A CHECKLIST OF THE LONG-HORNED BEETLES (COLEOPTERA: CERAMBYCIDAЕ) OF ARUNACHAL PRADHESH, NORTHERNEAST INDIAN WITH SEVERAL NEW REPORTS

M.M. Kumawat¹, K. Mamocha Singh² & V.V. Ramamurthy³

¹ Department of Plant Protection, College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh 791102, India
² College of Post Graduate Studies, Central Agricultural University, Umiam (Barapani), Meghalaya 793103, India
³ Network Project on Insect Biosystematics, Division of Entomology, Indian Agricultural Research Institute, New Delhi 110012, India
¹ kumawatmm@gmail.com (corresponding author), ² mamoento@gmail.com, ³ vvrento@gmail.com

Abstract: Northeastern India is one of the hot spots of mega biodiversity of the world. The collections of cerambycid beetles were made from the forest region of Arunachal Pradesh, India during 2008–2013. A total of 49 species of cerambycids were collected during the survey, belonging to three subfamilies and a checklist of all the species is provided. Taxonomic synonyms, bibliography alongwith new distribution and list of host plants of the region are included. *Rhytidodera griseofasciata* is reported for the first time from India, besides seven other species, viz., *Nupserha nigriceps*, *Pterolophia* (*Hylobrotus*) *tuberculatrix*, *Neocerambyx grandis*, *Olenecamptus indianus*, *Oberopiosis obscura obscura*, *Aristobia reticulata*, and *Sarothrocera lowii* are being reported from Arunachal Pradesh for the first time.

Keywords: Cerambycidae, Coleoptera, Long-horned Beetles, wood boring beetles.
INTRODUCTION

The state of Arunachal Pradesh situated in the northeastern region of India has six broad rich forest types. The location of the state is at the juncture of palaeartic, Indo–China and Indo–Myanmar bio–geographical regions. Longicorn beetles are forest insects that constitute one of the largest groups of wood boring beetles. Most are dead wood feeders while some contribute to regulating living forest and fruit trees including plantation crops, weeds, orchids etc. The family cerambycidae contains more than 35,000 species under, 4,000 genera in 11 subfamilies (Lawrence 1982). A total 396 species of cerambycids were described by Gahan (1906) from the Indian subcontinent. About 1500 species of cerambycids were recorded from India (Beeson 1941; Breuning 1960–62, 1964, 1965, 1966). Sengupta & Sengupta 1981 recorded 16 cerambycids from Arunachal Pradesh. Later eight species more have been reported in West Siang of Arunachal Pradesh by Singh et al. (2010). Several more species have been reported from India and adjacent countries (Holzschuh 1999, 2003; Holzschuh & Biswas 2000a, 2002b; Mukhopadhyay & Halder 2004, 2005; Heffern 2005; Miguel 2005; Lobl & Smetana 2010) and compiled. The specimens discussed in this work were deposited in the National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi.

RESULTS AND DISCUSSION

During the five year survey, 49 species of cerambycids belonging to three subfamilies were recorded. Subfamily Lamiae was found to be dominant with 28 species followed by Cerambycinae with 11 species. Subfamily Prioninae included 10 species. Pic reported from China earlier is being reported from India for the first time during the present study. However, the biology and host plants of R. griseofasciata remain unknown. Beside this, seven species, viz., Nupserha nigriceps, Pterolophia (Hylabrotus) tuberculatrix, Neocerambyx grandis, Oleneamptus indanus, Obereopsis obscura obscura, Aristobia reticular and Sarothrocera lowii are being reported from Arunachal Pradesh, northeastern India for the first time. The status of the new reports of the present study were confirmed by reviewing previously published literature of Zoological Survey of India (Sengupta & Sengupta 1981; Mukhopadhyay & Biswas 2000a, 2002b; Mukhopadhyay & Halder 2004; Anonymous 2006; Ramakrishna & Alfred 2006; Singh et al. 2007), Gahan (1906), Singh et al. (2010), Agarwala & Bhattacharjee (2012), CAB abstracts, Catalogue of life and Zoological records. The known host plants and colour images of all the specimens have also been included in the present paper.

CHECKLIST OF COLLECTED SPECIMENS

Family Cerambycidae
Subfamily Prioninae
1. Nepioedes costipennis costipennis (White, 1853) (Image 1)

Long-horned Beetles of Arunachal Pradesh

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Nepiodes costipennis subsp. costipennis Lobl & Smetana 2010, Cat. Palaeartic Coleopt.–6, Apollo books: 40.


Distribution: Arunachal Pradesh, Assam, Manipur, Sikkim, Bangladesh, Myanmar.

Biolog: N. costipennis recorded as boring into teak tree in Assam, India (Lefroy 1909).

Host Plants: Teak Tectona grandis; Kulsi teak plantation (Stebbing 1914).

2. Nepiodes bowringi (Gahan, 1894) (Image 2)


Megopis (Megopis) bowringi Lameere, 1909

Megopis (Megopis) sulcipennis Hayashi, 1979 (nec White 1853)


Distribution: India, Myanmar, Nepal

Biolog: Unknown

Host Plants: Unknown

3. Aegolipton marginale (Fabricius, 1775) (Image 3)

Cerambex marginalis Fabricius, 1775 Officina Libraria Kortii: 30 + 169.

Cerambex marginalis Olivier, 1795 Imprimerie de Lanneau 4: 7.


Aegosoma marginalae Lansberge, 1884 Notes Leyden Mus. 6 (3): 156.


Aegosoma marginalae Gahan, 1906 Fauna Brit. India Col. 1: 45.


Megopis (Baralipton) marginalis Lameere, 1913 Coleopt. Cat. (52) 22:42.

Megopis (Baralipton) marginalis Kano, 1933 Kontyu 6 (5–6): 260.


Megopis (Aegolipton) marginalis Gressitt, 1951 Longicorna 2: 15.

Cerambex marginalis Zimsen, 1964 Copenhagen, Munksgaard 166.


Megopis marginalis Hua 2002 Zhongshan (Sun Yat-sen) Univ. Press, Guangzhou 2: 214.


Aegolipton marginalae Lobl & Smetana, 2010 Cat. Palaeartic Coleopt. - 6, Apollo books: 38.


Distribution: Peninsula of southeastern Asia including China, Java, Sumatra, Banka, Borneo, Celebes, Amboina, India, Myanmar, Thailand, Vietnam, Laos, Taiwan, Formosa.

Biolog: Unknown
Host Plants: Unknown

4. Dorysthenes (Lophosternus) indicus (Hope, 1831) (Image 4)
   


   *Dorysthenes (Lophosternus) indicus* Lameere, 1913 Col. Cat. 52: 68.


   *Dorysthenes indicus* Weigel, 2006 *Ver. der Fre. und For. des Naturk. Erfurt* e. 5: 497.


   Distribution: Arunachal Pradesh, Assam, Darjeeling, Kashmir, Sikkim, China, Nepal.

   Biology: Adults start emerging with the onset of pre–monsoon rains during the second fortnight of June and the majority of the beetles (75–80 %) emerge by the first week of July but the emergence continues up to the second week of August depending upon the frequency of rainfall (Sharma & Khajuria 2005). The eggs are placed in an interstic in the bark (Stebbing 1914). The eggs are also laid 8–12 mm below the soil surface and after hatching the grubs initially feed on organic matter and then bore into the roots of the tree. It takes up to 3.5 years for them to mature (Atwal & Dhaliwal 1997).

