Bostrichidae and Ptinidae: Ptininae (Insecta: Coleoptera) type collection at National Forest Insect Collection, Forest Research Institute, Dehradun (India)

Jerzy Borowski¹,* and Sudhir Singh²

¹Department of Forest Protection and Ecology, SGGW, ul. Nowoursynowska 159/34, 02-776 Warsaw, Poland
²Forest Entomology Division, Forest Research Institute, New Forest, Dehradun - 248 006, Uttarakhand, India

¹,²³E-mail address: jerzy_borowski@sggw.pl, sudhirs@icfre.org, ssandot2@gmail.com

* Corresponding author

ABSTRACT

The paper discusses the type-specimens of the family Bostrichidae and nomenclotypical subfamily Ptininae of Ptinidae deposited at National Forest Insect Collection, Forest Research Institute (NFIC-FRI) Dehradun, India. For each species the type locality, number of descriptive material and remarks (including geographical distribution) are given. Type-specimens, together with the respective labels, are shown on photographs. Five species of bostrichids – Sinoxylon gloriosus n. syn., Xylopertha dunensis n. syn., Xyloprista fisheri n. syn., Xylopsocus distinctus n. syn., and Paraxylogenes pistaciae n. syn. – have been synonymized.

Keywords: Insecta, Coleoptera, Bostrichidae, Ptinidae, types, India, Dehradun, Forest Research Institute, new synonym
1. INTRODUCTION

National Forest Insect Collection (NFIC) housed at the Forest Entomology Division of Forest Research Institute (FRI) in Dehradun, India, is one of the richest and oldest (more than hundred years old) insect collections of India. It was conceptualized by none other than Prof. A.D. Imms, who served as head of the Foret Entomology Division. NFIC is having a total of over three hundred thousand insects belonging to eighteen thousand authentically identified species. It is rich with holotypes and co-types of Indian subcontinent and holds over 1,800 insect types. A significant part of the type collection is composed by types of order Coleoptera with about 1,244 species (Singh and Singh 2012).

The family Bostrichidae is one of the smaller families of the Coleoptera with more than 570 described species (Borowski and Węgrzynowicz 2007). Type-specimens of Bostrichidae are deposited in 56 scientific institutions dispersed all-over the world, but overwhelming majority of them in the collection of the leading specialist of the family, P. Lesne, in the National Museum of Natural History (MNHN) in Paris. The situation with Ptininae is similar: most (e.g. above 90% of tropical taxa) of the currently known 650 species have been described by the French entomologist M. Pic, and his types are also in the Paris museum. The types of 22 bostrichid and 1 ptinid species preserved in NFIC have been presented below.

2. MATERIALS AND METHODS

Original descriptions of Bostrichidae and Ptininae found in the NFIC collection have been consulted and analysed from papers – Bellés (1991), Damoiseau (1968), Lesne (1895, 1897, 1931, 1932, 1933, 1936, 1937, 1941), Pic (1897), Rai (1966, 1967, 1978) and Rai and Chatterjee (1963, 1964) – in various entomological journals, mainly from the first half of twentieth century. The digital photograph of the type specimen were taken by Automontage 3-D imaging system mounted on Olympus SZX-16 stereozoom microscope. The information on scientific name of the specimen, collection locality, collection date, collector name(s), etc. given for each species was taken from original hand written labels, and where ever necessary, corrected with original description or published articles. The pictures of these associated handwritten data labels of specimens have also been captured and placed along with the species photograph.

Used abbreviations

BMNH - British Museum Natural History, London, England
FRI - Forest Research Institute, Dehradun, India
NFIC - National Forest Insect Collection, Dehradun, India
MNHN - Museum Nationale d’Histoire Naturelle, Paris, France

3. RESULTS AND DISCUSSION

Bostrichidae Latreille, 1802
Lyctinae Billberg, 1820
Lyctini Billberg, 1820
1. *Lyctoxylon convictor* Lesne 1936

*Lyctoxylon convictor* Lesne 1936: 132

The species has been described from a series of specimens collected by J.C.M. Gardner in the vicinities of Dehradun, northern India. The NFIC contains one of the syntypes – see the photograph of the specimen and associated labels (Figs 1-2).

