

BUTTERFLIES OF TRIPURA

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ABSTRACT

The state of Tripura is situated in the south-western extremity of north-east India. It shares an international boundary with Bangladesh on its north, south and south-eastern part; whereas on eastern side it shares a common boundary with two Indian states, Assam and Mizoram respectively. The state is located in the Bio-geographic zone of 9B-North-East Hills and has a predominantly hilly terrain with an altitudes ranging from 50 to 3080 ft above sea level. As because, it is geographically situated in the Indian sub-region of Oriental Zoo-geographic region, therefore possesses a very close affinity and resemblance with floral and faunal components of Indo-Malayan and Indo-Chinese sub-regions. Tripura is not a big state with an area covering only 10,491.69 sq. km., but around 60% of that area is forest cover. The main forest types are tropical evergreen, semi evergreen, and moist deciduous; also sizeable area is covered with bamboo brakes. Tripura is extremely rich in bio-diversity point of view. However, little studies had done on its butterfly diversity. Keeping that in consideration, one preliminary survey for butterfly fauna was planned during October-November 2009. During this seventeen days long survey period, a large part of the state was covered. An amazing 196 species of butterflies from five different families were recorded from different habitats such as plantation, cultivation and natural forests. Nymphalidae was the dominant family, with most species number (81), followed by families Lycaenidae (44), Hesperidae (39), Pieridae (18) and Papilionidae (14) respectively. Among the recorded butterfly species, some of them are protected under different schedules of the Indian Wildlife Protection Act, 1972. Here also, habitat loss and fragmentation of habitat continuously threatening the overall faunal diversity. During the study, more number of species was recorded from the natural forest area which supports a large diversity of flora. The results showed that the change of environment quality and altitude influenced the diversity of butterfly remarkably. The diversity pattern shows extreme richness in the Jampui Hills region, whereas in Sepahijala Wildlife Sanctuary it is considerably low. The other regions of Tripura showed moderate diversity of butterfly species. The result of the present survey will be helpful for further detailed study on butterfly diversity in the region.

Keywords: Abundance, Butterflies, Diversity, Conservation status, Tripura.

INTRODUCTION

The state of Tripura, with a geographical area of 10,491.69 sq. km. has predominantly hilly terrain. The state is situated in the south-western extremity of north-east India between 22°56′ - 24°32′ N and 91°09′ - 92°20′ E. Tripura comes under the bio-geographic zone of 9B-North East Hills and has an altitude ranging from 50 to 3080 ft. (Rodgers and Panwar, 1988). Total forested area of the state is 6292.681 sq. km. which is 59.98% (=60%) of the total geographic area. The major forest types recorded are – East Himalayan Lower Bhabar Sal; Cachar Tropical Evergreen Forests; Moist Mixed Deciduous Forests; Low Alluvial Savannah Woodland; Moist Mixed Deciduous Forests, Dry Bamboo Brakes and Secondary Moist Bamboo Brakes (Champion and Seth, 1968). The overall climate of the state is hot and humid, with temperature ranging from 36.8°C (maximum in summer) to 4°C (minimum in winter). The average annual rainfall is around 230 cm. There are 10 major rivers running across the state.

Due to high rainfall, nutrient rich soils, large forest covered areas - the state has fairly diverse assemblage of floral and faunal components. There are 1545 species of recorded flora, 90 mammalian species and 341 reported species of avi-fauna. However, Tripura is one of the least studied states when butterfly diversity is concerned. The main objective of the present study was to conduct a survey so as to prepare a baseline data on butterfly species diversity in state of Tripura.

MATERIALS AND METHODS

The duration of the survey was for 17 days, from 08 October 2009 to 24 October 2009, covering some specific locations, especially Protected Areas of all four districts of Tripura. Observations were carried out for eight hours per day consisting of two sessions 07:00 to 12:00 and 13:00 to 16:00 hrs. During the entire survey period the weather was dry and sunny with no precipitation or cloudy sky. However, in the North Tripura district (especially in Jampui Hill regions) morning was covered by fog. Identification of butterflies was done in the field. Some small butterflies were caught and closely observed after placing them in clear glass bottle. Then they were released to the same habitat from where they were caught. Photographs of the respective butterfly species were also taken for further references. The butterflies were identified using standard references like Evans (1932), Wynter-Blyth (1957), Corbet and Pendlebury (1992), D’Abrera (1982, 1986, 1998), Larsen (2004), Colin Smith (2006) and Kehimkar (2008).

