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BEETLES OF JALGAON DISTRICT OF MAHARASHTRA, INDIA

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ABSTRACT

The study presents record of 35 species belonging to 28 genera under 13 families of the order Coleoptera (Linnaeus, 1758) from Jalgaon district of Maharashtra, India. The families viz. Carabidae (4 genera and 4 species), Gyrinidae (1 genus and 1 species), Dytiscidae (1 genus and 2 species), Geotrupidae (1 genus and 1 species), Scarabaeidae (9 genera and 9 species), Buprestidae (1 genus and 3 species), Coccinellidae (2 genera and 2 species), Tenebrionidae (3 genera and 3 species), Chrysomelidae (1 genus and 2 species), Cerambycidae (1 genus and 1 species), Curculionidae (2 genus and 2 species), Meloidae (4 genera and 4 species) and Cetoniidae (1 genus and 1 species).

Keywords – Beetle diversity, Coleoptera and Jalgaon district

INTRODUCTION

Geographical location of Jalgaon district is in between 20° and 21° North latitudes and 74° 55' to 76° 28' East longitudes, in the northern part of the state. Jalgaon district is located in the north-west region of the state of Maharashtra. It is bounded by Satpuda mountain ranges in the north, Ajanta mountain ranges in the south. Jalgaon District receives an average rainfall of about 690 mm and the temperature varies from 10 to 48 degree Celsius.

It is very rich in biodiversity. The beetles belonging to the dominant order of animal kingdom Coleoptera and found everywhere in natural habitats except marine and the Polar region. About 40% (4, 00,000) of all described insect species are beetles (Hammond, 1992) and approximately 15,088 species were recorded India (Kazmi, 2004). There are particular species that are adapted to practically every kind of diet. Beetles are detritus feeders, some feed on flesh, dung, fungi, plants, pollen, flower and fruit eaters as well as some are predatory invertebrates and some are parasites. Beetles are harmful pest attacking on plants, processed fibers, grains and wood products, but can also be beneficial, usually by controlling the populations of serious pests of agricultural plants, examples ladybird feed on aphid colonies, scale insects, thrips and mealy bugs that damage crops.

Beetles serve as prey of various invertebrates and vertebrates including insects, fish, reptiles, birds and mammals. The miger record of diversity of beetles from Jalgaon district is available, therefore a preliminary study was conducted and an attempt was made to find out the diversity of beetles of Jalgaon district.

Map of Jalgaon District and Maharashtra

MATERIAL AND METHODS

Beetles were observed from different places of Jalgaon district during July, 2013 to February, 2014 to determine their diversity. Photographs of the beetles were taken with help of digital camera Sony (DSC-W610) and were identified with the help of standard keys like Bousquet (1990) and available literature (Mani, 1974) as well as different websites from the internet.

RESULT AND DISCUSSION

35 species belonging to 28 genera under 13 families of the order Coleoptera from Jalgaon district of Maharashtra, India have been noted. The observed beetle species are tabulated in Table 1. Family Scarabaeidae was found to be dominant with 9 species which constituted 25.71% besides family Carabidae and Meloidae contributed 04 species each with 11.42% and Buprestidae, Tenebrionidae contributed 03 species each with 8.57% each as well as Dytiscidae, Coccinellidae, Chrysomelidae, Curculionidae contributed 02 species each with 5.71% each and family Gyrinidae, Geotrupidae, Cerambycidae and Cetoniidae contributed 01 species each with 2.85% each.

Fig 1. Familywise beetle species percentage in Maharashtra (India)

