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Address for Correspondence

Butterfly Research Centre, Bhimtal,
Uttarakhand 263 136, India. Phone: +91
8938896403.

Email: butterflyresearchcentre@gmail.com

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A PRELIMINARY REPORT ON COLEOPTERA FAUNA OF KALYANI (A SUBURBAN CITY), WEST BENGAL, INDIA

BHIM PRASAD KHAREL¹, UDIPTA CHAKRABORTI², KAKALI BHADRA³
& SUBHANKAR KUMAR SARKAR⁴

^{1, 2, 3 & 4}Department of Zoology, University of Kalyani, Kalyani-741235, West Bengal, India
^{*4}sksarkarzoology18@klyuniv.ac.in

Reviewer: Peter Smetacek

Introduction

Among insects, order Coleoptera, commonly known as beetles, are the most diverse group of organisms on earth. These beetles form an important component of our ecosystems. Many of them are serious pests of agriculture and forestry while some are extremely beneficial as nutrient recyclers and pollinators. From India, approximately 15,500 beetle species were reported till date (Ramkrishna & Alfred, 2007). Though several faunistic and taxonomic works on larger families of Coleoptera have been carried out regionally from different parts of West Bengal, Kalyani city has never been assessed for its beetle fauna. In addition to the State Fauna Series and the Records of the Zoological Survey of India, some of the notable works on Coleoptera fauna of West Bengal are of Banerjee (2014), Mitra (2014), Mitra *et al.* (2015, 2016, 2018), Sarkar *et al.* (2012, 2014, 2015, 2016a, 2016b, 2017, 2019), Basu *et al.* (2017), Ghosh *et al.* (2017), Saha & Raychaudhuri (2017) and Kharel *et al.* (2020). Based on this background, several surveys were conducted from March, 2019 to February, 2020 to document the Coleoptera fauna of Kalyani city. The city has an area of 29.14 km² and is located in the Nadia district of West Bengal, India (22.9747° N, 88.4337° E). The city displays characteristic features of both rural and urban environment. It is surrounded by agricultural fields and pastures.

Materials and methods

Beetle specimens were collected using sweep nets, hand picking, pit fall traps and ultra violet

light traps. The collected specimens were identified by examining the characters under stereozoom trinocular microscope (OLYMPUS SZX7) using the keys and descriptions available in Fauna of British India volumes on different families of Coleoptera, State Fauna series and Occasional Papers of the Zoological Survey of India, as well as other relevant and current literature. The current status of each species was checked in various databases like Catalogue of Life, GBIF, Coccinellidae of India etc. The collected specimens were deposited in the Entomology Laboratory of the Department of Zoology, University of Kalyani for further studies. The distribution records for each species were compiled from literature published till date.

Results and Discussion

The surveys resulted in the recognition of 34 species distributed over 29 genera and 10 families of Coleoptera. The maximum species representation was from the family Scarabaeidae (13), followed by Coccinellidae (07) and Chrysomelidae (03) respectively. The families Cerambycidae, Elateridae and Tenebrionidae were recorded with two species each, whereas the families Curculionidae, Hydrophilidae and Meloidae were recorded each with only one species. All the species presented here are reported for the first time from Kalyani city. Systematic account

Order: Coleoptera Linnaeus, 1758

Suborder: Adephaga Schellenberg, 1806

Family: Carabidae Latreille, 1802

Subfamily: Harpalinae Bonelli, 1810

Genus *Chlaenius* Bonelli, 1810

Subgenus *Pachydinodes* Kuntzen, 1919

1. *Chlaenius* (*Pachydinodes*) *hamifer* Chaudoir, 1856

Specimens recorded: 3 exs.: 2 exs. Chandmari, Kalyani (22.9839° N, 88.4546° E), West Bengal, India, 14.ix.2019, coll. B.P. Kharel. 1 ex. Lake Park, Kalyani (22.9683° N, 88.4436° E), West Bengal, India, 04.x.2019, coll. S.K.Sarkar.

