

Bugs & ALL

Invertebrate Conservation & Information Network of South Asia (ICINSA)

Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

Butterflies (Lepidoptera) of Dangori Reserve Forest, Upper Assam, India

Introduction

Dangori Reserve Forest (DRF) is one of the few remaining large tract left in upper Assam (Tinsukia) and falls under the Dehing-Patkai Landscape of Assam Valley and is part of the globally recognized Eastern Himalayan biodiversity hotspot. DRF is located between 27.25°N to 27.30°N latitude and 94.50°E to 95°E longitudes with an elevation of about 102m. Due to surrounding of subtropical climate, the average annual rainfall is about 27cm and the average relative humidity recorded is about 78%. The temperature is ranges from 8.5°C to 33.4°C (Bora et al, 2015).

In Assam, documentation on butterflies was first reported by Doubleday (1845) and followed by De Niceville (1880), Doherty (1890), Evans (1900-1957), Norman (1953), Cantlie & Norman (1959 - 1962) like various entomologist, naturalist worked in British Assam. But most of the British lepidopterist had collected their specimen or published reported from adjacent hills - Abor Hills (Moore 1857; Evans 1912) and Mishimi Hills (Moore 1857; Evans 1912; South 1913), mountain districts of North East India (Talbot 1939, 1947 and Bettles 1950) and some from Upper Assam. In 2009, Tariang et al. enlisted butterflies of Dibru-Saikhowa Biosphere Reserve, upper Assam and again it was reviewed by Joshi and Dhyani (2014). In 2013, Gogoi was recorded 292 species from Jeypore Reserve Forest, Upper Assam; he reported some rare species such as *Dodona longicaudata*, *Capilia zennara*, *Amathuxidia amythaon*, *Pithecopis fulgens*. Recently, Bora et al (2015) compiled a list of swallowtail butterflies having 23 species from DRF. Despite these works, the overall documentation on butterfly community of eastern most Assam is still very poor, except few works.



Map shows the location of Dangori Reserve Forest, Upper Assam



Methods

The survey was carried out in different forest trails regularly between 10.00–15.00 hr. from March, 2011 to February, 2013 at different seasons to determine the maximum number of species. Sampling of butterflies was carried throughout the year; conducted at damp patches in the forest, open sunny areas, blossoming flowers and bird droppings to record the maximum number of species. Butterfly species were identified using the identification keys of Evans (1932), Talbot (1947), Evans (1957), Haribal (1992) and photographic guides of Kehimkar (2016) and also using websites on Butterflies of India (<http://www.flutters.org/>), Butterflies of Indo-China (<http://www.yutaka.it-n.jp/>) and Indian Foundation for Butterflies – Butterflies of India (<http://www.ifoundbutterflies.org/>).

Results and Discussion

A total of 207 species of butterflies belonging to 119 genera were recorded during the study period (Table 2). Of these 207 species, 25 species of Papilionidae, 25 Pieridae, 49 Lycaenidae, 69 Nymphalidae and 39 species were belong to Hesperidae Family. Out of the genera recorded, the genera *Papilio* was found to be dominant representing 14 species of swallowtail butterflies. This was followed by the genera *Graphium* (8 species), *Junonia* (6 species), *Eurema* (5 species), *Athyma* (5 species), *Delias* (4 species), *Ypthima* (4 species) and *Appias* (4 species). The Papilionidae family contributing 25 numbers of species from Dangori, is about 23% of total species found in India mainland (107species). It shows a good characteristics and health of the forest.

Twenty seven (13%) of the recorded species (Table 1) come under the Indian Wildlife

Table 1: Overview of taxonomic diversity of butterflies of the Dangori RF along with butterflies protected under various schedules of the Indian Wildlife (Protection) Act, 1972.

