

CHECK LIST OF MOTHS (LEPIDOPTERA:HETEROCERA) OF PAKISTAN

S. Kamaluddin¹, S. Nargis Viqar², K.A.B. Saeed Khan¹ and Aliza Ali²

¹Department of Zoology, Federal Urdu University of Arts, Science and Technology, Gulshan-e-Iqbal Campus, Karachi, Pakistan.

²Department of Zoology, Government Degree College for Women, Block-M, North Nazimabad, Karachi, Pakistan.

ABSTRACT

A check-list of moths of Pakistan with species and families name and distribution with their host association is given.

Key words: Check-list, Moths, Heterocera, Pakistan.

INTRODUCTION

Moths are members of order Lepidoptera. Moths and Butterflies have scale-covered wings, from which the scientific name is derived (Gr. lepis means scale and pteron means wing). The Lepidoptera include about 130,000 known species, with an incalculable number still to be found and described, especially in the tropics. Of these, the Butterfly accounts for around 18,500 species and rest of them goes into the account of Moths.

Moths have frequently held our fascinated attention but it has to be admitted that the most common interaction between humanity and moths is when moths are acting as pests. Many migrant moths continue to fly on, even when they have reached an area where there is suitable habitat available. They seem to be "programmed" to use up their metabolic resources before they stop. Moths and Butterflies share common life cycle and the various ways in which this is adapted to differing climates, habitats and conditions. All adult female Lepidoptera lays eggs.

Many adult moths disperse either within the habitat or to new suitable areas elsewhere. For most adult moths, the immediate priority after emergence is to find a suitable mate; this poses a considerable problem for a relatively small organism in a large world. The opportunities for finding a mate by chance encounter are remote and most species have very effective mechanisms for locating the opposite sex of their own species. The obvious and indeed legendary was in which this is done is for the females to emit an attractive scent and in some species this plume of perfume is effective over a distance of several kilometers. This sort of attractive chemicals, released by one individual and inducing a behavioural response in another, is called a pheromone. We have learnt to produce some of these chemicals artificially and to use them to attract the males of certain pest species to killing traps to control them.

The remarkable works which have been done on Moths are Butler (1875), Moore (1882-83), Walker (1854), Cotes and Swinhoe (1886,1889), Westwood (1889), Hampson (1892-98), Harmer and Shipley (1899), Lefroy (1909), Seitz (1913), Core *et al.* (1938), Buchsbaum (1938), Sevastopol (1940, 1942, and 1947), Curran (1946), Imms (1957), Chaudhry *et al.* (1966 and 1970), Haque (1970), Dennis (1975), Watson *et al.* (1980), Dubatalov (1985), Helgard (1991), Hashmi and Tashfeen (1992), Goodger and Watson (1995), Jervis and Kidd (1996), Young (1997), Kristensen (1999), Gavin (2000) and from 2001 to 2004 present authors have been collected Moths from the different locations of Pakistan, made research, and archived following results.

Name of the Specie	Locality	Host Plant	Reference No.*
Family - Arctiidae			
<i>Aegocera venulia</i> Cramer	Muree	<i>Pinus wallichiana</i>	3,6,15,29,30
<i>Agape ficus</i> F.	Dongagali	<i>Rhamnus virgata</i>	3,6,12,15,31
<i>Agylla albifinis</i> Walker	Muree	<i>Berberis lyceum</i>	2,7,14,16,28
<i>Agylla metaxantha</i> (Walker)	Muree	<i>Berberis lyceum</i>	2,8,14,16,28
<i>Agylla ramelana</i> Moore	Dongagali	<i>Berberis lyceum</i>	3,6,12,15,24
<i>Amerila astreus</i> (Walker)	Dongagali	<i>Salix babylonica</i>	2,5,14,19,28
<i>Amsacta albistriga</i> Walker	Dongagali	<i>Ribes glaciale</i>	1,14,28,29,31
<i>Amsacta lineola</i> F.	Dongagali	<i>Nepeta erecta</i>	6,12,16,26,29
<i>Amsacta morrie</i> Butler	Dongagali	<i>Nepeta erecta</i>	2,12,16,26,29
<i>Arctia caja</i> L.	Sawat	<i>Quercus ilex</i>	3,12,21,25,31
<i>Argina argus</i> Koll	Ghoragali	<i>Pinus wallichiana</i>	5,11,15,24,26

