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Invertebrate Conservation & Information Network of South Asia (ICINSA)

Newsletter of the

Butterfly diversity in Tumkur University Campus, Karnataka, India

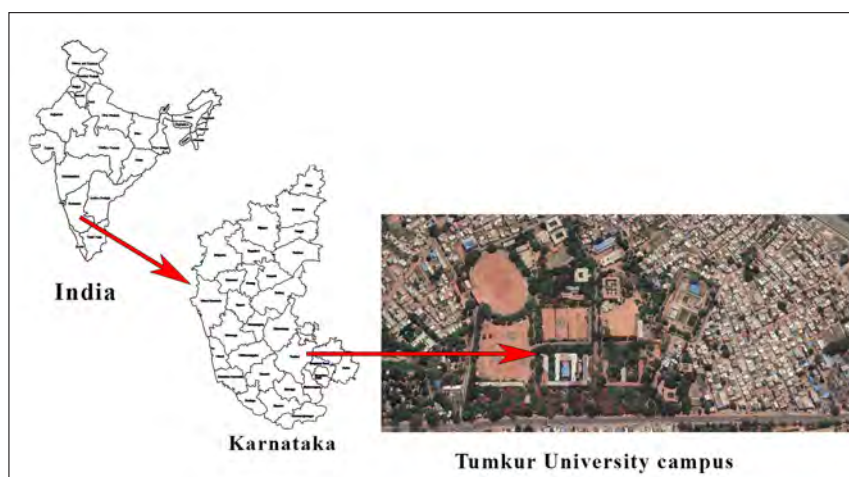
The faunistic survey of butterflies, their occurrence and characteristics provide crucial information on the ecology of a particular region (Ghazoul 2002). The reports of Kunte (2001), Tiple (2011), and Tiple et al. (2006) signifies the study of butterfly fauna and its role in the ecology of a particular habitat. The present study was conducted to document the diversity, abundance, and status of butterfly species of Tumakuru. There is hardly any published data on the butterfly fauna of this region.

Tumakuru is one of the districts of Karnataka situated at a distance of 70km from north-west of Bengaluru. It covers an area of 48.60km² and is located geographically at 13.34°N & 77.12°E. Tumakuru includes a well-known Devarayanadurga State Reserve Forest. The city was recorded with

a minimum temperature of 19°C and a maximum temperature of 36°C. It receives an average annual rainfall of about 300–900 mm. The present study was carried out in the Tumkur University campus, Tumakuru. It is located at the centre of the city (13.34°N & 77.12°E) and is spread over 90 acres of land with thick vegetation.

The survey was carried out thrice a week from 07.00h to 10.00h and from 16.00h to 18.00h. The visual encounter method was followed. Most of the

species were identified on the spot with the help of field guides (Kunte 2000; Kehimkar 2016). After identification, the species were photographed (Nikon D3400, 18–55mm lens) and released. The whole survey followed keen observation and search for the butterflies in the campus environment such as the trees, bushes, herbs, flowering plants, and dry areas of playing ground. Most common trees and plants with a high abundance of nectar-feeding were also documented in the study period.



Map.



Table 1. List of butterfly species distributed in the Tumkur University campus, Tumakuru.