	Number of Species	Number of Genera	W(P)A-1972 (No of protected species)		
			Sch I	Sch II	Sch IV
Papilionidae	25 (12%)	5 (4%)	-	2	-
Pieridae	25 (12%)	11 (9%)	-	1	-
Lycaenidae	49 (24%)	40 (34%)	-	10	-
Nymphalidae	69 (33%)	35 (29%)	-	8	1
Hesperidae	39 (19%)	28 (24%)	-	1	4
Total (percentage)	207 (100%)	119 (100%)	-	22	5

**Table 2: List of butterflies recorded from Dangori Reserve Forest, Upper Assam.**

Sl. No.	Family	Scientific Name	Common Name	W(P)A, 1972	
1	Papilionidae	<i>Lamproptera curius curius</i> Fabricius 1787	White Dragontail		
2		<i>Graphium sarpedon</i> Linnaeus 1758	Common Bluebottle		
3		<i>Graphium cloanthus</i> Westwood 1841	Glassy Bluebottle		
4		<i>Graphium doson axion</i> Felder 1864	Common Jay		
5		<i>Graphium eurypylus</i> Linnaeus 1758	Great Jay		
6		<i>Graphium chironides</i> Honrath 1884	Veined Jay		
7		<i>Graphium agamemnon</i> Linnaeus 1758	Tailed Jay		
8		<i>Graphium nomius</i> Esper 1799	Spot Swordtail		
9		<i>Graphium antiphates</i> Cramer [1775]	Five Bar Swordtail		
10		<i>Papilio memnon agenor</i> Linnaeus 1758	Great Mormon		
11		<i>Papilio protenor euprotenor</i> Fruhstorfer 1908	Spangle		
12		<i>Papilio alcmenor alcmenor</i> C. & R. Felder 1865	Redbreast		
13		<i>Papilio paris</i> Linnaeus 1758	Paris Peacock		
14		<i>Papilio bianor</i> Cramer 1777	Common Peacock		
15		<i>Papilio castor</i> Westwood 1842	Common Raven		
16		<i>Papilio helenus</i> Linnaeus 1758	Red Helen		
17		<i>Papilio nephelus chaon</i> Westwood 1845	Yellow Helen		
18		<i>Papilio polytes romulus</i> Cramer 1776	Common Mormon		
19		<i>Papilio demoleus</i> Linnaeus 1758	Lime Butterfly		
20		<i>Papilio paradox atelearchus</i> Hewitson 1852	Great Blue Mime	Sch II	
21		<i>Papilio clytia</i> Linnaeus 1758	Common Mime		
22		<i>Papilio slateri</i> Hewitson 1859	Blue-striped Mime	Sch II	
23		<i>Papilio agestor</i> Gray 1831	Tawny Mime		
24		<i>Atrophaneura aristolochiae</i> Fabricius 1775	Common Rose		
25		<i>Troides helena cerberus</i> Felder 1864	Common Birdwing		
26		Pieridae	<i>Pieris brassicae nepalensis</i> Gray 1846	Large Cabbage White	
27			<i>Pieris canidia indica</i> Evans 1926	Indian Cabbage White	
28			<i>Pareronia hippia</i> Fabricius 1787	Common Wanderer	
29			<i>Cepora nadina</i> Lucas 1852	Lesser Gull	
30			<i>Cepora nerissa</i> Fabricius 1775	Common Gull	



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Sl. No.	Family	Scientific Name	Common Name	W(P)A, 1972
31	Pieridae	<i>Delias pasithoe</i> Linnaeus 1767	Red Base Jezebel	
32		<i>Delias hyparete</i> Linnaeus 1758	Painted Jezebel	
33		<i>Delias descombesi</i> Boisduval 1836	Red Spot Jezebel	
34		<i>Delias eucharis</i> Drury 1773	Common Jezebel	
35		<i>Appias olferna</i> Fabricius 1775	Eastern Striped Albatross	
36		<i>Appias lyncida</i> Cramer 1777	Chocolate Albatross	
37		<i>Appias albina darada</i> C. & R. Felder 1865	Common Albatross	Sch II
38		<i>Appias lalage</i> Doubleday 1842	Spot Puffin	
39		<i>Leptosia nina</i> Fabricius 1793	Psyche	
40		<i>Ixias pyrene</i> Linnaeus 1764	Yellow Orangetip	
41		<i>Hebomoia glaucippe</i> Linnaeus 1758	Great Orangetip	
42		<i>Catopsilia crocale</i> Fabricius 1775	Common Emigrant	
43		<i>Catopsilia pomona</i> Fabricius 1775	Lemon Emigrant	
44		<i>Catopsilia pyranthe</i> Latreille 1758	Mottled Emigrant	
45		<i>Gandaca harina assamica</i> Moore 1906	Tree Yellow	
46		<i>Eurema brigitta rubella</i> Wallace 1867	Small Grass Yellow	
47		<i>Eurema andersoni</i> Moore 1886	One Spot Grass Yellow	
48		<i>Eurema sari</i> Horsfield 1829	Chocolate Grass Yellow	
49		<i>Eurema blanda silhetana</i> Wallace 1867	Three Spot Grass Yellow	
50		<i>Eurema hecabe hecabe</i> Linnaeus 1758	Common Grass Yellow	
51	Lycaenidae	<i>Poritia hewitsoni</i> Moore 1866	Common Gem	Sch II
52		<i>Spalgis epeus</i> Westwood 1851	Apefly	
53	Lycaenidae	<i>Curetis acuta dentate</i> Moore 1879	Toothed Sunbeam	
54		<i>Curetis bulis</i> Westwood 1851	Bright Sunbeam	
55		<i>Nacaduba kurava</i> Moore 1857	Transparent Sixline blue	
56		<i>Prosotas nora</i> Felder 1860	Common Lineblue	
57		<i>Ionolyce helicon merguiana</i> Moore 1884	Pointed Lineblue	Sch II
58		<i>Caleta elna</i> Hewitson 1876	Elbowed Pierrot	
59		<i>Caleta roxus</i> Godart 1824	Straight Pierrot	
60		<i>Castalius rosimon</i> Fabricius 1775	Common Pierrot	
61		<i>Tarucus extricates</i> Butler 1886	Rounded Pierrot	
62		<i>Jamides bochus</i> Cramer 1782	Dark Cerulean	



