

## HOST PLANT AND NECTAR PLANTS OF THE ZEBRA SKIPPER *ERNSTA ZEBRA* (LEPIDOPTERA: HESPERIIDAE) IN RAJASTHAN, INDIA

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*Ernsta zebra* (Zebra Skipper) is distributed in parts of Pakistan and Rajasthan, India (Tshikolovets & Pages, 2016; Panwar, 2020). Other than the restricted distribution, no information is available on the host plants, life cycle stages, and nectar plants. Between 2014 and 2023 opportunistic surveys were undertaken to gather data on the species.

On 8<sup>th</sup> November 2014, an adult female of the Zebra Skipper was seen ovipositing on the underside of a leaf of *Melhania futteyporensis* Munro ex Mast (Malvaceae), in Sagwara, Dungarpur (Rajasthan). After a few days, caterpillars of the Zebra Skipper were seen feeding on the leaves of *M. futteyporensis*, confirming that it is the larval host plant. During the study period, different life cycle stages of the butterfly were observed on the plant. Also, the caterpillars were collected and raised on the plant's leaves (Figures 1a to

11). *M. futteyporensis* (Pic 2a and 2b) is endemic to the Indian subcontinent and it is also among the threatened plants of India (Barik *et al.*, 2018). It is a small shrub with simple, broad ovate to lanceolate and serrated leaves, and yellow flowers, growing in arid to semi-arid regions in gravelly soil to rocky terrain.

During the survey period, the nectar plants of the Zebra Skipper were also recorded. The skipper was observed nectaring upon a wide range of plants including 23 species belonging to 15 families (Table 1; Pic 3 a to 3w). The butterfly was observed to be on the wing in January, February, March, July, August, September, October and November suggesting that there are at least two and perhaps three generations during the year. It is unusual that a butterfly with such an extended flying period has been overlooked for so long.

**Table 1: List of Nectar Plants of the Zebra Skipper**

S. No.	Family	Scientific Name	Common Name	Habit
1	Acanthaceae	<i>Justicia procumbens</i> L.	Water Willow	Herb

2	Amaranthaceae	<i>Digera muricata</i> (L.) Mart.	False Amaranth	Herb
3		<i>Celosia argentea</i> L.	Plumed Cockscomb	Herb
4	Apocynaceae	<i>Wrightia antidysenterica</i> (L.) R.Br.	Snowflake	Shrub
5	Asteraceae	<i>Cyanthillium cinereum</i> (L.) H.Rob.	Little Ironweed	Herb
6		<i>Tagetes erecta</i> L.	Marigold	Herb
7		<i>Tridax procumbens</i> L.	Coatbuttons	Herb
8	Cucurbitaceae	<i>Cucumis melo</i> L.	Melon	Climber
9	Euphorbiaceae	<i>Jatropha integerrima</i> Jacq.	Spicy Jatropha	Shrub
10	Fabaceae	<i>Cajanus scarabaeoides</i> (L.) Thouars	Showy Pigeon Pea	Shrub
11		<i>Crotalaria medicaginea</i> Lam.	Trefoil Rattlepod	Herb
12	Lamiaceae	<i>Mesosphaerum suaveolens</i> (L.) Kuntze	American Mint	Herb
13		<i>Ocimum basilicum</i> L.	Basil	Herb
14		<i>Tectona grandis</i> L.f.	Teak	Tree
15	Malvaceae	<i>Melhania futeyporensis</i> Munro ex Mast	Fatehpur Melhania	Shrub
16		<i>Sida cordifolia</i> L.	Bala	Herb
17		<i>Waltheria indica</i> L.	Boater Bush	Herb
18	Nyctaginaceae	<i>Boerhavia diffusa</i> L.	Common Hogweed	Herb
19	Passifloraceae	<i>Turnera ulmifolia</i> L.	Yellow Alder	Herb

