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Invertebrate Conservation & Information Network of South Asia (ICINSA)

Newsletter of the

An updated checklist of butterflies of Rajgir Wildlife Sanctuary, Bihar

The study was carried out in the Rajgir Wildlife Sanctuary (RWS) to prepare an updated inventory of Lepidoptera (Butterflies) belonging to class Insecta. There are more than 28,000 species of butterflies, with about 80 percent found in tropical regions. The butterfly diversity and abundance depends on the availability of plant species and changes in climate and vegetation patterns (Kunte 1997). India is one of the mega biodiverse country in the world; and is home to around 1,504 species of butterflies (Kunte et al. 2012), which is about 8.74% of total butterfly species of the world.

We randomly surveyed the study region and recorded a total of 64 species of butterflies belonging to five families. RWS is situated near Rajgir City in Nalanda District of Bihar covering an area of 35.84km² and the sanctuary is the only leftover forested area in Nalanda District declared as sanctuary in 1978 under section 18 of the Wildlife Protection Act 1972 Vide S.O. No 727.

The ancient Rajgir is located about 25km away from the district headquarters. The study area comes under Indo-Gangetic plains and lies between 24.9167°-



Rajgir Wildlife Sanctuary, Rajgir, Nalanda.

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Table 1. Checklist of butterflies of Rajgir Wildlife Sanctuary, Bihar.

	Family	Common name	Scientific name
1	Nymphalidae	Peacock Pansy	<i>Junonia almana</i> (Linnaeus, 1758)
2		Lemon Pansy	<i>Junonia lemonias</i> (Linnaeus, 1758)
3		Blue Pansy	<i>Junonia orithya</i> (Linnaeus, 1758)
4		Yellow Pansy	<i>Junonia hierta</i> (Fabricius 1798)
5		Grey Pansy	<i>Junonia atlites</i> (Linnaeus, 1763)
6		Chocolate Pansy	<i>Junonia iphita</i> (Cramer, 1779)
7		Common Baron	<i>Euthalia aconthea</i> (Cramer, 1777)
8		Gaudy Baron	<i>Euthalia lubentina</i> (Cramer, 1777)
9		Plain Tiger	<i>Danaus chrysippus</i> (Linnaeus, 1758)
10		Blue Tiger	<i>Tirumala limniace</i> (Cramer, 1775)
11		Common Tiger	<i>Danaus genutia</i> (Cramer, 1779)
12		Common Leopard	<i>Phalanta phalantha</i> (Drury, 1773)
13		Common Evening Brown	<i>Melanitis leda</i> (Linnaeus, 1758)
14		Common Indian Crow	<i>Euploea core</i> (Cramer, 1780)
15		Common Bushbrown	<i>Mycalesis perseus</i> (Fabricius, 1775)
16		Common Sailor	<i>Neptis hylas</i> (Linnaeus, 1758)
17		Commander	<i>Moduza procris</i> (Cramer, 1777)
18		Common Castor	<i>Ariadne merione</i> (Cramer, 1777)
19		Tawny Coster	<i>Acraea terpsicore</i> (Linnaeus, 1758)
20		Great Eggfly	<i>Hypolimnas bolina</i> (Linnaeus, 1758)
21		Danaid Eggfly	<i>Hypolimnas misippus</i> (Linnaeus, 1764)
22		African Ringlet	<i>Ypthima asterope</i> (Klug, 1832)
23		Common Fourring	<i>Ypthima huebneri</i> (Kirby, 1871)
24		Baronet	<i>Euthalia nais</i> (Forster, 1771)
25		Painted Lady	<i>Vanessa cardui</i> (Linnaeus, 1758)
26		Glassy Tiger	<i>Parantica aglea</i> (Stoll, 1782)
27	Pieridae	Common Emigrant	<i>Catopsilia pomona</i> (Fabricius, 1775)
28		Molted Emigrant	<i>Catopsilia pyranthe</i> (Linnaeus, 1758)
29		Cabbage Butterfly	<i>Pieris brassicae</i> (Linnaeus, 1758)
30		White Orange Tip	<i>Ixias marianne</i> (Cramer, 1779)
31		Yellow Orange Tip	<i>Ixias pyrene</i> (Linnaeus, 1764)
32		Common Jezebel	<i>Delias eucharis</i> (Drury, 1773)
33		Common Grass Yellow	<i>Eurema hecabe</i> (Linnaeus, 1758)
34		Spotless Grass Yellow	<i>Eurema laeta</i> (Boisduval, 1836)
35		Common Gull	<i>Cepora nerissa</i> (Fabricius, 1775)