<i>Argina cribararia</i> Clerk	Hazara	<i>Ailanthus sp.</i>	3,6,8,12,14,21
<i>Asota caricae</i> F.	Ghoragali	<i>Skimmia laureola</i>	2,12,22,25,29
<i>Asura punctata</i> Roths	Thandiani	<i>Pistacia sp.</i>	2,12,20,22,27
<i>Asura punctata</i> Roths	Dongagali	<i>Quercus dilatata</i>	4,12,15,24,28
<i>Callimorpha plagiata</i> Wlk	Ghoragali	<i>Cornus macrophylla</i>	4,12,15,17,20
<i>Callimorpha principalis</i> Koll	Dongagali	<i>Quercus dilatata</i>	2,6,7,10,26,30
<i>Callitomis syntomoides</i> Butler	Dongagali	<i>Abies pindrow</i>	1,14,15,23,25
<i>Carcinopyga licheniugera</i> Fd	Sawat	<i>Alnus nitida</i>	3,6,8,12,15,24
<i>Chionoema arama</i> Moore	Ghoragali	<i>Pyrus pashia</i>	3,16,12,15,24
<i>Chionoema bellissima</i> Moore	Dongagali	<i>Berberis lycium</i>	3,16,12,15,24
<i>Chionoema detrita</i> Walker	Hazara	<i>Morus sp.</i>	3,16,12,28,29
<i>Chionoema dobertyi</i> Elwes	Dongagali	<i>Quercus dilatata</i>	1,12,14,15,29
<i>Chionoema perigrina</i> Walker	Dongagali	<i>Quercus dilatata</i>	3,16,12,28,29
<i>Chionoema puella</i> Drury	Hazara	<i>Morus sp.</i>	2,3,6,15,20,25
<i>Chionoema quadrinotata</i> Walker	Abbottabad	<i>Platanus sp.</i>	3,12,16,28,29
<i>Chrysorabdia viridata</i> (Walker)	Dongagali	<i>Plectranthus rugosus</i>	3,12,16,28,29
<i>Cretonotus gangis</i> L.	Karachi	<i>Inula granteoides</i>	1,4,6,11,29,30
<i>Cretonotus transiens</i> Walker	Peshawar	<i>Tectona grandis</i>	3,11,28,29,31
<i>Diacrisia casignata</i> Koller	Hazara	<i>Rumex hastatus</i>	1,14,15,17,21
<i>Diacrisia erythrozona</i> Koller	Hazara	<i>Quercus incana</i>	6,14,15,17,21
<i>Diacrisia felderri</i> Roths	Azad Kashmir	<i>Indigofera sp.</i>	5,14,15,17,21
<i>Diacrisia oblique</i> Walker	Abbottabad	<i>Ulmus wallichiana</i>	1,14,15,17,28
<i>Diacrisia unifascia</i> Walker	Azad Kashmir	<i>Berberis sp.</i>	1,14,15,17,28
<i>Digama hearseyana</i> Moore	Islamabad	<i>Acacia sp.</i>	2,3,6,15,24,29
<i>Dysauxes punctata</i> F.	Ziarat	<i>Pistacia khinjuk</i>	1,5,7,17,25,28
<i>Eilema basinota</i> Moore	Dongagali	<i>Lonicera webbiana</i>	6,14,15,24,29
<i>Eilema conformis</i> Walker	Sawat	<i>Celtis eriocarpa</i>	6,14,15,28,31
<i>Eilema reticulata</i> Moore	Hazara	<i>Skimmia laureola</i>	6,14,15,24,30
<i>Eilema vagesa</i> Moore	Dongagali	<i>Populus ciliata</i>	6,14,15,20,24
<i>Eilema vicaria</i> Walker	Dongagali	<i>Daphne papyracea</i>	6,14,15,25,28
<i>Estigmene lactinea</i> Hubner	Chitral	<i>Juniperus communis</i>	1,3,6,12,20,30
<i>Estigmene imbuta</i> Walker	Kalam	<i>Cedrus deodara</i>	3,6,7,12,28,29
<i>Estigmene quadriramosa</i> Koller	Sawat	<i>Pinus sp.</i>	3,6,8,12,29,30
<i>Euchromia polymena</i> L.	Dongagali	<i>Quercus dilatata</i>	1,16,23,27,28
<i>Miltochrista phaeodonta</i> Hubner	Dongagali	<i>Ulnus wallichiana</i>	6,12,15,29,31
<i>Nyctemera lacticinea</i> Cramer	Dongagali	<i>Quercus incana</i>	7,11,20,23,25
<i>Nyctemera plagifera</i> Walker	Dongagali	<i>Quercus incana</i>	7,11,28,30,31
<i>Oenistis entella</i> Cramer	Dongagali	<i>Aesculus indica</i>	7,11,20,23,24
<i>Pericallia imperialis</i> Koller	Kalam	<i>Juglans regia</i>	2,11,12,29,31
<i>Pericallia ricini</i> (F).	Kalam	<i>Juglans regia</i>	2,11,12,29,31
<i>Pericallia transversa</i> Moore	Abbottabad	<i>Pyrus pashia</i>	2,11,24,29,30
<i>Siccia sordida</i> Butler	Sawat	<i>Pinus wallichiana</i>	2,6,7,20,28,30
<i>Siccia taprobanis</i> Walker	Sawat	<i>Rhus continues</i>	6,11,20,29,30
<i>Sidyma albifinis</i> Walker	Dongagali	<i>Populus ciliata</i>	1,3,6,15,24,30
<i>Simerreea basinota</i> Moore	Dongagali	<i>Taxus wallichiana</i>	5,14,21,24,29
<i>Spilosoma bifurca</i> Walker	Dongagali	<i>Juglans regia</i>	6,11,12,15,28
<i>Spilosoma impleta</i> Walker	Dongagali	<i>Juglans regia</i>	6,11,12,15,28
<i>Spilosoma melanostigma</i> Eversmann	Dongagali	<i>Querous incana</i>	6,11,15,29,30
<i>Spilosoma poswali</i> Nargis & Kamal	Dongagali	<i>Juglans regia</i>	Sp.n
<i>Spilosoma saleemi</i> Nargis & Kamal	Dongagali	<i>Juglans regia</i>	Sp.n
<i>Spilosoma stigmata</i> Moore	Dongagali	<i>Querous incana</i>	6,11,12,24,30
<i>Spilosoma subfesia</i> Moore	Dongagali	<i>Querous incana</i>	4,6,7,12,24,30
<i>Stigmatophora palmate</i> Moore	Hazara	<i>Lonicera sp.</i>	1,4,6,12,24,30
<i>Syntomis bicincta</i> Kill	Sawat	<i>Contoneaster sp.</i>	3,5,6,12,20,31
<i>Syntomis lucina</i> Butler	Abbottabad	<i>Platanus orientalis</i>	2,3,6,12,20,22
<i>Syntomis sperbius</i> F.	Quetta	<i>Prunus cerasus</i>	3,6,8,12,20,29

