

Checklist of Platypodidae (Coleoptera: Curculionoidea) from Taiwan

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ABSTRACT

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The family Platypodidae includes over 1400 species worldwide. Thirty-eight species have been recorded from Taiwan. We exclude 3 doubtful species *Crossotarsus concinnus* Blandford, *Dinoplatypus calamus* (Blandford), and *D. luniger* (Motschulsky) which have been listed in other publications of the Taiwan fauna. The following species are new combinations: *D. flectus* (Nijima & Murayama), *D. kusukusensis* (Murayama), *Treptoplatypus severini* (Blandford), and *T. xylographus* (Schedl), all from the genus *Platypus*. The checklist provides both distribution data and hosts, and indicates further taxonomic studies which are required. Species with potential economic importance are noted. The faunal elements and host preferences of the Platypodidae in Taiwan are briefly discussed.

(Key words: Platypodidae, Taiwan, host plant, distribution)

INTRODUCTION

The Platypodidae is a family of wood-boring weevils of considerable economic importance in tropical and subtropical countries. Their gallery systems often penetrate deeply into recently felled timber, and their associated symbiotic fungi cause staining of the wood

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around the galleries, leading to a downgrading of timber quality. In addition, some species can attack living trees, especially if the tree is stressed or unhealthy. Such attacks are often unsuccessful in that the beetle is unable to breed, but the value of the timber is still adversely affected by the holes and staining. Browne⁽¹⁰⁾ and Schedl⁽⁴²⁾ provide reviews of the biology of the family, and Beaver⁽²⁾ reviewed its association with fungi.

The familial status of the Platypodidae within the Curculionoidea^(45, 50, 51) has recently been called into question⁽²⁴⁾, but we prefer to maintain it until further molecular and other studies have been made.

The earliest descriptions of the Platypodidae from Taiwan were made by Strohmeyer^(48, 49). During the Japanese occupation of the country, extensive studies of the Taiwanese Platypodidae were made by Murayama^(25, 26, 27, 29, 31). It should be noted that although the titles of these papers refer to the Platypodidae of Formosa, many of the species records are from localities in Japan and Korea. Little work was done after this until Nobuchi⁽³⁴⁾ reviewed the earlier taxonomic work, and provided a checklist of 32 species recorded from Taiwan. Since that checklist was published, there have been a number of taxonomic changes^(45, 51), and several more species have been described, some from timber imported into Japan from Taiwan^(13, 15, 16, 17). The present paper provides an up-to-date checklist of all species recorded from Taiwan, with information on their distribution and host plants. It indicates where further taxonomic studies are needed, and the various faunal elements (FE) are reviewed. These are indicated in the checklist by a figure in parentheses (FE x) following the distribution. Further references to the species may be found in a catalog of the Scolytidae and Platypodidae⁽⁵²⁾ and its supplements^(8, 9). The classification used follows Wood⁽⁵¹⁾. Because type depositories and type localities are listed in Wood and Bright⁽⁵²⁾, they are not repeated here.

The distribution and host records are extracted from an extensive card catalog maintained by the senior author, and have been checked against the data in the Wood and Bright's⁽⁵²⁾ catalog and its supplements. In the checklist, an asterisk (*) indicates a species endemic to Taiwan.

Family PLATYPODIDAE 小蠹蟲科

Subfamily TESSEROCERINAE Blandford, 1895 刺小蠹蟲科

Tribe DIAPODINI Strohmeyer, 1914 刺小蠹族

Genus *Diapus* Chapuis, 1865 刺小蠹屬

Diapus Chapuis, 1865, Monogr. Platypides: 43, 329.

Type species: *Diapus quadrispinatus* Chapuis, 1865, Monogr. Platypides: 332.

1. *Diapus aculeatus* Blandford, 1894 刺小蠹

Diapus aculeatus Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 139.

Distribution: India, Bhutan, Vietnam, Japan, and Taiwan^(3, 34, 37). (FE 3)

Hosts: Unknown in Taiwan; elsewhere, *Castanea* spp. and *Quercus* spp. (Fagaceae).
 Remarks: This is an oligophagous species normally restricted to the Fagaceae. There is a single record from *Alnus incana* (Betulaceae) in northern India (Uttar Pradesh) ⁽⁴¹⁾.

2. *Diapus quinquespinatus* Chapuis, 1865 斜刺小蠹

Diapus quinquespinatus Chapuis, 1865, Monogr. Platypides: 334.

