



## An insight into the ethnozoology of Panch Pargana area of Jharkand, India

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The use of insects as medicine is known from all parts of the globe, including Africa (Joyce 1991), the U.S. (Harwood & James 1979), and China (Chou 1990). Insects are consumed as food and medicine by some tribal communities in India. Examples include the Pod Borer (*Helicoverpa armigera*), which is used alone or in combination with herbs to treat many common diseases in Chhattisgarh (Oudhia 2001). The Green Leaf Hopper (*Nephotettix nigropictus*) occurring in paddy fields is used as an additive for enhancing efficiency of the drug. Dried leaves of *Blumea lacera* are burnt with Green Leaf Grass Hopper and the patient is advised to inhale the fumes to reduce the intensity of asthma (Oudhia 2000).

Among the ethnic groups in this area, known for its forests, tribals and the rich flora and fauna, Mundas are the second largest community, next to Kurmis. Others are Paik, Pakhur and Kundu.

Their knowledge in alleviating suffering is primary, limited to remote villages, where modern medical system is not easily available

This survey was carried out in remote villages of Panch Pargana, i.e. Kanchi, Deori, Salgadih, Norhi, Rargaon and Ulidih in Tamar Block; Raisa, Taimara, Dasham, Madhukama, Tau and Kadamdih in Bundu Block; Baghadih, Rahe, Jamudag and Sonahatu in Sonahatu Block; Sarainghatu, Khesaribera, Ramchu and Longa in Arki Block; and Silli in Silli Block. Specimens of both plants and animals have been collected from 'Vaidyas' (village doctors) and also from village hats (market). Twenty-four Vaidyas were interviewed during three years (2004-2006), seven of whom were found practicing with insectan medicines who provided required informations.

Identification of faunal samples was done with the help of Lefroy & Howlet (1909), Jeppson et al. (1975), Smart (1975), Zahradnik & Chavala (1989), Pathak et al. (2003), Smart

(2003), Harmer & Mellanby (2005) and Balmer (2007). Identification of host and combinant plants was done with Haines (1921-25), Ghosh (1971), Singh et al. (2001).

### Insects

*Mylabris pustulata* Thunb.

Coleoptera (Cantharidae)

Local Name: Kutma Poka

Stage: Adult

Habitat: On flowers of cucurbits and a pest of malvaceous plants.

Locality: Used by Vaidyas of Baghadih and Kanchi.

Disease: Dog bite, Hydrophobia

Method of use: The insect is dried and preserved. Only one dose is prescribed. The dose comprises of one insect with paste of some fresh plants like Puru Ghas (*Ageratum conyzoides* L., Asteraceae) and Chirchitti (*Achyranthes aspera* L., Amaranthaceae), taken in empty stomach. It is said that none in village Baghadih has taken any anti-rabies injection. The medicine is in use since generations.

*Danais chrysippus* Linn.

Lepidoptera (Danaiidae)

Local Name: Akwan Pillu

Stage: Larvae

Habitat: On the leaves of *Calotropis procera* (Asclepiadaceae).

Locality: Used by Vaidyas of Taimara and Dasham.

Disease: Epilepsy

Method of use: The larvae are fried in mustard oil (one larva per tablespoon). The filtered oil is used as nasal drop.

*Betousa stylophora* Swinhoe.

Hemiptera (Aphidoidea)

Local Name: Aonla Pillu

Stage: Larvae

Habitat: Form galls on the stem of *Phyllanthus emblica* L. (Euphorbiaceae)

Locality: Used by Vaidyas of Silli.

Disease: Epilepsy

Method of use: The larvae are fried in mustard oil (2-3 larvae per table spoon). The filtered oil is used as nasal drop.

*Sagra nigrita* Oliver.

Coleoptera (Sagridae)

Local Name: Semi Pillu

Stage: Larvae

Habitat: Swells the stem of 'Sem' *Dolichos lablab* L. (Fabaceae) like galls.

Locality: Used by Vaidyas of Longa and Silli.

Disease: Epilepsy and Paralysis.

Method of use: The larvae are fried in mustard oil (one larva per tablespoon). The filtered oil is used as nasal drop for Epilepsy. For Paralysis oil massage on affected parts is recommended.

*Trombidium grandissimum* Koch.

Arachnida: Acari: (Tetranychoidae): Trombidiidae (Red Velvet Mite)

Local Name: Ruhin kira, Rani poka

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*Sagra nigrita* Oliver. On the stem of 'Sem' *Dolichos lab-lab* (Fabaceae) like galls



*Sagra nigrita* Larvae, Cocoon, Adult



*Termes obesus* Ramb. stage: fruiting body of fungus growing on mud nest



*Betousa stylophora* Swinhoe



Stage: Nymph

Habitat: Found in ground during rainy season.

Locality: Used by Vaidyas of Tamar, Salgadh

Disease: Polio, paralysis, joint pains.

Method of use: 2-3 insects fried in one table spoon of oil with root of Bacch plant (*Acorus calamus* L., Araceae). This mixture is filtered and used for massaging on affected parts.

*Sceliphron madraspatanum* (Fabricius)

Hymenoptera (Sphegidae)

Local Name: Kunkal, Kumhar poka.

Stage: Mud nest.

Habitat: Found after rainy season.

Locality: Used by Vaidyas of Bundu, Tau.

Disease: Migrane, dyspepsia.

Method of use: In case of migraine paste of mud nest is applied on fore-head; for dyspepsia and frequent thirst, the paste is applied on the navel.

*Termes obesus* Ramb.

Isoptera or Neuroptera (Termitidae)

Local Name: Ufani, Burdulu, dimak.

Stage: Fruiting body of fungus (*Termitomyces*) growing on mud nest of the specified termites.