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63	Lycaenidae	<i>Jamides celeno</i> Cramer 1775	Common Cerulean	
64		<i>Jamides alecto</i> Felder 1860	Metallic Cerulean	
65		<i>Catochrysops strabo</i> Fabricius 1793	Forget-me-not	
66		<i>Lampides boeticus</i> Linnaeus 1767	Pea Blue	Sch II
67		<i>Leptotes plinius</i> Fabricius 1793	Zebra Blue	
68		<i>Zizeeria karsandra</i> Moore 1865	Dark Grass Blue	
69		<i>Pseudozizeeria maha</i> Kollar 1848	Pale Grass Blue	
70		<i>Zizina otis</i> Fabricius 1787	Lesser Grass Blue	
71		<i>Neopithecops zalmora</i> Butler 1870	Quaker	
72		<i>Megisba malaya</i> Horsfield 1828	Malayan	
73		<i>Acytolepis puspa</i> Horsfield 1828	Common Hedge Blue	
74		<i>Celastrina lavendularis</i> Moore 1877	Plain Hedge Blue	
75		<i>Euchrysops cnejus</i> Fabricius 1798	Gram Blue	Sch II
76		<i>Chilades lajus</i> Cramer 1782	Lime Blue	
77		<i>Anthene emolus</i> Godart 1823	Ciliate Blue	
78		<i>Heliophorus epicles latilimbata</i> Fruhstorfer 1908	Purple Sapphire	
79		<i>Arhopala silhetensis silhetensis</i> Hewitson 1862	Sylhet Oakblue	Sch II
80		<i>Arhopala centaurus</i> Moore 1883	Centaur Oakblue	
81		<i>Arhopala paramuta</i> de Niceville [1884]	Hooked Oakblue	
82		<i>Surendra quercetorum</i> Moore 1857	Common Acacia Blue	
83		<i>Loxura atymnus</i> Cramer 1782	Yamfly	
84		<i>Horaga onyx</i> Moore 1857	Common Onyx	Sch II
85		<i>Cheritra freja</i> Fabricius 1793	Common Imperial	
86		<i>Ticherra acte</i> Moore 1857	Blue Imperial	
87		<i>Charana mandarina</i> Hewitson 1863	Mandarin Blue	
88		<i>Creon cleobis</i> Godart 1823	Broadtail Royal	
89		<i>Rachana jalindra</i> Horsfield 1829	Banded Royal	Sch II
90		<i>Tajuria cippus cippus</i> Fabricius 1798	Peacock Royal	Sch II
91		<i>Hypolycaena erylus</i> Godart 1823	Common Tit	
92		<i>Zeltus amasa</i> Fabricius 1787	Fluffy Tit	
93		<i>Deudorix epijarbas amatius</i> Fruhstorfer 1912	Cornelian	Sch II
94		<i>Rapala varuna</i> Hewitson 1863	Indigo Flash	Sch II