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	Family	Common name	Scientific name
36	Pieridae	Pioneer Butterfly	<i>Belenois aurora</i> (Fabricius, 1793)
37		Common Wanderer	<i>Pareronia valeria</i> (Cramer, 1776)
38		Psyche	<i>Leptosia nina</i> (Fabricius, 1793)
39	Papilionidae	Lime Butterfly	<i>Papilio demoleus</i> (Linnaeus, 1758)
40		Common Mormon	<i>Papilio polytes</i> (Linnaeus, 1758)
41		Common Jay	<i>Graphium doson</i> (C. & R. Felder, 1864)
42		Common Mime	<i>Papilio clytia</i> (Linnaeus, 1758)
43		Common Rose	<i>Pachliopta aristolochiae</i> (Fabricius, 1775)
44		Blue Mormon	<i>Papilio polymnestor</i> (Cramer, 1775)
45		Spot Swordtail	<i>Graphium nomius</i> (Esper, 1793)
46	Lycaenidae	Pea Blue	<i>Lampides boeticus</i> (Linnaeus, 1767)
47		Common Pierrot	<i>Castalius rosimon</i> (Fabricius, 1775)
48		Rounded Pierrot	<i>Tarucus extricatus</i> (Butler, 1886)
49		Common Silver line	<i>Cigaritis vulcanus</i> (Fabricius, 1775)
50		Zebra Blue	<i>Leptotes plinius</i> (Fabricius, 1793)
51		Indian Gram Blue	<i>Euchrysops cnejus</i> (Fabricius, 1798)
52		Lesser Grass Blue	<i>Zizina otis</i> (Fabricius, 1787)
53		Tiny Grass Blue	<i>Zizula hylax</i> (Fabricius, 1775)
54		Lime Blue	<i>Chilades lajus</i> (Stoll, 1780)
55		Dark Grass Blue	<i>Zizeeria karsandra</i> (Moore, 1865)
56		Tailless Line blue	<i>Prosotas dubiosa</i> (Semper, 1879)
57		Forget Me Not	<i>Catochrysops strabo</i> (Fabricius, 1793)
58		Plains Cupid	<i>Luthrodes pandava</i> (Horsfield, 1829)
59		Slate Flash	<i>Rapala manea</i> (Hewitson, 1863)
60		Large Oakblue	<i>Arhopala amantes</i> (Hewitson, 1862)
61	Hesperiidae	Indian Palm Bob	<i>Suastus gremius</i> (Fabricius, 1798)
62		Small Branded Swift	<i>Pelopidas mathias</i> (Fabricius, 1798)
63		Indian Grizzled Skipper	<i>Spialia galba</i> (Fabricius, 1793)
64		Oriental Dark Palm Dart	<i>Telicota bambusae</i> (Moore, 1878)
65		Grass Demon	<i>Udaspes folus</i> (Cramer, 1775)

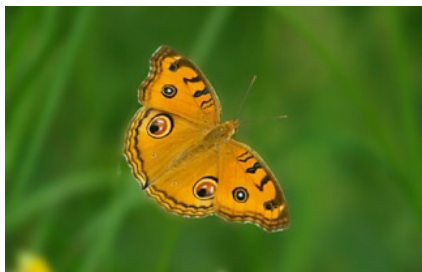
25.0833°N and 85.1000°-85.5000°E. RWS is surrounded by five hillocks named Ratnagiri, Vipalachal, Vaibhagiri, Songiri, and Udaygiri. Temperature may reach up to 45°C in the month of May–June and

maximum precipitation in July–August. The RWS inhabits a number of wildlife including threatened species such as Indian Pangolin *Manis crassicaudata*, Striped Hyaena *Hyaena hyaena*, Small Indian Civet *Viverricula*

