



Research Paper

Moths (Insecta: Lepidoptera) of Prayagraj, Uttar Pradesh

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Abstract: The study yielded the identification of 92 species of the order Lepidoptera and all these species are reported from Prayagraj and nearby district

Keywords: Lepidoptera, species, Prayagraj Area.

INTRODUCTION

Lepidoptera is one of the most widespread and widely recognizable terrestrial insect order in the world, attracting the scientific as well as non-scientific communities for centuries. Butterflies (including skippers) and moths of this order are of great economic importance as they act as both: pests and pollinators. Globally, known by 1, 57, 424 described species (Nieuwerkerken *et al.*, 2011), Lepidopteran are mainly recognized due to the body and wings covered with scales (modified and flattened hairs).

As far as the state of Uttar Pradesh is concerned, Lepidopteran fauna is less studied so far. Although, many studied has been taken up as far as butterflies are concerned but the moths diversity remain under studied. A very scattered publication can be seen on moths of Prayagraj, Uttar

Pradesh. In this manuscript, we tried to compile the published information on moths from literature as well as from books. The data will act as baseline to update the diversity of moths from this state in coming years. The list of species reported by various workers from Prayagraj Uttar Pradesh is given in the end for reference.

MATERIALS, METHODS AND PROCEDURE OF STUDY

Both vertical sheet method and portable light trap methods can be used for this purpose. Collection can be done in any season but it is better to plan it in pre-monsoon and post-monsoon seasons.

Collected adult are killed with ethyl acetate vapours in the killing jars. The freshly killed specimens are pinned and then stretched in special stretching boxes. Stretched specimens are kept for 2-3 days and then preserved in air tight and well fumigated wooden boxes in air tight insect cabinets.



(Stretched moths in Stretching box)

Each specimen is tagged with information like locality, date of collection, altitude, sex of specimen and name of collector. Whole collection is first sorted out tentatively before identification. The sorting is done on the basis of external morphological characters like antennae, labial palpi, proboscis, colour of eyes, vertex, frons, patagia, tegula, wing venation and general maculation, colour and markings of thorax, abdominal characters, position and number of tibial spurs etc. Adult moths should be photographed before preparation of wing slides and dissections of abdomen to examine genital structures.

RESULTS AND DISCUSSION

Uttar Pradesh is the least studied state as far as the Lepidopteran fauna is concerned. A very scattered publications were found on moths of Uttar Pradesh which includes 13 species of Sphingidae (Chandra *et al.*, 2014), 3 species of Cossidae (Arora, 1976) and 32 species of Crambidae (Arora, 2000). Apart from this, In State fauna series of West Bengal, Vol. 7, Gupta (1997), Bhattacharya (1997), while dealing with diversity from West Bengal. Mandal & Maulik (1997) also reported 26 species of Noctuidae from Uttar Pradesh while Apart from this, recently diversity of butterflies has been taken up by Sharma (2007) by reporting 26 species of Butterfly from Sur Sarova Bird Sanctuary, Agra. 8 species of Satyridae, single species each of family Acraeidae and Rhodinidae. Ansari *et al* (2015) reported 53 species of

butterflies from Surajpur wetland, Uttar Pradesh, study yielded the identification of 92 species of the order Lepidoptera and all these species are reported from Prayagraj and nearby district

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Diversity of moths from Prayagraj, Uttar Pradesh

Family Crambidae (Arora, 2000)

1. *Chilo suppressalis* (Walker)
2. *Chilo partellus* (Swinhoe)
3. *Chilo tumidicostalis* (Hampson)
4. *Chilotraea infuscatellus* (Snellen)
5. *Chilotraea ceylonicus* (Hampson)
6. *Chilotraea auricilia* (Dudgeon)
7. *Chilotraea polychrysa* (Meyrick)
8. *Girdharia tauromma* Kapur
9. *Bissetia steniellus* (Hampson)
10. *Sacchariphagus indicus* (Kapur)
11. *Scirpophaga xanthogastrella* (Walker)
12. *Scirpophaga magnella* de Joannis
13. *Scirpophaga excerptalis* (Walker)
14. *Scirpophaga incertulas* (Walker)
15. *Scirpophaga innotata* (Walker)
16. *Scirpophaga nivella* (Fab.)
17. *Scirpophaga gilviberbis* Zeller
18. *Scirpophaga fusciflua* Hampson
19. *Achroia griseila* (Fabr.)
20. *Stenachroia elongella* Hampson
21. *Trachylepidia fructicassiella* Ragonot
22. *Corcyra cephalonica* (Stainton)
23. *Galleria mellonella* (Linn.)
24. *Lamoria adaptella* (Walker)
25. *Raphimetopus ablutella* (Zeller)
26. *Emmalocera depressella* (Swinhoe)
27. *Etiella zinckenella* (Treitschke)
28. *Thylacoptila paurosema* Meyrick
29. *Nephopterix eugraphella* Hampson
30. *Phycita clientella* (Zeller)
31. *Euzophera perticella* Ragonot
32. *Cadra cautella* (Walker)