<i>Thyrgorina rhodophila</i> Walker	Dongagali	<i>Aesculus indica</i>	6,11,20,29,31
<i>Utethesia amhara</i> Jordan	Dongagali	<i>Pistacia sp.</i>	9,11,20,29,30
<i>Utethesia lotrix</i> Cramer	Dongagali	<i>Pistacia sp.</i>	1,11,20,29,30
<i>Utethesia pulchella</i> (L.).	Peshawar	<i>Eugenia sp.</i>	3,4,9,12,15,29
Family - Bombycidae			
<i>Ocinara signifera</i> Walker	Sawat	<i>Rhus continues</i>	1,13,16,18,28
<i>Trilocha varians</i> Walker	Peshawar	<i>Ficus relegiosa</i>	5,13,16,19,28
Family - Cossidae.			
<i>Cossus cadambae</i> Moore	Peshawar	<i>Salix tetrasperma</i>	6,15,21,24,27
<i>Xyleutes mineus</i> Cramer	Dongagali	<i>Cedrus deodera</i>	3,12,17,19,31
<i>Zeuzera coffeae</i> Niein	Hazara	<i>Ficus sp.</i>	1,3,6,12,15,21
<i>Zeuzera multistrigata</i> Moore	Dongagali	<i>Abies pindrow</i>	1,3,6,15,24,27
Family - Cymatophoridae.			
<i>Thyatira batis</i> Linn.	Azad Kashmir	<i>Berberis sp.</i>	9,12,20,21,26
Family - Drepanidae.			
<i>Macroclilia mysticata</i> Kill.	Murree	<i>Taxarix articulata</i>	1,6,18,22,27
<i>Oreta vatama</i> Mre.	Azad Kashmir	<i>Vibrnum sp.</i>	5,8,14,23,25
Family - Eucosmidae.			
<i>Eucosma hypsidryas</i> Meyr	Hazara	<i>Ficus carica</i>	8,13,16,19,23
Family - Geometridae.			
<i>Agathina lycaenaia</i> Koller	Dongagali	<i>Terminalia catappa</i>	5,7,13,19,22
<i>Aglossochloris radiate</i> Walker	Quetta, Ziarat	<i>Terminalia catapha</i>	6,12,15,28,29
<i>Alcis nudipennis</i> Warr	Hazara	<i>Marus sp.</i>	1,6,13,20,27
<i>Alcis trikotaria</i> Felder	Malakand	<i>Pinus roxburgha</i>	1,6,13,23,26
<i>Anaitis plagiata</i> L.,	Sawat	<i>Mallotas philippensis</i>	6,9,18,21,25
<i>Ascotis imparata</i> Walker	Mianwali	<i>Melia azedarach</i>	6,9,18,28,31
<i>Chlorisa pretiosaria</i> Stqr	Abbottabad	<i>Platanus sp.</i>	7,12,13,19,26
<i>Cleora cornria</i> Gn.	Sawat	<i>Pinus roxburgha</i>	7,12,13,23,25
<i>Cleora repulsaria</i> Walker	Sawat	<i>Pinus roxburgha</i>	6,9,18,28,31
<i>Colostygia albogirata</i> Kollar	Dongagali	<i>Prunus cornuta</i>	6,8,16,20,27
<i>Ctenognophos paerlita</i> Butler	Azad Kashmir	<i>Indigofera sp.</i>	2,9,16,19,30
<i>Dysphania minervaria</i> Gn.	Dongagali	<i>Cornus macrophylia</i>	1,9,13,21,27
<i>Ectropis deodarae</i> Beeson	Murree	<i>Cedrus deodara</i>	5,8,19,26,29
<i>Euphyia subangulata</i> Kollar	Sawat	<i>Pinus wallichiana</i>	6,12,17,20,25
<i>Gonodontis angularia</i> Moor	Murree	<i>Pinus wallichiana</i>	6,12,17,20,24
<i>Gonodontis kometaria</i> Felder	Hazara	<i>Pistacia integerimma</i>	4,14,22,23,27
<i>Hemistola detracta</i> Walker	Sawat	<i>Fragaria nubicola</i>	6,7,9,18,28,31
<i>Hemistola fletcheri</i> Prout	Kalam	<i>Juglans regia</i>	1,6,9,18,20,27
<i>Heterolocha rosearia</i> Leech	Ghoragali	<i>Quereus incana</i>	5,14,16,23,25
<i>Medasina albidaria</i> Walker	Murree	<i>Salix sp.</i>	7,18,28,30,31
<i>Medasina pulverulenta</i> Hampson	Rawalpindi	<i>Grewia tenax</i>	7,12,18,28,29
<i>Odontopera kometaria</i> Felder	Nathiagali	<i>Cedrus deodara</i>	1,4,9,17,20,22
<i>Ozola micronriaria</i> Walker	Ghoragali	<i>Diospyrus lotus</i>	7,12,15,19,30
<i>Physetobasis dentifascia</i> Hampson	Hazara	<i>Lonicera sp.</i>	4,12,18,20,28
<i>Problepsis ocellata</i> Friv.	Hazara	<i>Pyrus pashia</i>	9,17,19,23,29
<i>Sabaria rondelaria</i> F.,	Dongagali	<i>Mucuna pruriens</i>	9,13,18,21,27
<i>Scopula nesciaria</i> Walker	Murree	<i>Temarix articulate</i>	1,6,9,18,28,31
<i>Scopula pallida</i> Warr.	Murree	<i>Pistacia sp.</i>	3,4,9,18,19,27
<i>Semiothisa eleonora</i> Fab.	Murree	<i>Tamarix articulate</i>	5,6,9,13,21,25
<i>Semiothisa streniataria</i> Walker	Mardan	<i>Juglans regia</i>	16,18,19,24,30
<i>Somatina anthophilata</i> Gn.	Dongagali	<i>Mucuna pruriens</i>	5,7,8,20,29,31