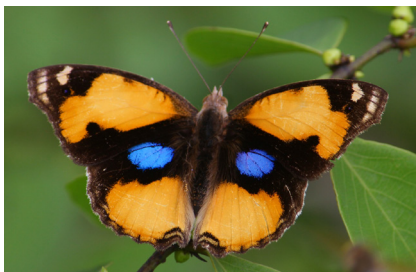
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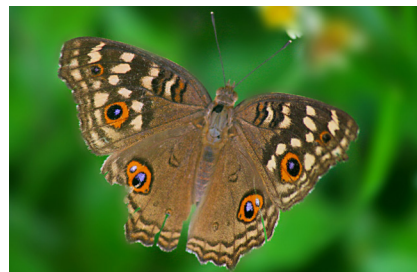
Images. © Rahul Kumar.



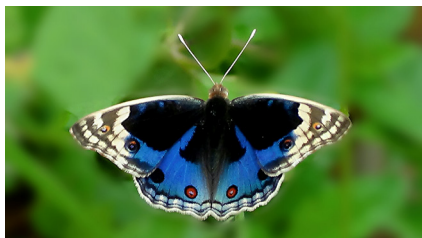
Peacock Pansy *Junonia almana*



Yellow Pansy *Junonia hierta*



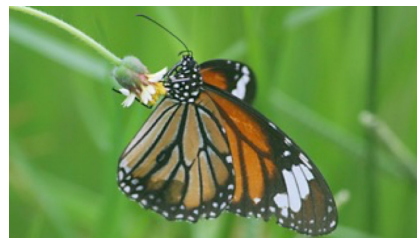
Lemon Pansy *Junonia lemonias*



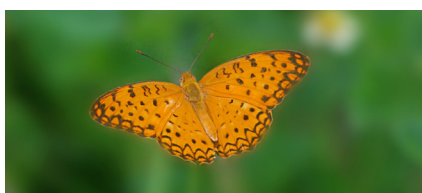
Blue Pansy *Junonia orithya*



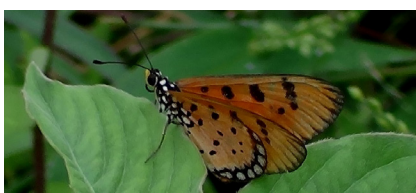
Lime Butterfly *Papilio demoleus*



Common Tiger *Danaus genutia*



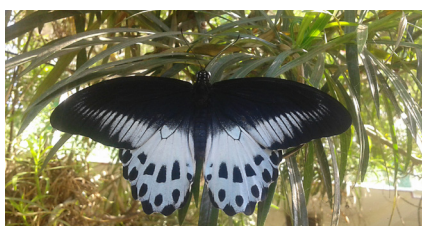
Common Leopard *Phalanta phalantha*



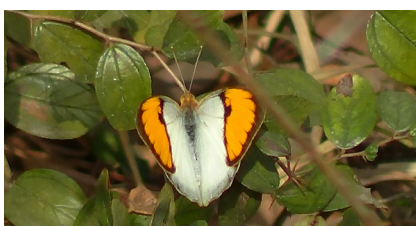
Tawny Coster *Acraea terpsicore*



Baronet *Euthalia nais*



Blue Mormon *Papilio polymnestor*



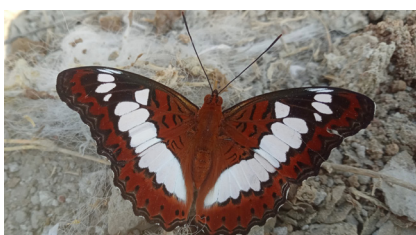
White Orange Tip *Lxias marianne*



Large Oakblue *Arhopala amantes*



Common Baron *Euthalia aconthea*



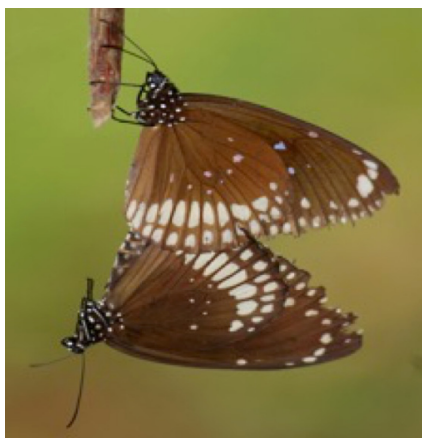
Commander *Moduza procris*