Distribution: Tropical Africa, Madagascar, Asia from India to Indonesia, New Guinea, Australia, Pacific islands ⁽⁵²⁾, and Taiwan ^(6, 25, 34). (FE 6)

Hosts: Unknown in Taiwan; elsewhere, polyphagous ^(42, 52).

Remarks: A species of economic importance in Malaysia ⁽¹¹⁾.

3. *Diapus truncatus* Nijjima & Murayama, 1934 截尾斜刺小蠹

Diapus truncatus Nijjima & Murayama, 1934, J. Faculty Agric. Hokkaido Imp. Univ. 35: 143.

Diapus spatulifer Browne, 1977, Entomol. Mon. Mag. 112: 101. Synonymy: Beaver, 2000, Serangga 5: 255-6.

Distribution: India, Taiwan ^(3, 31, 34, 37). (FE 3)

Hosts: Unknown in Taiwan; elsewhere, polyphagous ⁽¹²⁾.

Subfamily PLATYPODINAE Erichson, 1847 小蠹亞科

Tribe PLATYPODINI Erichson, 1847 小蠹族

Genus *Crossotarsinulus* Schedl, 1972 擬斜尾小蠹屬

Crossotarsinulus Schedl, 1972, Monogr. Familie Platypodidae: 85.

Type species: *Crossotarsus sauteri* Strohmeyer, 1913, Entomol. Blätt. Biol. Syst. Käfer 9: 164.

4*. *Crossotarsinulus sauteri* (Strohmeyer, 1913) 絕種擬斜尾小蠹

Crossotarsus sauteri Strohmeyer, 1913, Entomol. Blätt. Biol. Syst. Käfer 9: 164.

Crossotarsinulus sauteri (Strohmeyer). Schedl, 1972, Monogr. Familie Platypodidae: 85, 87.

Distribution: Taiwan ^(1, 49). (FE 1)

Hosts: Unknown.

Remarks: This species, the only one in its genus, appears not to have been found again since its description. It needs reinvestigation, and may belong in the genus *Platypus* Herbst.

Genus *Crossotarsus* Chapuis, 1865 斜尾小蠹屬

Crossotarsus Chapuis, 1865, Monogr. Platypides: 23, 44.

Type species: *Platypus wallacei* Thomson, 1858, Arch. Entomol. 1: 343.

5. *Crossotarsus emancipatus* Murayama, 1934 退尾斜尾小蠹

Crossotarsus emancipatus Murayama, 1934, J. Faculty Agric. Hokkaido Imp. Univ. 35: 138.

Distribution: Japan and Taiwan ⁽²⁷⁾ [as *C. terminatus* Chapuis] ^(2, 31, 32, 34). (FE 2)

Hosts: Taiwan: *Glochidion hongkongense*, *Mallotus paniculatus* (Euphorbiaceae), and *Wendlandia paniculata* (Rubiaceae)⁽²⁷⁾ [as *C. terminatus*]⁽³²⁾; elsewhere in the Fagaceae and Lauraceae⁽³⁵⁾. Presumably polyphagous.

6. *Crossotarsus externedentatus* (Fairmaire, 1849) 外齒棘尾長小蠹

Platypus externedentatus Fairmaire, 1849, Preprint from Rev. Mag. Zool. Pure Appl. Ser. 2(2): 78.

Crossotarsus externedentatus (Fairmaire). Chapuis, 1865, Monogr. Platypides: 81.

Distribution: Tropical E and S Africa, Madagascar, Indian Ocean islands, Oriental region to New Guinea, Pacific islands⁽⁵²⁾, and Taiwan^(6, 25, 34, 37). (FE 6)

Hosts: Taiwan: *Carica papaya* (Caricaceae), *Cinnamomum camphora* (Lauraceae), *Leucaena glauca* (Leguminosae), *Cryptomeria japonica* (Taxodiaceae)⁽²⁵⁾, *Brownea* sp. (Leguminosae), and *Prunus mume* (Rosaceae) (new records); elsewhere strongly polyphagous^(6, 10, 42, 40).

Remarks: A species of economic importance in plantations, because it sometimes attacks living trees^(3, 11).

7. *Crossotarsus flavomaculatus* Strohmeier, 1912 斑點棘尾長小蠹

Crossotarsus flavomaculatus Strohmeier, 1912, Entomol. Mitt. 1: 40.