<i>Stenorumia ablunata</i> Gn.	Sawat	<i>Pistacia sp.</i>	1,4,5,20,22,30
Family - Heliodinidae <i>Eretmocera impactella</i> Walker	Dongagali	<i>Lonicera webbiana</i>	2,3,9,18,29,30
Family - Hypsidae <i>Hypsa ficus</i> Fabr.	Lahore	<i>Oryza sativa</i>	5,6,7,20,23,29
Family - Lasiocampidae <i>Estigena pardalis</i> Walker <i>Lenodora fia</i> Swinh <i>Malacosma indica</i> Walker <i>Metanastria ampla</i> Walker <i>Nadiasa siva</i> Lef.	Azad Kashmir Hazara Sawat Ghoragali Kohat	<i>Pinus roxburghii</i> <i>Morus sp.</i> <i>Contoneaster sp.</i> <i>Cornus macrophylla</i> <i>Diospyros Montana</i>	3,4,7,18,28,29 5,7,9,17,19,20 2,4,9,18,20,25 2,3,9,18,20,29 10,21,27,28,30
Family - Limacodidae <i>Altha niven</i> Walker <i>Iragoides conjuncta</i> Walker <i>Macroplecta nararia</i> Moore <i>Parasa lipida</i> Cramer <i>Parasa pastoralis</i> Butler <i>Setora nitens</i> Walker <i>Thosea cana</i> Walker	Murree Dongagali Sawat Hazara Abbottabad Dongagali Sawat	<i>Tamarix articulata</i> <i>Ficus carica</i> <i>Albizzia lebbek</i> <i>Ficus sp.</i> <i>Platanus orientalis</i> <i>Abies pindrow</i> <i>Juglans regia</i>	29,18,27,30,31 3,8,9,12,28,31 12,18,24,25,30 1,6,7,16,25,29 2,11,14,23,26 14,15,21,28,29 15,21,27,28,29
Family - Lymantridae <i>Dasychira mendosa</i> Hubner <i>Euproctis divisa</i> Walker <i>Euproctis fraternal</i> Moore <i>Euproctis scintillans</i> Walker <i>Euproctis vitellina</i> Koller <i>Euproctis xanthorrhoea</i> Koller <i>Leucoma flavosulphrea</i> Ersch. <i>Lymantria concolor</i> Walker <i>Lymantria obfuscata</i> Walker <i>Numenes siletta</i> Walker <i>Trabala Vishnu</i> Lefroy	Dongagali Dongagali Peshawar Azad Kashmir Murree Abbottabad Kalam Dongagali Murree Dongagali Hazara	<i>Lonicera sp.</i> <i>Juglans regia</i> <i>Zeyphus sp.</i> <i>Indigofera sp.</i> <i>Salix sp.</i> <i>Salix sp.</i> <i>Contoneaster sp.</i> <i>Querous incana</i> <i>Cedrus deodara</i> <i>Querous incana</i> <i>Lonicera sp.</i>	8,14,17,25,26 3,4,9,18,28,31 1,5,9,18,24,28 2,4,9,18,28,30 13,18,24,27,28 12,16,21,22,27 9,12,17,28,31 12,17,27,28,30 16,18,24,26,28 3,14,16,21,26 5,13,19,25,26
Family - Lyonetiidae <i>Leucoptera sphenograpta</i> Myer	Peshawar	<i>Pyrus malus</i>	1,5,9,19,28,29
Family - Noctuidae <i>Aeglera bimacula</i> Walker <i>Agrotis flammatra</i> Fab <i>Agrotis ypsilon</i> Rott. <i>Amyna octo</i> Gn. <i>Apatele maxima</i> Moore <i>Apopestes spectrum</i> Esp. <i>Arcta taprobana</i> Moore. <i>Areyophora ieteriea</i> Swinh. <i>Asticta dorsigera</i> Walker <i>Borolia venalba</i> Moore <i>Calpe emarginata</i> Fab. <i>Characoma rufieirra</i> Hampson <i>Cirphis loreyi</i> Dup. <i>Daseochaeta pallens</i> Moore <i>Emmelia fascialis</i> Hamp.	Azd Kashmir Peshawar Murree Abbottabad Hazara Rawalpindi Abbottabad Ghoragali Azad Kashmir Donga gali Donga gali Dir agency Murree Hazara Sawat	<i>Omdogpfera sp.</i> <i>Pyrus malus.</i> <i>Cornus Macrophylla.</i> <i>Cedrus deodera.</i> <i>Morus sp.</i> <i>Acacia modesta.</i> <i>Pistacia sp.</i> <i>Ailanthis sp.</i> <i>Indigofera sp.</i> <i>Salix babylonica</i> <i>Salix babylonica</i> <i>Juglans regia</i> <i>Pistacia integerimma</i> <i>Rumex hastatus</i> <i>Myrsine Africana</i>	1,5,9,19,28,29 2,4,6,15,19,27 4,6,7,15,19,27 3,12,15,16,26 6,14,18,24,27 6,15,20,28,31 14,24,27,29,30 3,12,15,19,23 12,19,20,25,28 11,16,24,27,29 1,15,22,29,30 1,12,15,17,25 18,20,25,27,28 5,11,12,15,24 12,15,18,24,28