Common Jay *Graphium doson*

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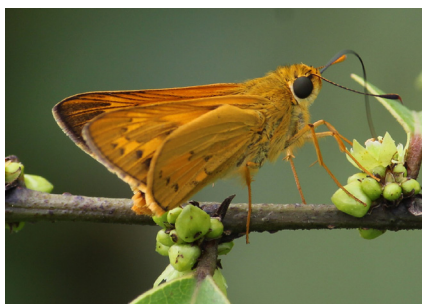
Common Indian Crow *Euploea core*



Common Jezebel *Delias eucharis*



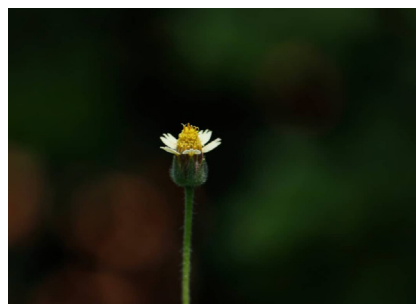
Indian Gram Blue *Euchrysops cnejus*



Oriental Dark Palm Dart *Telicota bambusae*



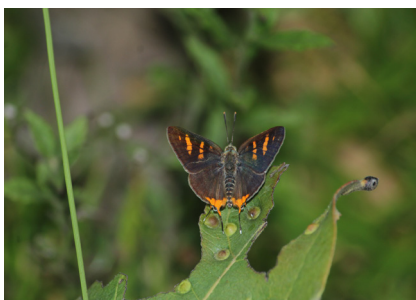
Common Grass Yellow *Eurema hecabe*



Coat button *Tridax procumbens*
common host plant for
butterflies.



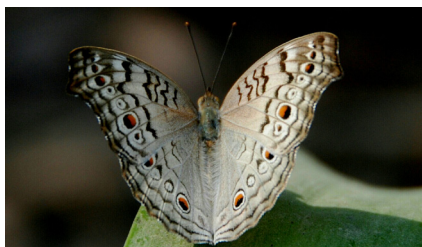
Indian Grizzled Skipper *Spialia galba*



Common Silverline *Cigaritis vulcanus*



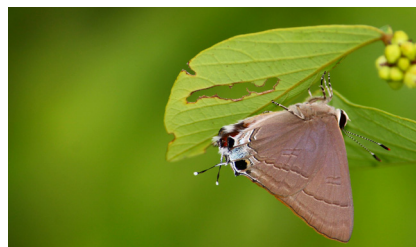
Common Wanderer *Pareronia valeria*



Grey Pansy *Junonia atlites*



Mottled Emigrant feeding on
Tridax procumbens Nector.

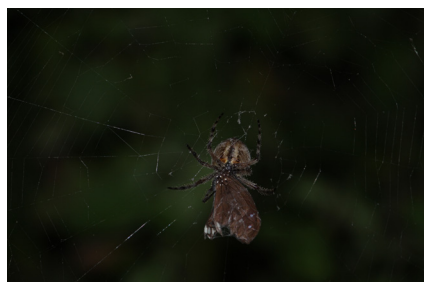


Slate Flash *Rapala manea*

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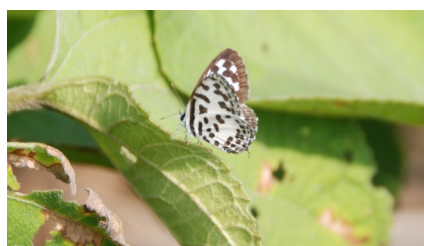
Spider preying on Common Indian Crow *Euploea core*