	Family	Species covered under Wildlife Protection Act 1972 (WPA 1972)	Species	Common name
1.	Papilionidae	WPA 1972	<i>Pachliopta hector</i> *	Crimson Rose
			<i>Graphium doson</i> *	Common Jay
			<i>Graphium sarpedon</i> *	Common Bluebottle
		-	<i>Pachliopta aristolochiae</i>	Common Rose
			<i>Graphium agamemnon</i>	Tailed Jay
			<i>Papilio demoleus</i>	Common Lime Butterfly
			<i>Papilio polytes</i>	Common Mormon
			<i>Papilio polymnestor</i>	Blue Mormon
2.	Pieridae	WPA 1972	<i>Eurema andersonii</i>	One-spot Grass Yellow
			<i>Catopsilia pyranthe</i> *	Mottled Emigrant
			<i>Eurema brigitta</i> *	Small Grass Yellow
			<i>Eurema hecabe</i> *	Common Grass Yellow
			<i>Catopsilia pomona</i> *	Common Emigrant
		-	<i>Eurema blanda</i>	Three-spot Grass Yellow
			<i>Delias eucharis</i>	Common Jezebel
			<i>Leptosia nina</i>	Psyche
3.	Nymphalidae	WPA 1972	<i>Euploea core</i> *	Common Indian Crow
			<i>Melanitis leda</i> *	Common Evening Brown
			<i>Lethe europa</i> *	Bamboo Treebrown
		-	<i>Danaus genutia</i>	Striped Tiger
			<i>Libythea myrrha</i>	Club Beak
			<i>Elymnias hypermnestra</i>	Common Palmfly
			<i>Tirumala limniace</i>	Blue Tiger
			<i>Melanitis zitenius</i>	Great Evening Brown
			<i>Danaus chrysippus</i>	Plain Tiger
			<i>Mycalesis anaxias</i>	White-bar Bushbrown
			<i>Acraea terpsicore</i>	Tawny Coster
			<i>Neptis hylas</i>	Common Sailer
			<i>Symphaedra nais</i>	Baronet
			<i>Ariadne merione</i>	Common Castor
			<i>Junonia hierta</i>	Yellow Pansy
			<i>Junonia iphita</i>	Chocolate Pansy
			<i>Junonia lemonias</i>	Lemon Pansy
			<i>Hypolimnas bolina</i>	Great Eggfly
			<i>Hypolimnas misippus</i>	Danaid Eggfly
			<i>Parantica aglea</i>	Glassy Tiger
4.	Lycaenidae	WPA 1972	<i>Castalius rosimon</i> *	Common Pierrot
			<i>Euchrysops cnejus</i> *	Gram Blue



	Family	Species covered under Wildlife Protection Act 1972 (WPA 1972)	Species	Common name
5.	Hesperiidae	-	<i>Matapa aria</i>	Common Branded Redeye
			<i>Gangara thyrsis</i>	Giant Redeye

Table 2. Distribution of butterfly species in different nectar plants in Tumkur University campus, Tumakuru.

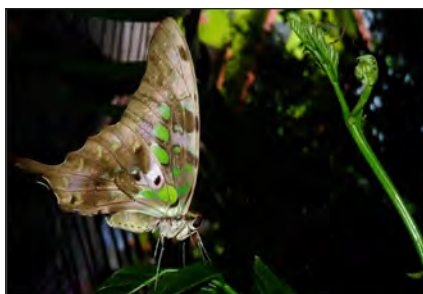
	Nectar plants	Butterfly species found
1.	<i>Vernonia elaeagnifolia</i>	<i>Hypolimnas misippus</i>
		<i>Junonia lemonias</i>
		<i>Euploea core</i>
		<i>Catopsilia pyranthe</i>
		<i>Castalius rosimon</i>
		<i>Catopsilia pomona</i>
		<i>Graphium doson</i>
		<i>Delias eucharis</i>
		<i>Thirumala limniace</i>
		<i>Ariadne merine</i>
		<i>Neptis hylax</i>
		<i>Hypolimnas bolina</i>
2.	<i>Tridax procumbens</i>	<i>Acraea terpsicore</i>
		<i>Danaus chrysippus</i>
		<i>Eurema hecabe</i>
		<i>Eurema andersonii</i>
		<i>Eurema blanda</i>
3.	<i>Polyalthia longifolia</i>	<i>Graphium doson</i>
		<i>Pachliopta hector</i>
		<i>Graphium sarpedon</i>
4.	<i>Pennisetum orientale</i>	<i>Acraea terpsicore</i>
		<i>Euchrys opsenejus</i>
5.	<i>Euphorbia milli</i>	<i>Hypolimnas bolina</i>
		<i>Hypolimnas misippus</i>
		<i>Libythea myrrha</i>
		<i>Graphium agamemnon</i>
		<i>Papilio polymnestor</i>
6.	<i>Ixora coccinea</i>	<i>Papilio demoleus</i>
		<i>Lethe europa</i>
		<i>Melanitis leda</i>
7.	<i>Peltaphorum pterocarpum</i>	<i>Parantica aglea</i>
		<i>Libythea myrrha</i>
		<i>Papilio polymnestor</i>
8.	<i>Bougainvillea glabra</i>	<i>Eurema blanda</i>
		<i>Pachliopta hector</i>
9.	<i>Santalum album</i>	<i>Graphium doson</i>
		<i>Graphium sarpedon</i>
		<i>Danaus genutia</i>
10.	<i>Lantana camara</i>	<i>Parantica aglea</i>
		<i>Catopsilia pomona</i>
		<i>Papilio demoleus</i>
11.	<i>Hibiscus</i>	<i>Papilio demoleus</i>

