

COLEOPTERA (INSECTA) FAUNA FROM THE INDIAN THAR DESERT, RAJASTHAN

Sarfrazul Islam Kazmi ¹ and V. V. Ramamurthy ²

¹ Zoological Survey of India, Desert Regional Station, Jhalamand, Pali Road, Jodhpur, Rajasthan 342005, India.

² Division of Entomology, Indian Agriculture Research Institute, Pusa, New Delhi 110012, India.
Email: ¹ kazmisi@rediffmail.com

The order Coleoptera includes 3,50,000 species, amongst which, about 1,50,88 species are known from Indian region. Roonwal (1983) and Ghosh *et al.* (1996) provided significant information on geographical distribution of insect species in the Thar Desert. Saha (1979) gave an excellent review on the taxonomy and distribution of the Indian blister beetles (Meloidea) and also included a few species from his study in the Thar Desert. Tak and Sewak (1987) and Tak (1996) reported 27 species of aquatic beetles from Jodhpur and Sikar districts belonging to families Haliplidae, Gyrinidae, Dytiscidae and Hydrophilidae which have been included to prepare this checklist. Tandon (1996) reported 34 species, and identified gaps in research on the distribution of coleopteran species from the Thar Desert of Rajasthan.

In view of filling the gaps in our knowledge on the fauna of Thar Desert, Rajasthan, the present study was initiated under a research project entitled "Studies on faunal diversity in the Thar desert of Rajasthan" sanctioned by the Ministry of Environment and Forests, New Delhi, at Zoological Survey of India, Desert Regional Station, Jodhpur. In this paper we have reported 99 species belonging to 60 genera under 13 families of Coleoptera from Thar desert of Rajasthan during May, 2000-June 2003. Besides, eight specimens have been identified up to generic level.

Majority of the specimens were collected during the day from agricultural as well as barren lands or sand dune areas by the free sweeping method. However, some groups of insects were collected during night with the help of screen light trap with a strong source of white light (Sengupta & Mukhopathyay, 1990). All the specimens are deposited in the National Zoological Collection, Desert Regional Station, Zoological Survey of India, Jodhpur. This checklist covers all the districts of the Thar Desert. In Ganganagar, Hanumangarh, part of Bikaner and Jaisalmer the crop pattern has entirely changed during the last two decades due to the Indira Gandhi canal.

REFERENCES

- Ghosh, A.K., Q.H. Baqri and I. Prakash (1996). *Faunal diversity in the Thar Desert: Gaps in Research*. Scientific Publication, Jodhpur i-xi, 1-140.
- Roonwal, M.L. (1983). Fauna of Great Indian Desert. In: *Desert Resource and Technology*. Scientific Publication, Jodhpur 1:1-85.
- Saha, G.N. (1979). Revision of Indian Blister beetles (Coleoptera: Meloidea: Meloidea). *Records of the Zoological Survey of India* 74(1): 1-146.
- Sengupta, T. and P. Mukhopathyay (1990). Coleoptera, pp.151-157.