<i>Entomogramma autrix</i> Guen.	Quetta	<i>Pistacia khinjuk</i>	1,17,21,22,27
<i>Ephasia flavesrens</i> Hampson	Sawat	<i>Jasminum humile</i>	10,12,16,19,23
<i>Erebis ephesperis</i> Hubner	Donga gali	<i>Quercus dilatata</i>	1,17,19,27,31
<i>Eublemma silicula</i> Swinh.	Peshawar	<i>Pyrus malus</i>	3,4,9,12,17,27
<i>Euplexia gemmifera</i> Walker	Murree	<i>Tamarix articulata</i>	7,17,28,30,31
<i>Eusemia adulatrix</i> Koller	Donga gali	<i>Abies pinmdrow</i>	2,5,6,27,30,31
<i>Fodina stola</i> Guen.	Donga gali	<i>Aesculus indica</i>	1,12,20,28,30
<i>Grammodes stolida</i> Fab.	Azad Kashmir	<i>Indigofera sp.</i>	3,4,5,17,29,30
<i>Haderonia culta</i> Moore	Hazara	<i>Pistacia integerimma</i>	7,15,18,21,24
<i>Heliothis armigera</i> Hubner	Quetta	<i>Prunus cerasus</i>	1,12,13,22,27
<i>Hermonassa incise</i> Moore	Sawat	<i>Pistacia integerimma</i>	5,21,24,28,30
<i>Hypena subvittalis</i> Walker	Mardan	<i>Ficus carica</i>	9,15,17,24,28
<i>Hypocala lativitta</i> Moore	Sawat	<i>Mallotus phillippensis</i>	3,5,9,16,24,26
<i>Hypotacha indecisa</i> Walker	Murree	<i>Acacia sp.</i>	3,11,15,22,28
<i>Ichthyura anachoreta</i> F.	Abbottabad	<i>Vitis vinifera</i>	5,7,9,15,20,23
<i>Lugoptera honesta</i> Hubner	Murree	<i>Ficus carica</i>	9,17,26,27,31
<i>Leucania angulifera</i> Moore	Sawat	<i>Contoneaster sp.</i>	5,6,9,18,24,30
<i>Nycteola diplographa</i> Hampson	Sawat	<i>Contoneaster sp.</i>	8,12,16,19,21
<i>Othreis salamina</i> Cramer	Donga gali	<i>Taxus wallichiana</i>	3,4,9,18,20,25
<i>Ozarba hypenoides</i> Butler	Abbottabad	<i>Pistacia sp.</i>	2,3,9,17,21,27
<i>Pericyma umbrina</i> Guen	Malakand	<i>Acacia modesta</i>	3,5,9,11,18,20
<i>Plecoptera reflexa</i> Guen	Kohat	<i>Diospyros Montana</i>	3,5,9,11,18,29
<i>Plusia nigristigma</i> (Walker)	Peshawar	<i>Ficus sp.</i>	11,13,18,28,31
<i>Prodenia litura</i> F.	Kohat	<i>Diospyros Montana</i>	6,13,16,26,29
<i>Rhesala imparata</i> Walker	Kalam	<i>Acacia suma</i>	15,21,28,29,30
<i>Simplicia butesalis</i> Walker	Azad Kashmir	<i>Pinus Roxburghii</i>	15,21,28,29,31
<i>Simyra conspersa</i> Moore	Quetta	<i>Prunus cerasus</i>	1,13,24,28,29
<i>Speiredonia retorta</i> Cramer	Mianwali	<i>Leucaena glauca</i>	3,5,9,12,27,29
<i>Spodoptera exigua</i> Hubner	Quetta	<i>Prunus amygdalus</i>	1,2,9,17,20,27
<i>Tarache fascialis</i> Hampson	Sawat	<i>Acacia suma</i>	12,15,16,20,27
<i>Tegosioma pentodontalis</i> Ersch.	Quetta	<i>Prunus cerasus</i>	13,17,20,27,31
<i>Timora beatrix</i> Moore	Azad Kashmir	<i>Berberis sp.</i>	5,7,9,12,15,24
<i>Xanthograpta trilatalis</i> Walker	Abbottabad	<i>Pistacia sp.</i>	5,12,15,17,28