Element and geographical distribution. Oriental element; species known hitherto from the type-locality only, but there it seems rather common.

Trogodylini Lesne, 1921

2. *Cephalotoma ambiguum* (Lesne, 1936)

*Lyctoderma ambiguum* Lesne, 1936: 133

Species described in the genus *Lyctoderma* Lesne, later (Borowski and Węgrzynowicz 2012) synonymized with *Cephalotoma* Lesne. The description has been based on specimens collected in Rahatgaon near Hoshangabad (Madhya Pradesh State) and Bellary in the Madras Prov. (now Ballari, Karnataka State). NFIC hosts three ex. from the type-series and the photograph one of them with labels is presented in Figs 3-4.

Element and geographical distribution. Oriental element; species known hitherto only from the type-localities.

3. *Lyctoxylon auriculatum* Lesne, 1932

*Lyctoxylon auriculatum* Lesne, 1932: 654

Described from several localities in northern India (Uttarakhand) and Pakistan (Punjab). Three specimens of the type-series preserved in NFIC-FRI originated from both India and Pakistan (Punjab: Lahore). One of the type-specimen and labels are shown in Figs 5-6.

Element and geographical distribution. Oriental element; commonly occurring almost everywhere in India and eastern Pakistan.

Dinoderinae Thomson, 1863

4. *Dinoderus* (*Dinoderus*) *gardneri* Lesne, 1933

*Dinoderus Gardneri* Lesne, 1933: 258

Described from two specimens collected in September 1930 by J.C.M. Gardner from Sappal hills near Palghat, Madras Prov. (now Palakkad, Kerala State). The author, P. Lesne, retained one ex. in his collection and sent the other to Dehradun – now in NFIC-FRI. The photograph of the second type-specimen with labels is shown in Figs 7-8.

Element and geographical distribution. Oriental element; known from several localities in SW-India.

5. *Dinoderus* (*Dinoderus*) *perplexus* Lesne, 1932

*Dinoderus perplexus* Lesne, 1932: 651

The unique holotype, deposited in NFIC, has been caught by C.F.C. Beeson in Hillgrove, a railway station on way to Ooty, a famous hill station in Nilgiris Hill of Tamil Nadu State; its photograph with labels shown in Figs 9-10.

Element and geographical distribution. Oriental element; species known hitherto only from the type-locality.
6. *Stephanopachys himalayanus* Lesne, 1932

*Stephanopachys himalayanus* Lesne, 1932: 651

The species has been described from specimens collected by C.F.C. Beeson in mountaineous localities Tharoch and Kathian near Chakrata – Uttar Pradesh State (now Uttarakhand State); NFIC hosts eighteen of them. Photograph (with labels) of one syntype is shown in Figs 11-12.

Element and geographical distribution. Palaearctic element; known along the border areas between Palaeartctis and Orientalis, from various parts of the south slopes of Himalaya.


*Bostrychopsis roonwali* Rai, 1966: 576

The type-series – holotype, allotype and two paratypes – consists of specimens collected in the vicinity of Dehradun (Lachhiwala Range). The FRI collection contains two of them: holotype and allotype. Photograph of holotype with labels are presented in Figs 13-14.

Attention: the head and pronotum of the allotype (female) missing.

Element and geographical distribution. Oriental element, known only from the type-locality.

8. *Sinoxylon atratum* 1897

*Sinoxylon atratum* Lesne, 1897: 20

Described from the Canara (=Kanara) region of SW India, Karnataka State. The type specimens originated from the collections of L. Bedel, H.E. Andrewes, and others of MNHN. NFIC hosts one ex. from the Andrewes’ collection, photographed with labels in Figs 15-16.

Element and geographical distribution. Oriental element, common nearly everywhere in India.

9. *Sinoxylon beesoni* Lesne, 1931

*Sinoxylon Beesoni* Lesne, 1931: 102

Description has been based on 2 specimens caught by C.F.C. Beeson in Schwegu and Katha (Myanmar). The specimen from Katha is hosted in the MNHN collection, that from Schwegu in FRI. The photograph of the syntype and labels is shown in Figs 17-18.