Family Hepialidae (Goel & Bhardwaj, 2004)

33. *Palpifer sexnotatus* (Moore, 1879)
34. *Endoclita undulifer* (Walker, 1869)

Family Pyralidae: (Goel & Bhardwaj, 2004)

35. *Ancylolomia chryographalla* (Kollar)

Family Gelechidae: (Goel & Bhardwaj, 2004)

36. *Lecithocera aulias* (Meyrick)
37. *Lecithocera fortis* (Meyrick)

Family Tortricidae: (Goel & Bhardwaj, 2004)

38. *Bacrta truculenta* (Meyrick)
39. *Eucosoma critica* (Meyrick)
40. *Enarmonia koenigiana* Fabr.

Family Cosmopterygidae: (Goel & Bhardwaj, 2004)

41. *Lecithorus trigonopsis* (Meyrick)
42. *Caloptilia tetratypa* (Meyrick)

Family Pterophoridae: (Goel & Bhardwaj, 2004)

43. *Exelastis pumilio* (Zeller)

Family Tineidae: (Goel & Bhardwaj, 2004)

44. *Hapsifera seclusella* (Walker)

Family Yponomeutidae

45. *Plutella maculipennis* Curt.

Family Cossidae (Arora, 1976)

46. *Xyleutes persona* (Le Gllillou)
47. *Zeuzera nudtistrigata* Moore
48. *Zeuzera postexcisa* Hampson

Family Zygaenidae (Bhattacharya, 1997)

49. *Gynautocera papilionaria* Guerin, 1830
50. *Campylotes histrionicus* Westwood, 1839
51. *Eterusia pulchella pulchella* (Kollar, 1844)

Family Saturniidae (Gupta, 1997)

52. *Actias selene* (Huebner, 1806)

53. *Antheraea paphia* (Linnaeus, 1758)
54. *Antheraea roylei* Moore
55. *Samia cynthia* (Drury, 1773),
56. *Caligula thibeta extensa* (Butler, 1881)
57. *Neoris huttoni* Moore, 1862
58. *Loepa katinka* (Westwood, 1848)
59. *Attacus atlas* (Linnaeus, 1758)

Family Lymantriidae (Mandal & Maulik, 1997)

60. *Pida decolorata* (Walker, 1869)
61. *Himala argentea* (Walker, 1855)
62. *Porthesia xanthorrhoea* (Kollar, 1842)

List of species of Family Noctuidae reported from Uttar Pradesh by Mandal and Maulik (1991)

63. *Agrotis spinirera* (Hubner, 1827)
64. *Agrotis ypsilon* (Rottenburg, 1776)
65. *Agrotis flammatra* (Schiffermüller, 1776)
66. *Hyphilare loreyi* (Duponchel, 1827)
67. *Dasygaster reversa* (Moore)
68. *Cirphis compta* (Moore, 1881)
69. *Pariambia pulla* (Swinhoe, 1885)
70. *Spodoptera mauritia* (Boisduval, 1833)
71. *Laphygma exigua* (Hubner, 1808)
72. *Eublemma quadrilineata* (Moore, 1881)
73. *Eublemma anachoresis* (Wallengren, 1863)
74. *Paectes subapicalis* (Walker, 1837)
75. *Odontodes aleuca* (Guenee, 1852)
76. *Earias fabia* (Stoll, 1782)
77. *Anua coronata* (Fabricius, 1775)
78. *Anua tirhaca* (Carmer, 1780)
79. *Anua triphaenoides* (Walker, 1858)

80. *Parallelia conficiens* (Walker, 1858)
81. *Parallelia algira* (Linnaeus, 1767)
82. *Grammodes geometrica* (Fabricius, 1775)
83. *Chalciope hyppasia* (Cramer, 1779)
84. *Euclidisema mygdon* (Cramer, 1777)
85. *Mocis frugalis* (Fabricius, 1775)
86. *Mocis undata* (Fabricius, 1775)
87. *Diachrysia orichalcea* (Fabricius, 1775)
88. *Cosmophila erosa* Hubner, 1818
89. *Mocis frugalis* (Fabricius, 1775)
90. *Mocis undata* (Fabricius, 1775)
91. *Diachrysia orichalcea* (Fabricius, 1775)
92. *Cosmophila erosa* Hubner, 1818