

BUTTERFLIES OF THE REGIONAL RESEARCH LABORATORY CAMPUS, JORHAT, ASSAM

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India possesses 1501 species of butterflies (Kunte *et al.*, 1999) out of which northeastern India accounts for nearly a two-third (962 species) (Evans, 1932) of the species. Some reports of butterflies in certain areas of northeastern India have also been published by various workers (Mason & Niceville, 1886; Doherty, 1889; Talbot, 1939, 1947; Wynter-Blyth, 1957; Saharia, 1967; Varshney & Chanda, 1971). Recent surveys conducted in Kamrup district, Manas National Park, Nameri National Park and Dibru-Saikhowa Biosphere Reserve depict the status of a few butterfly species (Anon., 2002). However, the attempts still remain very fragmented.

Regional Research Laboratory (RRL) campus is situated 6km westward from Jorhat town (94°15'E & 26°44'N). North to the RRL campus, the NH37 highway passes from Guwahati to Jorhat town. The campus occupies an area of 136.4ac. During the establishment of the institute, 70% of the area was cleared for construction. However, in time, the gaps were filled with various endemic as well as exotic plant species. Towards the east of the main gate, an area of about 0.8ac has completely been converted to woodland with various strata of vegetation beneath the big canopies. Inside the campus, two gardens with medicinal plants of northeastern India were setup. Apart from these two gardens, one ecological park NEEP (North East Ecological Park) having various species of endemic plants of the region is present. The vegetation of the campus can be classified as tree patch plantation, avenue plantation, cultivable land and swampy land. The forest type is a mixture of evergreen, deciduous, grassland, hedge land and aquatic land. Among the plant species *Eucalyptus* sp., *Albizia procera*, *Mesua ferea*, *Mimusops elengi*, *Terminalia belerica*, *Terminalia arjuna*, *Acalypha agallocha*, *Aegle marmelos*, *Aristolochia indica*, *Paederia foetida* etc. are dominant. The campus area has more than 150 species of various medicinal and aromatic plants. Detailed account of floristic diversity of RRL campus is not yet completed. However, a few plant species have been identified (Table 1). Several species of plants have already been identified as larval host plant of butterflies (Table 2) and detailed biology of few species of butterflies were also studied (Bhuyan *et al.*, 2003a,b).

The butterflies were surveyed during the period 2001-2002. Adult butterflies were collected by net and preserved accordingly. The eggs and larvae observed during surveys were collected and reared in their respective host plants in the

laboratory up to adult emergence. Accordingly, the adult butterflies were identified and preserved in the laboratory for future reference. During the study period a total of 70 species of butterflies belonging to 45 genera were recorded. Maximum numbers of species were observed in the family Nymphalidae (40) followed by Papilionidae (12), Pieridae (10), Lycaenidae (5) and Hesperidae (3). The butterflies were identified and verified following Wynter-Blyth (1957), Evans (1932), Haribal (1992) and Kunte (2000). Butterflies collected during the period are presented in Table 3.

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Table 1. Dominant plant species of the RRL campus.

1. <i>Acacia auriculiformis</i>	22. <i>Cymbopogon citrates</i>	42. <i>Michelia champaka</i>
2. <i>Aegle marmelos</i>	23. <i>Cymbopogon flexuosus</i>	43. <i>Murraya koenigii</i>
3. <i>Ageratum conyzoides</i>	24. <i>Cymbopogon martini</i>	44. <i>Neolamarckia</i>
4. <i>Alastonia schlaris</i>	25. <i>Cymbopogon</i>	cadamba
5. <i>Albizia lucida</i>	winterianus	45. <i>Nerium indicum</i>
6. <i>Albizia procera</i>	26. <i>Embelica officinalis</i>	46. <i>Ocimum sanctum</i>
7. <i>Amaranthus spinosus</i>	27. <i>Erythrina stricta</i>	47. <i>Oldenladia diffusa</i>
8. <i>Annona</i> sp.	28. <i>Euralyptus globulus</i>	48. <i>Paederia foetida</i>
9. <i>Aquillaria agallocha</i>	29. <i>Ficus hispida</i>	49. <i>Persia bombycina</i>
10. <i>Aristolochia indica</i>	30. <i>Gmelina arborea</i>	50. <i>Polyalthia longifolia</i>
11. <i>Artocarpus heterophyllus</i>	31. <i>Hibiscus rosa sinensis</i>	51. <i>Psidium guajava</i>
12. <i>Bauhinia purpurea</i>	32. <i>Litsea chinensis</i>	52. <i>Ricinus communis</i>
13. <i>Bixa orellana</i>	33. <i>Litsea cubeba</i>	53. <i>Salmalia malabérica</i>
14. <i>Calotropis procera</i>	34. <i>Litsea glutinosa</i>	54. <i>Sesbania grandifolia</i>
15. <i>Carica papaya</i>	35. <i>Magnolia grandiflora</i>	55. <i>Shorea robusta</i>
16. <i>Cassia fistula</i>	36. <i>Mallatus albus</i>	56. <i>Spondia mangifera</i>
17. <i>Citrus limon</i>	37. <i>Mangifera indica</i>	57. <i>Terminalia arjuna</i>
18. <i>Citrus aurantifolia</i>	38. <i>Maringa oleifera</i>	58. <i>Terminalia belerica</i>
19. <i>Citrus grandis</i>	39. <i>Melastoma malabathricum</i>	59. <i>Zizyphus jujuba</i>
20. <i>Citrus sinensis</i>	40. <i>Melia azadirachta</i>	
21. <i>Cocos nucifera</i>	41. <i>Mesua ferrea</i>	