   Host Plants: It is a serious pest of apple trees. (Verma & Thapa 2005). The larvae also bore into the roots of oak trees, *Quercus* sp. (David & Ramamurthy 2012).

5. Dorysthenes (Lophosternus) hugelii (Redtenbacher 1848) (Image 5)
   


   *Dorysthenes (Lophosternus) hugeli var. falco* Lameere, 1913 *Coleopt. Cat.* (52) 22:69.

   *Dorysthenes (Lophosternus) hugeli var. palpalis* Lameere, 1913 *Coleopt. Cat.* (52) 22:69.


   *Dorysthenes hugelii* Weigel, 2006 *Ver. der Fre. und For. des Naturk. Erfurt* e. 5: 497.

   Specimen examined: CHF/2015/214, male, 10.iv.2010, Forest ground, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. M.M. Kumawat.

   Distribution: Arunachal Pradesh, Assam, Darjeeling, Kashmir, Sikkim, China, Nepal.

   Biology: Adults start emerging with the onset of pre–monsoon rains during the second fortnight of June and the majority of the beetles (75–80 %) emerge by the first week of July but the emergence continues up to the second week of August depending upon the frequency of rainfall (Sharma & Khajuria 2005). The eggs are placed in an interstic in the bark (Stebbing 1914). The eggs are also laid 8–12 mm below the soil surface and after hatching the grubs initially feed on organic matter and then bore into the roots of the tree. It takes up to 3.5 years for them to mature (Atwal & Dhaliwal 1997).

   Host Plants: It is a serious pest of apple trees. (Verma & Thapa 2005). The larvae also bore into the roots of oak trees, *Quercus* sp. (David & Ramamurthy 2012).

Biology: Unknown.

Host Plants: Castanea mollisima, Diospyros kaki, Malus pumila, Pistacia chinensis, Prunus armeniaca, P. persica, Pyrus serotina and Quercus variabilis (Gressitt 1951).

7. Anomophysis plagiata (Waterhouse, 1884) (Image 7)


Macrotoma (Zooblux) plagiata Lameere, 1913 Coleopt. Cat. (52) 22: 28.

Macrotoma (Zooblux) vidua Lameere, 1913 Coleopt. Cat. (52) 22: 28.

Macrotoma (Zooblux) plagiata Lameere, 1919 Coleopt. Generate Insecta. 172: 51.


Distribution: Sri Lanka, southern India, Arunachal Pradesh.

Biology: The adult appears in June–July. It is a borer of stumps and decaying logs making very large tunnels, the mature larva being over five inches long (Beeson 1941).

Host Plants: Abies pindrow, A. webbiana, Juglans regia, Ficus excelsa, Boswellia serrata (Beeson 1941; Duffy 1968).

9. Rhaphipodus subopacus Gahan, 1890 (Image 9)


Rhaphipodus (Rhaphipodus) subopacus Lameere, 1903 Mem. Ent. Soc. Belg. 11: 73

Rhaphipodus subopacus Gahan, 1906 Fauna Brit. India Col. 1: 32


Distribution: Arunachal Pradesh, Mumbai, Tamilnadu, Uttar Pradesh, West Bengal

Biology: Larvae bores into the dead wood (Duffy 1968; Mathur & Singh 1961).

Host Plants: Sapium sebiferum, Salmalia malabarica (Duffy 1968); Ailanthus triphysa (Verma 1986).


Specimens examined: CHF/2015/233, male, 19.iv.2009, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Herojit; CHF/2015/234, female, 23.v.2010, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India,
Distribution: Arunachal Pradesh, Myanmar, Thailand

Subfamily: Lamiinae

11. *Apomecyna saltator* (Fabricius, 1787) (Image 11)

Lamia saltator Fabricius, 1787 Hafniae, Proft 1: 141


13. **Apomecyna histrio histrio** (Fabricius, 1793) (Image 13)
   Lamia histrio Fabricius, 1793 Hafniae, Proft 1, 2: 288.

   **Saperda alboguttata** Megerle, 1802 Appendix Novus, 473: 10.

   **Apomecyna histrio histrio** Castelnau, 1840 *P. Dumenil* 2: 492.

   **Apomecyna alboguttata** Dejean, 1821 *Crevet* :
   **Apomecyna histrio histrio** Blanchard, 1849 Paris, Deterville and Crochard: 68.


   **Apomecyna maculaticollis** Pic, 1918 *Mel. extot. Ent. 28*: 6.

   **Saperda alboguttata** Bousquet et al., 2009 *Zootaxa* 2321: 26.


   Specimen examined: CHF/2015/238, male, 05.v.2010, wild cucurbits, East Siang (elevation 180m), Arunachal Pradesh, India, coll. C. Risha.

   Distribution: Himalayan India, North East India, Japan, Korean Peninsula (South Korea), Laos, Moluccas, Nepal, Pakistan, Philippines, Siberia (East Siberia), Subtropical China, Taiwan.

   Biology: The pest overwinters as grub inside the stem from October to February. Adult emergence from stems takes place usually during May. Incubation, grub and pupal periods last for 5–6, 22–33 and 6–8 days, respectively. A life cycle is completed in 35–46 days and adult longevity is 33–39 days (Lefroy 1909). There are 3 to four generations in a year.

   Host Plants: Ridge gourd, smooth gourd, sponge gourd (Srivastava & Butani 2009), chow-chow, *Sechium eduli*; *Coccinia indica* (David & Ramamurthy 2012) and *Cephalandra sp.*

14. **Apomecyna tigrina indica** Breuning, 1969 (Image 14)

   **Apomecyna tigrina** Thomson, 1857 *Arch. Ent. 1*: 343.


   **Apomecyna (Apomecyna) tigrina** Lobl & Smetana, 2010 *Cat. Palearctic Coleopt.-6*, *Apollo books*: 228.

   Specimen examined: CHF/2015/237, male, 20.iv.2010, forest weeds, East Siang (elevation 180m), Arunachal Pradesh, India, coll. Subhash.

   Distribution: India, Himalayan India, India, Nepal, Subtropical China, Taiwan, Laos, Philippines, S. Asia, Manila.

   Biology: Biology similar to that of *A. saltator*. More common in south India (Srivastava & Butani 2009).

   Host Plants: Cucurbitaceous plants

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Distribution: Widely distributed in all over India, subtropical China, Pakistan, Taiwan and Vietnam.

Biology: The grubs are brownish in colour having flattened head and thorax, soft and distinctly segmented abdomen. Eggs are laid single in the epidermis of the stems. On hatching, grubs bore into the long trailing stems or near the node and tunnel inside. Adult beetles gnaw the leaf petioles and soft parts of the stem. Egg, larval and pupal periods last for 5–7, 31–35 and 7–9 days, respectively (Srivastava & Butani 2009; Muthukrishnan et al. 2005).

Host Plants: Ivy gourd, bottle gourd, ridge gourd, snake gourd, sponge gourd, pumpkin (Beeson 1941; Nair 1975; David & Ramamurthy 2012).

