

ON A COLLECTION OF SCARABAEID BEETLES (COLEOPTERA) FROM PACHMARHI BIOSPHERE RESERVE, MADHYA PRADESH

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INTRODUCTION

The eco-sensitive zone of Pachmarhi Biosphere Reserve, falling in three administrative districts *i.e.* Hoshangabad, Betul, and Chhindwara in Madhya Pradesh has been designated as Pachmarhi Biosphere Reserve (vide notification no. J-22016/17/94-BR dated March, 1999.M.O.E.F., Govt. of India). It is situated in Central Narmada valley and extends over the Satpura hill ranges and comprises the highest peak of Madhya Pradesh. The highest point of the Biosphere Reserve is the Dhoopgarh Hill (1352 m. above sea level). The important river of the area is Narmada and its tributaries Tawa, Malani, Sonbhadra, Denwa and Dudhi, which run in south-north direction. The Pachmarhi Biosphere Reserve (PBR) includes three protected areas *i.e.*, Satpura National Park and two wildlife sanctuaries *i.e.*, Pachmarhi Sanctuary and Bori Sanctuary. The Pachmarhi Biosphere Reserve encompasses ecologically rich forest pockets of Betul and Chhindwara divisions having diverse habitats. The total area of Biosphere Reserve is 4926.28 sq. km. Out of this an area of 524.37 sq. km. encompassing the Satpura National Park comprise the core zone. The remaining area of 4401.91 sq. km. has been designated as a buffer zone of the Biosphere Reserve.

STUDY AND OBSERVATIONS

The comprehensive exploration of fauna of PBR, except higher groups of vertebrates, is yet to be carried out seriously. In view of this, Zoological Survey of India, has undertaken the project to study different groups of animals of the Pachmarhi Biosphere Reserve to formulate the management strategy for the conservation of its biodiversity in its natural ecosystem. The one of the authors undertook the survey of Pachmarhi B.R. during the month of June, 1999 and the collection was made from Bori Sanctuary and Satpura National Park and a total of 163 specimens of Scarabaeid beetles were collected (Table-1 & II). These represent 18 species belonging to 11 genera under 6 subfamilies. All these Scarabaeid beetles, except three, are new addition to the fauna of Hoshangabad. Among these, five species are very common, while nine are common and the remaining four species are reported to be not commonly found in the area during the present investigation. Only three species of Scarabaeid beetles *i.e.* *Termitopisthes laticollis* Wassman. of subfamily Aphodiinae, *Onitis philemon* Fabricius, and *Onthophagus ramosellus* Bates of subfamily Scarabaeinae are hitherto known from Hoshangabad (Arrow, 1910, 1917 & 1931) and (Balthasar,

1963 & 1964). The scarabaeid beetles have both useful as well as deleterious effects from human considerations. The coprophagous beetles generally known as dung beetles, play an important role in nature's sanitation by utilizing the animal dung as food in their larval and adult stages. While the phytophagous beetles, commonly known as chafers, are the pests of agricultural crops, plantations and forests.

Table 1. Scarabaeid Beetles collected from Pachmarhi B.R.

Subfamily/Species	No. of Examples Collected	Status in Area	NRH
Hybosorinae			
<i>Hybosorus orientalis</i> (Westwood)	1	C	NRH
Scarabaeinae			
<i>Catharsius pithecius</i> (Fabricius)	12	C	”
<i>Gymnopleurus cyaneus</i> (Fabricius)	25	VC	”
<i>Gymnopleurus miliaris</i> (Fabricius)	1	NC	”
<i>Gymnopleurus mundus</i> (Wiedman)	19	VC	”
<i>Gymnopleurus opacus</i> (Redt.)	5	C	”
<i>Gymnopleurus parvus</i> (Macl.)	1	NC	”
<i>Oniticellus cinctus</i> (Fabricius)	1	C	”
<i>Onthophagus pactolus</i> (Fabricius)	6	C	”
<i>Phalops divisus</i> (Wiedman)	20	VC	”
<i>Scarabaeus sanctus</i> (Fabricius)	2	C	”
Melolonthinae			
<i>Schizonycha ruficollis</i> (Fabricius)	23	VC	”
Rutelinae			
<i>Adoretus bicaudatus</i> Arrow	41	VC	”
<i>Adoretus bicolor</i> Brenske	1	NC	”
<i>Adoretus lasiopygus</i> (Burm.)	9	C	”
<i>Anomala dorsalis</i> (Fabricius)	1	C	”
<i>Anomala varicolor</i> (Gyll.)	4	C	”
Dynastinae			
<i>Phyllognathus dionysius</i> (Fabricius)	2	NC	”

C = Common; VC = Very common; NC = Not common; B.R. = Bori Sanctuary; NRH = New record Hoshangabad; S.N.P. = Satpura National Park.

Table 2. Date-wise collection of species and their abundance.

Date	Locality	Species Collected	Examples	Source
8.VI.1999	B.S., Bori	<i>Phyllognathus dionysius</i>	1	light
9.VI.1999	"	<i>Scyzonycha ruficollis</i>	1	"
"	"	<i>Phyllognathus dionysius</i>	2	"
10.VI.1999	B.S., Churna	<i>Catharsius pithecius</i>	3	"
"	"	<i>Gymnopleurus cyaneus</i>	20	dung
"	"	<i>Gymnopleurus mundus</i>	1	"
"	"	<i>Schizonycha ruficollis</i>	7	light
"	"	<i>Adoretus bicaudatus</i>	1	light
11.VI.1999	"	<i>Catharsius pithecius</i>	1	"
"	"	<i>Gymnopleurus cyaneus</i>	2	dung
"	"	<i>Gymnopleurus mundus</i>	18	"
"	"	<i>Gymnopleurus opacus</i>	5	"
"	"	<i>Gymnopleurus parvus</i>	1	"
"	"	<i>Onthophagus pactolus</i>	4	"
"	"	<i>Phalops divisus</i>	3	"
"	"	<i>Scarabaeius sanctus</i>	1	"
"	"	<i>Schizonycha ruficollis</i>	1	light
12.VI.1999	"	<i>Hybosorus orientalis</i>	1	"
13.VI.1999	S.N.P., Madai	<i>Schizonycha ruficollis</i>	3	"
"	"	<i>Adoretus bicaudatus</i>	37	"
"	"	<i>Adoretus lasiopygus</i>	1	"
"	"	<i>Anomala varicolor</i>	1	"
14.VI.1999	"	<i>Gymnopleurus cyaneus</i>	3	dung
"	"	<i>Gymnopleurus miliaris</i>	1	"
"	"	<i>Oniticellus cinctus</i>	1	"
"	"	<i>Onthophagus pactolus</i>	2	"
"	"	<i>Phalops divisus</i>	17	"
"	"	<i>Scarabaeius sanctus</i>	1	"
"	"	<i>Schizonycha ruficollis</i>	8	light
"	"	<i>Adoretus bicaudatus</i>	3	"
"	"	<i>Adoretus bicolor</i>	1	"
"	"	<i>Adoretus lasiopygus</i>	8	"
"	"	<i>Anomala dorsalis</i>	1	"
"	"	<i>Anomala varicolor</i>	2	"

SUMMARY

A total of 18 species of Scarabaeid beetles belonging to 11 genera under 6 subfamilies are collected from Pachmarhi Biosphere Reserve. Madhya Pradesh. All these are new addition to the fauna of Hoshangabad and this Biosphere Reserve.

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