Table 2. Butterfly larval host plant in the RRL campus.

S.No.	Butterflies	Larval host plant
1.	<i>Troides</i>	<i>Aristolochia indica</i>
2.	<i>Graphium sarpedon</i>	<i>Cinnamomum camphora</i> , <i>Litsea chinensis</i>
3.	<i>Graphium doson</i>	<i>Cinnamomum</i> sp., <i>Magnolia grandiflora</i> , <i>Michelia champaka</i> , <i>Polyalthia longifolia</i>
4.	<i>Graphium agamemnon</i>	<i>Annona</i> sp., <i>Cinnamomum</i> sp., <i>Michelia champaka</i> , <i>Polyalthia longifolia</i>
5.	<i>Papilio clytia</i>	<i>Cinnamomum</i> sp., <i>Litsea chinensis</i>
6.	<i>Papilio polytes</i>	<i>Aegle marmelos</i> , <i>Citrus aurantifolia</i> , <i>C. grandis</i> , <i>C. limon</i> , <i>C. sinensis</i> , <i>Murraya koenigii</i>
7.	<i>Papilio demoleus</i>	<i>Murraya koenigii</i> , <i>Citrus</i> sp.
8.	<i>Eurema</i> sp.	<i>Cassia</i> sp.
9.	<i>Catapsilia pyranthe</i>	<i>Cassia fistula</i>
10.	<i>Pieris</i> sp.	<i>Brassica oleraceae</i>
11.	<i>Neptis</i> sp.	<i>Bombyx</i> sp.
12.	<i>Modura procris</i>	<i>Neolamarckia cadamba</i>
13.	<i>Euthalia aconthea</i>	<i>Magnifera indica</i>
14.	<i>Ariadne</i> sp.	<i>Ricinus communis</i>
15.	<i>Danaus</i> sp.	<i>Calotropis procera</i> , <i>Nerium oleander</i>
16.	<i>Euploea</i> sp.	<i>Ficus</i> sp., <i>Nerium oleander</i>
17.	<i>Castalius rosimon</i>	<i>Ziziphus</i> sp.
18.	<i>Gangara thyrsis</i>	<i>Cocos nucifera</i> , Ornamental palm

Table 3. List of butterflies of the Regional Research Laboratory, Jorhat campus.