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**12. Apomecyna cretacea** (Hope, 1831) (Image 12)

**Callidium cretaceum** Hope, 1831 *Gray’s Zool. Misc. 1*: 28.

**Apomecyna proba** Newman, 1842 *The Entomologist* 1, 19: 299.


**Apomecyna (Apomecyna) cretacea** Lobl & Smetana, 2010 *Cat. Palearctic Coleopt.-6*, *Apollo books*: 228.

Specimen examined: CHF/2015/237, male, 20.iv.2010, forest weeds, East Siang (elevation 180m), Arunachal Pradesh, India, coll. Subhash.

Distribution: India, Himalayan India, India, Nepal, Subtropical China, Taiwan, Laos, Philippines, S. Asia, Manila.

Biology: Biology similar to that of *A. saltator*. More common in south India (Srivastava & Butani 2009).

Host Plants: Cucurbitaceous plants

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**13. Apomecyna histrio histrio** (Fabricius, 1793) (Image 13)

**Lamia histrio** Fabricius, 1793 *Hafniae, Proft 1*, 2: 288.

**Saperda alboguttata** Megerle, 1802 Appendix Novus, 473: 10.

**Apomecyna histrio histrio** Castelnau, 1840 *P. Dumenil* 2: 492.

**Apomecyna alboguttata** Dejean, 1821 *Crevet* :

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**Apomecyna histrio histrio** Blanchard, 1849 Paris, Deterville and Crochard: 68.


**Apomecyna maculaticollis** Pic, 1918 *Mel. extot. Ent. 28*: 6.

**Saperda alboguttata** Bousquet et al., 2009 *Zootaxa* 2321: 26.


Specimen examined: CHF/2015/238, male, 05.v.2010, wild cucurbits, East Siang (elevation 180m), Arunachal Pradesh, India, coll. S. Tamang.

Distribution: Himalayan India, North East India, Japan, Korean Peninsula (South Korea), Laos, Moluccas, Nepal, Pakistan, Philippines, Siberia (East Siberia), Subtropical China, Taiwan.

Biology: The pest overwinters as grub inside the stem from October to February. Adult emergence from stems takes place usually during May. Incubation, grub and pupal periods last for 5–6, 22–33 and 6–8 days, respectively. A life cycle is completed in 35–46 days and adult longevity is 33–39 days (Lefroy 1909). There are 3 to four generations in a year.

Host Plants: Ridge gourd, smooth gourd, sponge gourd (Srivastava & Butani 2009), chow-chow, *Sechium eduli*; *Coccinia indica* (David & Ramamurthy 2012) and *Cephalandra sp.*

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**Apomecyna tigrina** Thomson, 1857 *Arch. Ent. 1*: 343.


Distribution: Himalayan India, India (North East India), China, Indonasia, Laos.

Biology: Unknown
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Host Plants: Unknown

15. *Aristobia approximator* (Thomson, 1865) (Image 15)

Specimen examined: None
Distribution: Nepal, India, Cambodia, Myanmar, Subtropical China, Yunnan, Thailand, Vietnam, Malaysia

Biology: The adult beetle emerges in June to July. Females lay their eggs on the branches of the litchi tree; the grubs bore into the bark and feed beneath it. Later, grubs enter deep into the sapwood. The last larval instars were observed in the last week of April to the first week of May. The freshly emerged adults were found in the pupal chamber in the middle of June in Pasighat, Arunachal Pradesh. Only one generation is completed in a year.
Host Plants: *Dimocarpus longana*, *Lagerstroemia calyculata*, *Casurina* spp.

16. *Aristobia reticulator* (Voet, 1778) (Image 16)

*Cerambyx testudo* Voet, 1778 *La Haye Bakh*. 2: 29
*Lamia reticulator* Fabricius, 1781 *Bohn; Hamburgi et Kilonii* 1: 219
*Celosterna reticulator*, Thomson 1860 *Paris*: 85
*Celosterna testudo* Thomson, 1860 *Paris*: 85


Distribution: Northeastern Himalayan range of India, Nepal, China, Vietnam.

Biology: One generation was observed each year with adults emerging in July. They removed bark rings around twigs, which then withered. Eggs were laid individually under the bark mainly in August, hatched generally in September and fed below the bark before hibernation (August–December). After hibernation the larvae bored into the wood, producing tunnels up to about 60 cm long (Ho et al. 1990).

Host Plants: Litchi, Guava, Pigeonpea (Shylesha et al. 2000; Firake et al. 2012), *Microcos paniculata* (Agarwala & Bhattacharjee 2015) and *Dimocarpus longana*. The species is reported for the first time on litchi, *Litchi chinensis* in Pasighat, Arunachal Pradesh during the present study. The litchi plantations of the region including research farm of litchi in the College of Horticulture and Forestry, CAU, India suffered heavily.

Remarks: *A. approximator* characterized by the presence of a strong tuft of hairs at the apical half of the third antennal segment only in both sexes, whereas *A. reticulator* possesses tufts of hairs on the apices of the third, fourth, and most often on fifth antennal segments; these tufts are most prominent on the third segment, less so on the fourth segment, and feebly so, if present, on the fifth segment (Hua 2002; Jiroux et al. 2014; Agarwala & Bhattacharjee 2015).

17. *Batocera parryi* (Hope, 1846) (Image 17)

*Lamia* (*Batocera*) *calanus* Parry, 1846 *Trans. Ent. Soc. Lond.* 1, 4: 77
*Megacriodes guttata* Vollenhoven, 1871 *Tijdsschr. Ent.*: 110
*Batocera fabricii* Thomson, 1878 *Rev. Mag. Zool.* 3, 6: 54
*Batocera calanus* var. *bimaculata* Schwarz 1914 *Ent. Mitteil. 3*: 280
*Batocera calanus* var. * immaculata* Schwarz, 1914 *Ent. Mitteil. 3*: 280
*Semibatocera calana* Kriesche, 1915 *Arch. f. Naturg.*
80A 11: 115

Batocera (Semibatocera) parryi narada Kriesche, 1928

Deutsche Ent. Z.: 45

Batocera parryi Perger & Vitali, 2012 Les Cahiers Magellanes NS 7: 11,15


Distribution: Borneo, Himalayan India, India, Java, Malayan Peninsula, Myanmar, Sumatra, Vietnam

Biology: Unknown

Host Plants: Unknown

18. Batocera rubus rubus (Linnaeus, 1758) (Image 18)

Cerambyx rubus Linnaeus, 1758 Laur. Salvius Holmiae

10, 1: 390

Cerambyx albofasciatus Degeer, 1775 Stockholm, Impr.