RESULTS

During the entire survey a total 196 species of butterflies from 5 different families and 125 different genera were observed. Nymphalidae was the dominant family with most number of butterflies (81 species), followed by families Lycaenidae (44 species), Hesperidae (39 species), Pieridae (18 species) and Papilionidae (14 species) respectively.

Table 1: Systematic list of butterflies recorded from Tripura (October, 2009)

Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
A. Super-family: Papilionoidea						
I. Family: Papilionidae						
a. Sub-family: Papilioninae						
1	<i>Lamproptera curius</i> (Fabricius)	White Dragontail	√			
2	<i>Graphium sarpedon</i> (Linnaeus)	Common Bluebottle	√			
3	<i>Graphium doson</i> (C.&R. Felder)	Common Jay	√		√	
4	<i>Graphium agamemnon</i> (Linnaeus)	Tailed Jay	√	√	√	√
5	<i>Chilasa clytia</i> (Linnaeus)	Common Mime	√		√	√
6	<i>Papilio polytes</i> (Linnaeus)	Common Mormon	√	√	√	√
7	<i>Papilio helenus</i> Linnaeus	Red Helen	√	√	√	√
8	<i>Papilio nephelus</i> Boisduval	Yellow Helen	√		√	√
9	<i>Papilio memnon</i> Linnaeus	Great Mormon	√		√	√
10	<i>Papilio protenor</i> Cramer	Spangle	√			
11	<i>Papilio demoleus</i> Linnaeus	Lime Butterfly	√	√	√	√
12	<i>Atrophaneura varuna</i> (White)	Common Batwing	√			
13	<i>Atrophaneura aristolochiae</i> (Fabricius)	Common Rose	√	√	√	√
14	<i>Triodes helena</i> (Linnaeus)	Common Birdwing	√	√	√	√
II. Family: Pieridae						
a. Sub-family: Coliadinae						
15	<i>Eurema blanda</i> (Boisduval)	Three-spot Grass Yellow	√			√
16	<i>Eurema brigitta</i> (Cramer)	Small Grass Yellow	√			
17	<i>Eurema hecabe</i> (Linnaeus)	Common Grass Yellow	√	√	√	√
18	<i>Catopsilia pomona</i> (Fabricius)	Common Emigrant	√	√	√	√
19	<i>Catopsilia pyranthe</i> (Linnaeus)	Mottled Emigrant	√	√	√	√
b. Sub-family: Pierinae						
20	<i>Ixias pyrene</i> (Linnaeus)	Yellow Orange-tip	√		√	√
21	<i>Hebomoia glaucippe</i> (Linnaeus)	Great Orange-tip	√			
22	<i>Pareronia avatar</i> (Moore)	Pale Wanderer				√
23	<i>Pareronia valeria</i> (Cramer)	Common Wnderer	√		√	√
24	<i>Appias libythea</i> (Fabricius)	Striped Albatross		√	√	√
25	<i>Appias lycinda</i> (Cramer)	Chocolate Albatross	√			
26	<i>Pieris canidia</i> (Sparman)	Indian Cabbage White	√		√	√

[Table Contd.]