Element and geographical distribution. Oriental element, known only from the type-localities.


*Sinoxylon gloriosus* Rai and Chatterjee, 1963: 15

The species described from 6 specimens, allegedly collected by the author of the description in Timli, Dehradun area. All of them – holotype, allotype and 4 paratypes – are preserved in the collection of FRI. In Figs 19-20 we show the photograph of the holotype with its labels.
Attention. Labels erroneous: the type-series belongs to a common West-African species: *Sinoxylon senegalense* Karsch., *i.e.* *S. gloriosus* n. syn. is a junior synonym of *S. senegalense*.

11. **Sinoxylon indicum** Lesne, 1897

*Sinoxylon indicum* Lesne, 1897: 22

Type-series consisted of numerous specimens from H.E. Andrewes’, L. Bedel’s and E. Allard’s collections. In FRI a syntype from the collection of Andrewes is preserved, whose photograph with labels is shown in Figs 21-22.

Element and geographical distribution. Oriental element, rather common from eastern Pakistan throughout India to Myanmar.

12. **Sinoxylon lycturum** Lesne, 1936

*Sinoxylon lycturum* Lesne, 1936: 136

Description has been based on 1 specimen caught by D.J. Atkinson in the Okkan Reserve in southern Myanmar. The holotype is preserved in the NFIC – see its photograph with labels (Figs 23-24).

Element and geographical distribution. Oriental element, known only from the type-locality.

13. **Sinoxylon marseuli** Lesne, 1895

*Sinoxylon Marseuli* Lesne, 1895: 177

*Sinoxylon Marseuli* convexicauda Lesne, 1932: 657

The nominotypical subspecies has been described from Indonesia, while NE-India (Assam) and N-Vietnam (Tonkin) are type-localities for *S. marseuli convexicauda*. NFIC houses a specimen collected by S.N. Chatterjee in Jiri Forests, Cachar area, Assam State. Its photograph with respective labels is shown in Figs 25-26.

Element and geographical distribution. Oriental element; *S. marseuli convexicauda* is known from scattered localities between E-India and Myanmar to Vietnam; nominotypical *S. marseuli marseuli* from Indonesia: Sumatra, Java and Celebes.

14. **Sinoxylon oleare** Lesne, 1932

*Sinoxylon oleare* Lesne, 1932: 655

Described from few specimens collected by C.F.C. Beeson in the vicinities of Dehradun. In the FRI collection three ex. of the type-series are deposited, a photograph of one of them with its labels is shown in Figs 27-28.

Element and geographical distribution. Oriental element, known hitherto only from the type-locality, where it seems rather common.

Xyloperthini Lesne, 1921

15. **Octomeristes minutissimus** (Lesne, 1932)

*Octodesmus minutissimus* Lesne, 1932: 662

Described from numerous specimens collected in India by C.F.C. Beeson (railway station on way to Ooty, a famous hill station in Nilgiris hills of Tamil Nadu State) and B.M. Bhatia (Mandla, Banjar, Kanha: Madhya Pradesh State). Six syntypes are in NFIC, one of them shown with labels in the photograph (Figs 29-30).

Attention: one of the type-specimens is damaged: head and pronotum missing.
Element and geographical distribution. Oriental element, rather common throughout India.

16. Paraxylin bifer (Lesne, 1932)
Xylin bifer Lesne, 1932: 659

The species has been described from 9 ex. from Nilambur in Kerala State of India (collections of C.F.C. Beeson and B.M. Bhatia), 1 from Tenasserim (now Taninthayi) in S-Myanmar and some caught by L.G.E. Kalshoven on Java. FRI houses 6 syntypes from Nilambur, one of them photographed with labels (Figs 31-32).

Element and geographical distribution. Oriental element, widely distributed probably all-over the Oriental Region, although not yet recorded from some countries.

17. Psicula heterogama Lesne, 1941
Psicula heterogama Lesne, 1941: 147

Described from the specimens collected by B. Sigh in Kalimpong and by S.N. Chatterjee near Jalpaiguri (both localities in NE-India: West Bengal State); the collection of FRI contains two types from Kalimpong. The photograph of syntype with the respective labels are shown in Figs 33-34.