Indian distribution: Haryana and West Bengal.

Global distribution: Australia, Bhutan, China, Iran, Japan, North Korea, South Korea, Myanmar, Nepal, New Guinea, Pakistan, Sri Lanka, Thailand and United Arab Emirates.

Remarks: Commonly found in leaf litter, under tree bark, under logs, and rocks and sands by the edges of pond and river.

Subfamily: Scaritinae Bonelli, 1810

Genus *Scarites* Fabricius, 1775

Subgenus *Parallelomorphus* Motschulsky, 1849

2. *Scarites* (*Parallelomorphus*) *indus* Olivier, 1795

Specimens recorded: 1 ex. Silpanchal, Kalyani (22.9813° N, 88.4392° E), West Bengal, India, 15.xii.2019, coll. B.P. Kharel.

Indian distribution: Arunachal Pradesh, Assam, Karnataka, Kashmir, Sikkim, Uttar Pradesh, and West Bengal.

Global distribution: Afghanistan, Nepal, Pakistan, Sri Lanka, Vietnam.

Remarks: Commonly found in leaf litter, under tree bark and logs, and soil surface.

Suborder: Polyphaga Emery, 1886

Family Cerambycidae Latreille, 1802

Subfamily Cerambycinae Latreille, 1802

Genus *Xystrocera* Audinet-Serville, 1834

3. *Xystrocera globosa* (Olivier, 1795)

Specimens recorded: 2 exs.: 1 ex. Dakshin Goshpara, Kalyani (22.9897° N, 88.4372° E), West Bengal, India, 11.vi.2019, coll. B.P.

Kharel, 1 ex. Kathaltala, Kalyani (22.9902° N, 88.4436° E), West Bengal, India, 16.iii.2019, coll. B.P. Kharel.

Indian distribution: Andaman Island, Assam, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Global distribution: Arabia, Australia, Bangladesh, China, Egypt, Hawaii Island, Indonesia, Israel, Japan, Korea, Madagascar, Malaysia, Myanmar, Philippines, Pakistan, Sri Lanka, Taiwan, Thailand and Vietnam.

Remarks: Commonly found in roots, stumps and branches of cutch, gum, and many species of *Albizia* trees. It is a pest of *Albizia* species.

Subfamily Lamiinae Latreille, 1825

Genus *Batocera* Castelnau, 1840

4. *Batocera rufomaculata* De Geer, 1775

Specimens recorded: 2 exs. Lake Park, Kalyani (22.9683° N, 88.4436° E), West Bengal, India, 04.x.2019, coll. B.P. Kharel.

Indian distribution: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Global distribution: China, Comoros, Egypt, Iran, Israel, Lebanon, Madagascar, Mascarene, Mauritius, Nepal, Oman, Pakistan, Syria, Turkey and Yemen.

Remarks: Commonly found in roots, stumps, and branches of fig, papaya, mango and Sal trees. It is a pest of mango and fig.

Family Chrysomelidae Latreille, 1802

Subfamily Cassidinae Gyllenhal, 1813

Genus *Aspidomorpha* Hope, 1840

Subgenus *Aspidomorpha* Berg, 1899

5. *Aspidomorpha* (*Aspidomorpha*) *miliaris* (Fabricius, 1775)

Specimens recorded: 1 ex. Birpara, Kalyani 22.9961° N, 88.4352° E), West Bengal, India, 05.vii.2019, coll. B.P. Kharel.

Indian distribution: Assam, Bihar, Karnataka, Meghalaya, Orissa, Tamil Nadu and West Bengal.

Global distribution: Australia, China, Philippines and Sri Lanka.

Remarks: Commonly found in leaves & flowers of Cucurbitaceae plants.

Genus *Diclidispa* Gestro, 1897

Subgenus *Diclidispa* Gestro, 1897

6. *Diclidispa (Diclidispa) armigera* (Olivier, 1808)

Specimens recorded: 2 exs. Taltala, Kalyani (22.9908° N, 88.4191° E), West Bengal, India, 21.i.2020, coll. B.P. Kharel.

