

An Account of the Rove Beetles (Coleoptera : Staphylinidae) from the Sunderban Biosphere Reserve, West Bengal

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About 30, 000 species are known from the world and more than 2000 species have been recorded from India. Motschulsky (1858), Kraatz (1859), Fauvel (1895) and Bernhauer (1915) are the pioneer workers of the family Staphylinidae. After Cameron's work in the *Fauna of British India* series (1930, 1931, 1932), Rougemont (1986) and Biswas & Biswas (1995) are noteworthy.

Recently Sar et al. (2015) have reported five species of three genera under three subfamilies of family Staphylinidae from the Sagar Island, West Bengal. This island comes under the Sunderban Biosphere Reserve (SBR). Present communication reports further eight species of six genera under two subfamilies of Staphylinidae, from different localities of SBR, of which *Stenus carinatus* Cameron was reported earlier also from the Sagar Island.

Hence, altogether 12 species of seven genera under four subfamilies of the family Staphylinidae are reported from SBR. All the collections reported here were made by Bulganin Mitra & Party.

List of total species so far reported from SBR :

Subfamily Paederinae

1. *Paederus fuscipes* Curtis
2. *Astenus leptocerus* Eppelsheim
3. *Cryptobium elephas* Fauvel
4. *Lathrobium cafrum* Boh.

Subfamily Staninae

5. *Stenus carinatus* Cameron

Subfamily Staphylininae

6. *Philonthus castaneus* Gemm. et Har.
7. *Philonthus roudicollis* Menet.
8. *Philonthus fimetarius* Gr.
9. *Philonthus quediiformis* Cameron
10. *Philonthus quisquiliarius* (Gyll.)
11. *Philonthus quisquiliarius* var. *inquinatus* Stephens

Subfamily Oxytelinae

12. *Bledius* (s. str.) *hoplites* Fauvel

Eight species of rove beetles reported from the SBR

here are recorded as follows :

Order : Coleoptera

Family : Staphylinidae

Subfamily : Paederinae

1. *Paederus fuscipes* Curtis

1823-40. *Paederus fuscipes* Curtis, *Ent. Brit.*, 3: 108.

1931. *Paederus fuscipes*: Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 2: 40-41.

Material examined: 1 ex. Gosaba island: Jatirampur, dt. 16.xii.2014., 1 ex. Pakhirala, dt. 16. xii.2014, 1 ex. Satjelia Island: 4 no. Satjelia, dt.30.x.2015.

2. *Astenus leptocerus* Eppelsheim

1895. *Sunius leptocerus* Epp., *W.E.Z.*, 14: 64.

1931. *Astenus leptocerus*: Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 2: 75-76.

Material examined: 1 ex. Bali island: 9. no. Gheri, dt. 29.viii.2014., 1 ex. Pakhirala, dt.16. xii.2014, 1 ex. Satjelia Island: 4 no. Satjelia, dt.30.x.2015.

3. *Cryptobium elephas* Fauvel

1904. *Cryptobium elephas* Fauv. *Rev.d'Ent.* 23 : 54.

1931. *Cryptobium elephas*: Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 2: 230.

Material examined: 1 ex. Gosaba island: Jatirampur, dt. 16.xii.2014., 1 ex. Pakhirala, dt. 16. xii.2014.

4. *Lathrobium cafrum* Boh.

1848. *Lathrobium cafrum* Boh. *Ins. Afric.*, i : 285.

1931. *Lathrobium cafrum*: Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 2: 40-41.

Material examined: 42 ex., Gosaba island: Jatirampur, dt. 16.xii.2014., 1 ex. Pakhirala, dt. 16.xii.2014.

Subfamily : Staninae

5. *Stenus carinatus* Cameron

1914. *Stenus (Nestus) carinatus* Cam., *Trans. Ent. Soc. Lond.*, p. 532.

1930. *Stenus carinatus* Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 1: 345-346.

Material examined: 1 ex.,Gosaba island: Jatirampur,

dt.16.xii.2014., 3 exs., Pakhirala, dt.16. xii.2014,

Subfamily : Staphylininae

6. *Philonthus castaneus* Gemm. et Har.

1868. *Philonthus castaneus* Gemm. et Har., *Cat. Col. ii.* : 586.

1932. *Philonthus castaneus*: Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 3: 99-100.

Material examined: 1 ex., Gosaba island: Jatirampur, dt. 16.xii.2014.

7. *Philonthus rotundicollis* Menet.

1832. *Philonthus rotundicollis* Menet, *Cat.rais.* ;145.

1932. *Philonthus rotundicollis* Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 3: 84.

Material examined: 1 ex., Gosaba island: Jatirampur, dt. 16.xii.2014.

8. *Philonthus fimetarius* Gr.

1802. *Staphylinus fimetarius* Gr., *Col. Mier. Brunsv.* : 210.

1932. *Philonthus fimetarius*: Cameron, *Fauna of British India, incl. Ceylon & Burma (Col.: Staphylinidae)*, 3: 92-93.

Material examined: 43 ex., Gosaba island: Jatirampur, dt. 16.xii.2014., 1 ex. Pakhirala, dt. 16.xii.2014,

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Bhang, the Secret to Ellora's Decay Shield

No Insect Damage on the Walls

A mix of hemp with clay and lime plaster has protected the Ellora Caves from decaying over the last 1,500 years, a new study has found. "The use of hemp helped the caves and most of the paintings remain intact at the 6th century Unesco World Heritage site," says the study. Rajdeo Singh, a former Superintending Archaeological Chemist of Archaeological Survey of India's science branch (western region), and M. M. Sardesai, who teaches botany at Dr. Babasaheb Ambedkar Marathwada University, have carried out the study, which has been published in the '*Current Science*'.

"*Cannabis sativa*, popularly known as ganja or bhang, was found mixed in the clay and lime plaster at Ellora. This was confirmed by technologies such as scanning of the electron microscope, Fourier transform, infra-red spectroscopy and stereo-microscopic studies," Singh said.

"Hemp samples were collected from areas in Jalna district near Aurangabad and also from the outskirts of Delhi. These specimens were matched with the samples found in cave number 12 of Ellora," he added.

He says there was no difference. "In the sample collected from the Ellora's cave, we found a 10% share of *Cannabis sativa*. This is the reason why no insect activity is found at Ellora," Singh said.

The study indicates that many valuable properties of hemp were known to Indians in the 6th century. "Hemp was extensively used in Ellora as well as by the Yadavas, who build the Deogiri (Daulatabad) Fort in the 12th century," Singh told. "It was not used in the Ajanta Caves, which are about 30 rock-cut Buddhist structures dating back to the 2nd century BC. Rampant insect activity has damaged at least 25% of the paintings at Ajanta."