Table 1. Coleoptera from Thar Desert of Rajasthan

Scientific name	Localities
Meloidea	
<i>Mylabris phalerata</i> (Pallas)	Barmer: Bithuja (CV)
<i>Mylabris pustulata</i> Thunberg	Barmer: Bithuja (CV), Jodhpur: Rohit (CV)
<i>Cylindrothorax audoniui</i> (Haag-Rutenberg)	Barmer: Pachpadra (CV)
<i>Cyaneolytta coerulea</i> (Leuckart)	Barmer: Ashotra (CV)
<i>Cyaneolytta pictus</i> (Laporte)	Jodhpur: Bhopalgarh (CV), Jaisalmer: Chandan, Sam (CV)
<i>Cyaneolytta violacea</i> Brandt	Barmer: Ashotra (CV)
<i>Pseudosybaris kempi</i> Saha	Bikaner (CV)
Cicindelidae	
<i>Cicindela cancellata</i> Dej.	Jaisalmer: Chandan (CV), Jalore (CV)
<i>Cicindela minuta</i> Oliver	Jodhpur: Agolai (Ar), Bikaner: Mukham (Ar)
<i>Cicindela sumatrensis var imperfecta</i> W. Horn.	Jaisalmer: Chandan (CV)
Carabidae	
<i>Carabus orientalis</i> Hope	Bikaner (CV)
<i>Anthia sexmaculata</i> (Fab.)	Jodhpur: Dechu (Ar)
<i>Calosoma maderae</i> Fab.	Bikaner (CV)
Hydrophilidae	
<i>Hydrous senegalensis</i> Perch	Jaisalmer: Chandan (WB)
<i>Hydrous olivaceus</i> Fab.	Jodhpur: Kailana Lake (WB)
<i>Hydrous indicus</i> Bdel.*	Jodhpur: Kailana Lake (WB)
<i>Helochaeres crematus</i> Regimbart*	Jodhpur: Kailana Lake (WB)
<i>Helochaeres lentus</i> Sharp*	Jodhpur: Kailana Lake (WB)
<i>Enochrus flavicans</i> Regimbart*	Jodhpur: Kailana Lake (WB)
<i>Coleostoma horni</i> Regimbart*	Jodhpur: Kailana Lake (WB)
<i>Coleostoma stuttum</i> Walker*	Jodhpur: Kailana Lake (WB)
<i>Sternolopus rufipes</i> Fab.*	Jodhpur: Kailana Lake (WB), Bikaner (WB)
<i>Berosus nigriceps</i> (Fab.) [#]	Sikar (WB)
<i>Berosus pulchellus</i> Mclay [#]	Sikar (WB)
<i>Berosus indicus</i> Mots [#]	Jodhpur: Kailana Lake (WB)
<i>Berosus fairmairizait</i> [#]	Sikar (WB)
Haliplidae	
<i>Halipus (Liaplus) pulchellus indicus</i> Regimbart*	Jodhpur: Kailana Lake (WB)
Gyrinidae	
<i>Orectochilus (Patrus) limbatus</i> Regimbart*	Jodhpur: Kailana Lake (WB)
Dytiscidae	
<i>Guignotus pendjabensis</i> Guignot*	Jodhpur: Kailana Lake (WB)
<i>Guignotus flammulatus</i> (Reigmbart)*	Jodhpur: Kailana Lake (WB)
<i>Herophydrus musicus</i> Klug.*	Jodhpur: Kailana Lake (WB)
<i>Hyphoporus kempi</i> Gschwendtner*	Jodhpur: Kailana Lake (WB)
<i>Hyphoporus severini</i> Regimbart [#]	Nagaur: Nawa, Guda (WB)
<i>Hyphoporus flavicans</i> Regimbart [#]	Jodhpur: Kailana Lake(WB), Sikar (WB)
<i>Laccophilus flexuosus</i> Aube*	Jodhpur: Kailana Lake (WB)
<i>Laccophilus sharpi</i> Regimbart*	Jodhpur: Kailana Lake (WB)
<i>Laccophilus parvulus</i> Aube [#]	Nagaur: Nawa, Guda (WB), Sikar (WB)
<i>Laccophilus chinensis inefficiens</i> Walker [#]	Nagaur: Nawa (WB)
<i>Canthydrus laetabilis</i> (Walker)*	Jodhpur: Kailana Lake (WB)
<i>Erectes sticticus</i> Linn.*	Jodhpur: Kailana Lake (WB), Sikar (WB)
<i>Hydaticus fabricii</i> Macleay*	Jodhpur: Kailana Lake (WB)
<i>Hydaticus vittatus</i> Fab.*	Jodhpur: Kailana Lake (WB)
<i>Hydaticus histrio</i> Clark	Bikaner (WB)
<i>Cybister (Meganectes) tripunctatus asiaticus</i> Sharp*	Jodhpur: Kailana Lake (WB), Sikar (WB)
<i>Rhantus congestus</i> (Klug)*	Jodhpur: Kailana Lake (WB)
Coccinellidae	
<i>Coccinella septempunctata</i> Linnaeus	Jodhpur: Osian, Piparcity (CV), Phalodi (CV), Pali: Sumerpur(CV), Ganganagar(CV).
<i>Coccinella septempunctata var divaricata</i>	Churu: Talchapper (CV)
<i>Cycloneda carolinae</i> Muls.	Jaisalmer (CV)
<i>Thea bisoctonota</i> Muls.	Jaisalmer: Chandan (CV),

