

Annotated checklist of butterflies of Royal Manas National Park, Gelephu, Bhutan.

This study explored almost all the habitat types of butterflies within Royal Manas National Park (RMNP). Study was carried out from January to December 2014. A total of 181 species belonging to five major families were recorded. Maximum numbers of species recorded were belonging to Nymphalidea and the least was Hesperidae. Study found that during warmer months maximum numbers of fauna diversity of butterflies were on the wings and also maximum species diversity was recorded from lower altitude as compared to higher altitude. Out of 181 species 25 species of them are listed in Schedule I, II and IV of the Indian Wildlife Protection Act (IWPA, 1972). Species such as Pale Wanderer *Pareronia avatar avatar* (Moore), Panther *Neurosigma doubledayi doubledayi* (westwood) Jezebel Palmfly *Elymnias vasudeva vasudeva* (Moore), Tailed Sulphur *Dercas verhuelli* (Moore), Magpie Crow *Euploea radmanthus* (Fabricius), Lime butterfly *Papilio linnaeus-* (Linnaeus) should be given conservation priority as they are rarely found in study area. Further systematic research is vital for getting a detailed periodic estimate and comparisons of the faunal diversity of butterflies for long term in RMNP.

Annotated checklist of butterflies of Royal Manas National Park		
	Common Name	Scientific Name
Sl. No.	Family: Hesperidae	
1	Chestnut Angle	<i>Odontoptilium angulata angulata</i> (Felder-1862)
2	Common Awl	<i>Hasora badra badra</i> (Fruhstorfer-1911)
3	Coon	<i>Sancus folio</i> (Mabille)
4	Dusky Yellow Breasted Flat	<i>Gerosis phisara phisara</i> (Mabille-1903)
5	Common Spotted Flat	<i>Celaenorrhinus leucocera</i> (Koller)
6	Fulvous Pied Flat	<i>Coladenia dan festa</i> (Evans-1949)
7	Great Swift	<i>Pelopidas assamensis</i> (Wood-Mason & De Niceville-1882)
8	Himalayan Dart	<i>Potanthus dara</i> (Kollar)
9	Indian Skipper	<i>Spialia galba</i> (Fabricius-1793)
10	Orange Awlet	<i>Bibasis jaina</i> (Moore)
11	Orange Tail Awl	<i>Bibasis sena</i> (Moore)
12	Pale Palm Dart	<i>Telicota colon</i> (Fabricius-1775)
13	Restricted Demon	<i>Notocrypta curvifas</i> (Felder)
14	Small Branded Swift	<i>Pelopidas thrax masta</i> (Evans-1949)
15	Tiger Hopper	<i>Ochus subvittatus subradiatus</i> (Moore-1778)
16	Water Snow Flat	<i>Tagiades litigiosa litigiosa</i> (Hubner-1819)
	Family: Lycaenidae	