Family - Pyralidae

<i>Aulacodes perlboialis</i> Walker	Abbottabad	<i>Pistacia sp.</i>	7,12,15,28,31
<i>Aulacodes sejunctalis</i> Snell.	Sawat	<i>Juglans regia</i>	3,4,9,15,21,27
<i>Betousa trifascialis</i> Mre.	Donga Galli	<i>Prunus cornutea</i>	3,15,20,27,31
<i>Catselysta</i> sp.	Hazara	<i>Xylosoma longifolium</i>	9,13,19,27,31
<i>Catereirna cedrella</i> Hampson	Sawat	<i>Pinus roxburgha</i>	9,12,17,20,23
<i>Chilo</i> sp.	Abbottabad	<i>Platanus sp.</i>	3,8,9,16,24,28
<i>Cotachenia histricalis</i> Walker	Sawat	<i>Cedrus deodera</i>	12,13,20,19,28
<i>Cryptoblabes</i> sp.	Peshawar	<i>Cassia fistula</i>	4,14,16,20,25
<i>Dioryctria abietella</i> D& S	Sawat	<i>Pinus wallichiana</i>	14,20,25,27,30
<i>Euchromius ocellea</i> Haw.	Quetta	<i>Terminalia catapha</i>	1,4,5,12,17,27
<i>Euzophera cedrella</i> Hampson	Quetta	<i>Pinus gerardiana</i>	3,12,20,27,29
<i>Glyphodes caesalis</i> Walker	Donga Gali	<i>Populus ciliata</i>	9,21,27,28,29
<i>Hapalia demastisalis</i> Walker	Multan	<i>Pyrus malus</i>	5,12,21,27,28
<i>Hymenia recurvalis</i> F.	Donga Gali	<i>Quercus dilatata</i>	1,7,9,18,27,30
<i>Hymenoptychis sordida</i> Zell	Kalam	<i>Cedrus deodara</i>	3,4,7,19,27,31
<i>Hypsipyla robusta</i> Moore.	Lahore	<i>Oryza sativa</i>	15,18,20,24,26
<i>Loxostge palealis</i> Sch.	Sawat	<i>Juglans regia</i>	1,3,9,17,21,30
<i>Lygropia quaternalis</i> Zell	Abbottabad	<i>Platanus orientalis</i>	3,4,5,19,27,31
<i>Margarania pyloalis</i> Walker	Sawat	<i>Xylosoma longifolium</i>	2,12,17,20,28
<i>Nomophila noctuella</i> Schiff.	Hazara	<i>Ficus sp.</i>	7,15,18,22,29
<i>Noctuelia floralis</i> Hubner	Quetta	<i>Prunus cerasus</i>	1,3,7,16,21,29