Scientific name	Localities	Scientific name	Localities
<i>Adonia variegata</i> (Goeze)	Ganganagar: Suratgarh (CV)		Chandan (CV), Digha (CV)
<i>Coelophora</i> sp.	Jodhpur: Osian (CV)	<i>Catharsius</i> sp.	Jodhpur (CV), Bikaner: Mukham (Ar), Ganganagar: Rojari (CV)
<i>Menochilus</i> (= <i>Chilomenes</i>) <i>sexmaculata undulata</i> Fab.	Jodhpur: Rampura (CV) Jodhpur: Piparcity (CV), Guda bishnoian (CV), Mandore (CV)	Chrysomelidae	
	Jaisalmer: Mohangarh (CV), Jalore: Bhinmal (CV), Pali: Sumerpur (CV)	<i>Clytra succineta</i> Lacord	Jodhpur: Rohit (CV) Pali: Kharda (Ar & CV)
	Sikar: Shakhambari (CV)	Elateridae	
<i>Henosepilachna</i> (= <i>Epilachna</i>) <i>vigintioctopuntata</i> Fabricius		<i>Cardiophorus</i> sp.	Jodhpur: Bhopalgarh (CV)
<i>Henosepilachna</i> (= <i>Epilachna</i>) <i>indica</i> Muls	Pali: Kharda (CV)	<i>Silensis inficetus</i> Candze	Bikaner (CV)
Curculionidae			
<i>Myloccerus undecimpustulatus</i> Fst.	Ganganagar: RAU Farm (CV)		
<i>Myloccerus viridanus</i> Fabricius	Jodhpur: Kailana Lake		
<i>Myloccerus discolor</i> Boh.	Jalore: Bhinmal (CV), Ghasari (CV), Barmer (CV).		
<i>Myloccerus fabricii</i> Gur.	Barmer: Nimbario-ki-dhani (CV), Pali: Rampuron-ki-dhani (CV)		
<i>Myloccerus severini</i> Mshl.	Barmer: Nimbario-ki-dhani (CV)		
<i>Myloccerus pustulatus</i> var <i>maculosus</i> Desbr	Jodhpur: Kailana (CV), Bhopalgarh (CV), Atria Kalan (CV), Hanumangarh (CV).		
<i>Myloccerus pubescens</i> Faust	Nagaur (CV)		
<i>Myloccerus sabulosus</i> Mshl.	Barmer: Kumaro-ki-dhani (CV)		
<i>Crytozemia dispar</i> Pasc.	Jodhpur: Atria kalan (CV), Jalore (CV), Barmer (CV), Ganganagar (CV)		
<i>Amblyrrhinus poricollis</i> Bohem.	Hanumangarh: R.A.U. Farm (CV)		
<i>Lixus</i> (= <i>Hypolixus</i>) <i>trancatulus</i> Fabricius	Jaisalmer: Chandan (CV), Hanumangarh: R.A.U. Farm (CV)		
Tenebrionidae			
<i>Pimelia inexpectata</i> Sen	Churu: Talchappar (Ar), Jaisalmer: Digha (Ar)		
<i>Pimelia indica</i> Sen	Jaisalmer: Chandan (Ar), Churu: Talchappar (Ar), Bikaner: IGNP (CV)		
<i>Oxycara tharensis</i> Klgr.	Churu: Talchappar (Ar)		
<i>Opatroides vicinus</i> Fairm	Jaisalmer: Chandan (CV)		
<i>Gonocephalum</i> sp.	Jodhpur: Bhopalgarh (CV)		
<i>Spyrathus</i> sp.	Barmer: Madhosar (CV)		
<i>Rhytina impolita</i> Fairm	Hanumangarh: R.A.U. Farm (CV)		
<i>Arthodes</i> sp.	Bikaner: IGNP (CV), Jodhpur: Osian (CV)		
<i>Setenis semiopaca</i> Stebbing	Bikaner (CV)		
Scarabaeidae			
<i>Scarabaeus cristatus</i> Fabricius	Barmer: Madhosar (CV)		
<i>Scarabaeus gangeticus</i> Cast.	Bikaner: R.A.U. Farm (CV)		
<i>Scarabaeus brahminus</i> Cestlenau	Bikaner (CV)		
<i>Trox indicus</i> Har.	Barmer: Akoli (Ar), Jaisalmer (Ar)		
<i>Onthophagus catta</i> Fabricius	Bikaner (CV)		
<i>Onthophagus bonasus</i> Fab.	Jodhpur (CV), Jaisalmer: Chandan (CV), Bikaner: R.A.U. Farm (CV)		
<i>Onthophagus</i> sp.	Bikaner: R.A.U. Farm (CV)		
<i>Gymnopleurus cyaneus</i> (Fabricius)	Jodhpur: Kailana lake (CV)		
<i>Hybosorus orientalis</i> (Westwood)	Jodhpur: Bhopalgarh (CV)		
<i>Hybosorus illigeri</i> Reiche	Jaisalmer: Chandan (CV)		
<i>Adoretus</i> sp.	Jodhpur: Bhopalgarh (CV)		
<i>Adoretus binarginatus</i> Ohaus	Jodhpur: Bhopalgarh (CV), Pali: Sumerpur (CV), Jaisalmer: Sam (Ar)		
<i>Adoretus punjabensis</i> Arrow	Bikaner (CV)		
<i>Rhinyptia laeviceps</i> Arrow	Bikaner (CV)		
<i>Ochodaeus</i> sp.	Bikaner (CV)		
<i>Copris furciceps</i> Felsche	Bikaner (CV)		
<i>Apogonia ferruginea</i> Fab.	Jaisalmer: Sam (Ar), Jalore: Ahore (CV), Jodhpur: Mathania (CV), Bikaner: Mukham (CV)		
<i>Apogonia</i> sp.	Jaisalmer: Chandan (CV)		
<i>Schizonycha ruficollis</i> (Fabricius)	Jodhpur: Bhopalgarh (CV), Pali: Sanderao (Ar & CV), Jaisalmer: Dabla (Ar)		
<i>Autoserica insanabilis</i> Brsk.	Jodhpur: Mathania (CV)		
<i>Catharsius pithecus</i> Fab.	Hanumangarh (CV), Jaisalmer:		