1	Angled Sun Beam	<i>Curetis acuta</i> (Moore)
2	Banded Line Blue	<i>Prosotas aluta coelestis</i> (De Niceville)
3	Bright Sun Beam	<i>Zeltus amasa</i> (Fabricius)
4	Chocolate Royal	<i>Remelana jangala ravata</i> (Moore-1884)
5	Common Acacia Blue	<i>Surendra quercetorum</i> (Moore-1857)
6	Common Beak	<i>Libythea lepita lepita</i> (Moore-1857)
7	Common Gem	<i>Poritia hewitsoni hewitsoni</i> (Moore-1865)
8	Common Imperial	<i>Cheritra freja freja</i> (Fabricius-1793)
9	Common Pierrot	<i>Castalius rosimon rosimon</i> (Fruhstorfer)
10	Common Tinsel	<i>Catapaecilma elegans</i> (Druce)
11	Common Tit	<i>Hypolycaena erylus himavantus</i> (Fruhstorfer)
12	Common Quaker	<i>Neopithecops zalmora zalmora</i> (Distance-1884)
13	Club Beak	<i>Libythia myrrha</i> (Godart)
14	Elbowed Pierrot	<i>Celeta elna noliteia</i> (Fruhstorfer-1922)
15	Fluffy Tit	<i>Zeltus amasa</i> (Fabricius)
16	Forget Me Not	<i>Catochrysops panormus</i> (Fabricius-1793)
17	Large Hedge Blue	<i>Celastrina huegelii oreana</i> (Moore-1883)
18	Large Oak Blue	<i>Arhopala amantes amantes</i> (Hewitson-1862)
19	Malayan	<i>Megisba malayan sikkima</i> (Moore-1879)
20	Metallic Cerulean	<i>Jamides alecto eurysaces</i> (Fruhstorfer)
21	Orchid Tit	<i>Chliaria othona</i> (Hewitson-1865)
22	Pale Grass Blue	<i>Pseudozizeeria maha</i> (Kollar-1848)
23	Pea Blue	<i>Lampides boeticus</i> (Linnaeus-1767)
24	Purple Sapphire	<i>Heliophorus epicles indicus</i> (Fruhstorfer)
25	Plum Judy	<i>Abisara echerius suffusa</i> (Moore-1878)
26	Slate Flash	<i>Rapala manea schistacea</i> (Moore-1879)
27	Western Centaur Oakblue	<i>Arhopala pseudocentaurus</i> (Doubleday)
28	White Bordered Copper	<i>Lycaena pavana</i> (Kollar)
29	Yamfly	<i>Loxura atymnus continentalis</i> (Fruhstorfer)
	Family: Nymphalidae	
1	Angled Castor	<i>Ariadne ariadne pallidior</i> (Fruhstorfer)
2	Autumn Leaf	<i>Doleschallia bisaltide indica</i> (Moore-1881)
3	Black Forester	<i>Lethe vindhya</i> (C. & R. Felder)
4	Black Prince	<i>Rohana parisatis parisatis</i> (Moore-1857)
5	Black Raja	<i>Charaxes solon</i> (Fabricius-1781)
6	Blackvein Sergeant	<i>Parathyma ranga ranga</i> (Moore-1857)
7	Bright Eye Bushbrown	<i>Mycalesis nicotia</i> (Westwood-1850)
8	Blue Glassy Tiger	<i>Tirumala limniace leopardus</i> (Moore-1880)
9	Brown King Crow	<i>Euploea klugii klugii</i> (Moore-1858)
10	Blue Pansy	<i>Precis orithya ocyale</i> (Hubener-1816)
11	Chocolate Pansy	<i>Precis iphita iphita</i> (Cramer-1779)

12	Chocolate Tiger	<i>Parantica melaneus platiniston</i> (Fruhstorfer-1910)
13	Circe	<i>Hestina nama</i> (Doubleday-1845)
14	Commander	<i>Moduza procris procris</i> (Cammer-1877)
15	Commodore	<i>Limenitis danava</i> (Moore-1857)
16	Colour Sergeant	<i>Parathyma nefte inara</i> (Doubleday & Hewitson-1850)
17	Common Castor	<i>Ariadne meriono assama</i> (Evans)
18	Common Crow	<i>Euploea core core</i> (Cramer-1790)
29	Common Bushbrown	<i>Mycalesis perseus blasius</i> (Fabricius-1798)
20	Common Earl	<i>Tanaecia julii appiades</i> (Menetries-1857)
21	Common Evening Brown	<i>Melanitis leda</i> (Linnaeus)
22	Common Fivering	<i>Ypthima baldus baldus</i> (Fabricius-1775)
23	Common Jester	<i>Symbrenthai lilaea khasiana</i> (Moore-1874)
24	Common Lascar	<i>Pantoporia hordinia hordinia</i> (Stoll-1791)
25	Common Leopard	<i>Phalanta phalantha</i> (Drury-1770)
26	Common Map	<i>Cyrestis thyodamas thyodamas</i> (Boisduval-1836)
27	Common Maplet	<i>Chersonesia risa risa</i> (Doubleday & Hewitson-1850)
28	Common Pamfly	<i>Elymnias hypermnestra undularis</i> (Drury-1773)
29	Common Sailer	<i>Neptis hylas varmona</i> (Moore-1872)
30	Common Tiger	<i>Danaus (Salathura) genutia</i> (Cramer-1779)
31	Courtesan	<i>Euripus halitheres</i> (Doubleday and Hewitson-1848)
32	Cruiser	<i>Vindula erota erota</i> (Fabricius-1793)
33	Dark Archduke	<i>Lexias dirtea khasiana</i> (Swinhoe-1893)
34	Dark Brand Bushbrown	<i>Mycalesis mineus mineus</i> (Linnaeus-1765)
35	Dark Blue Tiger	<i>Tirumala septentrioni</i> (Butler-1874)
36	Dark Evening Browning	<i>Melanitis phedimebele bela</i> (Moore-1875)
37	Dot-Dash Sergeant	<i>Parathyma kanwa</i> (Moore)
38	Double Branded Blue Crow	<i>Euploea sylvester hopei</i> (Fabricius-1793)
39	Great Eggfly	<i>Hypolimnas bonila</i> (Linnaeus-1758)
40	Grey Pansy	<i>Precis atlites atlites</i> (Johanssen-1764)
41	Great Nawab	<i>Polyura eudamippus eudamippus</i> (Doubleday-1843)
42	Glassy Tiger	<i>Parantica aglea melanoides</i> (Moore-1883)
43	Grey Count	<i>Tanaecia lepidea lepidea</i> (Butler-1868)
44	Himalayan Fivering	<i>Ypthima sakra sakre</i> (Moore-1857)
45	Indian Red Admiral	<i>Vanessa indica indica</i> (Herbst-1794)
46	Indian Fritillary	<i>Agyreus hyperbius hyperbius</i> (Johanssen-1764)
47	Indian Purple Emperor	<i>Apatura ambica ambica</i> (Kollar)
48	Indian Tortoiseshell	<i>Aglais cashmiriensis aesis</i> (Kollar-1844)
49	Jezebel Palmfly	<i>Elymnias vasudeva vasudeva</i> (Moore-1857)
50	Jungle Glory	<i>Thaumantis diores</i> (Doubleday)
51	Knight	<i>Lebadea martha marrtha</i> (Fabricius-1787)
52	Large Yeoman	<i>Cirrochroa aoris aoris</i> (Doubleday-1847-48)