Pierre Hesselberg 5: 106

Cerambyx stigma Voet, 1778 La Haye Bakh. 2: 37

Cerambyx albomaculatus Retzius, 1783 Cruse: 138

Lamia octomaculata Fabricius, 1793 Hafniae, Prof 1, 2: 290

Batocera rubus Dejean, 1835 Crevot 2: 4

Lamia (Lamia) rubus Audinet-Serville, 1835 Ann. Soc. Ent. Fr. 1, 4: 94

Batocera rubus Blanchard, 1845 Paris Didot 2: 175

Batocera sarawakensis Thomson, 1858 Arch. Ent. 1: 452

Batocera octomaculata Thomson, 1858 Arch. Ent. 1: 454

Lamia octomaculata = albofasciatus Degeer, 1775, Thomson 1858, Arch. Ent. 1: 454

Lamia octomaculata = stigma Voet, 1778, Thomson

1858 Arch. Ent. 1: 454

Batocera rubus Thomson, 1858 Arch. Ent. 1: 456

Batocera sabina Thomson, 1878 Rev. Mag. Zool. 3, 6: 52

Batocera albofasciata Stebbing, 1914 Indian For. Ins.: 366

Batocera rubus var. bipunctata Kriesche, 1915 Arch. f. Naturg. 80A 11: 134

Batocera rubus var. punctatella Kriesche, 1915 Arch. f. Naturg. 80A 11: 135

Batocera formosana Kriesche, 1915 Arch. f. Naturg. 80A 11: 136

Batocera siporensis Schwarzer, 1930 Treubia 12: 122


Batocera dividopunctata Gilmour & Dibb, 1948 Spolia Zeylanica 25: 61

Cerambyx rubus Bousquet et al., 2009 Zootaxa 2321: 27

Batocera rubus Perger & Vitali, 2012 Les Cahiers Magellanes NS 7: 11,16


Distribution: Borneo, Himalayan India, India, Japan, Korean Peninsula, Laos, Lesser Sunda, Malayan peninsula, Myanmar, Nepal, Pakistan, Subtropical China, China, Saudi Arabia, Sumatra, Taiwan, Thailand, Vietnam

Biology: The beetles emerged during April. The eggs are laid on the bark or on wounds in the months of April to May. The larvae on hatching, tunnel through the bark till they reach the bast and then bore deeper and eat out a winding gallery. The larvae spend about nine months and enter into pupal stage which lasts from six weeks to two months. The grubs pupate in January or February. There is only one generation per year (Stebbing 1914).

Host Plants: Indian rubber, Ficus elastic, Careya arborea, mango, fig and many other forest trees.

19. Batocera horsfieldi Hope, 1839 (Image 19)

Batocera horsfieldi Hope, 1839 Proc. Linn. Soc. Lond. 1: 42.

Batocera adelpha Thomson, 1859 Baillere: 77


Specimen examined: CHF/2015/257, male, 05.vi.2011, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Donald.

Distribution: Bhutan, Himalayan India, India, Myanmar, Palaearctic China.

Biology: Adults emerge in early June and continue till July. The adults live for about four months. Adults rest on their food plants and feed on the bark of the young twigs. A single female lays 55–60 eggs in the bark. The grubs bore into the bark and reach into the sap wood. It pupates in a chamber under the bark. The life cycle completes in 22–32 months (Rahman & Khan 1942).

Host Plants: Aliius nepaleusis, Juglans regia, Quercus incana, Walnut, Salix tetrasperma, Tremo amboinensis and Parlowina tomentosa (Beeson 1941).

Remarks: B. horsfieldi characterized by the presence of smoky or grayish pubescence on black elytra with multi striped whitish longitudinal pubescence bands are present on middle of each elytron. Mesepimeron covered with whitish pubescence leaving a narrow triangular mark.
uncovered near the juncture of mesepisternum. Lateral lobes of apical tegmen of male genitalia are narrow, long and less jointed from their base to each other. *Batocera lineolata* is closely related species possesses reddish-brown or dark brown elytra covered with brownish pubescence with cloudy striped longitudinal whitish yellow pubescence band on each elytron. Mesepimeron covered with dense whitish pubescence without leaving a narrow triangular mark. Lateral lobes of apical tegmen are broad and their basal half jointed to each other. The median lobe of male *B. horsfieldi* is broad at base as compared to *B. lineolata* (Ponpinij 2011; Ying et al. 2012).

20. *Batocera rufomaculata rufomaculata* (De Geer, 1775) (Image 20)


*Cerambyx rubiginosus* Voet, 1778 *La Haye Bakh.* 2: 14

*Cerambyx cruentatus* Gmelin, 1790 *Lipsiae Beer* 13, 1, 4: 1863

*Batocera rufomaculata* m. *flavescens* Breuning 1950

*Longicornia* 1: 519


*Cerambyx rubus* = *rubiginosus* Voet, 1778, Thomson 1858 *Arch. Ent.* 1: 456

*Cerambyx rubus* = *rufomaculatus* Degeer, 1775, Thomson 1858 *Arch. Ent.* 1: 456

*Batocera diana* Nonfried, 1892 *Deutsche Ent. Z.* 2: 276


*Batocera rufomaculata* Rigout, 1981 *Sciences Nat.* 86

*Batocera rufomaculata* Chalumeau & Tournoult, 2005

*Pensoft Publ.*: 141

*Batocera rufomaculata* Sakenin et al., 2011 *Calodema* 143: 7


*Batocera numitor Newman, 1842* *The Entomologist* 1, 17: 275

*Batocera ajax* Thomson, 1858 *Arch. Ent.* 1: 455

*Batocera ajax* = *ajax* Dejean, 1837, Thomson, 1858

*Arch. Ent.* 1: 455

*Batocera ferruginea* Thomson, 1858 *Arch. Ent.* 1: 456

*Batocera numitor titana* Thomson 1859 *Bailliere*: 82

*Batocera javanica* Thomson, 1859 *Bailliere*: 83

*Batocera ioki* Kriesche, 1915 *Arch. f. Naturg.* 80A: 11: 143

*Batocera numitor* var. *sumatrensis* Aurivillius, 1922

*Coleopt. Cat.* 73: 126

*Batocera numitor* var. *palawanica* Kriesche, 1928

*Deutsche Ent. Z.*: 47


Distribution: Himalayan India, India, Java, Nepal, Palaearctic China, Subtropical China, Sulawesi, Sumatra, Thailand, Vietnam

Biological: The beetle makes its appearance from July to August. The eggs are laid in wounds or on the bark having no strength to resist the tunneling. The grub bores into the stem and become full grown in March than it pupates for three months. The life cycle is annual. The beetle was studied by Stebbing (1914) under the name of *Batocera titana* (Beeson 1941).

Host Plants: *Anthocephalus cadamba*, *Hodgsonia heteroclita*, *Mangifera indica*, *Ochroma lagopus*, *Sterculia villosa* (Beeson 1941); *Alstonia spp.*, *Ceiba pentandra* (Bhasin et al. 1958)

22. *Apriona germarii germarii* (Hope, 1831) (Image 22)


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Aprilona deyrollei Kaup, 1866 Einige Ceramby.: 7.
Aprilona germarii Stebbing, 1914 Indian For. Ins.: 371.
Aprilona germarii Huang et al., 2009 Les Cahiers Magellanes 94: 8 (4).
Lamia germarii = cribrota Thomson, 1878, Jiroux 2011
Les Cahiers Magellanes NS 5: 59.
Lamia germarii = deyrollei Kaup, 1866, Jiroux 2011, Les
Cahiers Magellanes NS 5: 59.
Aprilona germarii Hussain 2012 J. Amer. Sci. 8, 8: 961.
Specimens examined: CHF/2015/266, male, 12.iv.2010,
light trap, Pasighat (elevation 150m), Arunachal Pradesh,
India, coll. Mantu; CHF/2015/267, female, 21.v.2009, light
trap, Basar (elevation 575m), Arunachal Pradesh, India,
coll. T. Riba.
Distribution: Bhutan, Himalayan India, India, Nepal
Biological habits: Both pupae and beetles are found in
the middle of June. Adults lay eggs on the bark of the stems.
The young grubs start eating on the bark and then enter
into the heartwood and tunnel up and down (Stebbing 1914) In Andhra Pradesh, A. germarii appeared in July–
August, feeding on the bark of the top stem portion of 2–3
cm diameter of the crown (Kulkarni 2010).
Host Plants: Mulbery, Morus indica, eucalyptus.