Indian distribution: Andhra Pradesh, Assam, Bihar, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Global distribution: Bangladesh, Bhutan, Cambodia, China, Indonesia, Iran, Korea, Malaysia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Taiwan, Thailand and Vietnam.

Remarks: Commonly found in paddy plants.

Subfamily Galerucinae Latreille, 1802

Genus *Aulacophora* Dejean, 1835

7. *Aulacophora foveicollis* (Lucas, 1849)

Specimens recorded: 3 exs.: 2 exs. Muratipur, Kalyani (22.9969° N, 88.4472° E), West Bengal, India, 13.x.2019, coll. S.K. Sarkar, 1 ex. Birpara, Kalyani 22.9961° N, 88.4352° E), West Bengal, India, 05.vii.2019, coll. B.P. Kharel.

Indian distribution: Arunachal Pradesh, Assam, Bihar, Gujarat, Kerala, Maharashtra, Meghalaya, Orissa, Punjab, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Global distribution: Bangladesh, Myanmar, Pakistan, Sri Lanka.

Remarks: Commonly found on leaves & flowers of *Cucumis melo* and other Cucurbitaceae plants.

Family Coccinellidae Latreille, 1807

Subfamily Chilocorinae Mulsant, 1846

Genus *Brumoides* Chapin, 1965

8. *Brumoides suturalis* (Fabricius, 1798)

Specimens recorded: 2exs. Kathaltala, Kalyani (22.9902° N, 88.4436° E), West Bengal, India, 16.iii.2019, coll. B.P. Kharel.

Indian distribution: Haryana, Himachal Pradesh, Manipur, Maharashtra, Punjab, Rajasthan, Tamil Nadu and West Bengal.

Global distribution: Bangladesh, Bhutan, Indonesia, Nepal, Pakistan and Papua New Guinea.

Remarks: Commonly found in stems & leaves of paddy and mulberry plants.

Genus *Curinus* Mulsant, 1850

9. *Curinus coeruleus* (Mulsant, 1850)

Specimens recorded: 2exs. Block D, Kalyani (22.9847° N, 88.2627° E), West Bengal, India, 17.x.2019, coll. B.P. Kharel.

Indian distribution: Andhra Pradesh, Kerala, Tamil Nadu and West Bengal.

Global distribution: Nepal, Philippines and Thailand.

Remarks: Commonly found in stems, leaves, and roots of sugarcane and flowers of marigold and rose.

Subfamily Coccinellinae Latreille, 1807

Genus *Cheilomenes* Chevrolat, 1837.

10. *Cheilomenes sexmaculata* (Fabricius, 1781)

Specimens recorded: 1ex. Bidhanpally, Kalyani (22.9644° N, 88.4675° E), West Bengal, India, 04.iv.2019, coll. B.P. Kharel.

Indian distribution: Andhra Pradesh, Assam, Bihar, Maharashtra, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Manipur, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

Global distribution: Australia, Bangladesh, China, Indonesia, Japan, Malaysia, Pakistan and Philippines.

Remarks: Commonly found in stems, leaves, flowers & fruits of brinjal, maize and cotton plants.

Genus *Coccinella* Linnaeus, 1758

11. *Coccinella transversalis* Fabricius, 1781
Specimens recorded: 5 exs.: 2exs. Block A9, Kalyani (22.9661° N, 88.4650° E), West Bengal, India, 29.v.2019, coll. B.P.Kharel, 3exs. Chandmari, Kalyani (22.9839° N, 88.4546° E), West Bengal, India, 14.ix.2019, coll. S.K.Sarkar.

Indian distribution: Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Kerala, Manipur, Meghalaya, Odisha, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Global distribution: Australia, Bangladesh, China, Indonesia, Japan, Malaysia, Philippines, Sri Lanka and Vietnam.