* From Tak & Sewak (1987), # Tak (1996)

CV – Cultivated / irrigated land; Ar – Arid Areas; WB – Water bodies

In: *Collection and Preservation of Animals*. Zoological Survey of India, Calcutta, 226pp.**Tak, N. (1996)**. Aquatic beetles of Thar Desert, pp.221-226. In: *Faunal Diversity in the Thar Desert: Gaps in Research*. Scientific Publication, Jodhpur, 410pp.**Tak, N. and R. Sewak (1987)**. On the collection of aquatic beetles (Coleoptera) from Lake Kailana (Jodhpur, India). *Oikoassay* 4(2): 33-38.**Tandon, S.K. (1996)**. Insect Diversity in the Thar Desert, pp.131-143. In: *Faunal Diversity in the Thar Desert: Gaps in Research*. Scientific Publication, Jodhpur, 410pp.**ACKNOWLEDGEMENT**

We are grateful to Dr. Qaiser, H. Baqri, Principal Investigator and Additional Director, Desert Regional Station, Zoological Survey of India, Jodhpur, for encouragement and providing necessary facilities. We thank Dr. P.C. Mathur, Deputy Director, IGNP, Bikaner, for providing the material and Dr. H.R. Khan, Scientist-F, Head, Division of Forest Entomology, Forest Research Institute, Dehra Dun, for allowing one of us (S.I.K.) to study specimens deposited in National Insect Reference Collection. The Financial assistance from the Ministry of Environment and Forests, New Delhi, in research project to Q.H.B. is gratefully acknowledged.