Attention: One of the syntypes glued upside down.

Element and geographical distribution. Oriental element, very rarely found, hitherto known only from the type-localities.

18. Xylogenes sindicola Lesne, 1936
Xylogenes sindicola Lesne, 1936: 136

Type-series consisted of two specimens collected in Mirpur Khas, prov. Sindh (=Sind) in southern Pakistan, one of them is preserved in NFIC. The photograph (Fig. 35) shows it with the content of its labels (Fig. 36).

Element and geographical distribution. Palearctic element, known only from the type-locality. Members of the genus Xylogenes inhabit arid, hot, semidesertic habitats. X. sindicola represents species occurring in the western part of the Thar desert, the natural border-area between Palearctic and Oriental Regions.

19. Xylopertha dunensis Rai and Chatterjee, 1964 n. syn. of Xylopertha praeusta (Germar, 1817)
Xylopertha dunensis Rai and Chatterjee, 1964: 122

Seven specimens making the type-series have been allegedly collected in Dehradun by the author of the description; the allotype and one of the paratypes are in the NFIC – the photograph of paratype with respective labels is shown in Figs 37-38.

Attention: labeling erroneous – the description made based on specimens from Tulon, S-France, belonging to rather common species Xylopertha praeusta (Germar). So, X. dunensis n. syn. is a junior synonym of X. praeusta.

20. Xyloprista fisheri Rai, 1978 n. syn. of Xylomeira tridens (Fabricius, 1792)
Xyloprista fisheri Rai, 1978: 119

The species described from single specimen, allegedly collected by its author in Dhariwal, Punjab State, NW-India. Holotype is housed in FRI; its photography with attached labels is shown in Figs 39-40.
Attention: the specimen erroneously labelled, in fact origins from Middle America and belongs to a species of different genus: *Xylomeira tridens* (Fabricius). Therefore, *Xyloprista fisheri* n. syn. is a junior synonym of *Xylomeira tridens* (F.).

21. *Xylopertha reflexicauda* (Lesne, 1937)
*Xylonites reflexicauda* Lesne, 1937: 199
*Paraxylogenes pistaciae* Damoiseau, 1968: 4 n. syn.

Described from specimens received from C.F.C. Beeson, who collected them in Sukkur, prov. Sindh (=Sind), S-Pakistan, and some originating from Rafssindjan (=Rafsanjan) in central Iran. NFIC houses 32 ex. of the type-series, all from Sukkur. A photograph of one of these syntypes with its labels is shown in Figs 41-42.

Attention: type-specimens of *Xylonites reflexicauda* Lesne, 1937, from MNHN and FRI have been compared to the holotype, allotype and paraotype of *Paraxylogenes pistaciae* Damoiseau, 1968, housed in BMNH – all of them belong to *Xylopertha* (=*Xylonites*) *reflexicauda* (Lesne): *Paraxylogenes pistaciae* n. syn. is a junior synonym of *Xylopertha reflexicauda*.

Element and geographical distribution. Palaearctic element, rarely found but widely distributed from Israel, Lebanon and Syria through Iraq, Iran and Afghanistan to eastern Pakistan. Like the representatives of *Xylogenes* Lesne inhabits arid, hot areas, mainly semideserts.

22. *Xylopsocus distinctus* Rai, 1967 n. syn. of *Xylopsocus castanoptera* (Fairmaire, 1850)
*Xylopsocus distinctus* Rai, 1967: 140

Species described from the holotype, allotype and 2 paratypes allegedly collected by its author in Jhajra near Dehradun – all of them preserved in FRI. The photograph of holotype and its labels is shown in Figs 43-44.

Attention: Labels erroneous, specimens originating in fact from Philippines (see the label of the holotype) and belonging to a different, common species *Xylopsocus castanoptera* (Fairmaire), i.e. *X. distinctus* n. syn. is a junior synonym of *X. castanoptera*.