20	Rhamnaceae	<i>Ziziphus mauritiana</i> Lam.	Indian Jujube	Small tree
21	Rubiaceae	<i>Spermacoce articularis</i> L.f.	False Buttonweed	Herb
22	Verbenaceae	<i>Lantana camara</i> L.	Lantana	Shrub
23	Vitaceae	<i>Causonis trifolia</i> (L.) Mabb. & J.Wen	Fox Grape	Liana

## REFERENCES

Barik, S.K., O. N. Tiwari, D. Adhikari, P. P. Singh, R. Tiwary, & S. Barua. 2018. Geographic distribution pattern of threatened plants of India and steps taken for their conservation. *Current Science* 114 (3): 470-513.

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Tshikolovets, V. & J. Pages. 2016. *The butterflies of Pakistan (Lepidoptera, Rhopalocera)*. Privately published by V. Tshikolovets, Pardubice, Czechia. 318 pp., 67 pl.

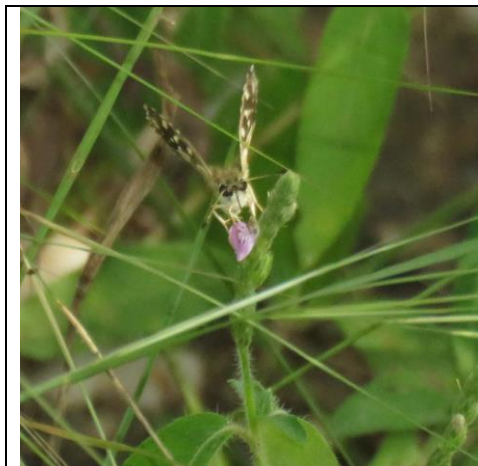


Fig 1: *Justicia procumbens*



Fig 2: *Digera muricata*

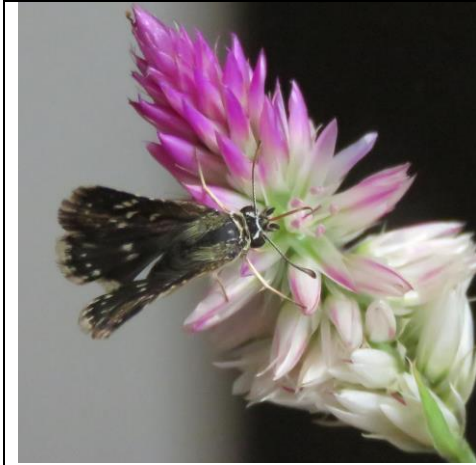


Fig 3: *Celosia argentea*



Fig 4: *Wrightia antidysenterica*

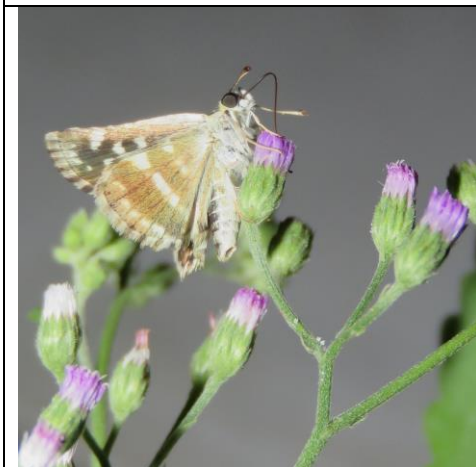


Fig 5: *Cyanthillium cinereum*



Fig 6: *Tagetes erecta*



Fig 7: *Tridax procumbens*



Fig 8: *Cucumis melo*