Spot Swordtail *Graphium nomius*



Psyche *Leptosia nina*



Common Pierrot *Castalius rosimon*



Rounded Pierrot *Tarucus extricatus*



Common Rose *Pachliopta aristolochiae* caterpillar



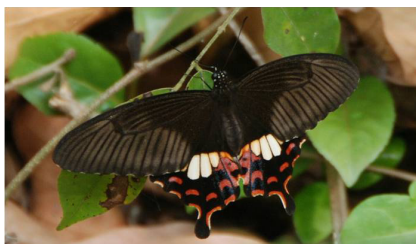
Pea Blue *Lampides boeticus*



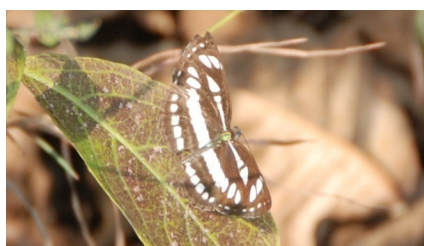
Great Eggfly *Hypolimnna bolina*



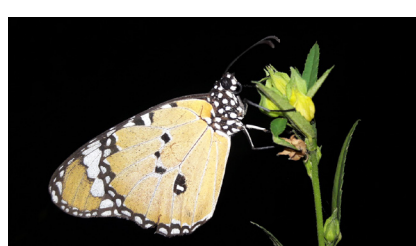
Pioneer *Belenois aurota*



Common Mormon *Papilio polytes*



Common Sailor *Neptis hylas*



Plain tiger *Danaus chrysippus*



Common Mime *Papilio clytia*

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indica, Common Palm Civet
Paradoxurus hemaphorditus,
Indian Crested Porcupine
Hystrix indica, and Indian Hare
Lepus nigricollis.

The species have been recorded from various habitat types in RWS; dry deciduous, Sal-mixed moist deciduous, including dry deciduous scrublands, and patches of bamboo grooves (Champion & Seth 1968). Historical studies suggest that there are 399 species of vascular plants in Rajgir (Paul 1981). The dominating species of trees and shrubs in the study area include; *Cassia* sp., *Ziziphus oenoplia* (Dithora), *Carissa opaca* (Kanauda), *Bridelia retusa* (Kaaj), *Ziziphus* sp., *Ficus* sp. (Gular), *Buchanania lanzan* (Piar), *Aegle marmelos* (Bel), *Lantana camara* (Putus), and *Tridax procumbens* that attract butterfly species.

The survey yielded total 65 species of butterflies belonging to the five families from March to August in the

year of 2018. Specimens were documented in natural habitat with the help of Canon 1300D efs 55–250 mm lens and Garmin GPS. The dominating family Nymphalidae contributing 25 species, followed by Lycaenidae (15), Pieridae (12), Papilionidae (7), and Hesperidae (5). The survey site includes: Jayprakash Udhhan (25.003, 85.423), Vaibhargiri Giri (25.008, 85.412), Griddhakuta (25.001, 85.446), Venu Vana (25.015, 85.418), Vaitarani, FRH (25.001, 85.415), Ghora katora forest trail (24.998, 85.453), and nearby village (24.986, 85.318).

Photographed specimens were identified by using relevant literature of Kehimkar (2008), Gupta & Majumdar (2012) and Kunte (2006).

The dominant species in the Nymphalidae was Peacock Pansy *Junonia almana*, and Plain Tiger *Danaus chrysippus* while in family Pieridae was

White Orange Tip *Tiplixias marianne*, Common Grass Yellow *Eurema hecabe*, Common Gull *Cepora nerissa*, Common Emigrant *Catopsilia Pomona*, and Psyche *Leptosia nina*. Dominant papilionids were Common Mormon *Papilio polytes* and Spot Swordtail *Graphium nomius*. While trekking on Vaibhara Hill we got a chance to photograph *Spialia galba*, *Rapala manea* and mating of *Eurema laeta* while Blue Mormon *Papilio polymnestor*, Common Rose *Pachliopta aristolochiae* were rarely seen in the study region.

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