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Sl. No.	Family	Scientific Name	Common Name	W(P)A, 1972
95	Lycaenidae	<i>Rapala manea schistacea</i> Moore 1879	Slate Flash	
96		<i>Rapala pheretima petosiris</i> Hewitson 1863	Copper Flash	
97		<i>Rapala damona</i> Swinhoe 1890	Malayan Red Flash	
98		<i>Zemerus flegyas indicus</i> Fruhstorfer 1898	Punchinello	
99		<i>Abisara echerius</i> Stoll 1790	Plum Judy	
100	Nymphalidae	<i>Parantica aglea melanoides</i> Moore 1883	Glassy Tiger	
101		<i>Tirumala limniace</i> Cramer 1775	Blue Tiger	
102		<i>Tirumala septentrionis</i> Butler 1874	Dark Blue Tiger	
103		<i>Danaus genutia</i> Linnaeus 1758	Striped Tiger	
104		<i>Danaus chrysippus</i> Linnaeus 1758	Plain Tiger	
105		<i>Euploea mulciber</i> Cramer 1777	Striped Blue Crow	Sch IV
106		<i>Euploea midamus rogenhoferi</i> C. & R. Felder 1865	Spotted Blue Crow	
107		<i>Euploea klugii</i> Moore & Horsfield 1857	Blue King Crow	
108		<i>Euploea core core</i> Cramer 1780	Common Indian Crow	
109	Nymphalidae	<i>Melanitis leda</i> Linnaeus 1758	Common Evening Brown	
110		<i>Melanitis phedima bela</i> Moore 1857	Dark Evening Brown	
111		<i>Elymnias hypermnestra undularis</i> Drury 1773	Common Palmfly	
112		<i>Lethe europa niladana</i> Frushtorfer 1911	Bamboo Treebrown	
113		<i>Lethe confusa</i> Aurivillius 1897	Banded Treebrown	
114		<i>Lethe chandica</i> Moore 1858	Angled Red Forester	
115		<i>Mycalesis anaxias aemate</i> Fruhstorfer 1911	Whitebar Bushbrown	Sch II
116		<i>Mycalesis gotama</i> Moore 1857	Chinese Bushbrown	Sch II
117		<i>Mycalesis perseus blasius</i> Fabricius 1798	Common Bushbrown	
118		<i>Mycalesis mineus mineus</i> Linnaeus 1765	Dark Brand Bushbrown	
119		<i>Mycalesis visala</i> Moore 1858	Long Brand Bushbrown	
120		<i>Orsotriaena medus</i> Fabricius 1775	Nigger	
121		<i>Ypthima nareda</i> Kollar 1844	Large Threering	
122		<i>Ypthima asterope</i> Klug 1832	Common Threering	
123		<i>Ypthima huebneri</i> Kirby 1871	Common Fourring	
124		<i>Ypthima baldus baldus</i> Fabricius 1775	Common Fivering	
125		<i>Discophora sondaica</i> Boisduval 1836	Common Duffer	
126		<i>Ariadne merione assama</i> Evans 1924	Common Castor	