Distribution: Japan, Java, the Philippines, W. Malaysia, and Taiwan^(4, 25, 31). (FE 4)

Hosts: Taiwan: *Quercus glauca* (Fagaceae)⁽²⁵⁾; elsewhere, none recorded.

8*. *Crossotarsus formosanus* Strohmeier, 1912 臺灣棘尾長小蠹

Crossotarsus formosanus Strohmeier, 1912, Entomol. Mitt. 1: 41.

Distribution: Taiwan^(1, 25, 27, 34, 48). (FE 1)

Hosts: Taiwan: *Casuarina equisetifolia* (Casuarinaceae), *Glochidion hongkongense*, *Mallotus paniculatus*, *M. philippinensis* (Euphorbiaceae), *Beilschmiedia erythrophloia*, *Cinnamomum camphora*, *Neolitsea konishii* (Lauraceae), *Ficus gibbosa* (Moraceae), *Eugenia formosana* (Myrtaceae), *Wendlandia paniculata* (Rubiaceae), and *Styrax suberifolium* (Styracaceae)^(25, 27).

Remarks: This species may be based on large specimens of *Crossotarsus externedentatus* (Fairmaire).

9. *Crossotarsus niponicus* Blandford, 1894 日本棘尾長小蠹

Crossotarsus niponicus Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 130.

Distribution: Japan, Taiwan^(2, 25, 31, 34). (FE 2)

Hosts: Taiwan: none recorded; elsewhere, polyphagous⁽³⁵⁾.

10. *Crossotarsus piceus* Chapuis, 1865 黑棘尾長小蠹

Crossotarsus piceus Chapuis, 1865, Monogr. Platypides 56.

Distribution: Indonesia (Aru Is., Moluccas, Sumatra), New Guinea, the Philippines, and Taiwan^(5, 25). (FE 5)

Hosts: Unknown.

11*. *Crossotarsus rengetensis* Niiijima & Murayama, In Murayama, 1925 樟蝽屬小蠹

Crossotarsus rengetensis Niiijima & Murayama, In Murayama, 1925a, J. Coll. Agric. Hokkaido Imp. Univ. 15: 208.⁽⁵⁾

Distribution: Taiwan^(1, 25, 28, 34). (FE 1)

Hosts: Taiwan: *Lithocarpus cuspidata* (Fagaceae), *Cinnamomum camphora*, *C. micranthum*, *Cryptocarya chinensis*, *Neolitsea konishii*, *N. longipaniculata* (Lauraceae), *Melia azedarach* (Meliaceae), *Gordonia axillaris*, and *Ternstroemia japonica* (Theaceae)^(25, 28).

Remarks: This species seems to show some preference for trees of the Lauraceae⁽²⁸⁾.

12. *Crossotarsus simplex* Murayama, 1925 樟蝽屬小蠹

Crossotarsus simplex, Murayama, 1925b, J. Coll. Agric. Hokkaido Imp. Univ. 15: 231.

Distribution: Japan, Korea, and Taiwan^(2, 26, 34, 35). (FE 2)

Hosts: Taiwan: none recorded; elsewhere, polyphagous^(19, 35).

Remarks: We have found no actual reference to specimens collected in Taiwan in Murayama's papers, but Nobuchi⁽³⁵⁾ notes that he examined specimens from "Formosa".

13. *Crossotarsus wallacei* Thomson, 1858 樟蝽屬小蠹

Platypus wallacei Thomson, 1858, Arch. Entomol. 1: 343.

Crossotarsus wallacei (Thomson). Chapuis, 1865, Monogr. Platypides: 53.

Distribution: India, through Southeast Asia to New Guinea, and Taiwan^(4, 25, 34). (FE 4)

Hosts: Taiwan: none recorded; elsewhere, polyphagous^(10, 39).

Remarks: Considered to be of economic importance by Browne^(10, 11), because of the large size of the holes made in timber, but not known to attack healthy trees.

Genus *Dinoplatypus* Wood, 1993 莫拉蝽屬小蠹

Dinoplatypus Wood, 1993, Gt. Basin Nat. 53: 273.

Type species: *Platypus cupulatus* Chapuis, 1865, Monogr. Platypides: 278.

14. *Dinoplatypus flectus* (Niiijima & Murayama, 1931), New Combination 莫拉蝽屬小蠹

Platypus lepidus formosanus Niiijima & Murayama, in Murayama, 1925a, J. Coll. Agric. Hokkaido Imp. Univ. 15: 214. (preoccupied)

Platypus lepidus flectus Niiijima & Murayama, in Murayama, 1925a, J. Faculty Agric. Hokkaido Imp. Univ. 30: 197.