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Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
27 <i>Cepora nerissa</i> (Fabricius)	Common Gull	√	√	√	√	Sch II
28 <i>Delias pasithoe</i> (Linnaeus)	Red-base Jezebel	√				
29 <i>Delias descombesi</i> (Boisduval)	Red-spot Jezebel	√				
30 <i>Delias agostina</i> (Hewitson)	Yellow Jezebel	√				
31 <i>Delias hyparete</i> (Linnaeus)	Painted Jezebel	√				
32 <i>Leptosia nina</i> (Fabricius)	Psyche	√	√	√	√	
III. Family: Lycaenidae						
a. Sub-family: Poritiinae						
33 <i>Poritia hewitsoni</i> Moore	Common Gem	√				Sch II
b. Sub-family: Miletinae						
34 <i>Miletus chinensis assamensis</i> (Doherty)	Common Brownie	√				
35 <i>Allotinus drumila</i> Moore	Great/Crenulate Darkie	√				
36 <i>Spalgis epius</i> (Westwood)	Apefly	√			√	
c. Sub-family: Curetinae						
37 <i>Curetis acuta</i> Moore	Angled Sunbeam	√				
d. Sub-family: Theclinae						
38 <i>Arhopala pseudocentaurus</i> (Doubleday)	Western Centaur Oakblue	√	√	√	√	
39 <i>Surendra quercetorum</i> (Moore)	Common Acacia Blue	√			√	
40 <i>Iraota timeleon</i> (Stoll)	Silverstreak Blue				√	
41 <i>Loxura atymnus</i> (Stoll)	Yamfly	√	√	√	√	
42 <i>Cheritra freja</i> (Fabricius)	Common Imperial	√				
43 <i>Remelana jangala</i> (Horsfield)	Chocolate Royal	√			√	
44 <i>Hypolycaena erylus</i> (Godart)	Common Tit	√	√	√	√	
45 <i>Zeltus amasa</i> (Hewitson)	Fluffy Tit	√				
46 <i>Rapala damona</i> Swinhoe	Malay Red Flash	√				
47 <i>Rapala pheretima</i> (Hewitson)	Copper Flash	√		√		
48 <i>Rapala manea</i> (Hewitson)	Slate Flash	√	√	√		
49 <i>Rapala varuna</i> (Horsfield)	Indigo Flash	√				Sch II
50 <i>Catapaecilma elegans</i> (Druce)	Common Tinsel	√			√	
51 <i>Spindasis lohita</i> (Horsfield)	Long-branded Silverline				√	Sch II
52 <i>Spindasis syama</i> (Horsfield)	Club Silverline	√				
53 <i>Heliophorus epicles</i> Godart	Purple Sapphire	√				
54 <i>Araotes lapithis lapithis</i> (Moore)	Witch	√				Sch II
e. Sub-family: Polyommatainae						

[Table Contd.]

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Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
55 <i>Anthene emolus</i> (Godart)	Common Ciliate Blue	√	√	√	√	
56 <i>Anthene lycaenina</i> (C.&R. Felder)	Pointed Ciliate Blue	√				Sch II
57 <i>Caleta roxus</i> Godart	Straight Pierrot	√				
58 <i>Caleta elna</i> Hewitson	Elbowed Pierrot	√			√	
59 <i>Discolampa ethion</i> (Westwood)	Banded Blue Pierrot	√		√	√	
60 <i>Castalius rosimon</i> (Fabricius)	Common Pierrot	√	√	√	√	
61 <i>Niphanda cymbia</i> de Nicéville	Pointed Pierrot	√				Sch II
62 <i>Prosotas lutea sivoka</i> (Evans)	Sevoke Lineblue				√	
63 <i>Prosotas nora</i> (C. Felder)	Common Lineblue	√	√		√	
64 <i>Prosotas dubiosa indica</i> Evans	Tailless Lineblue	√			√	
65 <i>Jamides bochus</i> (Stoll)	Dark Cerulean	√	√			
66 <i>Jamides celeno</i> (Cramer)	Common Cerulean	√			√	
67 <i>Jamides alecto</i> (C.&R. Felder)	Metallic Cerulean	√				
68 <i>Catochrysops panormus</i> (C.&R. Felder)	Silver Forget-me-not	√				
69 <i>Lampides boeticus</i> (Linnaeus)	Pea Blue	√	√		√	Sch II
70 <i>Zizeeria karsandra</i> (Moore)	Dark Grass Blue	√	√	√	√	
71 <i>Zizinia otis</i> (Fabricius)	Lesser Grass Blue	√	√	√	√	
72 <i>Neopithecops zalmora</i> (Butler)	Quaker	√	√	√	√	
73 <i>Megisba Malaya</i> (Horsfield)	Malayan	√				
74 <i>Acytolepis puspa</i> (Horsfield)	Common Hedge Blue	√				
75 <i>Chilades lajus</i> (Stoll)	Lime Blue	√	√	√	√	
f. Sub-family: Riodiniinae						
76 <i>Zemeros flegyas</i> (Cramer)	Punchinello	√	√	√	√	
IV. Family: Nymphalidae						
a. Sub-family: Libytheinae						
77 <i>Libythea myrrha</i> Godart	Club Beak	√				
b. Sub-family: Danainae						
78 <i>Tirumala limniace</i> (Cramer)	Blue Tiger	√	√	√	√	
79 <i>Tirumala septentrionis</i> (Butler)	Dark Blue Tiger	√				
80 <i>Danaus genutia</i> (Cramer)	Striped Tiger	√	√	√	√	
81 <i>Danaus chrysippus</i> (Linnaeus)	Plain Tiger				√	
82 <i>Parantica aglea</i> (Stoll)	Glassy Tiger	√		√	√	
83 <i>Parantica sita</i> (Kollar)	Chestnut Tiger	√				
84 <i>Euploea mulciber</i> (Cramer)	Striped Blue Crow	√		√	√	
85 <i>Euploea klugii</i> Moore	Brown King Crow	√	√			