23. Coptops aedificator (Fabricius, 1793) (Image 23)
Lamia ambulator Fabricius, 1775 Korte, Flensburgi and
Lipsiae 30: 171.
Cerambyx fuscus Olivier, 1792 Paris Pancaucque Imp.
Lib. 7: 462.
Cerambyx villica Olivier, 1792 Paris Pancaucque Imp.
Lib. 7: 468.
Lamia aedificator Fabricius, 1793 Hafniae, Profit 1 (2):
275.
Cerambyx fuscus Olivier, 1795 Coleopteres, Imp. de
Lanneau Paris 4: 83.
Lachnia (Coptops) parallela Audinet-Serville, 1835 Ann.
Soc. Ent. Fr. (1) 4: 64.
Lamia aedificator = calliginosus Dejean, 1837,
Thomson 1858 Arch. Ent. 2 : 177
Coptops aedificator Thomson, 1858 Arch. Ent. 2: 177.
Lamia aedificator = bidens Fabricius, Thomson 1858
Arch. Ent. 2: 177
Forsk. 29 (2): 30.
Phymasterna inhambanensis Bertoloni, 1876 n. Syn. by
Coptops fuscus Quedenfeldt, 1883 Ber. Ent. Zeitschrift
Coptops aedificator Breuning, 1939 Novit. Entomol.
Lamia aedificator Zimsen, 1964 Copenhagen,
Munksgaard: 169.
Coptops aedificator Delahaye, 2009 Les Cahiers
Magellanes 96: 16.
Coptops aedificator Vitali, 2011 Entomol. Africana 16,
1: 8.
Specimens examined: CHF/2015/269, female,
26.iv.2010, Pomegranate, East siang (elevation 170m),
Arunachal Pradesh, India, coll. Henuka; CHF/2015/270,
female, 28.iii.2010, mango, Pasighat (elevation 150m),
Arunachal Pradesh, India, coll. Subhash; CHF/2015/271,
male, 08.iv.2009, light trap, Pasighat (elevation 150m),
Arunachal Pradesh, India, coll. Mantu.
Distribution: Cameroon, Central Africa R., Dibouti,
Ethiopia, Gabon, Ivory Coast, Kenya, Malawi, Namibia,
Nigeria, R.D. Congo, R.P. Congo, Senegambia, Senegal,
Saudi Arabia, Tanzania, Uganda, Zambia and India including
northeastern region.
Biological habits: Larvae of this species feed on the inner bark,
and the damage they do to the sapwood is only superficial,
for even the pupal cells are constructed almost entirely
in the bark (Beeson & Bhatia 1939; Fraser 1949). The
emergence hole is circular, but usually somewhat ragged.
Emergence occurs more or less throughout the year,
although the main period in India is in June. The life cycle
normally lasts a year.
Host Plants: More than 50 subtropical forest trees
(Beeson & Bhatia 1939). Fraser (1949) records this species
from Afzelia. Duffy (1953a) reported from Artocarpus sp.
Dawah et al. (2013) observed on mango as host in Saudi
Arabia.

24. Acalolepta cervina (Hope, 1831) (Image 24)
1: 27.
Hist. 4, 15: 64.
Haplohammus cervinus Gahan, 1894 Ann. Museo
Civico di Storia Nat. (2) 14: 36.
Dihammus cervinus Gressitt, 1951 Longicornia 2: 399.
Acalolepta cervina Hua et al., 2009 Sun Yat–sen Univ. Press: 330
Distribution: Myanmar, Laos, China, India including
North Eastern region, Korea, Japan, Vietnam, Laos, Myanmar, Nepal.

Biology: The life cycle is annual with a long larval period (Beeson 1941). Adults feed on the bark of the twigs. The female lays eggs on the bark by making a slit or incision with the help of mandibles. The newly hatched larva makes tunnels in the cambium, later penetrating deeper in the wood resulting in the abnormal callus like growth or bulging base formed known as canker around the wounded portion of the trunk.

Host Plants: Clerodendron sp., Tectona grandis, Gmelina arborea, Adina cardifolia, Anthocephalus chinensis, Anthocephalus cadamba, Camellia thea, Clerodendron infortunatum, Buddleia madagascarensis, chinensis, Anthocephalus, Camellia thea, Gmelina arborea, Adina cardifolia, Anthocephalus

25. Epepeotes uncinatus Gahan, 1888 (Image 25)
Epepeotes salvazai Pic, 1925 Mel. exot. Ent. 43: 18.
Specimen examined: CHF/2015/275, female, 17.v.2010, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Mantu.
Distribution: Bhutan, Himalayan India, India, Myanmar, Nepal, Palaearctic China, Laos, Vietnam

Biology: Emergence occurs in April–June, mainly May. The life-cycle is annual. The prepupal tunnel and pupal chamber are carried deep into the wood. The beetle escapes by an imaginal tunnel from the base of the pupal chamber (Beeson 1941; Duffy 1968).

Host Plants: Crateva unilocularis, Ficus carica, F. elastica, F. religiosa, Morris indica, M. laevigata, Terminalia myriocarpa (Beeson 1941).

26. Glenea (Stiroglenea) spilota Thomson, 1860 (Image 26)
Specimen examined: CHF/2015/277, male, 01.iv.2011, forest weeds, Pasighat (elevation 160m), Arunachal Pradesh, India, coll. Mantu.
Distribution: India, Himalayan India including Arunachal Pradesh, Nepal

Biology: The life-cycle is annual with the beetle emergence in April–July (April 16%, May 68%, June 15%) (Beeson 1941). It lays eggs on the bark, on hatching the grub bores into the bast and feeds on sapwood, eating out ramifying galleries. It is not found on freshly felled trees (Stebbing 1914). Lefroy (1909) confirmed that the larvae are found abundantly in the decaying trunk.

Host Plants: Bombax malabaricum and Sterculia villosa, the other species of Glenea attack on Zanthoxylum rhetsa and Bombax ceiba (Mathew 1982).

27. Imantocera penicillata (Hope, 1831) (Image 27)
Cerambyx plumosus = penicillata Hope, 1831, Thomson, 1864 Mem. Soc. R. Sci. Liege. 19: 82
Imantocera penicillata Thomson 1857 Arch. Ent. 1: 188.


Distribution: Bangladesh, Bhutan, Himalayan India, India, Laos, Malayan Peninsula, Myanmar, Nepal, Palaearctic China, Subtropical China, Thailand, Vietnam

Biology: Unknown

Host Plants: Ficus religiosa (Beeson 1941) and citrus.

28. Macrochenus guerinii (White, 1858) (Image 28)

Macrochenus guerinii Hua, 2002 Zhongshe (Sun Yat–sen) Univ. Press, Guangzhou 2: 213.