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127	Nymphalidae	<i>Ariadne ariadne pallidior</i> Frushtorfer 1899	Angled Castor	
128		<i>Argyreus hyperbius</i> Linnaeus 1763	Indian Fritillary	
129		<i>Phalanta phalantha</i> Drury 1773	Common Leopard	
130		<i>Vagrans egista</i> Cramer 1780	Vagrant	
131		<i>Cirrochroa tyche mithila</i> Moore 1872	Common Yeoman	
132		<i>Cirrochroa aoris</i> Doubleday 1847	Large Yeoman	
133		<i>Symbrenthia lilaea khasiana</i> Moore 1874	Common Jester	
134		<i>Junonia hierta hierta</i> Fabricius 1798	Yellow Pansy	
135		<i>Junonia orithya ocyale</i> Hubner 1822	Blue Pansy	
136		<i>Junonia lemonias</i> Linnaeus 1758	Lemon Pansy	
137		<i>Junonia almana</i> Linnaeus 1758	Peacock Pansy	
138		<i>Junonia atlites</i> Linnaeus 1763	Grey Pansy	
139		<i>Junonia iphita</i> Cramer 1779	Chocolate Pansy	
140		<i>Hypolimnas bolina</i> Linnaeus 1758	Great Eggfly	
141		<i>Rhinopalpa polynice birmana</i> Frushtorfer 1898	Wizard	Sch II
142		<i>Cyrestis thyodamas</i> Boisduval, 1836	Common Map	
143		<i>Chersonesia risa</i> Doubleday 1848	Common Maplet	
144		<i>Neptis clinia</i> Moore 1872	Clear Sailer	
145		<i>Neptis hylas kamarupa</i> Moore 1875	Common Sailer	
146		<i>Neptis sappho</i> Pallas 1771	Pallas Sailer	
147		<i>Neptis yerburyi</i> Evans 1924	Yerbury's Sailer	
148		<i>Phaedyma columella ophiana</i> Moore 1872	Short-banded Sailer	
149		<i>Lasippa viraja viraja</i> Moore 1872	Yellow Jack Sailer	
150		<i>Pantoporia hordonia</i> Stoll 1790	Common Lascar	
151		<i>Athyma perius</i> Linnaeus 1758	Common Sergeant	
152		<i>Athyma ranga</i> Moore 1857	Black Veined Sergeant	Sch II
153		<i>Athyma selenophora</i> Kollar 1848	Staff Sergeant	
154		<i>Athyma nefte inara</i> Doubleday 1848	Colour Sergeant	
155		<i>Athyma pravara acutipennis</i> Fruhstorfer 1906	Unbroken Sergeant	Sch II
156		<i>Moduza procris</i> Cramer 1777	Commander	
157	<i>Tanaecia julii</i> Lesson 1837	Common Earl		
158	<i>Tanaecia lepidea</i> Butler 1868	Grey Count	Sch II	



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159	Nymphalidae	<i>Euthalia aconthea</i> Moore 1857	Common Baron	
160		<i>Lexias pardalis jadeitina</i> Fruhstorfer 1913	Archduke	
161		<i>Lexias dirtea khasiana</i> Swinhoe 1893	Dark Archduke	Sch II
162		<i>Polyura athamas</i> Drury 1773	Common Nawab	
163		<i>Polyura arja</i> C. & R. Felder 1867	Pallid Nawab	
164		<i>Charaxes bernardus</i> C. & R. Felder 1867	Tawny Rajah	
165		<i>Charaxes solon sulphureus</i> Rothschild 1900	Black Rajah	Sch II
166		<i>Acraea violae</i> Fabricius 1775	Tawny Coster	
167		<i>Cethosia biblis tisamena</i> Fruhstorfer 1912	Red Lacewing	
168		<i>Cethosia cyane</i> Drury 1773	Leopard Lacewing	
169		Hesperiidae	<i>Burara harisa</i> Moore 1866	Orange Striped Awlet
170	<i>Burara jaina</i> Moore 1866		Orange Awlet	
171	<i>Burara amara</i> Moore 1865		Small Green Awlet	
172	<i>Hasora badra</i> Moore 1858		Common Awl	
173	<i>Sarangesa dasahara</i> Moore 1865		Common Small flat	
174	<i>Pseudocoladenia dan</i> Fabricius 1787		Fulvous pied flat	
175	<i>Tagiades japedus</i> Moore 1866		Common Snow Flat	
176	<i>Tagiades gana</i> Moore 1866		Suffused Snow Flat	
177	<i>Odontoptilum angulata</i> Felder 1862		Chestnut Angle	
178	<i>Spialia galba</i> Fabricius 1793		Indian Skipper	
179	<i>Aeromachus pygmaeus</i> Fabricius 1775		Pigmy scrub Hopper	
180	<i>Ampittia dioscorides</i> Fabricius 1793		Bush Hopper	
181	<i>Halpe zola</i> Evans 1937		Long-banded Ace	
182	<i>Halpe porus</i> Mabille 1877		Moore's Ace	
183	<i>Halpe homolea</i> Hewitson 1868		Indian Ace	Sch II
184	<i>Iambrix salsala</i> Moore 1865		Chestnut Bob	
185	<i>Koruthaialos butleri</i> De Nicéville 1883		Dark Velvet Bob	
186	<i>Suastus gremius gremius</i> Fabricius 1798		Indian Palm Bob	
187	<i>Suastus minuta</i> Evans 1943		Small Indian Palm bob	
188	<i>Ancistroides nigrita diocles</i> Moore 1866		Chocolate Demon	
189	<i>Notocrypta paralysos</i> Wood-Mason & de Nicéville 1881	Common Banded Demon		
190	<i>Notocrypta curvifascia</i> C. & R. Felder 1862	Restricted Demon		