The study unveiled the presence of 40 butterfly species belonging to 26 genera of five families which accounts for 2.67% of the Indian butterfly species population (Table 1). The distribution of five families of

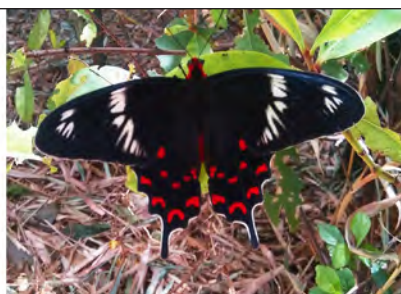
butterfly species in the campus is graphically represented in Figure 1. The Nymphalidae family was also found to be a dominant family of the butterfly by Harisha et al. 2019. The abundance of butterfly species in the

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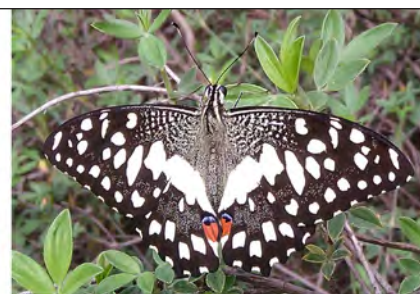
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Graphium agamemnon



Pacliopha hector



Papilio demoleus



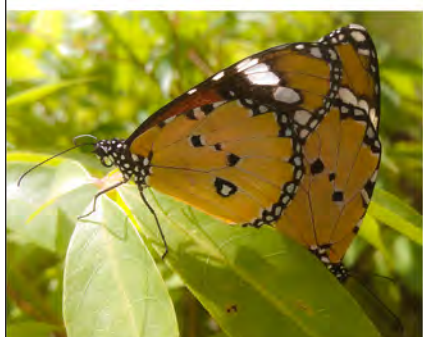
Papilio polytus



Eurema blanda



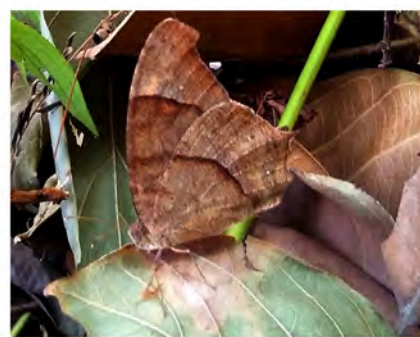
Eurema hecabe



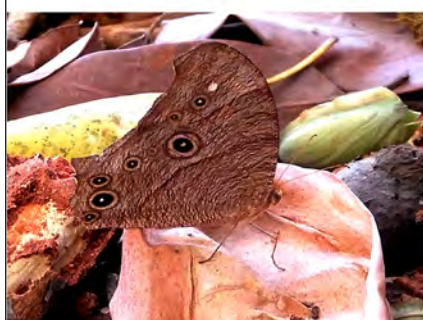
Danaus chrysippus



Danaus genutia



Melanitis leda (Dry season)



Melanitis leda (Wet season)