Remarks: Commonly found in stems of maize, wheat & rice plants.

12. *Coccinella undecimpunctata* Linnaeus, 1758

Specimens recorded: 4 exs.: 3exs. Muratipur, Kalyani (22.9980° N, 88.4533° E), West Bengal, India, 14.ii.2020, coll. B.P. Kharel, 1ex. Dakshin Goshpara, Kalyani (22.9897° N, 88.4372° E), West Bengal, India, 11.vi.2019, coll. B.P. Kharel.

Indian distribution: Jammu and Kashmir, Punjab, Uttar Pradesh and West Bengal.

Global distribution: Afghanistan, Canada, China, Egypt, Greece, Iraq, Libya, Mongolia, New Zealand, Pakistan, Poland, Saudi Arabia, Tajikistan and Turkmenistan.

Remarks: Commonly found in dead grass, rotting bark, stems, leaves and flowers of rose, china-rose and leaves of Solanaceae plants.

Genus *Oenopia* Mulsant, 1850

13. *Oenopia billieti* (Mulsant, 1853)

Specimens recorded: 1ex. Block B3, Kalyani (22.9713° N, 88.4344° E), West Bengal, India, 10.vi.2019, coll. S.K. Sarkar.

Indian distribution: Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Punjab, Sikkim, Uttar Pradesh and West Bengal.

Global distribution: Nepal.

Remarks: Commonly found in stems, leaves and flowers of brinjal, okra and tomato plants.

Subfamily Epilachninae Mulsant, 1846

Genus *Henosepilachna* Li & Cook, 1961

14. *Henosepilachna vigintioctopunctata* (Fabricius, 1775)

Specimens recorded: 1ex. Block B8, Kalyani (22.9783° N, 88.4347° E), West Bengal, India, 14.ix.2019, coll. B.P. Kharel.

Indian distribution: Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Meghalaya, Punjab, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal.

Global distribution: Australia, Bhutan, China, Japan, Korea, Philippines, Russia.

Remarks: Commonly found in stems and leaves of Cucurbitaceae plants, leaves of bitter gourd and flowers of Ashwagandha *Withania somnifera*.

Family Curculionidae Latreille, 1802

Subfamily Entiminae Schönherr, 1826

Genus *Blosyrus* Schönherr, 1826

15. *Blosyrus oniscus* (Olivier, 1807)

Specimens recorded: 1ex. Buddha Park, Kalyani (22.9850° N, 88.4180° E), West Bengal, India, 12.vii.2019, coll. B.P. Kharel.

Indian distribution: Assam, Meghalaya, Nagaland and West Bengal.

Global distribution: Bangladesh and Myanmar.

Remark: Commonly found in air-filled stems of aquatic plants.

Family Elateridae Leach, 1815

Subfamily Agrypninae Candèze, 1857

Genus *Lanelater* Arnett, 1952

16. *Lanelater fuscipes* (Fabricius, 1775)

Specimens recorded: 1ex. Buddha Park, Kalyani (22.9850° N, 88.4180° E), West Bengal, India, 12.vii.2019, coll. B.P. Kharel.

Indian distribution: Karnataka, New Delhi, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal.

Global distribution: Indonesia, Madagascar and Sri Lanka.

Remarks: Commonly found in potato leaves, stems and tubers.

Subfamily Melanotinae Candèze, 1859

Genus *Melanotus* Eschscholtz, 1829

17. *Melanotus fuscus* (Fabricius, 1801)

Specimens recorded: 1ex. Block B2, Kalyani (22.9766° N, 88.4252° E), West Bengal, India, 24.ix.2019, coll. S.K. Sarkar

Indian distribution: Sikkim, Tripura and West Bengal.

Global distribution: China, Indonesia, Laos, Myanmar, Sri Lanka and Thailand.

Remarks: Commonly found in stems, tubers and leaves of onion and potato.