53	Lemon Pansy	<i>Precis lemonias lemonias</i> (Linnaeus-1758)
54	Leopard Lacewing	<i>Cethosia cyane</i> (Drury-1770)
55	Long Brand Bushbrown	<i>Mycalesis visala visala</i> (Moore-1857)
56	Magpie Crow	<i>Euploea radmanthus</i> (Fabricius-1973)
57	Nigger	<i>Orsotrioena medus medus</i> (Fabricius-1775)
58	Orange Oakleaf	<i>Kallima inachus inachus</i> (Boisduval-1836)
59	Orange Staff Seneant	<i>Athyma cama</i> (Moore)
60	Peacock Pansy	<i>Precis almana almanac</i> (Linnaeus-1758)
61	Painted Courtesan	<i>Euripus consimilis consimilis</i> (Westwood-1850)
62	Pale Green Sailer	<i>Neptis zaida bhutanica</i> (Doubleday)
63	Pallid Nawab	<i>Polyura arja</i> (Felder and Felder-1867)
64	Panther	<i>Neurosigma doubledayi doubledayi</i> (westwood-1848)
65	Pasha	<i>Herona marathus marathus</i> (Doubleday-1848)
66	Plain Earl	<i>Tanaecia jahnu</i> (Moore-1857)
67	Plain Tiger	<i>Danaus (Anosia) schryseippus</i> (Linnaeus-1758)
68	Popinjay	<i>Stibochiona nicea nicea</i> (Gray-1833-1846)
69	Punchinello	<i>Zemoros flegyas indicus</i> (Fabricius-1897)
70	Red Lacewing	<i>Cethosia biblis tisamena</i> (Fabricius-1770)
71	Straight Banded Treebrown	<i>Neope verma sintica</i> (Fruhstorfer-1911)
72	Streaked Baron	<i>Euthalia jama jamida</i> (Felder-1866)
73	Striped Blue Crow	<i>Euploea mulciber mulciber</i> (Cramer-1777)
74	Small Staff Sergen	<i>Parathyma zeroa</i> (Moore-1872)
75	Small Yellow Sailer	<i>Neptis miah</i> (Moore- 1857)
76	Spotted Sailer	<i>Neptis magadha</i> (C. & R. Felder)
77	Staff Sergeant	<i>Parathyma selenophora selenophora</i> (Kollar-1844)
78	Sullid Sailer	<i>Neptis soma</i> (Moore-1858)
79	Tabby	<i>Pseudergolis wedah</i> (Kollar-1844)
80	Tawny Rajah	<i>Charaxes polyxena hierax</i> (Felder--1867)
81	Vagrant	<i>Vagrans egista</i> (Hemming-1934)
82	Variegated Rajah	<i>Charaxes kahruba</i> (Moore)
83	Whitebar Bushbrown	<i>Mycalesis anaxias oemate</i> (Frushtorfer-1911)
84	White Edged Blue Baron	<i>Euthalia phemius</i> (Doubleday and Hewitson-1848)
85	Yellow Coster	<i>Pareba vesta</i> (Fabricius-1787)
86	Yellow Jack Sailer	<i>Lassipa viraja viraja</i> (Moore-1872)
87	Yellow Pansy	<i>Precis hierta magna</i> (Evans-1923)
88	Yellow Rajah	<i>Charaxea marmax</i> (Ochsenheimer-1816)
89	Yellow Sailer	<i>Neptis ananta</i> (Moore)
	Family: Papilionidae	
1	Blue Striped Mime	<i>Chalasa slateri slateri</i> (Hewison 1859)
2	Common Batwing	<i>Atrophaneura varuna astorion</i> (Westwood-1842)
3	Common Blue Bottle	<i>Graphium sarpedom sarpedom</i> (Linnaeus-1758)