<i>Palpita hilaralis</i> Walker	Nathia gali	<i>Pyrus poshia</i>	7,15,22,28,31
<i>Papua aurifusella</i> Walker	Sawat	<i>Albizzia lebbek</i>	6,12,19,21,27
<i>Phycita</i> sp.	Sawat	<i>Pinus wallichiana</i>	4,15,18,22,29
<i>Pionea verbascalis</i> Schiff.	Hazara	<i>Pyrus pashia</i>	1,13,16,21,29
<i>Plodia interpunctella</i> Hubner	Mardan	<i>Pistacia</i> sp.	5,12,20,24,31
<i>Pycnarmon cibrata</i> F.	Donga gali	<i>Mucuna pruriens</i>	1,12,15,17,18
<i>Pygospila tyres</i> Cramer	Murree	<i>Pistacia</i> sp.	1,12,19,27,30
<i>Pyralis tripartite</i> Hampson	Sawat	<i>Acacia suma</i>	1,16,18,28,30
<i>Pyrausta diniensis</i> Walker	Sawat	<i>Acacia suma</i>	4,16,18,28,29
<i>Sylepta crotonalis</i> Walker	Sawat	<i>Cedrus deodara</i>	17,18,27,28,31
<i>Synclera univocalis</i> Walker	Donga gali	<i>Linicera</i> sp.	3,5,9,12,19,28
<i>Uresiphita polygonalis</i> Schiff.	Hazara	<i>Pistacta</i> sp.	9,13,19,20,23

Family - Saturniidae

<i>Actias silence</i> (Hubner)	Sawat	<i>Alnus nitida</i>	12,18,19,20,26
<i>Antheraea pulchra</i> Moore	Ghora gali	<i>Cornus macrophylla</i>	16,17,24,27,29
<i>Attacus cynthis</i> Drury	Hazara	<i>Zanthoxylum</i> sp.	1,5,9,17,29,31

Family - Sphingidae

<i>Acherontia lachesis</i> F.	Donga gali	<i>Quercus dilatata</i>	7,16,20,22,27
<i>Celerio lineata livornica</i> (Exper)	Dir agency	<i>Juglans regia</i>	1,12,16,17,29
<i>Cephonodes hylas</i> (L.).	Dir agency	<i>Juglans regia</i>	3,7,9,13,27,31
<i>Chromis erotus</i> (Cramer)	Murree	<i>Salix</i> sp.	6,8,9,11,19,27
<i>Clanis phalaris</i> Cramer	Abbottabad	<i>Cedrus deodara</i>	2,5,7,16,20,21
<i>Deilephila nerii</i> (L.).	Peshawar	<i>Teciona grandis</i>	4,12,19,20,23
<i>Herse convolvuli</i> L.	Sawat	<i>Pinus wallichiana</i>	7,16,21,25,29
<i>Hippotion celereio</i> (L.).	Peshawar	<i>Convivulus</i> sp.	9,12,16,19,21
<i>Macroglossum nycteris</i> Koller	Hazara	<i>Ficus curica</i>	6,17,19,21,27
<i>Nephele didyma</i> (F).	Quetta	<i>Terminalia catappa</i>	1,4,9,15,27,30
<i>Pergesa elpenor macromera</i> (Butler)	Donga gali	<i>Juglans regia</i>	2,8,9,17,23,25
<i>Polyptychus dentatus</i> Cramer	Mianwali	<i>Leucaena glauca</i>	1,17,19,24,28
<i>Sataspes scotti</i> Jord.	Hazara	<i>Salix</i> sp.	3,12,18,27,30
<i>Theretra nessus</i> (Drury)	Donga gali	<i>Pistacia</i> sp.	5,7,8,17,23,28

Family - Tortricidae

<i>Archips micaceana</i> Walker	Peshawar	<i>Prunus persica</i>	3,8,9,17,21,28
<i>Clepsis rurinana</i> L.	Kaghan	<i>Quercus ilex</i>	1,12,18,19,22
<i>Laspeyresia tricentra</i> Meyr.	Kalam	<i>Cedrus deodara</i>	3,12,17,20,27
<i>Olethreutes cellifera</i> Meyr.	Peshawar	<i>Eugenia</i> sp.	5,12,17,19,31

*, reference number is indicated in the last of each reference.