Family Hydrophilidae Latreille, 1802

Subfamily Hydrophilinae Latreille, 1802

Genus *Hydrophilus* Geoffroy, 1762

18. *Hydrophilus olivaceous* Fabricius, 1781

Specimens recorded: 2 exs. Chandmari, Kalyani (22.9839° N, 88.4546° E), West Bengal, India, 14.ix.2019, coll. S.K. Sarkar.

Indian distribution: Andhra Pradesh, Haryana, Madhya Pradesh, Maharashtra, Manipur, Odisha and West Bengal.

Global distribution: No record found.

Remarks: Commonly found in ponds, dams and stagnant water bodies.

Family Meloidae Gyllenhal, 1810

Subfamily Meloinae Gyllenhal, 1810

Genus *Mylabris* Fabricius, 1775

19. *Mylabris phalerata* (Pallas, 1781)

Specimens recorded: 2 exs. Chandmari, Kalyani (22.9839° N, 88.4546° E), West Bengal, India, 14.ix.2019, coll. S.K. Sarkar

Indian distribution: Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh, Odisha, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal.

Global distribution: China and Sri Lanka.

Remarks: Commonly found in flowers of china-rose & and on rotting wood.

Family Scarabaeidae Latreille, 1802

Subfamily Dynastinae Macleay, 1819

Genus *Alissonotum* Arrow, 1908

20. *Alissonotum piceum* (Fabricius, 1775)

Specimens recorded: 4 exs. Dakshin Goshpara, Kalyani (22.9897° N, 88.4372° E), West Bengal, India, 11.vi.2019, coll. B.P. Kharel.

Indian distribution: Himachal Pradesh, Kerala, Madhya Pradesh, Odisha, Sikkim, Uttarakhand and West Bengal.

Global distribution: Bangladesh, China, Indonesia, Malaysia, Myanmar, Pakistan and Sri Lanka.

Remarks: Commonly found in rotting stems and leaves of various shrubs, rotting bark and grass.

Genus *Clyster* Arrow, 1908

21. *Clyster retusus* Arrow, 1908

Specimens recorded: 1 ex. Block B8, Kalyani (22.9783° N, 88.4347° E), West Bengal, India, 14.ix.2019, coll. B.P. Kharel.

Indian distribution: Andaman and Nicobar islands, West Bengal.

Global distribution: Indonesia and Myanmar.

Remarks: Commonly found in rotting bark and flowers of rose, marigold and china-rose.

Subfamily RUTELINAE Macleay, 1819

Genus *Anomala* Samouelle, 1819

22. *Anomala bengalensis* (Blanchard, 1851)

Specimens recorded: 5 exs.: 3exs. Block B2, Kalyani (22.9766° N, 88.4252° E), West Bengal, India, 24.ix.2019, coll. B.P. Kharel. 2exs. Muratipur, Kalyani (22.9980° N, 88.4533° E), West Bengal, India, 14.ii.2020, coll. B.P. Kharel.

Indian distribution: Andhra Pradesh, Bihar, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttarakhand and West Bengal.

Global distribution: Bangladesh, Bhutan, Myanmar and Nepal.

Remarks: Commonly found in stems, leaves & roots of maize, wheat, barley, jowar, bajra, oil seed crops like groundnut, sesame, sunflower, soyabean, vegetable crops like brinjal, cucurbit, okra and other commercial crops like sugarcane, cotton, tobacco etc.

23. *Anomala rugosa* Arrow, 1899

Specimens recorded: 2 exs. Block A7, Kalyani (22.9997° N, 88.4277° E), West Bengal, India, 04.i.2020, coll. B.P. Kharel.

Indian distribution: Assam, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu, Uttarakhand and West Bengal.

Global distribution: Bhutan, Nepal and Pakistan.

Remarks: Commonly found on leaves, stems and flowers of potato, tomato and brinjal plants.