4	Common Jay	<i>Graphium doson axion</i> (Felder, C., and R.-1864)
5	Common Lime	<i>Chilasa clytia clytai</i> (Linnaeus-1758)
6	Common Raven	<i>Papilio castor</i> (Westwood)
7	Common Rose	<i>Pachilopta aristolochiae aristolochiae</i> (Fabricius-1775)
8	Common Windmill	<i>Atrophaneura polyeuctes</i> (Doubleday-1842)
9	Fourbar Swordtail	<i>Graphium agetes</i> (Westwood)
10	Fivebar Swordtail	<i>Pathysa antiphates pompilius</i> (Fabricius-1787)
11	Golden Birdwing	<i>Triodes aeacus aeacus</i> (C. & R. Felder-1865)
12	Great Mormom	<i>Papilio memnon agenor</i> (Linnaeus)
13	Lesser Batwing	<i>Atrophaneura aidoneus</i> (Doubleday-1845)
14	Lime Butterfly	<i>Princeps demoleus</i> (Linnaeus-1758)
15	Lesser Zebra	<i>Graphium macareus</i> (Godart)
16	Paris Peacock	<i>Papilo paris</i> (Linnaeus)
17	Red Breast	<i>Papilio alcmenor</i> (C. & R. Felder- 1864)
18	Red Helen	<i>Papilo helenus</i> (Linnaeus)
19	Spot Sword tail	<i>Pathysa nomius nomius</i> (Esper-1785-98)
20	Tailed Jay	<i>Graphium agammemnon agammemnon</i> (Linnaeus-1758)
21	Yellow Helen	<i>Papilio (menelaides) nephelus</i> (Westwood-1845)
	Family: Pieridae	
1	Chocolate Albatross	<i>Appias lyncida elenora</i> (Boisduval-1836)
2	Common Emigrant	<i>Catopsilia pomona</i> (Fabricius-1775)
3	Common Grass Yellow	<i>Terias hecabe contubernalis</i> (Moore-1886)
4	Common Gull	<i>Cepora nerissa nerissa</i> (Fabricius-1775)
5	Common Wanderer	<i>Pareronia valeria</i> (Cramer)
6	Dark Clouded Yellow	<i>Colias fieldii</i> (Menetries-1855)
7	Great Orange tip	<i>Hebomoia glaucippe glaucippe</i> (Linnaeus-1758)
8	Indian Cabbage White	<i>Pieris canidia indica</i> (Evans-1926)
9	Large Cabbage White	<i>Pieris brassicae nepalensis</i> (Grey-1846)
10	Lesser Gull	<i>Cepora nadina nadina</i> (Lucas-1852)
11	Mottled Emigrant	<i>Catopsilis pyranthe</i> (Linnaeus-1758)
12	One Spot Grass Yellow	<i>Eurema andersoni andersoni</i> (Moore-1886)
13	Pale Wanderer	<i>Pareronia avatar avatar</i> (Moore-1857)
14	Pale Jezebel	<i>Delias sanaca oreas</i> (Talbot-1928)
15	Plain Puffin	<i>Appias indra</i> (Moore-1857)
16	Psyche	<i>Leptosia nina nina</i> (Fabricius-1793)
17	Red Spot Jezebel	<i>Delias descombesi leucacantha</i> (Boisduval-1836)
18	Red Base Jezebel	<i>Delias aglaia</i> (Linnaeus-1758)
19	Spot Puffin	<i>Appias lalage</i> (Doubleday)
20	Spotted Sawtooth	<i>Leptosia thestylis thestylis</i> (Doubleday-1842)
21	Striped Albastross	<i>Appias libythea olferna</i> (Fabricius)

22	Tailed Sulphur	<i>Dercas verhuelli doubledayi</i> (Moore-1905)
23	Three Spot Grass Yellow	<i>Eurema blanda silhetana</i> (Wallace-1867)
24	Tree Yellow	<i>Gandaca harina assamica</i> (Moore-1906)
25	Yellow Jezebel	<i>Delias agostina</i> (Hewitson-1852)
26	Yellow Orange tip	<i>Ixias pyrene familiaris</i> (Butler-1896)