Distribution: Subtropical China, North and North

Biology: Emergence occurs in April–May. The pupal chamber is vacated by the beetle through an imaginational tunnel from its lower end (Beeson 1941).

Host Plants: *Bombax malabaricum*, *Ficus elastica*, *F. religiosa*, *Lagerstroemia flos–reginae* (*Lagerstroemia speciosa*), *Stereospermum chelonoides* (Beeson 1941).

29. **Nupserha nigriceps** Gahan, 1894 (Image 29)


Specimen examined: CHF/2015/288, male, 05.iv.2010, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Mantu.

Distribution: India, Nepal, Subtropical China, Yunnan, Sumatra

Biology: Unknown

Host Plants: Unknown

30. **Stibara bicolor** Thomson, 1857 (Image 30)

*Stibara bicolor* Thomson, 1857 *Arch. Ent.* 1: 147

*Stibara bicolor* Thomson, 1860 *Paris*: 61

*Stibara bicolor* m. *nigrita* Breuning, 1950


*Stibara bicolor* m. *parateatriventris* Breuning, 1960

*Stibara bicolor* m. *subnitida* Breuning, 1960

*Stibara bicolor* m. *thomsoni* Breuning, 1960

Specimens examined: CHF/2015/286, male, 22.vi.2010, forest weeds, Pasighat (elevation 180m), Arunachal Pradesh, India, coll. Mantu.

Distribution: North East India, Himalayan India, Taiwan

Biology: The adult beetle girdles the stem at two levels before it starts oviposition. This causes withering, drooping and death of the portion above the lower girdle to a length varying from 5–50 cm thus resulting in loss of fibre yield. Girdling causes suspension of unidirectional vertical growth, and this is followed by the appearance of a number of side branches, which are of little value from the point of view of fibre (Dutt 1956; Dutt 1961).

Host Plants: Jute, *Corchorus olitorius* and *C. capsularis* (Dutt 1952; ICJC 1958).

31. **Obereopsis obscura obscura** Breuning, 1957 (Image 31)


Distribution: Nilgiri Hills, Tamil Nadu, The species first time reported in Arunachal Pradesh in the year 2012 during the course of the present study.

Biology: Unknown

Host Plants: Unknown

32. **Oleneamptus bilobus bilobus** (Fabricius, 1801) (Image 32)


*Oleneamptus bilobus* m. *madeccassa* Breuning, 1940 *Novit. Entomol.* 11, 66–71: 555.


*Oleneamptus bilobus* m. *dahlii* Breuning, 1940 *Novit. Entomol.* 11, 66–71: 556.


*Oleneamptus serratus* Breuning, 1940 *Novit. Entomol.* 11, 66–71: 556.


*Oleneamptus bilobus lacteoguttatus* Dillon & Dillon,
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Biology: In northern India the life-cycle is annual with an extended emergence-period from May to November (May 20%, June 36%, July 21%, August 9%); a portion of the brood may be prolonged to the second year but if the wood dries out considerably these belated individuals do not survive. The grubs generally bore into the sapwood in the early instars and subsequently tunnel into the heartwood (Beeson 1941). According to Stebbing (1914), it appears to affect old decaying trees and not reported in young, green and healthy trees.

Host Plants: Artocarpus hirsutus, A. blumei, A. incises and Lagerstroemia microcarpa, (Mathew 1982), Ficus rumphii, F. glomerata, F. raxburghii, Morus indica, and Jackfruit. Lefroy (1909) mentioned that this beetle is common in pakur, gular and other Ficus sp. in the plains.

33. Olenecamptus indianus (Thomson, 1857) (Image 33)

Authades indianus Thomson, 1857 Arch. Ent. 1: 192.


Olenecamptus albolineatus Pic, 1916 Mel. exot. Ent. 17 : 5.


Olenecamptus indians ab. salweeni Breuning, 1940 Novit. entomol. 11, 66–71: 545.


Distribution: India including eastern Himalaya, Malayan Peninsula, Myanmar, Nepal, Seychelles, subtropical China, Taiwan, Thailand, Vietnam.

Biology: The life-cycle of this sapwood borer is annual in north India with emergence in May– August (50% in June, 44% in July) (Beeson 1941; Duffy 1968).

Host Plants: Anogeissus acuminata, A. latifolia, Lagerstroemia calyculata, Phyllanthus emblica, Randia dumetorum, Terminalia bellerica, T. tomentosa (Beeson 1941).

34. Pterolophia (Hylobrotus) tuberculatrix (Fabricius, 1781) (Image 34)

Lamia tuberculator Fabricius, 1781 Bohn Hamburghi et Kilonii 1 : 224.
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Inst. Rech. sc. Tana.-Ts

Breuning, 1957

7894

23, A, 4: 1093.

2013

2000

dry stems and climbers (Beeson 1941; Duffy 1968).

annual but may be prolonged to the second or third year in

dry stems and grooves the sapwood.  The life-cycle is

month of the year but mainly in June–July (June 21%,

July 56%, August 11%).  The larva tunnels in thin barked

stems and grooves the sapwood.  The pupal chamber is

also constructed on the sapwood surface.  The life-cycle is


Pterolophia (Hylobrotus) Breuning, 1957 Inst. Rech. sc. Tana.-Ts. 4: 299


Specimen examined: CHF/2015/299, male, 23.iv.2013, forest ground, Rengging (elevation 300m), Arunachal Pradesh, India, coll. Madhu.

Distribution: India, first time reported in Arunachal Pradesh during present study, Ivory Coast, Kenya, Madagascar, Maldives Island, Mascarene Island, South Africa, Sri Lanka, Tanzania, Maldive, Comoros.

Biolog]: Unknown for P. tuberculatrix. Moreover, Pterolophia appears to be a minor pest from the agricultural point of view and its outbreaks can be easily controlled. In more recent years, there have been a few studies on the biology and host plants of Pterolophia species found elsewhere (Desmier et al. (1990, 1991), Zhan et al. (1996), Yamazaki & Takakjura (2003)).

Host Plants: Tectona grandis, other species of Pterolophia attacking Coconut, Cocos nucifera, Populus sp., Araucaria cunninghamii, Coffea arabica, Theobroma cacao, Citrus aurantiifolia, Saccharum officinarum, Campnosperma brevipediolata (Hawkeswood 2011).

35. Pterolophia occidentalis Schwarzer, 1931 (Image 35)


Distribution: Ghana, India, Himalayan India including Arunachal Pradesh

Biolog]: Adult emergence occurs in nearly every month of the year but mainly in June–July (June 21%, July 56%, August 11%). The larva tunnels in thin barked stems and grooves the sapwood. The pupal chamber is also constructed on the sapwood surface. The life-cycle is annual but may be prolonged to the second or third year in dry stems and climbers (Beeson 1941; Duffy 1968).

Host Plants: Millettia auriculata, Acacia sp., Acrocarpus fraxinifolius, A. hirsuta, Bauhinia vahlii, Cedaria javanensis, Dalbergia paniculata, Engelhardtia celebrensis, Ficus religiosa, Lagerstroemia parviflora, Lannea grandis, Mallotus philippinensis, Mangifera indica, Myristica attenuata, Pterocarpus marsupium, Spatholobus roxburghii, Terminalia paniculata, Vitis araneosa, Wistaria sp.