Platypus murayamaensis Schedl, 1941, Entomol. Blätt. Biol. Syst. Käfer 37: 43. (unneeded replacement name)

Platypus flectus Nijjima & Murayama, Wood and Bright, 1992, Gt. Basin Nat. Mem. 13: 1140.

Distribution: China and Taiwan^(2, 25, 29, 34, 37). (FE 2)

Hosts: Taiwan: 'oak' (Fagaceae), *Cinnamomum camphora*, *C. micranthum* (Lauraceae), *Lagerstroemia subcostata* (Lythraceae), *Psidium guaiacum*[?] (Myrtaceae), *Diplospora viridifolia* (Rubiaceae), *Styrax formosanum* (Styracaceae)^(25, 29, 34, 37). The species is polyphagous.

Remarks: This species is clearly related morphologically to other species in the genus *Dinoplatypus*, such as *D. calamus* (Blandford) and *D. hamatus* (Blandford), and is accordingly transferred to the genus.

15*. *Dinoplatypus kusukusensis* (Murayama, 1956), New Combination 高仁' 葉鞘毒長小蠹
Platypus kusukusensis Murayama, 1956, Coleopt. Bull. 10: 13.

Distribution: Taiwan^(1, 33, 34). (FE 1)

Host: *Cryptomeria japonica* (Taxodiaceae)⁽³³⁾.

Remarks: Murayama's description and figures leave no doubt that the species should be transferred to *Dinoplatypus*.

16. *Dinoplatypus lepidus* (Chapuis, 1865) 縷網葉鞘毒長小蠹

Platypus lepidus Chapuis, 1865, Monogr. Platypides: 282.

Dinoplatypus lepidus (Chapuis). Wood, 1993, Gt. Basin Nat. 53: 279.

Distribution: Seychelles, Sri Lanka through Southeast Asia to Australia, and Taiwan^(4, 25, 34). (FE 4)

Hosts: Taiwan: *Cryptomeria japonica* (Taxodiaceae)⁽²⁵⁾; elsewhere, polyphagous⁽⁵²⁾.

Remarks: This species has frequently been imported to Japan in timber but is not native there.

Genus *Platypus* Herbst, 1793 長小蠹屬

Platypus Herbst, 1793, Natursyst. Insekten 5: 128.

Type species: *Bostrichus cylindrus* Fabricius, 1792, Entomol. Syst. 1⁽²⁾: 364.

17*. *Platypus arisannensis* Murayama, 1934 阿比' 長小蠹

Platypus arisannensis Murayama, 1934, J. Faculty Agric. Hokkaido Imp. Univ. 35: 135.

Distribution: Taiwan^(1, 31, 34). (FE 1)

Hosts: None recorded.

Remarks: This species may be a synonym of *Platypus lewisi* Blandford.

18. *Platypus beaveri* Browne, 1975 斧頭長小蠹

Platypus beaveri Browne, In Beaver and Browne, 1975, Oriental Ins. 9: 306.

Diapus formosanus Nijjima & Murayama, In Murayama, 1925, J. Coll. Agric. Hokkaido Imp.

Univ. 15: 217. Synonymy: Beaver, 2000, Serangga, 5: 256. (*Platypus formosanus* preoccupied).

Platypus keelungensis Browne, 1985, Kontyu 53: 294. Synonymy: Beaver, 2000, Serangga, 5: 256.

Distribution: Thailand and Taiwan^(3, 17, 25, 29). (FE 3)

Hosts: Taiwan: *Lithocarpus konishii*, *Quercus* sp. (Fagaceae), and *Psidium guaiacum* (Myrtaceae)^(17, 25, 29); elsewhere: *Castanopsis* sp. and *Quercus* sp. (Fagaceae)⁽⁴⁾.

Remarks: This species shows a preference for trees of the family Fagaceae.

19. *Platypus contaminatus* (Blandford, 1894) 汚穢小蠹

Crossotarsus contaminatus Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 131.

Platypus contaminatus (Blandford). Schedl, 1972, Monogr. Familie Platypodidae: 200.

Distribution: India, China, Japan, and Taiwan^(3, 34, 35). (FE 3)

Hosts: Taiwan: *Prunus mume* (Rosaceae) (new record); elsewhere, polyphagous⁽³⁵⁾.