24. *Anomala varicolor* (Gyllenhal, 1877)

Specimens recorded: 4 exs. Buddha Park, Kalyani (22.9850° N, 88.4180° E), West Bengal, India, 12.vii.2019, coll. B.P. Kharel.

Indian distribution: Assam, Bihar, Chhattisgarh, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh, Himachal Pradesh, Sikkim, Uttarakhand and West Bengal.

Global distribution: Bhutan, China, Nepal, Sri Lanka and Taiwan.

Remarks: Commonly found in stems of Leguminosae plants like *Acacia*, pea and bean.

Subfamily Scarabaeinae Latreille, 1802

Genus *Catharsius* Hope, 1837

25. *Catharsius birmanensis* Lansberge, 1874

Specimens recorded: 1 ex. Birpara, Kalyani (22.9961° N, 88.4352° E), West Bengal, India, 05.vii.2019, coll. B.P. Kharel.

Indian distribution: Haryana, Punjab, Rajasthan, Sikkim, Uttar Pradesh and West Bengal.

Global distribution: Bhutan, Myanmar and Thailand.

Habitat: Commonly found in cow and buffalo dung.

Genus *Liatongus* Reitter, 1893

26. *Liatongus affinis* (Arrow, 1908)

Specimens recorded: 1 ex. Muratipur, Kalyani (22.9969° N, 88.4472° E), West Bengal, India, 13.x.2019, coll. B.P. Kharel.

Indian distribution: Manipur and West Bengal. Global distribution: China, Myanmar and Thailand.

Remarks: Commonly found in cow and buffalo dung.

Genus *Onitis* Fabricius, 1798

27. *Onitis philemon* Fabricius, 1801

Specimens recorded: 1 ex. Block D, Kalyani (22.9847° N, 88.2627° E), West Bengal, India, 17.x.2019, coll. S.K. Sarkar.

Indian distribution: Arunachal Pradesh, Bihar, Chandigarh Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand and West Bengal.

Global distribution: China, Nepal, Pakistan, Sri Lanka, Taiwan and Vietnam.

Remarks: Commonly found in cow and buffalo dung.

Genus *Onthophagus* Latreille, 1802

28. *Onthophagus andreweesi* Arrow, 1931

Specimens recorded: 4 exs.: 3 exs. Muratipur, Kalyani (22.9980° N, 88.4533° E), West Bengal, India, 14.ii.2020, coll. B.P. Kharel.

1 ex. Muratipur, Kalyani (22.9969° N,

88.4472° E), West Bengal, India, 13.x.2019, coll. S.K. Sarkar.

Indian distribution: Karnataka, Kerala, Maharashtra, Tamil Nadu and West Bengal.

Global distribution: No record found.

Remarks: Commonly found in cow, buffalo and goat dung.

29. *Onthophagus ceylonicus* Harold, 1859

Specimens recorded: 2 exs. Block A9, Kalyani (22.9661° N, 88.4650° E), West Bengal, India, 29.v.2019, coll. B.P. Kharel.

Indian distribution: Karnataka, Rajasthan and West Bengal.

Global distribution: Sri Lanka.

Remarks: Commonly found in cow dung.

30. *Onthophagus (Colobonthophagus) dama* (Fabricius, 1798)

Specimens recorded: 16 exs.: 8 exs. Bidhanpally, Kalyani (22.9644° N, 88.4675° E), West Bengal, India, 04.iv.2019, colls. B.P. Kharel. 6 exs. Kathaltala, Kalyani (22.9902° N, 88.4436° E), West Bengal, India, 16.iii.2019, coll. B.P. Kharel. 2 exs. Birpara, Kalyani (22.9961° N, 88.4352° E), West Bengal, India, 05.vii.2019, coll. S.K. Sarkar.

Indian distribution: Arunachal Pradesh, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal.

Global distribution: Bhutan, China, Nepal and Sri Lanka.

Remarks: Commonly found in cow, buffalo and goat dung.