Common Name	Scientific Name	Common Name	Scientific Name
Papilionidae		Grey Count	<i>Tanaecia lepidea</i> Butler
Common Bird Wing	<i>Troides helena</i> Linnaeus	Common Baron	<i>Euthalia aconthea</i> Cramer
Golden Bird Wing	<i>Troides aeacus</i> C & R Felder	Yellow Pansy	<i>Junonia hierta</i> Fabricus
Common Mime	<i>Papilio clytia</i> f. <i>dissimilis</i> Linnaeus	Lemon Pansy	<i>Junonia lemonias</i> Linnaeus
Great Mormon	<i>Papilio memnon</i> f. <i>typical</i> Linnaeus	Peacock Pansy	<i>Junonia almana</i> Linnaeus
Tailed Red Breast	<i>Papilio memnon</i> f. <i>alcanor</i> Linnaeus	Grey Pansy	<i>Junonia atlites</i> Linnaeus
Common Mormon	<i>Papilio polytes</i> Linnaeus	Blue Pansy	<i>Junonia orithya</i> Linnaeus
Lime Butterfly	<i>Papilio demoleus</i> Linnaeus	Chocolate Pansy	<i>Junonia iphita</i> Cramer
Yellow Swallowtail	<i>Papilio machaon</i> Moore	Blue Admiral	<i>Kaniska canace</i> Linnaeus
Common Rose	<i>Pachliopta aristolochiae</i> Fabricius	Leopard Lacewing	<i>Cethosia cyane</i> Drury
Red Helen	<i>Papilio helenus</i> Linnaeus	Red Lacewing	<i>Cethosia biblis</i> Fabricius
Tailed Jaw	<i>Graphium agamemnon</i> Linnaeus	Tawny Rajah	<i>Charaxes polyxena</i> Felder
Common Blue Bottle	<i>Graphium sarpedon</i> Linnaeus	Common Nawab	<i>Polyura athamas</i> Drury
Pieridae		Doub Branded Crow	<i>Euploea sylvestre</i> Fabricius
Great Orange Tip	<i>Hebomoia glaucippe</i> Linnaeus	Common Indian Crow	<i>Euploea core</i> Cramer
Small Grass Yellow	<i>Eurema brigitta</i> Wallace	Common Palm Fly	<i>Elymnias hypermnestra</i> Linnaeus
Chocolate Grass Yellow	<i>Eurema laetae</i> Moore	Spotted Palm Fly	<i>Elymnias malelas</i> (Hewitson)
Common Emigrant	<i>Catopsilia pomona</i> Fabricius	Common Evening Brown	<i>Melanitis leda</i> Linnaeus
Mottled Emigrant	<i>Catopsilia pyranthe</i> Linnaeus	Dark Evening Brown	<i>Melanitis phidema</i> Stoll
Red Base Jezebel	<i>Delias aglaia</i> (Linnaeus)	Common Five Ring	<i>Ypthima baldus</i> Fabricius
Red Spot Jezebel	<i>Delias descombesi</i> (Boisduval)	Common Brush Brown	<i>Mycalesis perseus</i> Fabricius
Common Jezebel	<i>Delias eucharis</i> (Drury)	Commander	<i>Modura procris</i> Cramer
Large Cabbage White	<i>Pieris brassicae</i> Gray	Common Castor	<i>Ariadne merione</i> Cramer
Indian Cabbage White	<i>Pieris canidia</i> Evans	Angled Castor	<i>Ariadne ariadne</i> Linnaeus
Nymphalidae		Small Leopard	<i>Phalanta alcippe</i> Cramer
Common Sergeant	<i>Athyma perius</i> (Linnaeus)	Common Leopard	<i>Phalanta phalantha</i> Drury
Sullied Sailor	<i>Neptis soma</i> Moore	Nigger	<i>Orsotrioena medus</i> Fabricius
Common Sailor	<i>Neptis hylas</i> Moore	Common Dufler	<i>Discophora sondiaca</i> Westwood
Colour Sergeant	<i>Parathyma nefte inara</i> (Doubleday & Hewitson)	Lycaenidae	
Orange Staff Sergeant	<i>Parathyma cama</i> (Moore)	Common Imperial	<i>Cheritra freja</i> (Fabricius)
Yellow Jack Sailor	<i>Lassipa viraja</i> Moore	Silver Streak Aacacia Blue	<i>Surendra todara</i> De Niceville
Common Map	<i>Cyrestis thyodamas</i> Boisduval	Yam Fly	<i>Loxura atymnus</i> Fruhstorfer
Danaid Egg Fly	<i>Hypolimnas misippus</i> Linnaeus	Centaur Oak Blue	<i>Nilasera centaurus</i> (Moore)
Clipper	<i>Parthenos sylvia</i> Cramer	Common Pierrot	<i>Castalius rosimon</i> Fabricius
Common Tiger	<i>Danaus genutia</i> Cramer	Hesperiidae	
Plain Tiger	<i>Danaus chrysippus</i> Linnaeus	Chestnut Bob	<i>Lambrix salsala</i> (Moore)
Glassy Tiger	<i>Parantica aglea</i> Stoll	Dart	<i>Cupitha purreea</i> Moore
		Common Dartlet	<i>Oriens gola pseudolus</i> (Mabille)