Dabhade *et al.* (2012) studied 25 beetles species belonging to the 8 super families and 11 families from Mangrulpir Tahsil, Dist. Washim, Maharashtra. Bhawane *et al.* (2012) recorded 29 species under 22 genera distributed in 4 subfamilies of family Scarabaeidae Kolhapur district, Maharashtra. Chandra and Gupta (2013) observed 43 species belonging to 25 genera, 16 tribes and 8 subfamilies in 2 families, Hybosoridae and Scarabaeidae of the superfamily Scarabaeoidea of Barnawapara Wildlife Sanctuary, Chhattisgarh, India. Thakare and Zade (2012) noticed 10 species belonging to 6 different families viz. Gyrinidae, Tenebrionidae, Carabidae, Scarabaeidae, Meloidae and Buprestidae of beetles from various habitats at Melghat Tiger Reserve, Maharashtra. The work on beetle diversity of Melghat area was done by Thakare *et al.* (2012). Chandra *et al.* (2012) recorded some new species of beetles of Jabalpur, Madhya Pradesh (India). Aland *et al.* (2012) surveyed 152 species under 101 genera belonging to 25 families of beetles, they concluded family Scarabaeidae to be dominant with 65 species from Amba Reserve Forest, Western Ghat, Kolhapur. Banerjee (2014) reported 9 families of Coleoptera from Durgapur, West Bengal, India.

Table 1. Familywise list of recorded beetles in Jalgaon district (M.S.)

No	Family	Scientific name
1	Carabidae (Latreille, 1802)	*Carabus auroaitens* (Fabricius, 1792)
2		*Patrobus longicornis* (Say, 1823)
3		*Anthia sexgutatta* (Fabricius, 1775)
4		*Chlaenius erythropus* (Germar, 1824)
5	Gyrinidae (Latreille, 1807)	*Dineutus ciliatus* (Forsberg, 1821)
6	Dytiscidae (Leach, 1815)	*Cybister tripunctatus (*Olivier, 1795)
7		*Cybister fimbriatus* (Say, 1823)
8	Geotrupidae (Latreille, 1807)	*Anoplotrupes stercorosus* (Hartmann, 1791)
9	Scarabaeidae (Latreille, 1807)	*Onthophagus longicornis* (Latreille, 1802)
10		*Helicopris midas* (Fabricius, 1775)
11		*Catharsius* (*Catharsius*) *sagax* (Quenstedt, 1806)
12		*Helicopris collasus* (Bates,1868)
13		*Copris elphenor* (Klug 1855)
14		*Heliocopris bucephalus* (Fabricius, 1775)
15		*Adoretus lasiopygus* (Burm.)
16		*Onthophagus* (*Digitonthophagus*) *gazella* (Fab. 1787)
17		*Oxycetonia versicolor* (Fabricius, 1775)
18	Buprestidae (Leach, 1815)	*Sternocera chrysis chryisidioides* (Castelnau & Gory, 1837)
19		*Sternocera basalis* (Castelnau & Gory, 1837)
20		*Sternocera aequisignata* (Saunders, 1866)
21	Coccinellidae (Latreille, 1807)	*Cheilomenes sexmaculata* (Fabricius, 1781)
22		*Coccinella septempunctata* (Linnaeus, 1758)
23	Tenebrionidae (Latreille, 1807)	*Tenebroides corticalis* (Melsheimer, 1844)
24		*Opatrum depressum* (Fabricius, 1801)
25		*Tribolium castaneum* (Herbst, 1797)
26	Meloidae (Gyllenhal, 1810)	*Mylabris postulata* (Thunberg, 1821).
27		*Cylindrothorax tenuicolis* (Pallas, 1798)
28		*Lytta vesicatoria* (Linnaeus, 1758)
29		*Epicauta callosa* (LeConte, 1866)
30	Cerambycidae (Latreille, 1802)	*Batocera rufomaculata* (DeGeer, 1775)
31	Chrysomelidae (Latreille, 1802)	*Callosobruchus maculates* (Fabricius, 1775)
32		*Callosobruchus chinensis* (Linn, 1758)
33	Curculionidae (Latreille, 1807)	*Sitophilus oryzae* (Linnaeus, 1763)
34		*Cosmopolites sordidus* (Germar,1824)
35	Cetoniidae (Leach, 1815)	*Cetonia aurata* (Linnaeus, 1758)

CONCLUSION

The data revealed will be addition to our knowledge of beetle diversity of Jalgaon district. A long term study is needed to observe the species occurrence in all seasons and their interaction with the environmental changes for better results. It provides useful information about diversity of beetles in the said area as well as provides baseline data for upcoming researchers and gives wide scope for further study.

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