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191	Hesperiidae	<i>Udaspes folus</i> Cramer 1775	Grass Demon	
192		<i>Psolos fuligo subfasciatus</i> Moore 1879	Coon	
193		<i>Cupitha purreea</i> Moore 1877	Wax Dart	
194		<i>Gangara thyrasis thyrasis</i> Fabricius 1775	Giant Redeye	
195		<i>Matapa aria</i> Moore 1866	Common Redeye	
196		<i>Hyarotis adrastus praba</i> Moore 1865	Tree Flitter	Sch IV
197		<i>Oriens gola</i> Moore 1877	Common Dartlet	
198		<i>Telicota colon</i> Fabricius 1775	Common Palm Dart	
199		<i>Telicota ancilla horisha</i> Evans 1934	Greenish Palm Dart	
200		<i>Parnara guttata</i> Bremer & Grey 1852	Straight Swift	
201		<i>Borbo cinnara</i> Wallace 1866	Rice Swift	
202		<i>Borbo bevani</i> Moore 1878	Bevan's Swift	
203		<i>Pelopidas mathias</i> Fabricius 1798	Small Branded Swift	
204		<i>Pelopidas assamensis</i> de Nicéville 1882	Great Swift	Sch IV
205		<i>Pelopidas conjuncta javana</i> Mabille 1877	Conjoined Swift	Sch IV
206		<i>Polytremis lubricans</i> Herrich-Schäffer 1869	Contiguous Swift	
207		<i>Baoris farri</i> Moore 1878	Paintbrush Swift	Sch IV

(Protection) Act 1972; Schedule II (22 species) and Schedule IV (5 species). Some notable rare encountered species were *Papilio paradoxa telearchus*, *Papilio slateri*, *Eurema sari*, *Ionolyce helicon merguiana*, *Caleta roxus*, *Euploea mulciber*, *Mycalesis gotama*, *Suastus minuta* and *Pelopidas assamensis*. Records of such rare species in the area, states as a preferred habitat for butterflies.

Butterfly diversity depends upon the floral diversity; study on ecologically important local butterflies in various habitats offer valuable information on their population dynamics (Kumar & Murugesan, 2014). Besides, the butterfly population of the reserve forest faces immense pressure, due to changes in land use pattern or habitat loss. With increasing agricultural practices and anthropogenic activities, butterfly diversity is gradually decreased. Moreover, it is needed to create awareness among the common people regarding the butterflies; to minimizing anthropogenic disturbances and help to improve the status of habitat.

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Image 1: *Lamproptera curius curius*



