ISSN 2230-7052
BugsEALL
#268
21 May 2023
Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

Annotated checklist of the edible insects of Lepcha tribe of Sikkim, India

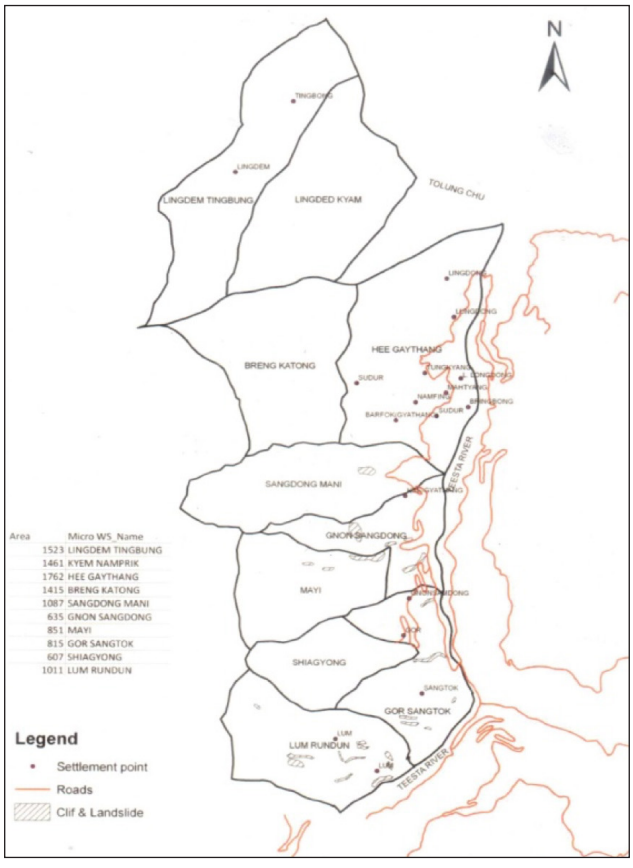
Sikkim has the record of existence of several insects but its economic and biological roles are thinly documented. Among those insects, there are some reports of existence of pests in agricultural land of Sikkim such as *Lissachatina fulica* and *Spodoptera frugiperda* (Pradhan et al. 2022b; Lama & Lepcha 2022) and some insects as palatable food of Lepcha community, e.g., *Megasoma actaeon* and *Gryllotalpa gryllotalpa*. Thus, the study area of Dzongu was selected having the altitudinal gradients of 700–6,000 m and the geographical area of 78 km^2.

Reconnaissance of data from several qualitative sources was performed and compared the information with the available data (Cowan & Cowan 1929; Hara 1966; Champion & Seth 1968; Grierson & Long 1983). In addition to this, several field visits and interactions with the community were conducted for qualitative and quantitative analysis in Dzongu, Sikkim.

As the insects have the roles in the ecosystem (Pradhan 2019, 2022a), the enumeration of edible insects of Dzongu, Sikkim was conducted from the hillock of Dzongu (Sikkim). The 10 edible insects are compiled along with their habitats, host plants and remarks.

Eventually, the outcome of this study is compiled and enlisted. The listing of 10 edible insects found in farmland and water sources of Dzongu, Sikkim Himalaya, is presented.

Most striking point is that these enlisted edible insects are basically the pests of the farm crops (Mandal et al. 2007). Thus, such consumption of edible insects is beneficial for farming and might be a support in the agricultural crop production.



Map of Dzongu (Source: HARC, F&ED)

ISSN 2230-7052
BUGS R ALL
#268
21 May 2023
Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

Table: Edible insects found in Dzongu, Sikkim.