36. Thylactus simulans Gahan, 1890 (Image 36)


Distribution: India, Arunachal Pradesh, Myanmar, Thailand, Vietnam, China

Biolog]: Not studied, although some preliminary study was done by Zhang & Zuo (1986) (original not seen).

Host Plants: Catalpa sp., Exbucklandia populnea (Beeson 1941) and Paulownia.

37. Pseudonemophas versteegii (Ritsema, 1881) (Image 37)


Monochamus albescens Pic, 1920 Mel. exot. Ent. 32: 2.

Monochamus glabronotatus Pic, 1934 Mat. Etud. Longic. 11, 2: 34.

Monochamus albescens var. subuniformis Pic, 1934 Mat. Etud. Longic. 11, 2: 34.


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Biological: The female beetles lay their eggs beneath the bark of the tree trunk by making a cut with their mandibles. The eggs are not laid on the trunk above one meter height from ground level. The frequency of egg laying per day per female varies from 0 to 11 eggs with the mean egg deposition frequency of 2.90 eggs per female. Initially the larvae feed under the bark and then enter the centre of the trunk. Pupation takes place below the bark. The egg, larval and pupal periods last for 4 to 5, 240 to 310 and 23 to 39 days, respectively. The adults emerge from April to May (Saikia et al. 2011; Singh & Singh 2012).


38. Sarothrocerca lowii


Sarothrocerca lowi Aurivillius, 1922 Coleopt. Cat. 73: 78.


Distribution: India (Western to eastern Himalayan range), Pakistan (north), Afghanistan, Baluchistan, Iran, Turkmenistan, Turkistan, Uzbekistan, Tajikistan, Kyrgyzstan (south), Quetta, Tibet in mountainous areas up to an altitude of 2000m. In Arunachal Pradesh, it was reported by Sengupta & Sengupta 1981.

Biological: A. sarta requires two years to complete a generation (Ahmad et al. 1977; Vorontsov 1995). Adults usually leave their pupal cells in April or the beginning of May. Females lay eggs in slit-like niches in the bark of the trunk and the larger branches. A single female may lay a total of 240–270 eggs. The larvae start feeding and construct tunnels deep into the wood. At the end of July, grubs pulate in cells and about two weeks later adults appear. Adults stay in the pupation cells over winter and emerge the following spring.

Host plants: Ulmus minor, U. pumila, U. carpinifolia, Populus diversifolia, P. euphratica, P. talaris, P. alba, P. euroamericana, Salix acmophylla, S. turanica, S. oongarica, S. tetrasperma, Platanus orientalis and P. acerifolia, Malus pumila and Juglans regia are the preferred hosts. It has also been known to attack other species of Ulmus, Populus, Salix, Platanus, Malus, Prunus, Pyrus, Juglans, Quercus, Betula, Fraxinus, Acer, Morus, Gleditsia, Robinia, Elaeagnus and other broadleaf trees (Thakur 2000; Afsaneh et al. 2011).

40. Hoplocerambyx spinicornis


Host plants: Eucalyptus sp., Engelhardtia spicata, Stereospermum suaveolens.

Hoplocerambyx morosus Pascoe, 1869 Trans. Ent. Soc.


Hoplocerambyx spinicornis Hayashi & Makihara, 1981

Images 33–49. 33 - Olenecamptus indianus; 34 - Pterolophia (Hylobrotus) tuberculatrix; 35 - Pterolophia occidentalis; 36 - Thylactus simulans; 37 - Pseudonemophas versteegii; 38 - Sarathroceras lowii; 39 - Aeolesthes sarta; 40 - Hoplocerambyx spinicornis; 41 - Chlorophorus annularis; 42 - Rhytidodera bowringii; 43 - Rhytidodera griseofasciata; 44 - Stromatium barbatum; 45 - Gnatoteca simplex; 46 - Xystrocera globosa; 47 - Xystrocera festiva; 48 - Neoplocaederus obesus; 49 - Neocerambyx grandis. © M.M. Kumawat
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Distribution: Afghanistan, Pakistan, Nepal, India, Bhutan, China, Myanmar, Thailand, Laos, Malaysia, Borneo, Indonesia (Sumatra, Java), Philippines (Mindanao, Luzon, Benguet, Negros).

Biology: The beetle emerges from June to August, coinciding with the rains. The gravid female lays eggs singly in cracks and crevices of the bark of unhealthy, fallen trees, dead trees and live trees also. The newly hatched larva starts feeding under the bark and gradually moves down to the sapwood by making tunnels. The larval period completes in 4–7 months. The fully grown larva returns to the peripheral region and excavates a chamber for pupation. The larva remains here in prepupal stage for several months. It pupates for 2–3 weeks, the newly emerged beetle remains in the chamber till the onset of rains (Thakur 2000). The borer ranks as the most injurious forest insect in India (Beeson 1941; Thakur 2000).

Host Plants: Shorea assamica, S. obtusa, S. robusta, Duabanga sonneratioides, Hevea brasiliensis.

41. Chlorophorus annularis (Fabricius, 1787) (Image 41)

Callidium annularis Fabricius, 1787 Mant. Ins. 1: 156.

Clytus annularis Fabricius, 1801 Syst. Eleuth. 2: 352.


Callidium bidens Wever, 1801 Obs. Ent. p. 90.


Distribution: North America, Oceania, South America, Australia, Micronesia, Hawaii Islands, India, Myanmar, Siam, China, Malaya Peninsula, New Guinea, Japan, East Indies.

Biology: Oviposition occurs on cut bamboo which has already lost a certain amount of sap. The first instar larvae bore into the tissues of the walls of the bamboo, making irregular excavations which are packed with powdery wooden particles and frass. The galleries are not delimited by the nodes. The mature larva excavates a cell in the wood in which it pupates. Adults emerge from May to September but principally in June (Stebbing 1914; Duffy 1953b). It is a native of Asia (Duffy 1953a).


42. Rhytidodera bowringii White, 1853 (Image 42)


Distribution: Arunachal Pradesh, India, Subtropical China, Nepal, Myanmar, Thailand, Laos, Vietnam

Biology: Eggs are laid in batches of 6–8 on living shoots and branches of mango trees over 8–10 years old. On hatching the larva enters the branches and feed on sapwood that is kept clean of wood dust. The adults emerge from June to August. Larval and pupal periods are 260–310 and 30–50 days, respectively.

Host Plants: Mango,cashew nuts

43. Rhytidodera griseofasciata Pic, 1912 (Image 43)

Rhytidodera griseofasciata Pic, 1912 L’ Echange Rev. Linn. 28 (326): 16.

Rhytidodera griseofasciata Lobl & Smetana, 2010 Cat. Palaearctic Coleopt.-6, Apollo Books: 162.

Specimen examined: CHF/2015/330, male, 01.iv.2010, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Hokivi.

Distribution: China from Yunnan province. The species
was first time reported from India (Arunachal Pradesh) during the present study.

**Biology:** Unknown

**Host Plants:** Unknown

**44. Stromatium barbatum** Fabricius, 1775 (Image 44)
*Callidium barbatum* Fabricius, 1775 Syst. Ent.: 189
*Callidium* (Callidium) *tranquebaricus* Gmelin, 1790
*Callidium variolosum* Fabricius, 1798 Pratf Storch Hafniae: 149.
*Callidium funestum* Boisd, 1835 Voy. d'Astrolabe 2: 481
*Stromatium barbatum* Castelnau, 1840 P. Dumenil 2: 452.