Fig 9: *Jatropha integerrima*



Fig 10: *Cajanus scarabaeoides*



Fig 11: *Crotalaria medicaginea*



Fig 12: *Mesosphaerum suaveolens*

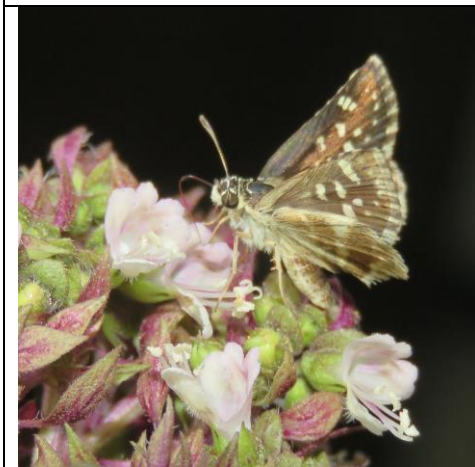


Fig 13: *Ocimum basilicum*



Fig 14: *Tectona grandis*





Fig 15: *Melhania futteyporensis*



Fig 16: *Sida cordifolia*



Fig 17: *Waltheria indica*



Fig 18: *Boerhavia diffusa*



Fig 19: *Turnera ulmifolia*



Fig 20: *Ziziphus mauritiana*

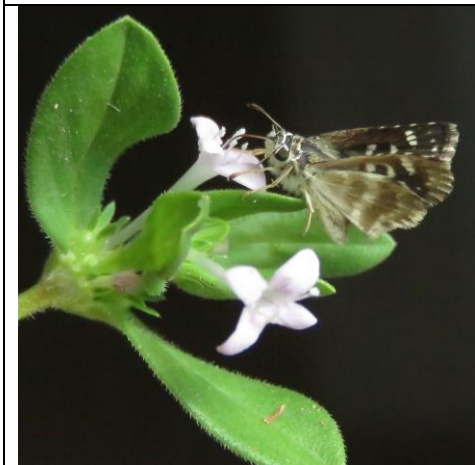


Fig 21: *Spermacoce articularis*

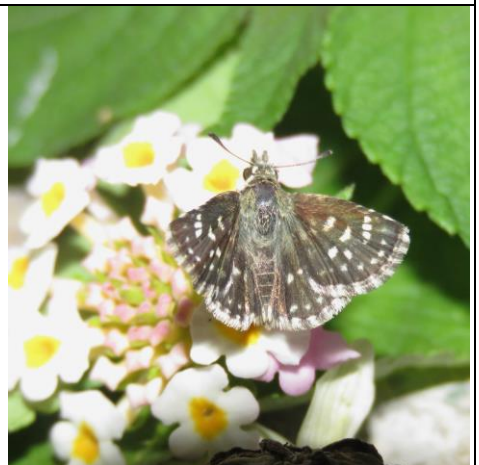


Fig 22: *Lantana camara*





Fig 23: *Causonis trifolia*

### Host Plants of Zebra Skipper



Fig 1: *Melhania futteyporensis*



Fig 2: *Melhania futteyporensis*

**Life cycle of Zebra Skipper**



Fig 1: Egg



Fig 2: First instar larva



Fig 3: Second instar larva



Fig 4: Third instar larva



Fig 5: Penultimate larval stage



Fig 6: Ultimate larval stage



Fig 7: Pre-pupation stage



Fig 8: Pupa





Fig 9: Pre-eclosion pupal stage



Fig 10: Pre-eclosion pupal stage

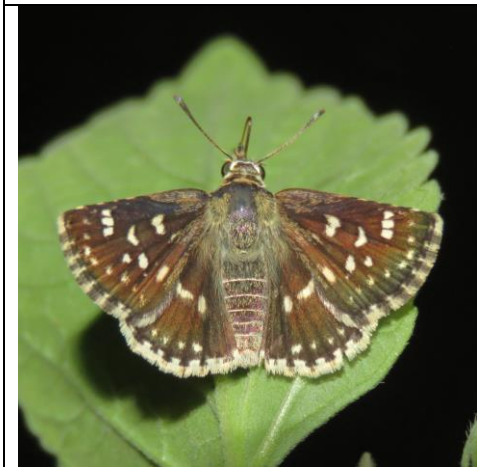


Fig 11: *Ernstia zebra* adult