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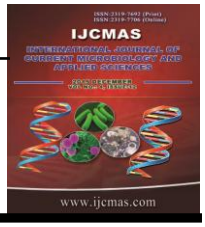

Original Research Article

An Inventory of the Moth Fuana of (Lepidoptera) of Amboli Reserve Forest, Maharashtra, India

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A B S T R A C T

The study reports the results from surveys for moth in the Amboli Reserve Forest during 2009-2011.This paper presents an inventory of 56species of moths from14families which were recorded by light trapping at Amboli. We assume that monitoring the abundance dynamics of this indicator assemblage of moth species will helpunderstand the future changes in quality and composition of the vegetation zones concerned.

Introduction

The order Lepidoptera comprises with Butterflies and Moths, which are the most common insects of the forest ecosystems and agricultural fields and are often termed as the biological indicators of the ecosystem. Lepidoptera is the second largest and the most diverse order of the class Insecta (Benton, 1995). Most of the biological researchers have used Lepidoptera as a model organism to assess the impact of human and pollution disturbance and management practices of the forest ecosystems (Willott*et al*., 2000; Lewis, 2001). In recently scientists estimated to comprise of 1, 74, 250 species, in 126 families and 46 super families in worldwide. In India it is estimated that approximately 12,000 species of moths belongs to 41 families are recorded (Chandra, 2007).

Materials and Methods

During the present study the moths were collected from different localities of Amboli Reserved Forest. Moths specimen were collected by using light trap by using white screen (40 W - UV Lamp) during the study periodJanuary 2009 to December 2011. The samples were collected in evening 6 PM to 9 PM. Collected moths were etherized in the glass bottle, placed in paper envelops and brought to the laboratory. The specimens were preserved by dry preservation method [Alfred, 2004]. The identification of the material was made with the help of available literature.

Study Region

Amboli Reserved Forest is a tropical semi evergreen forest in the Sindhudurga district

of Maharashtra State, a part of Western Ghats and the total area of this forest is 659.88 ha. It is situated at 150 37'- 600 40' N latitude and 730 19'- 740 13' E. The average rainfall of this region is 3000 to 5000 mm. The soil of the present study region is red brown.

Results and Discussion

The suborder Heterocera is represented by 56 species of moths belonging to 14 families have been listed in this order (Table. 1). Of these 14 families the family Noctuiidae was found to be dominant family which was represented by 13 species. This family was followed bySphingidae 06 species, followed byPyralidae, Geometridae, Lymantridae, Crambidae, (3 species each), Lasiocampidae, Saturniidae & Arctiidae (3 species), Gracillaridae and Gelechidae (2 species each), and Zygaenidae & Hepialidae. (1 species). In the present investigation 56 species of moths were recorded supporting the observations made by Pandhrbale (2004) who reported 128 species of moths from 74 Satara District, Western Ghats, Maharashtra. Barlow and Waiwood (1989) enlisted 1,426 moth species from tropical forest in Peninsular Malaysia. Smetacek (2008) reported 887 species of moths from Nanital District, Himalaya, India. Chandra and Nema (2007) reported 313 species and subspecies of moths from Madhya Pradesh. 14 species of wild sericigenous insects were documented by Kakati and Chutia(2009) in Nagaland, India. During the present study 3 species viz. *Anthrareamylitta*, *Actiasselene* and *Attacus atlas* of silkmoths were reported. Presently about 1,000 species of butterflies and 12,000 species of moths are known from India (State of Art, 1991). Hamlyn (1969) reported about 140,000 Lepidopteran species comprising 13,000 butterflies and 127,000 moths from the world however, according to Grimaldi and Engel (2005) nearly 150,000 Lepidopteran species were recorded throughout the world.

Table.1 Annotated checklist of moth fauna from Amboli Reserve Forest

Sr. No	Family	Genus	Species
1	Hepidalidae	*Phassus*	*malabaricus*
2	Gracillaridae	*Acrocerocops*	*syngramma*
3		*Bauhinia*	*purpurea*
4		*Gracillaria*	
5		*Phycodes*	
6		*Plutella*	*xyllostella*
7	Gelechidae	*Pectinophora*	*gossypiella*
8		*Sitotroga*	*cerealella*
9	Zygaenida	*Eterusia*	*aedia*
10		*Heterusia*	
11	Limacodidae	*Altha*	*subnotata*
12		*Parsa*	*lepida*
13	Pyralidae	*Chilo*	*partelus*
14		*Cnapphalocrosis*	*medinalis*
15		*Eutectona*	*machaeralis*
16		*Margaronia*	*caesalis*
17		*Procerus*	*indicus*

18		*Pyralid*	
19		*Raphimetopus*	
20	Geometridae	*Agathia*	*laetata*
21		*Eumelea*	*rosalia*
22		*Euproctis*	*subnotata*
23		*Geometra*	
24		*Macaria*	*fasciate*
25		*Micronea*	*aculeate*
26	Lasiocampidae	*Labeda*	
27		*Metanastria*	*hyrtaca*
28		*Taragama*	*siva*
29		*Trabal*	*vishnu*
30	Saturniiidae	*Actias*	*selene*
31		*Antharaea*	*mylitta*
32		*Atacus*	*atlas*
33	Sphingidae	*Acherontia*	*styx*
34		*Cephanodes*	*hylas*
35		*Daphnius*	*neri*
36		*Hippotion*	*celerio*
37		*Hippotion*	
38		*Nephele*	*hespera*
39		*Psilogramma*	*menephron*
40	Noctuidae	*Agrotis*	*ypsilon*
41		*Dysgonia*	
42		*Erebus*	*ephesperis*
43		*Erebus*	*marcops*
44		*Eudocima*	*maternal*
45		*Eudocima*	
46		*Helicoverpa*	*armigera*
47		*Heliothese*	*armigera*
48		*Hippopyra*	
49		*Hulodes*	
50		*Hypsiphylla*	*robusta*
51		*Lacera*	*procellosa*
52		*Mythimna*	*compacta*
53		*Mythimna*	*separate*
54		*Plusia*	
55		*Psimeda*	*quadripennis*
56		*Spirama*	*reorta*
57		*Spodoptera*	*litura*
58		*Spodoptera*	
59	Lymantrida	*Artax*	*diagramma*
60		*Dasychira*	
61		*Lymantria*	*ampla*
62		*Lymantria*	*dispar*

63		*Lymantria*	*incerta*
64		*Orygyia*	*postica*
65		*Orygyia*	
66	Arctiidae	*Amsacta*	
67		*Celamia*	
68		*Chionoema*	
69		*Diacrisia*	*oblique*
70		*Olepa*	*ricini*
71		*Syntomoides*	*imaon*
72		*Syntomoides*	
73	Crambidae	*Chilo*	*partellus*
74		*Chilo*	*simplex*
75		*Diatreaea*	*venosata*
76		*Galleria*	*melonella*
77		*Sameodes*	*cancelallis*

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