	Scientific name	Local name	Identified habitat	Host plant	Remarks
1	*Coridius chinensis* (Dallas, 1851)	Aungkyoung Noap (L); Khola ko Pudina (P)	River Bank of Rongyung Aung	-	Collected during November–February.
2	*Glenea spilota* (Thomson, 1860)	Tatetbu (L)	Lingkoo, North Sikkim	*Erythrina arborescens* Roxb.	Collected during April–June.
3	*Cotinis nitida* (Linnaeus, 1764)	Dhantaflak (L)	Noam Kung, Lingkoo, Namprick, North Sikkim	*Engelhardtia spicata* Lehen ex Blume	Collected during April–June.
4	*Popillia japonica* (Newman, 1841)	Pongthambeek (L)	KachiLho, Lingko, North Sikkim	*Eragrostis uniloides* (Retz.) Nees ex Steud. Locally known as Bonso (P)	Collected during April–July.
5	*Brachinus sclopeta* (Fabricius, 1792)	Sangtibu (L); Langkay Kera (P)	Lankay, Tingvong GPU, North Sikkim	*Colocasia* species	Collected during April–August.
6	*Odoiporus longicollis* (Oliver, 1807)	Kundungthambeek (L); Kayra Kera (P)	Lingkoo, North Sikkim	*Musa* species	Collected during February–August.
7	*Oxyahyla intricate* (Stal, 1861)	AreeTuknyum (L); Dhan BhariPatyangra (P)	Sunumdang, North Sikkim	Farmland of *Oryza sativa* L. and in other species of Oryza	Collected during June–October.
8	*Scudderia furcata* (Wattenwyl, 1878)	NungdokNyum (P)	Tingvong GPU, North Sikkim	Farmlands of *Amomum subulatum* Roxb., *Oryza sativa* L.	Collected during October–November.
9	*Megasoma actaeon* (Linnaeus, 1758)	Tumbolhohop (L)	Tingvong, GPU	*Zea mays* L.	Found in the cow dung's heap.
10	*Gryllotalpa gryllotalpa* (Linnaeus, 1758)	Ting Tyerbu (L)	Tingvong GPU	*Oryza sativa* L.	Found in marshy place of rice field.
(Abbreviations: L: Lepcha, P: Pharbatey)					

This remarkable measure of pest control mechanism was noted in the hillock of Dzongu that is ecofriendly and organic in nature. As there was no earlier record on edible insects of Dzongu, the study warrants further discourses on population density, biology, and economy of insects in Sikkim Himalaya.

References

Champion, H.G. & S.K. Seth (1968). *A revised forest types of India*. Govt. of India Press, New Delhi, 404 pp.

Cowan, A.M. & J.M. Cowan (1929). *The trees of Northern Bengal including shrubs, woody climbers, bamboos, palms and tree ferns*. Bengal Secretariat Book Depot, Calcutta, 177 pp.

ISSN 2230-7052

Bugs R All

#268
21 May 2023

Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

Grierson, A.J.C. & D.G. Long (1983). *Flora of Bhutan including a record of plants from Sikkim* Vol 1(1). Royal Botanic Garden, Edinburgh, 186 pp.

Hara, H. (1966). *The Flora of Eastern Himalaya*. University of Tokyo Press, Japan, 744 pp.

Lama, R. & N. Lepcha (2022). Larvae eaters of Fall Army worm, *Spodoptera frugiperda* (J E Smith) in Sikkim. *Science of Eastern Himalaya Journal* 2(1):12–14.

Mandal, S.K., A. Dey & A.K. Hazra (2007). *Pictorial Handbook on Indian Short-homed Grasshopper Pests* (*Acridoidea:Orthoptera*). Zoological Survey of India, Kolkata, 57 pp.

Pradhan, D.K. (2019). Taxonomy and ecology of *Bassarona durga durga* (Moore) from the Himalayan eco-zone of Sikkim. *Indian Journal of Biological Sciences* 25: 45–50.

Pradhan, D.K. (2022a). Notes on *Papilio Krishna Krishna* Moore, [1857] of Sikkim Himalaya. BugsRAll #253, In: *Zoo's Print* 37(9):14–15.

Pradhan, D.K., A. Pradhan & R. Lama (2022b). The invasive Giant African Snail in Sikkim Himalaya. BugsRAll #248, In: *Zoo's Print* 37(7): 12–13.

Acknowledgements
Author is thankful to the Department of Forest and Environment, Government of Sikkim for the kind support and also to the staff of QCL-HARC, F&ED and FAPM, south Sikkim. Author extends special thanks to Norden Lepcha for the valuable inputs.

Durga Kumar Pradhan
Quality Control Laboratory-HARC- Sikkim State Forest Herbarium (SSFH)
Forests and Environment Department, Govt. of Sikkim, Deorali, Gangtok, Sikkim 777102, India.
Email: pradhansikkim@gmail.com

Citation: Pradhan, D.K. (2023). Annotated checklist of the edible insects of Lepcha tribe of Sikkim, India. Bugs R All #268, In: Zoo's Print 38(5): 17–19.

Bugs R All is a newsletter of the Invertebrate Conservation and Information Network of South Asia (ICINSA)

ICINSA

ZOOREACH
ZOO OUTREACH ORGANISATION