAPTER VII		
7. RECOMMENDATIONS	141	
CHAPTER VIII		
8. REFERENCES	142	
APPENDIX		
Table 2	153	
Publication (a part) of the present work		

LIST OF ABBREVIATIONS

ab. : abdominal sternite

Aed. : aedeagus
ant. : antenna
Bl. : Blanchard
Bouc. : Boucomont
Burm. : Burmeister
C. : clypeus

C.cav. : coxal cavity

cl. : club
cox. : coxa
d' Orb. : Orbigny
e. : elytron

End. : Endophallus

Er. : ErichsonF. : FabriciusFairm. : Fairmaire

fem. femur Gebl. Gebler : Germ. Germar : Har. Harold Illig. Illiger : L. Linnaeus 1. labium :

Lansb. : Lansberge Latr. : Latreille

lp. : labial palpus

lr. : labrum
m. : mandible
Macl. : Mac Leay
me : mentum

Motsch.: Motschulsky

mp. : maxillary palpus

mp. : mesothoracic epimeron

msh. : metasternal shield

mst. : mesosternum

mtep. : metathoracic episternum

mtst. : metasternum

mx. : maxilla

oc.l. : ocular lobe

Oliv : Olivier Orf : Orifice

Pb. Phallobase Per. Peringuey : pygidium pg. : Pm. Parameres : pronotum prn. : pst. prosternum : Quenstedt Quens :

Redt. : Redtenbacher

sc. : scape

Serv. : Serveille sp. : tibial spur

tar. : tarsus tib. : tibia

tr. : trochanter Walk. : Walker

Wied. : Wiedemann

Wulf. : Wulfen

LIST OF MAP

Map 1 Map of Dhanusha district showing the nine study sites

LIST OF TABLES

Table 1	Total number of species of each genus known from the world, In	dia
	and Nepal.	32
Table 2	Showing habitat, altitudinal preference, food and seasonal occurren	ıce
	of the species recorded from Nepal.	153

LIST OF GRAPH

Graph 1 Showing number of species of dung beetles.

140

Publication (a part) of the present work

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ABBREVIATIONS

Aed: Aedeagus, End: Endophallus, Orf: Orifice, Pb: Phallobase, Pm: Parameres