

FAUNA OF INDIA CHECKLIST

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ARTHROPODA: INSECTA: STREPSIPTERA

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Comments on the checklist:

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ZOOLOGICAL SURVEY OF INDIA
Ministry of Environment, Forest & Climate Change

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Introduction: The order Strepsiptera are endoparasitic insects of wasps, bees, leafhoppers, silverfish, orthopterans etc. The name of the order is received from the Greek word *Strephein* (twisted) *Pteron* (winged), hence the common name twisted-winged flies. Females never emerge from the host, however early-stages of larvae actively seek a living host and the winged males a receptive female. The males are winged and appear like flies however, the forewings are modified as halteres and hind wings are round and fan shaped. Unlike other insects, they lack compound eyes and instead they have a cluster of eyelets surrounded by cuticle. The female strepsipterans never leave the host and are highly modified morphologically. They lack wings, eyes and legs but have well developed cephalothorax. Male locate the females by pheromones and traumatically inseminate by rupturing the cuticle of cephalothorax. The larvae consume their mother from the inside and emerge through the head of mother. The larvae actively seek a new host and develop there. The adult males emerge and have a short lifespan of about five hours. They are non-feeding and locate females through pheromones. The females remain inside the host as parasite for their life.

Global diversity: Globally 604 species under 59 genera and 17 families are known.

Diversity in India: In India 30 species in fourteen genera and six families are known.

Diversity in States

Table: Strepsipteran species diversity across states.

Sl.No.	State/Union Territory	No. Species	No. Endemic Species
1	Andhra Pradesh	0	0
2	Arunachal Pradesh	2	2
3	Assam	0	0
4	Bihar	2	1
5	Chhattisgarh	0	0
6	Gujarat	1	0
7	Goa	0	0
8	Haryana	0	0
9	Himachal Pradesh	0	0
10	Jharkhand	0	0
11	Karnataka	4	4
12	Kerala	1	1
13	Madhya Pradesh	0	0
14	Maharashtra	0	0
15	Manipur	0	0
16	Meghalaya	0	0

Sl.No.	State/Union Territory	No. Species	No. Endemic Species
17	Mizoram	0	0
18	Nagaland	0	0
19	Odisha	0	0
20	Punjab	0	0
21	Rajasthan	0	0
22	Sikkim	0	0
23	Tamil Nadu	0	0
24	Telangana	0	0
25	Tripura	0	0
26	Uttarpradesh	0	0
27	Uttarakhand	0	0
28	West Bengal	20	14
29	Andaman & Nicobar	0	0
30	Chandigarh	0	0
31	Dadra Nagar Haveli, Daman & Diu	0	0
32	Delhi	0	0
33	Jammu & Kashmir	0	0
34	Ladakh	0	0
35	Lakshadweep	0	0
36	Puducherry	0	0
37	State Unknown	1	0
	INDIA TOTAL	30	22

Endemism: Twenty-two species are endemic to India.

Habitat: They are widely distributed but difficult to locate due their extreme rarity.

Ecological Significance: They are minor parasites of many insect orders.

Human Significance: Strepsiptera are parasites of agriculturally important pastes.

Threatened species: No species are reported as threatened in India.

Protected Species as per WPA (2022): Species reported from India are not listed under any Schedules of the Wildlife Protection Act.

Species under CITES: Species reported from India are not listed under CITES.

Invasive alien species: No invasive alien species are reported from this order.

Gap areas: Through Strepsiptera are widely distributed, they are not recorded from several states. Further, information on geographic distribution and hosts for most of the species is limited.

Checklist of Strepsiptera of India

Family: Elenchidae

1. *Elenchus japonicus* Esaki and Hashimoto, 1931

Family: Xenidae

2. *Tachytixenos indicus* Pierce, 1911
3. *Xenos ropalidiae* (Kinzelbach, 1975)
4. *Xenos hebraei* Kinzelbach, 1978

Family: Corioxenidae

5. *Corioxenos raoi* Baliga, 1967
6. *Dundoxenos kinzelbachi* Luna de Carvalho, 1985
7. *Triozocera pugiopennis* Chaudhuri and Das Gupta, 1979
8. *Viridipromontorius aequus* (Roy and Hazra, 2016)

Family: Lychnocolacidae

9. *Lychnocolax similis* Chaudhuri, Ghosh and Das Gupta, 1983

Family: Myrmecolacidae

10. *Myrmecolax comparilis* Roy and Hazra, 2017
11. *Myrmecolax pierci* (Chattopadhyay and Chaudhuri, 1980)
12. *Myrmecolax plantipes* (Chaudhuri, 1978)
13. *Stichotrema sagax* Roy and Hazra, 2017

Family: Halictophagidae

14. *Coriophagus calcaneus* Roy and Hazra, 2016
15. *Halictophagus acerbus* Mazumdar and Chaudhuri, 1997
16. *Halictophagus australensis* Perkins, 1905
17. *Halictophagus bipunctatus* Yang, 1955
18. *Halictophagus compactus* (Pierce, 1914)
19. *Halictophagus indicus* Bohart, 1943
20. *Halictophagus membraciphaga* (Subramanian, 1927)
21. *Halictophagus palmae* Kathirithamby and Ponnamma, 2000
22. *Halictophagus prominens* Roy and Hazra, 2016
23. *Halictophagus tenebrosus* Chaudhuri Ghosh and Das Gupta, 1983
24. *Tridactylophagus aduncus* Maxumdar and Chaudhuri, 1999
25. *Tridactylophagus carinatus* Maxumdar and Chaudhuri, 1999
26. *Tridactylophagus coniferus* (Yang, 1964)
27. *Tridactylophagus maculatus* Chaudhuri, Ghosh and Das Gupta, 1983
28. *Tridactylophagus mysorensis* Subramaniam, 1932
29. *Tridactylophagus orientalis* (Chaudhuri and Das Gupta, 1979)
30. *Tridactylophagus sufflatus* Hui, Mukherjee and Hazra, 2023

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