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Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
86 <i>Euploea algea</i> (Godart)	Long-branded Blue Crow	√				
87 <i>Euploea core</i> (Cramer)	Common Crow	√	√	√	√	
c. Sub-family: Charaxinae						
88 <i>Polyura athamas</i> (Drury)	Common Nawab	√			√	
89 <i>Charaxes bernardus</i> (Fabricius)	Tawny Rajah	√				
90 <i>Charaxes kahruba</i> (Moore)	Variegated Rajah	√				
91 <i>Charaxes solon</i> (Fabricius)	Black Rajah	√	√			
d. Sub-family: Morphinae						
92 <i>Discophora sondaica</i> Boisduval	Common Duffer					√
93 <i>Discophora timora</i> Westwood	Great Duffer	√				
e. Sub-family: Satyrinae						
94 <i>Melanitis leda</i> (Linnaeus)	Common Evening Brown	√	√	√	√	
95 <i>Lethe europa</i> (Fabricius)	Bamboo Treebrown	√			√	
96 <i>Lethe rohria</i> (Fabricius)	Common Treebrown	√				
97 <i>Lethe confuse</i> Aurivillius	Banded Treebrown	√				
98 <i>Lethe chandica</i> (Moore)	Angled Red Forester	√				
99 <i>Ethope himachala</i> (Moore)	Dusky Diadem	√				√
100 <i>Elymnias hypermnestra</i> (Linnaeus)	Common Palmfly	√	√	√	√	
101 <i>Elymnias malelas</i> Hewitson	Spotted Palmfly	√				
102 <i>Mycalesis anaxias</i> Hewitson	White-bar Bushbrown	√				Sch II
103 <i>Mycalesis perseus</i> (Fabricius)	Common Bushbrown	√	√	√	√	
104 <i>Mycalesis mineus</i> (Linnaeus)	Dark-brand Bushbrown	√	√	√	√	
105 <i>Orsotrioena medus</i> Fabricius	Nigger	√		√	√	
106 <i>Ypthima baldus</i> (Fabricius)	Common Five-ring	√	√	√	√	
107 <i>Ypthima huebneri</i> Kirby	Common Four-ring	√	√	√	√	
108 <i>Ypthima nareda</i> (Kollar)	Large Three-ring	√				
f. Sub-family: Heliconiinae						
109 <i>Acraea violae</i> (Fabricius)	Tawny Coster		√			√
110 <i>Cethosia biblis</i> (Drury)	Red Lacewing	√				
111 <i>Cethosia cyane</i> (Drury)	Leopard Lacewing	√				
112 <i>Vindula erota</i> Fabricius	Cruiser	√				√
113 <i>Cirrochroa aoris</i> Doubleday	Large Yeoman	√				
114 <i>Cupha erymanthis</i> (Drury)	Rustic	√				

[Table Contd.]

Contd. Table]

Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
115 <i>Vagrans egista</i> (Cramer)	Vagrant	√				
116 <i>Phalanta phalantha</i> (Drury)	Common Leopard	√	√	√	√	
g. Sub-family: Limenitinae						
117 <i>Sumalia daraxa</i> (Doubleday)	Green Commodore	√				
118 <i>Moduza procris</i> (Cramer)	Commander	√				
119 <i>Athyma perius</i> (Linnaeus)	Common Sergeant		√	√		
120 <i>Athyma asura</i> Moore	Studded Sergeant			√		
121 <i>Athyma ranga</i> Moore	Blackvein Sergeant	√				Sch II
122 <i>Athyma selenophora</i> (Kollar)	Staff Sergeant	√				
123 <i>Athyma zeroxa</i> Moore	Small Staff Sergeant	√	√	√	√	
124 <i>Athyma nefte</i> (Cramer)	Colour Sergeant	√		√		
125 <i>Pantoporia hordonia</i> (Stoll)	Common Lascar	√			√	
126 <i>Neptis yerburyi</i> Butler	Yerbury's Sailer	√				
127 <i>Neptis hylas</i> (Linnaeus)	Common Sailer	√	√	√	√	
128 <i>Neptis magadha</i> C.&R. Felder	Spotted Sailer	√				
129 <i>Neptis ananta</i> Moore	Yellow Sailer	√				
130 <i>Neptis cartica</i> Moore	Plain Sailer	√			√	
131 <i>Phaedyra columella</i> (Cramer)	Short-banded Sailer		√		√	
132 <i>Parthenos sylvia</i> (Cramer)	Clipper	√	√	√	√	Sch II
133 <i>Lebadea martha</i> (Fabricius)	Knight	√		√		
134 <i>Euthalia monina kesava</i> (Moore)	Powdered Baron				√	
135 <i>Euthalia phemius</i> (Doubleday)	White-edged Blue Baron	√				
136 <i>Euthalia alpheda jama</i> Fruhstorfer	Streaked Baron			√		
137 <i>Tanaecia lepidea</i> (Butler)	Grey Count	√	√	√	√	Sch II
138 <i>Tanaecia julii</i> (Lesson)	Common Earl	√			√	
h. Sub-family: Cyrestinae						
139 <i>Cyrestis cocles</i> (Fabricius)	Marbled Map	√				Sch II
140 <i>Cyrestis thyodamas</i> Boisduval	Common Map	√				
141 <i>Chersonesia risa</i> (Doubleday)	Common Maplet	√				
142 <i>Pseudergolis wedah</i> (Kollar)	Tabby	√				
143 <i>Stibochiona nicea</i> (Gray)	Popinjay	√				
i. Sub-family: Biblidinae						
144 <i>Ariadne ariadne</i> (Linnaeus)	Angled Castor	√			√	

[Table Contd.]

Contd. Table]

Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
145 <i>Ariadne merione</i> (Cramer)	Common Castor		√		√	
j. Sub-family: Apaturinae						
146 <i>Apatura chevana</i> (Moore)	Sergeant Emperor	√			√	
147 <i>Rohana parisatis</i> (Westwood)	Black Prince	√				
148 <i>Euripus nyctelius</i> (Doubleday)	Courtesan	√				Sch II
k. Sub-family: Nymphalinae						
149 <i>Symbrenthia hypselis</i> (Godart)	Himalayan Jester	√				
150 <i>Symbrenthia hippoclus</i> (Cramer)	Common Jester	√			√	
151 <i>Junonia hierta</i> (Fabricius)	Yellow Pansy			√	√	
152 <i>Junonia iphita</i> (Cramer)	Chocolate Pansy	√	√	√	√	
153 <i>Junonia atlites</i> (Linnaeus)	Grey Pansy	√	√	√	√	
154 <i>Junonia almana</i> (Linnaeus)	Peacock Pansy	√	√	√	√	
155 <i>Junonia lemonias</i> (Linnaeus)	Lemon Pansy	√	√	√	√	
156 <i>Hypolimnas bolina</i> (Linnaeus)	Great Eggfly	√		√	√	
157 <i>Doleschallia bisaltide</i> (Cramer)	Autumn Leaf	√				
B. Super-family: Hesperioidea						
V. Family: Hesperidae						
a. Sub-family: Coeliadinae						
158 <i>Hasora badra</i> (Moore)	Common Awl	√				
159 <i>Badamia exclamatoris</i> (Fabricius)	Brown Awl				√	
160 <i>Choaspes benjaminii</i> (Guerin-Meneville)	Indian Awlking	√				
b. Sub-family: Pyrginae						
161 <i>Celaenorrhinus leucocera</i> (Kollar)	Common Spotted Flat			√		
162 <i>Spialia galba</i> (Fabricius)	Indian Skipper	√	√			
163 <i>Sarangesa dasahara</i> Moore	Common Small Flat	√			√	
164 <i>Pseudocoladenia dan</i> (Fabricius)	Fulvous Pied Flat	√			√	
165 <i>Coladenia indrani</i> (Moore)	Tricoloured Pied Flat				√	
166 <i>Gerosis bhagava</i> (Moore)	Common Yellow-breasted Flat	√				
167 <i>Gerosis phisara</i> (Moore)	Dusky Yellow-breasted Flat	√				
168 <i>Tagiades gana</i> (Moore)	Suffused Snow Flat	√		√	√	

[Table Contd.]