*Stromatium barbatum* Gahan, 1906 Fauna Brit. India Col. 1: 114
*Stromatium barbatum* Aurivillius, 1912 Coleopt. Cat. 39: 73
*Stromatium barbatum* Stebbing, 1914 Ind. For. Ins.: 291

*Stromatium barbatum* Hayashi, 1979 Ent. Rev. 33(1/2): 86

Specimens examined: CHF/2015/331, male, 03.vi.2010, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Bilin Maying; CHF/2015/332, female, 01.xii.2008, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Madhu.

**Distribution:** India, Andaman, Sri Lanka, Myanmar, Nepal, Mauritius, Bourbon, Madagascar, Bangladesh.

**Biology:** *Stromatium barbatum* is primarily a pest of packing cases, seasoned timber, furniture, plywood, and wood work in buildings. It also attacks bamboos. This species has been known to attack over 300 tree species. The female beetle lays eggs on the bark. The newly hatched larva feeds under the bark until it matures enough. The larvae while excavating in the wood, throws out coarse dust, frass and wood fibres from the boring (Thakur 2000).

**Host Plants:** Specimen examined: CHF/2015/334, male, 01.iv.2013, packing cases, seasoned timber, furniture, plywood, and wood work in buildings. It also attacks bamboos.

**45. Gnatholea simplex** Gahan, 1890 (Image 45)
*Gnatholea simplex* Gahan, 1906 Fauna Brit. India Col.: 111.


Specimen examined: CHF/2015/334, male, 01.iv.2013, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. B. Mibang.

**Distribution:** Arunachal Pradesh, Sikkim, Darjeeling, Assam, Burma, Ruby Mines, Mandalay and Prome, Tharawaddy, Sri Lanka

**Biology:** The life-cycle of this sapwood borer is annual which gets prolonged up to three years under dry conditions. Adult emergence takes place during May–August, mainly in May (Beeson 1941; Duffy 1968).

**Host Plants:** *Hardwickia binata, Albizia odoratissima, Millettia pinnata, Pongamia glabra, Shorea robusta.*

**46. Xystrocera globosa** (Olivier, 1795) (Image 46)
*Cerambix globosus* Olivier, 1795 Ent. (4) 67: 27.
*Callidium marginale* Goldfuss, 1805 Walther Erlangae 1805: 44.


*Xylotrechus globosa* Wang, 2003 [misspelling]
*Xystrocera globosa* mediovitticollis Hua, 2002 *Zhongshan (Sun Yat-sen) Univ. Press, Guangzhou*: 237.


**Distribution:** Europe and northern Asia, South and South-east Asia, Australasian to Oceanian

**Biology:** The larva initially feed beneath the bark, making cavities in the outer sapwood portion. As the larva grows, it penetrates deep into the wood resulting in formation of longitudinal galleries (Mathew 1982). Adult emergence occurs every month of the year but mainly in May, June and September. Larval period is variable and in some individuals may be prolonged for two years, while others of the same brood may develop in less than a year (Duffy 1953a).

**Host Plants:** *Albizia odoratissima, A. falcatoria, A. odoratissima, A. lebbek, A. lucida, A. moluccana, A. odoratissima, A. procera, A. stipulata, Bombax ceiba, Hardwickia cordifolia, Acacia catechu, A. modesta, A. auriculiformis, A. magnif, Acrocarpus fraxinifolius,*
*Bauhinia acuminata*, *Grewia tilaefolia*, *Xyilia dolabriformis*, *Paraserianthus faleatarios* (Beeson 1941; Nair 2000).

47. *Xystrocera festiva* Thomson, 1861 (Image 47)


Distribution: India, Burma, Karenee, Sumatra, Java, Borneo, China, Hainan, Yunnan, Java, Malaysia.

Biology: Almost similar to that of *X. globosa*.

Host Plants: *Acacia* spp., *Paraserianthus faleatarios*, *Albizia lebbek*, *Tectona grandis* (Nair 2000).

48. *Neoplocaederus obesus* (Gahan, 1890) (Image 48)


*Plocaederus obesus* Gahan, 1906 *Fauna Brit. India Col.* 1: 121


*Neoplocaederus obesus* Lobl & Smetana, 2010 *Cat. Palaeartic Coleopt.-6, Apollo books:* 161.

Specimens examined: CHF/2015/343, male, 05.v.2013, light trap, Pasighat (elevation 150m), Arunachal Pradesh, India, coll. Oni.

Distribution: Sri Lanka, India including northeastern region, Arunachal Pradesh, Andaman and Nicobar, Bangladesh, Myanmar, Thailand, Vietnam, Laos, China, Taiwan, Bhutan.

Biology: The female beetle lays 40–50 eggs in the live tissues or in the crevices of the bark at the collar region. The eggs hatch out as tiny grubs which bore into the fresh tissues of the bark, feed on the sap wood and make tunnels in broad and irregular directions and reached in roots. The grubs feed inside the tissues for 3–6 months. The pupal period lasts for 3–4 months. Adult emergence occurs from January–May depending upon the climatic conditions or coinciding with pre monsoon rains. It has one generation in a year (Meshram 2009; Vasanthi & Raviprasad 2013).

Host Plants: *Anacardium occidentale*, *Boswellia serrata*, *Buchanania lanzan*, *Bombax malabaricum*, *Bombax heptaphyllum*, *Butea monosperma*, *B. frondosa*, *Caryota urens*, *Cedrela toona*, *Celtis pentandra*, *Cordia dichotoma*, *Dractomelon dao*, *Eriodendron anfractusum*, *Garuga pinnata*, *Gmelina arborea*, *Kydia calycina*, *Lannea coromandelica*, *Magnifera indica*, *Odina wodier*, *Odina sp.*, *Protium serratum*, *Pterocarpus marsupium*, *Salmalia malabarica*, *Shorea robusta*, *Spondias mangifera*, *Sterculia colorata*, *S. urens*, *S. villosa* and *Terminalia tomentosa* (Duffy 1968; Stebbing 1914).

49. *Neocerambyx grandis* Gahan, 1891 (Image 49)


Distribution: Allahabad, Assam, Arunachal Pradesh (reported first time during the course of the present study), China, Laos.

Biology: Unknown

Host Plants: Unknown

CONCLUSIONS

A total 49 species of the coleopteran family Cerambycidae were recorded during the study, out of which subfamily Lamiinae included 28 species, Cerambycinae 11 species and Prioninae 10 species. *Rhitydoder griseofasciata* Pic is reported for the first time from India whereas seven other species are reported for the first time in Arunachal Pradesh, northeastern India. The observations indicate that Arunachal Pradesh is a rich spot for entomological fauna. Most of the area is densely covered by deciduous and evergreen forests. A long
term survey covering maximum habitats over different seasons would be required at the earliest to explore and document the entomological wealth of the region. All the cerambycids are primary pests of forest trees and timber products which cause huge economic losses in the region. Considering the lack of studies on the wood borer insects in Arunachal Pradesh, present findings have much significant for understanding insect biodiversity in the region and providing baseline data for further research programmes.

REFERENCES


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