20. *Platypus curtus* Chapuis, 1865 刺鼻小蠹

Platypus curtus Chapuis, 1865, Monogr. Platypides: 261.

Distribution: India through Southeast Asia to the Philippines and Indonesia, China, and Taiwan^(4, 34). (FE 4)

Hosts: Taiwan: none recorded; elsewhere, polyphagous^(39, 52), but with a preference for trees in the family Dipterocarpaceae⁽¹⁰⁾.

Remarks: The only record of this species from Taiwan is of specimens taken in Japan from imported timber⁽³⁴⁾. Its establishment in Taiwan needs to be confirmed.

21*. *Platypus dasycauda* Browne, 1980 刺鼻小蠹

Platypus dasycauda Browne, 1980, Kontyu 48: 376.

Distribution: Taiwan^(1, 13). (FE 1)

Hosts: None recorded.

Remarks: The species was described by Browne from specimens imported to Japan in timber from Taiwan.

22. *Platypus formosanus* Nijijima & Murayama, 1925 臺灣小蠹

Platypus formosanus Nijijima & Murayama, In Murayama, 1925, J. Coll. Agric. Hokkaido Imp. Univ. 15: 215.

Platypus taiwansis Schedl, 1960, Entomol. Blätt. Biol. Syst. Käfer 56: 111. (unneeded replacement name).

Distribution: Japan and Taiwan^(22, 25, 29, 34). (FE 2)

Hosts: Taiwan: *Sapium discolor* (Euphorbiaceae), *Psidium guaiacum* (Myrtaceae), and *Styrax formosanum* (Styracaceae)^(25, 29); elsewhere: *Quercus* sp. (Fagaceae) and *Ficus* sp. (Moraceae)⁽³⁵⁾. Presumably polyphagous.

23*. *Platypus horishensis* Murayama, 1928 浦里小蠹

Platypus horishensis Murayama, 1928, J. Coll. Agric. Hokkaido Imp. Univ. 19: 284.

Distribution: Taiwan^(1, 16, 27, 28, 34, 37). (FE 1)

Hosts: *Castanopsis kawakamii*, *Lithocarpus brevicaudata*, and *L. rhombocarpus* (Fagaceae)⁽²⁷⁾.

Remarks: This species has a preference for, and may be largely restricted to the Fagaceae.

24. *Platypus indicus* Strohmeier, 1910 印地小蠹

Platypus indicus Strohmeier, 1910, Entomol. Blätt. Biol. Syst. Käfer 6: 131.

Distribution: India, Burma, Thailand, Vietnam, and Taiwan^(3, 14, 34, 43, 46). (FE 3)

Hosts: Taiwan: 'oak' (Fagaceae)⁽⁴³⁾; elsewhere, polyphagous⁽⁶⁾.

25. *Platypus kiushuensis* Murayama, 1936 霧島小蠹

Platypus kiushuensis Murayama, 1936, Tenthredo 1: 145.

Distribution: Japan and Taiwan^(2, 35). (FE 2)

Hosts: Taiwan: none recorded; elsewhere: *Quercus gilva* and *Quercus* sp. (Fagaceae)⁽³²⁾.

Remarks: There is too little information available on host trees to be sure whether there is a true preference for the Fagaceae.

26. *Platypus koryoensis* (Murayama, 1930) 朝鮮小蠹

Crossotarsus koryoensis Murayama, 1930, J. Chosen Nat. Hist. Soc. 11: 28.

Platypus koryoensis (Murayama). Schedl, 1972. Monogr. Familie Platypodidae: 219.

Distribution: Far E. Russia, Korea, and Taiwan^(2, 31, 34, 37). (FE 2)

Hosts: Taiwan: *Quercus* sp.⁽³¹⁾; elsewhere: *Acer* sp. (Aceraceae), *Carpinus laxiflora* (Carpinaceae), *Quercus acutissima*, *Q. aliena*, and *Q. serrata* (Fagaceae)⁽¹⁹⁾.

Remarks: Japan was included in the distribution⁽⁵²⁾, but we have found no published records. Most of the host records are from the Fagaceae, and a preference for that family is indicated.

27. *Platypus lewisi* Blandford, 1894 萊氏小蠹

Platypus lewisi Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 134.

Distribution: Bhutan, India, China, Korea, Japan, and Taiwan^(3, 25). (FE 3)

Hosts: Taiwan: none recorded; elsewhere, polyphagous^(35, 52), but with a clear preference for the Fagaceae.