REFERENCES

- Buchsbaum, R. (1938). *Animals without Back bones, an introduction to the invertebrates*. Revised edition. The University of Chicago press. Chicago (ref. #1).
- Butler, A.G. (1875). Descriptions of several African and Australian Lepidoptera in the collection of the British Museum. *Ann. Mag. Nat. Hist.* 19(4):458-462 (ref. #2).
- Chaudhry, G.U., M.I. Chaudhry and S.M. Khan (1966). *Survey of insect fauna of forest of Pakistan*. Final technical Report Biol. Sci. Res. Div. 1:167pp. (ref#3).
- Chaudhry, G.U., M.I. Chaudhry and S.M. Khan (1970). *Survey of insect fauna of forest of Pakistan*. Final technical Report Biol. Sci. Res. Div. 2: 169pp. (ref.#4).
- Core, E.L., P.D. Stransbaugh and B.R. Weimer (1938). *General Biology*. 4th edition. John Wiley and sons, Inc. New York London. Sydney (ref.#5).
- Cotes E.C. and C.C. Swinhoe (1886-1889). A catalogue of the moths of India *Sphinges* 1:810pp. Calcutta (ref.#6).
- Curran, C.H. (1946). Insects of the Pacific world. *American Mus. Nat. Hist.* :129-131 ref#7).
- Dennis, H. (1975). *Agricultural Insect Pests of the tropics and their control*. Cambridge. 517pp.(ref#8).

- Dubatalov, A. (1985). *Notes on the Holoortia cervini, complex of the family Arctiidae* (ref#9).
- Farb. P. (1964). *The Insects, time-life international*. Nederland, 191pp.(ref#10).
- Goodger, D.T. and A. Watson (1995). The Afrotropical Tiger-moths, *Nat. Hist. Mus.* 1-65(ref.#11).
- Hammer, S.F. and A.E. Shipley (1899). Lepidoptera, Butterflies and moths, Cambridge *Nat. Hist.* 4: 307-410 (ref#13).
- Hampson, G.F. (1892-1898). The fauna of British India including Ceylon and Burma, *Faun. Brit. Ind.* 1:Frances and Taylor :pp490 (ref#12).
- Haque, H. (1970). *Hand book of Agricultural pests of Pakistan and their control*. Government of Pakistan Ministry of Agriculture & Works Department of Plant Protection :125pp. (ref.#14).
- Hashmi, A.A. and A. Tashfeen (1992). Lepidoptera of Pakistan. *Proc. Pakistan. Congr. Zool.* 12:171-206 (ref.#15).
- Helgard, R. (1991). *Field guide to Butterflies and Moths of Britain and Europe*. The Crowood Press Ltd. 287pp. (ref.#16).
- Imms, A.D. (1957). *A text book of Entomology*. London, pp.886 (ref.#17).
- Janjua, A.N. and G. Chaudhry (1964). *Biology and control of Hill fruit Insects of West Pakistan*. Pp158 (ref.#18).
- Jervis and Kidd (1996). *Insect Natural Enemies, practical approaches to their study and evaluation*. (ref.#19).
- Kristensen, N. P. (1999). Lepidoptera, Moths and Butterflies. Evolution, systematics and biogeography. 1: 491pp. Berlin. New york (ref.#20).
- Lefroy, H.M. (1909). *Indian Insects life*. W. Thanckers and Co. London pp.786 (ref.#21).
- Mani, M. S. (1968). *General Entomology*. Oxford and IBH publishing Co. (Pvt.) ltd. Calcutta,m pp.912 (ref.#22).
- Mc. Gavin, G. (2000). *Insects spiders and terrestrial Arthropods*. Dorbing kinder sley, Inc. Singapore, pp.256 (ref.#23).
- Moore, F.D. (1882). *The Lepidoptera of Ceylon*. Lomndon, 2:77-101 (ref. #24).
- Picker, M., C. Griffiths and A. Weaving (2002). *Field guide to insects of South African*. Singapore, pp440 (ref.#25).
- Savastopolo, D. G. (1940,42 &1947). The early stages of Indian Lepidoptera. *J. Bomay Nat. Hist. Soc.* 61 (1 & 2) : 311-320 (ref. #27).
- Seitz, A. (1913). In: *A Die Gross-Schmetterlinge der Erde* (Seitz),, 2:89-103. Stuttgart. (ref.#26).
- Walker, F. (1855). List of the specimens of lepidopterous insects in the collection of the Moth,. *Brit. Mus.* 2:279- 581. London(ref. #28).
- Watson, A., D.S. Fletcher and I.W.B. Nye (1980). The generic names of the world. *Br. Mus. (Nat. Hist.)*, 2:108 (ref. #29).
- Westwood, J.O. (1889). The Transactions of the Entomological Society London. *Congress green reader and Dyer*, London, 1:466,pp.592 (ref. #30).
- Young, M. (1997). The Natural History of Moths. T& AD Poyser, *Nat. Hist. Lond.*,271:160-161 (ref. #31).

(Accepted for publication June 2007)