Ptinidae Marsham, 1802
Ptininae Marsham, 1802

1. *Hanumanus andrewesi* (Pic, 1897)
*Ptinus* (*Bruchus*) *Andrewesi* Pic, 1897: 26

Described from six specimens collected by H.E. Andrewes in the vicinities of Belgaum (=Belagavinow), SW-India. Two of the syntypes the author of the description retained for him collection, the larger part of which is now in the MNHN in Paris. From these X. Bellés (1991) selected a lectotype (male). In NFIC one specimen of the type-series (paralectotype) is preserved – Figs 45-46.

Element and geographical distribution. Oriental element, known only from southern India.

Acknowledgements

We would like to thank to Dr. Roman Hołyński for help in translation of the text. The first author would like to thank to Prof. H. Zybura (Forest Faculty of Warsaw University of Life Sciences) for the financial suport related research efforts at FRI in Dehradun, India.
References


(Received 02 January 2017; accepted 25 January 2017)
Fig. 1.

Fig. 2.

Figs 1-2. *Lyctoxylon convictor* Lesne; (1) the syntype, dorsal view; (2) associated labels of the syntype.
Figs 3-4. *Lyctoderma ambiguum* Lesne; (3) the syntype, dorsal view; (4) associated labels of the syntype.
Figs 5-6. *Trogoxylon auriculatum* Lesne; (5) the syntype, dorsal view; (6) associated labels of the syntype.
Figs 7-8. *Dinoderus Gardneri* Lesne; (7) the syntype, dorsal view; (8) associated labels of the syntype.
Figs 9-10. *Dinoderus perplexus* Lesne; (9) the holotype, dorsal view; (10) associated labels of the holotype.
Figs 11-12. *Stephanopachys himalayanus* Lesne; (11) the syntype, dorsal view; (12) associated labels of the syntype.
Figs 13-14. *Bostrychopsis roonwali* Rai; (13) the holotype, dorsal view; (14) associated labels of the holotype.
Figs 15-16. *Sinoxylon atratum* Lesne; (15) the syntype, dorsal view; (16) associated labels of the syntype.
Figs 17-18. *Sinoxylon Beesoni* Lesne; (17) the syntype, dorsal view; (18) associated labels of the syntype.
Figs 19-20. *Sinoxylon gloriosus* Rai and Chatterjee; (19) the holotype, dorsal view; (20) associated labels of the holotype.
Fig. 21.

Fig. 22.

Figs 21-22. *Sinoxylon indicum* Lesne; (21) the syntype, dorsal view; (22) associated labels of the syntype.
Figs 23-24. *Sinoxylon lycturum* Lesne; (23) the holotype, dorsal view; (24) associated labels of the holotype.
Figs 25-26. *Sinoxylon Marseuli convexicauda* Lesne; (25) the syntype, dorsal view; (26) associated labels of the syntype.
Figs 27-28. *Sinoxylon oleare* Lesne; (27) the syntype, dorsal view; (28) associated labels of the syntype.
Figs 29-30. *Octodesmus minutissimus* Lesne; (29) the syntype, dorsal view; (30) associated labels of the syntype.
Figs 31-32. Xylion bifer Lesne; (31) the syntype, dorsal view; (32) associated labels of the syntype.
Figs 33-34. *Psicula heterogama* Lesne; (33) the syntype, dorsal view; (34) associated labels of the syntype.
**Figs 35-36.** *Xylogenes sindicola* Lesne; (35) the syntype, dorsal view; (36) associated labels of the syntype.
Figs 37-38. *Xylopertha dunensis* Rai and Chatterjee; (37) the paratype, dorsal view; (38) associated labels of the paratype.
Figs 39-40. *Xyloprista fisheri* Rai; (39) the holotype, dorsal view; (40) associated labels of the holotype.
Figs 41-42. *Xylonites reflexicauda* Lesne; (41) the syntype, dorsal view; (42) associated labels of the syntype.
Figs 43-44. *Xylopsocus distinctus* Rai; (43) the holotype, dorsal view; (44) associated labels of the holotype.
Figs 45-46. *Ptinus andrewesi* Pic; (45) the paralectotype, dorsal view; (46) associated labels of the paralectotype.