Genus *Sisyphus* Latreille, 1807

31. *Sisyphus longipes* (Olivier, 1789)

Specimens recorded: 6ex. Kathaltala, Kalyani (22.9902° N, 88.4436° E), West Bengal, India, 16.iii.2019, coll. B.P. Kharel.

Indian distribution: Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu and West Bengal.

Global distribution: Myanmar, Pakistan, Sri Lanka and Thailand.

Remarks: Commonly found in cow and buffalo dung.

Genus *Tiniocellus* Péringuey, 1901

32. *Tiniocellus imbellis* (Bates, 1891)

Specimens recorded: 8 exs.: 5ex. Taltala, Kalyani (22.9908° N, 88.4191° E), West Bengal, India, 21.i.2020, coll. B.P. Kharel. 3ex. Dakshin Goshpara, Kalyani (22.9897° N, 88.4372° E), West Bengal, India, 11.vi.2019, coll. B.P. Kharel.

Indian distribution: Bihar, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal.

Global distribution: Nepal and Pakistan.

Remarks: Commonly found in cow, buffalo and goat dung.

Family Tenebrionidae Latreille, 1802

Subfamily Tenebrioninae Latreille, 1802

Genus *Alphitobius* Stephens, 1829

33. *Alphitobius diaperinus* (Panzer, 1797)

Specimens recorded: 2 exs. Kathaltala, Kalyani (22.9902° N, 88.4436° E), West Bengal, India, 16.iii.2019, coll. B.P. Kharel.

Indian distribution: Assam, Uttarakhand and West Bengal.

Global distribution: No record found.

Remarks: Commonly found in caves, rotting leaves, sticks and grasses.

Genus *Gonocephalum* Chevrolat, 1849

34. *Gonocephalum depressum* (Fabricius, 1801)

Specimens recorded: 2 exs. Kathaltala, Kalyani (22.9902° N, 88.4436° E), West Bengal, India, 16.iii.2019, coll. B.P. Kharel.

Indian distribution: Arunachal Pradesh, Assam, Himachal Pradesh, Kashmir, Manipur, Meghalaya, Sikkim and West Bengal.

Global distribution: Afghanistan, Bhutan, China, Indonesia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka and Taiwan.

Remarks: Commonly found in rotting wood, bark and leaf litter.

The outcome of the study indicates that Kalyani city, though facing rapid urbanization activities, still harbours a good number of insects, particularly beetles. The longhorn beetles (Cerambycidae) and dung beetles (Scarabaeidae) listed in our work are very common and found in many urban cities of India. For e.g., *Batocera rufomaculata* is a pest of mango, papaya, fig etc. and *Xystrocera globosa* is a pest of many species of *Albizia* and cutch trees. These trees are quite common in many cities of India. The dung beetles listed are found in dung of various mammals like cow, buffalo, goat etc. Most of the ladybird (Coccinellidae), leaf (Chrysomelidae), ground (Carabidae) and darkling (Tenebrionidae) beetles listed here can be spotted in many suburban cities of the country.

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Fig.1: *Alphitobius diaperinus*



Fig.2: *Anomala bengalensis*



Fig.3: *Aspidimorpha miliaris*



Fig.4: *Batocera rufomaculata*



Fig.5: *Coccinella transversalis*



Fig.6: *Chlaenius hamifer*



Fig.7: *Cheilomenes sexmaculata*



Fig.8: *Brumoides suturalis*



Fig.9: *Dicladispa armigera*



Fig.10: *Hydrophilus olivaceus*



Fig.11: *Lanelater fuscipes*

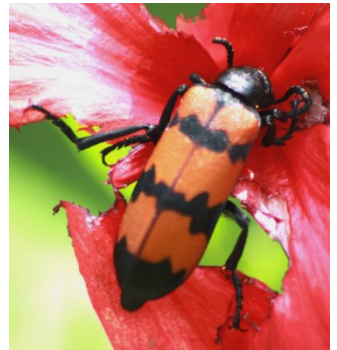


Fig.12: *Mylabris phalerata*