Image 2: *Graphium nomius*



Image 3: *Papilio paradoxa telearchus*

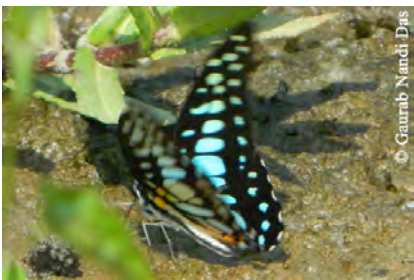


Image 4: *Graphium chironides*

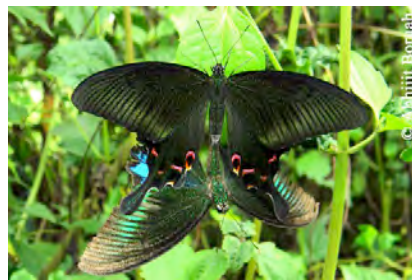


Image 5: *Papilio bianor*

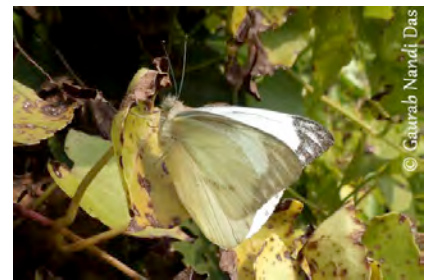


Image 6: *Appias albina*



Image 7: *Appias lalage*

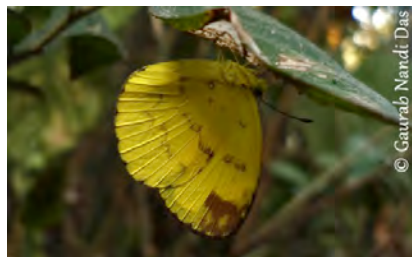


Image 8: *Eurema andersonii*



Image 9: *Cepora nadina*



Image 10: *Tirumala septentrionis*

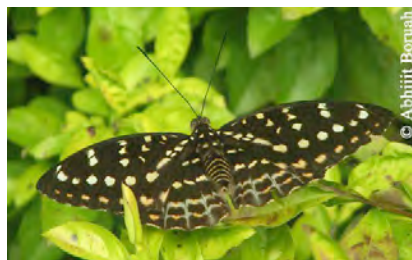


Image 11: *Lexias dirtea*

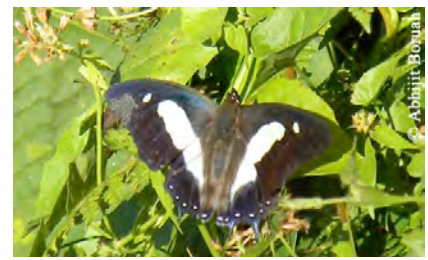


Image 12: *Polyura arja*

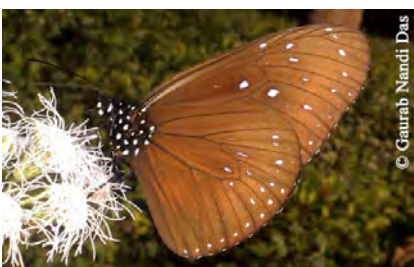


Image 13: *Euploea mulciber*

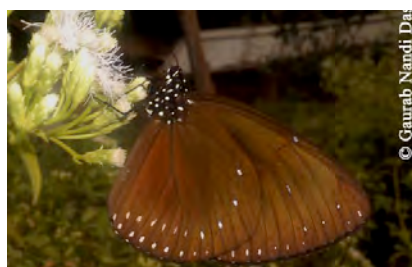


Image 14: *Euploea klugii*

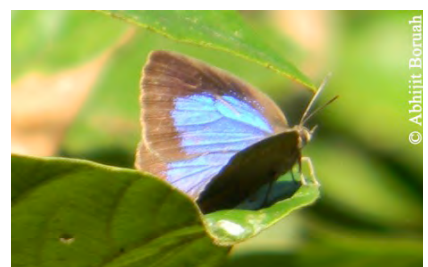


Image 15: *Arhopala paramuta*

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Image 16: *Arhopala silhetensis*