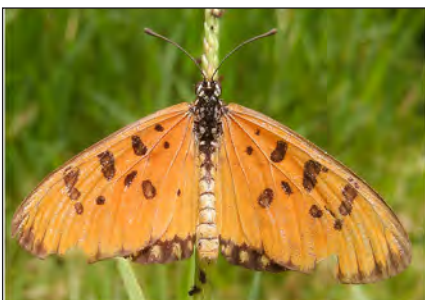
Melanitis zitenius



Lethe europa

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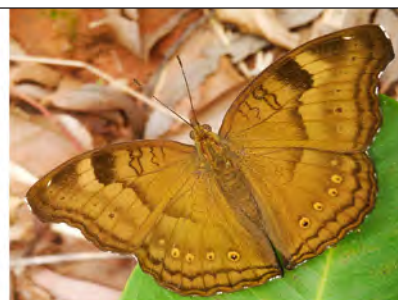
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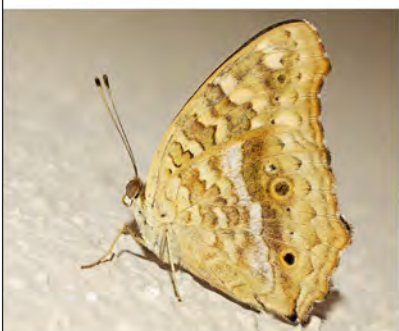
Acraea terpsicore



Neptis hylas



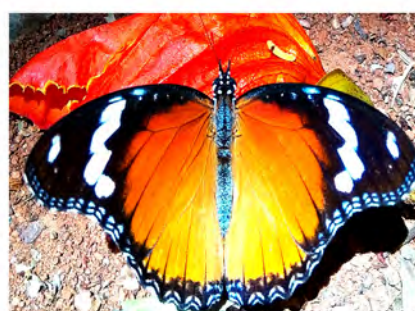
Junonia iphita



Junonia lemonias



Hypolimnas bolina (Male)



Hypolimnas misippus (Female)



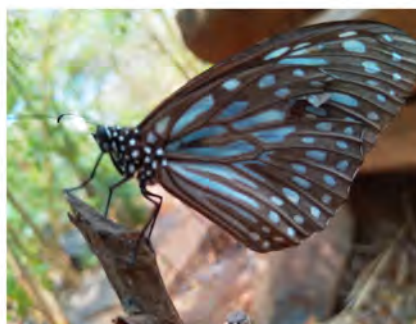
Castalius rosimon



Euchrysops cnejus



Matapa aria



Thirumala limniace

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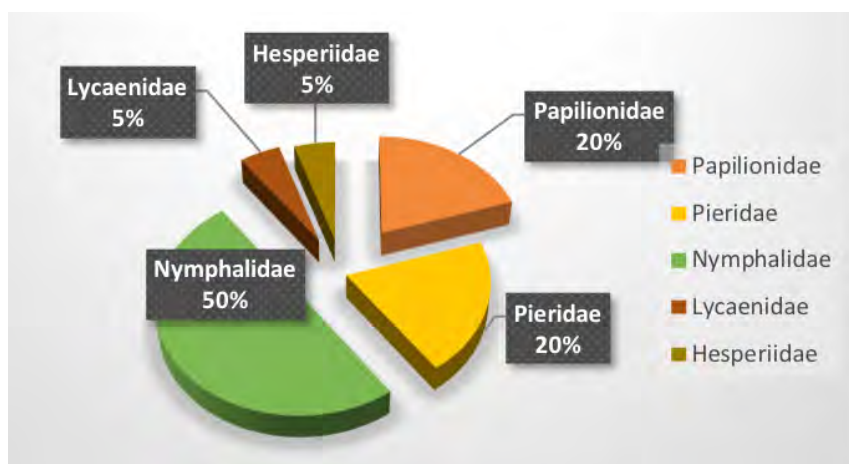


Figure 1. Percentage distribution of Butterfly species in Tumkur University campus, Tumakuru.

campus might be attributed to the thick vegetation which includes diverse trees and plant species.

From the present investigations, it is concluded that the study area has rich diversity of butterfly species with 40 species belonging to 26 genera of five families; 13 species listed in Wildlife (Protection) Act 1972. The campus, though surrounded by the city, harbours diverse vegetation that provide enough nectar plant species and as larval host plants. The presence of 13 protected species demands the need for implementation of conservation strategies in the campus.

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