Habitat: Fungus grown on the mud nest of termites in rainy season.

Locality: Used by Vaidyas of Bundu, Madhukama.

Disease: Rickets, anaemia in children; paediatric malnutrition.

Method of use: Soup of this mushroom-like-fungus is given regularly to strengthen the immune system. The fungus is dried and kept for odd seasons.

*Oecophylla smaragdina* F.

Hymenoptera (Formicidae)

Local Name: Kurkut, Hawoo, Be-boot.

Stage: Larvae, pupae and adult

Habitat: Nest found on trees & shrubs

Locality: Used by Vaidyas of Baghdadih, Longa, Norhi village.

Disease: Gout and joint pain, to recover from weakness after prolonged fever from diseases like typhoid, gastritis and bronchitis.

Method of use: For Gout and joint pain, entire nest is fried in the Karanj (*Pongamia pinnata*) oil which is used for massage. To overcome the weakness of prolonged illness, eggs, larvae and pupae are fried with onion and consumed regularly. Live ants are mashed with salt, red chillies and mustard oil and eaten with Botha bhat (stale rice) to prevent gastritis.

*Gyrinus natator*

Coleoptera (Gyrinidae)

Local Name: Pani Ghurani

Stage: Adult

Habitat: Nest found on trees and shrubs

Locality: Used by Vaidyas of Silli village.

Disease: Epilepsy

Method of use: A live insect is put within dough and given to

the patient for swallowing in empty stomach for five days.

### Discussion

Hembrom (1994) contributed to ethnozoological reporting with identification of local names. The larvae feeding on 'Aak' (*Calotropis procera*) is used in treatment of epilepsy in Panch Pargana areas of Jharkhand (Sudhansu & Bandana 2003). The acrid oil exuded from openings in the apices of the femora in *Mylabris pustulata* (Lefroy & Howlet 1909), commercially very useful. Oudhia (1999) has reported from Chhattisgarh about the Red Velvet Mite (*Trombidium grandissimum*) which is used in combination with different herbs for the treatment of about 10 diseases like Malaria, Paralysis etc. Ant is a major combinant component of a herbal medicine used for hepatitis B (Chen & Akre 1994). In the present study red ants (*Oecophylla smaragdina* F.) are found to be used for bronchitis.

### References

- Balmer, E. (2007). *A Concise Guide to Butterflies and Moths*. Paragon Books Ltd. 4 Queen Street, Bath, New York.
- Chen, Y. & R.D. Akre (1994). Ants used as food and medicine in China. *The Food Insect Newsletter* VII(2): 1, 8-10.
- Chou, I. (1990). *A History of Chinese Entomology*. Tianze Press, China.
- Ghosh, T.K. (1971). Studies on Flora of Ranchi District. PhD. Thesis, Vols I-II. Ranchi University, Ranchi.
- Haines, H.H. (1921-25). *The Botany of Bihar and Orissa*, Vol I-IV. Botanical Survey of India, Calcutta.
- Harmer, S.F. & Mellanby (2005). *Fresh Water Biology*. Asiatic Publishing House, Delhi 110092, India
- Harwood, R.F. & M.T. James (1979). *Entomology In Human and Animal Health*. Macmillan Pub. Co., New York.
- Hembrom, P.P. (1994). *Adiwasi Aushadh*, part I-VIII. Paharia Seva Samiti, Pakur, Jharkhand.
- Jeppson, L.R., H.H. Keifer & E.W. Baker (1975). *Mites Injurious to Economic Plants*. University of California Press.
- Joyce, C. (1991). The beetles, the frogs and French Legionnaires. *New Scientist* 129: 17.
- Lefroy, H.M. & F.M. Howlett (1909). *Indian Insect Life*. W. Thacker & Co., London.
- Munda, S.C. (2003). *Panch Pargana ke Mundaon per Hindu Dharm ka prabhawa*. Kailash paper conversion Pvt. Ltd., Ranchi.
- Oudhia, P. (1999). Traditional medicinal knowledge about Red velvet mite, *Trombidium* sp. (Acari: Trombididae) in Chhattisgarh. *Insect Environment* 5(3):113.
- Oudhia, P. (2000). Traditional medicinal knowledge about green leaf hopper, *Nephotettix* spp. in Chhattisgarh (India). *International Rice Research Notes*. 25(3):40.
- Oudhia, P. (2001). Traditional medicinal knowledge about Pod borer - *Helicoverpa armigera* in Chhattisgarh, India. *International Chickpea and pigeonpea Newsletter* I: 14-15.
- Pathak, R.K., D. Pandey, A.K. Mishra, M. Haseeb & D.K. Tondon (2003). *The Aonla*. Central Institute for sub-tropical Horticulture, Lucknow, 23pp
- Singh, N.P., V. Mudgal, K.K. Khanna, S.C. Srivatava, A.K. Sahoo, S. Bandopadhyay, N. Aziz, M. Das, R.P. Bhattacharya & P.K. Hazra (2001). *Flora of Bihar*. Botanical Survey of India, Calcutta.
- Smart, J. (2003). *A Handbook for the Identification of Insects of Medical Importance*. Biotech Books, Delhi.
- Smart, P. (1975). *The Illustrated Encyclopedia of the Butterfly in Color*. Leisure books, Salmender Books Ltd. England.
- Sudhanshu, K. & B. Kumari (2003). Paudhon ka Dadhichee Aak. *Jharkhand Today* oct.1-15, 39pp.
- Zahradnik, J. & M. Chavala (1989). *INSECTS: A Comprehensive Illustrated Guide to Insects of Britain and Europe*. Hamlyn Publishing Group Ltd. Michelin House, 81 Fulham Road, London.