Image 17: *Caleta roxus*



Image 18: *Tajuria cippus*



Image 19: *Charana mandarina*



Image 20: *Burara harisa*



Image 21: *Burara amara*



Image 22: *Baoris farri*

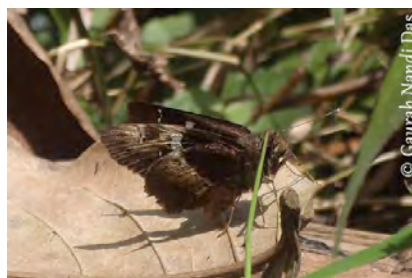


Image 23: *Hyarotis adrastus*



Image 24: *Telicota ancilla horisha*

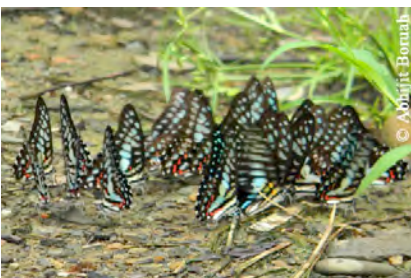


Image 25: Mud-puddling of Swallowtail butterflies

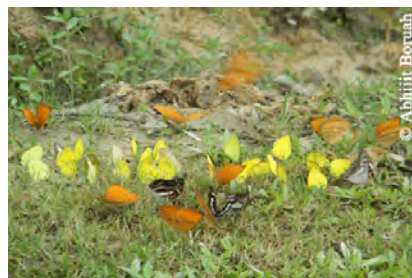


Image 26: Get together of all butterflies for mud-puddling



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References

- Arora, G.S. & D.K. Mondal (1981).** On the Papilioninae (Papilionidae: Lepidoptera) from Arunachal Pradesh, and adjoining areas of Assam in North-Eastern India. *Records Zoological Survey of India, Occasional Paper* 29: 1-65.
- Bettes, F.N. (1950).** On the collection of Butterflies from the Balipara Frontier Tract and the Subansiri Area (North Assam). *Journal of the Bombay Natural History Society* 49: 487-501.
- Bora, A., A. Baruah & L.R. Meitei (2015).** Diversity and Seasonal Abundance of Swallowtail Butterflies population in Dangori Reserve Forest, Tinsukia District, Assam, India. *The Journal of Biodiversity, Photon* 115, 453-460.
- Cantlie, K. (1952).** More butterflies of the Khasi and Jaintia Hills, Assam. *Journal of the Bombay Natural History Society* 51: 42-60.
- Cantlie, K. (1956).** Hesperiiidae of Khasi and Jaintia Hills. *Journal of the Bombay Natural History Society* 54: 212- 215.
- Doubleday, E. (1845).** Description of New or impartially described diurnal Lepidoptera. *The Annals and magazine of natural history* 16: 304-308.
- Evans, W.H. (1912).** Lepidoptera collected on the Abor Expedition. *Records of the Indian Museum* 8: 61-65.
- Evans, W.H. (1932).** *The Identification of Indian Butterflies*. Second Edition. Bombay Natural History Society, Mumbai, India, 454pp.
- Gogoi, M.J. (2013).** A preliminary checklist of butterflies recorded from Jeypore-Dehing forest, eastern Assam, India. *Journal of Threatened Taxa* 5(2): 3684-3696; doi:10.11609/JoTT.o3022.3684-96.
- Haribal, M. (1992).** *The Butterflies of Sikkim Himalaya and their natural history*. Natraj Publication. Dehra Dun, 218pp.
- Joshi, R.K. & S.Dhyani (2014).** Butterflies Diversity, Distribution and Threats in Dibru-Saikhowa Biosphere Reserve Assam North-East India: A Review. *World Journal of Zoology* 9 (4): 250-259.
- Kehimkar, I. (2016).** *Butterflies of India*. Bombay Natural History Society, Mumbai. 528pp.
- Kumar, P. & A. G. Murugesan (2014).** Species diversity and habitat association of butterflies around 30 km radius of Kudankulam Nuclear Power Plant area of Tamil Nadu, India. *International Journal of Biodiversity and Conservation* 6 (8): 608-615.
- Kunte, K., P. Roy, S. Kalesh, & U.Kodandaramaiah (eds) (2017).** *Butterflies of India*, v. 2.24. Indian Foundation for Butterflies, <http://www.ifoundbutterflies.org/>.
- Kunte, K., S. Sondhi, B.M. Sangma, R. Lovalekar, K. Tokekar & G. Agavekar (2012).** Butterflies of the Garo Hills of Meghalaya, northeastern India: their diversity and conservation. *Journal of Threatened Taxa* 4(10): 2933-2992.
- Moore, F. (1857).** A Catalogue of the Lepidopterous Insects in the Museum of the Hon East-India Company in Horsfield & Moore. *Cat. Lep. Ins. Mus. East India Coy.* 1: 1-278.
- Moore, F. (1890-1905).** *Lepidoptera Indica*. Part-I, II, III, IV, V, VI. Lovell, Reeve & Co. Ltd., London, 317pp, 274 pp, 254pp, 260pp, 248pp, 240pp.
- Parsons, R.E. & K.Cantlie (1948).** The butterflies of the Khasia and Jaintia hills, Assam. *Journal of the Bombay Natural History Society* 47: 498-522.
- South, R. (1911).** A list of Butterflies collected by Capt Bailey in Western China, South Eastern Tibet and Mishmi Hills. *Journal of the Bombay Natural History Society* 22: 345-365, 598-615.
- Swinhoe, C. (1905-1913).** *Lepidoptera Indica*. Part-VII, VIII, IX, X. Lovell, Reeve & Co. Ltd., London, , 286 pp, 293pp, 278pp, 364pp.
- Talbot, G. (1939, 1947).** *The Fauna of British India, including Ceylon and Burma: Butterflies*. Vol. I & II, Taylor and Francis, London, 600 pp, 506pp.
- Tyler, H.C. (1911).** Notes on butterflies from the Naga Hills. Part I. *Journal of the Bombay Natural History Society* 21: 48-65.

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