Contd. Table]

Species	Common Name	Distribution (District-wise)				IWPA Status
		North	Dhalai	West	South	
169 <i>Tagiades japetus</i> (Stoll)	Common Snow Flat	√	√	√	√	
170 <i>Tagiades litigosa</i> Möschler	Water Snow Flat	√		√	√	
171 <i>Tagiades menaka</i>	Spotted Snow Flat	√				
172 <i>Mooreana trichoneura pralaya</i> (Moore)	Yellow Flat	√				
173 <i>Odontoptilum angulata</i> (C.&R. Felder)	Chestnut Angle	√		√		
c. Sub-family: Hesperinae						
174 <i>Oriens goloides</i> (Moore)	Common Dartlet	√			√	
175 <i>Telicota colon</i> (Fabricius)	Pale Palm Dart	√				
176 <i>Telicota ancilla</i> (Herrich-Schäffer)	Dark Palm Dart	√	√			
177 <i>Parnara guttatus</i> (Bremer & Grey)	Straight Swift			√		
178 <i>Borbo cinnara</i> (Wallace)	Rice Swift	√		√		
179 <i>Pelopidas mathias</i> (Fabricius)	Small Branded Swift		√	√		
180 <i>Pelopidas assamensis</i> (de Nicéville)	Great Swift	√				Sch IV
181 <i>Pelopidas conjuncta</i> (Herrich-Schäffer)	Conjoined Swift	√			√	
182 <i>Sebastonyma dolopia</i> (Hewitson)	Tufted Ace	√			√	
183 <i>Hyarotis adrastus</i> (Stoll)	Tree Flitter	√				Sch IV
184 <i>Gangara thyrsis</i> (Fabricius)	Giant Red-eye			√		
185 <i>Matapa aria</i> (Moore)	Common Red-eye	√	√			
186 <i>Iambrix salsala</i> (Moore)	Chestnut Bob	√	√	√	√	
187 <i>Karuthaialos butleri</i> de Nicéville	Dark Velvet Bob	√				
188 <i>Sancus fuligo</i> (Mabille)	Coon	√				
189 <i>Ancistroides nigrita</i> (Latreille)	Chocolate Demon	√				
190 <i>Notocrypta curvifascia</i> (C.&R. Felder)	Restricted Demon	√			√	
191 <i>Udaspes folus</i> (Cramer)	Grass Demon	√	√			
192 <i>Iton semamora</i> (Moore)	Common Wight	√				
193 <i>Astictopterus jama</i> C.&R. Felder	Forest Hopper	√			√	
194 <i>Aeromachus pygmaeus</i> (Fabricius)	Pygmy Scrub Hopper				√	
195 <i>Halpe zema</i> (Hewitson)	Banded Ace	√				
196 <i>Halpe porus</i> (Mabille)	Moore's Ace	√				

DISCUSSION

Due to its geographical position, the state Tripura possesses a close resemblance with floral and faunal components of Indo-Malayan and Indo-Chinese sub-regions. On the other hand, Tripura shares its boundary with neighbouring country Bangladesh and other two Indian states Assam and Mizoram respectively. Bangladesh, Assam and Mizoram are rich in butterfly diversity and therefore the high butterfly diversity observed in Tripura are well expected.

Earlier surveys conducted by group of scientists from Zoological Survey of India revealed a total 58 species of butterflies (Papilionidae-7, Pieridae-10, Nymphalidae-28, Lycaenidae-3, Riodinidae-1 and Hesperidae-9) (Mandal *et al.*, 2000). However, this present study, although was of very short duration, revealed an astonishing 196 species of butterflies. Among the recorded butterfly species, 14 are protected under Schedule-II and 3 are under Schedule-IV of Indian Wildlife (Protection) Act, 1972 (Anon., 2007). Some of the rare butterflies of India (Kehimkar, 2008) that were recorded during the survey were Pale Wanderer (*Pareronia avatar*), Malay Red Flash (*Rapala damona*), Great Duffer (*Discophora timora*), Studded Sergeant (*Athyma asura*), Spotted Sailer (*Neptis magadha*), Sergeant Emperor (*Apatura chevana*), Dusky Yellow-breasted Flat (*Gerosis phisara*) etc. In case of another rare butterfly Marbled Map (*Cyrestis cocles*), both subspecies *earli* and *natta* were observed.

The diversity pattern shows extreme richness in the North Tripura district especially Jampui Hill regions. This Jampui Hill area has an average altitude of 3000 feet and has great floral diversity, small fountains and unique climate which boast good butterfly diversity. More than 88% of the total butterflies were commonly observed in that area. South Tripura district had moderate butterfly diversity, whereas, Dhalai and West Tripura districts had less diversity than the others. The result of the present survey will help in further detailed study regarding butterfly diversity, distribution, seasonality of the state Tripura.

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