28*. *Platypus lunatulus* Browne, 1980 彎月小蠹

Platypus lunatulus Browne, 1980, Kontyu 48: 497.

Distribution: Taiwan⁽¹⁾. (FE 1)

Hosts: *Quercus* sp. (Fagaceae)⁽¹⁶⁾.

Remarks: This species was described by Browne from specimens intercepted in Japan in timber from Taiwan. Browne⁽¹⁸⁾ recorded the species from timber imported from New

Guinea to Japan, but we believe this record is doubtful, and have excluded New Guinea from the distribution. Wood and Bright⁽⁵²⁾ list the species as a junior synonym of *Platypus tayabasi* Schedl, with a reference to a paper by Wood⁽⁵¹⁾. This paper has never been published. We believe that the synonymy is unlikely to be correct, unless the range of variation included within *P. tayabasi* is considered to be extremely large. It seems more likely that a complex of species is involved, but further taxonomic studies are clearly required.

29. *Platypus modestus* Blandford, 1894 巧形小蠹

Platypus modestus Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 133.

Distribution: Japan and Taiwan^(2, 31, 34). (FE 2)

Hosts: Taiwan: none recorded; elsewhere, polyphagous^(35, 52).

30*. *Platypus niijimai* Murayama, 1931 雀ノ楮小蠹

Platypus niijimai Murayama, 1931, J. Faculty Agric. Hokkaido Imp. Univ. 30: 197.

Distribution: Taiwan^(1, 29, 31, 34, 37). (FE 1)

Hosts: *Psidium guaiacum* (Myrtaceae)⁽²⁹⁾.

Remarks: This species has been intercepted in Japan in timber imported from Taiwan.

31. *Platypus obtusipennis* (Schedl, 1939) 喙膠舌小蠹

Platypus obtusipennis Schedl, 1939, Arkiv. Zool. 31B⁽¹¹⁾: 2.

Distribution: India, Burma, and Taiwan^(3, 46). (FE 3)

Hosts: Taiwan: none recorded; elsewhere: *Dipterocarpus indicus* (Dipterocarpaceae)⁽⁴¹⁾.

32*. *Platypus octodentatus* Browne, 1985 八齒小蠹

Platypus octodentatus Browne, 1985, Kontyu 53: 294.

Distribution: Taiwan^(1, 17). (FE 1)

Host: *Quercus* sp. (Fagaceae)⁽¹⁷⁾.

Remarks: The species was described from specimens intercepted in timber imported to Japan from Taiwan.

33*. *Platypus querci* Browne, 1980 橡樹小蠹

Platypus querci Browne, 1980, Kontyu 48: 488.

Distribution: Taiwan^(1, 15). (FE 1)

Host: *Quercus* sp. (Fagaceae)⁽¹⁵⁾.

Remarks: The species was described from specimens intercepted in timber imported to Japan from Taiwan.

34. *Platypus quercivorus* (Murayama, 1925) 栗實小蠹

Crossotarsus quercivorus Murayama, 1925, J. Coll. Agric. Hokkaido Imp. Univ. 15: 229.

Crossotarsus sexfenestratus Beeson, 1937, Indian Forest Rec., N. S. Entomol. 3: 94. Synonymy:
Schedl, 1972, Entomol. Arb. Mus. G. Frey 23: 156.

Platypus quercivorus (Murayama). Schedl, 1972, Monogr. Familie Platypodidae: 217.

Distribution: India, Japan, Java, New Guinea, and Taiwan^(4, 35). (FE 4)

Hosts: Taiwan: none recorded; elsewhere, polyphagous, but with a preference for the Fagaceae^(21, 35).

Remarks: This species is currently causing extensive mortality of some species of oak (*Quercus* spp.) trees in Japan, attacking healthy trees, vectoring a pathogenic ambrosia fungus, and breeding for several generations within the same tree as it dies^(20, 22, 23, 35, 47). It is a species of major economic importance in Japan.

35*. *Platypus taiheizanensis* (Murayama, 1932) 大平山小點

Crossotarsus taiheizanensis Murayama, 1932, Trans. Nat. Hist. Soc. Formosa 22: 485.

Stenoplatypus taiheizanensis (Murayama). Schedl, 1935, Philippine J. Sci. 56: 401.

Platypus taiheizanensis (Murayama). Schedl, 1972, Monogr. Familie Platypodidae: 220.

Distribution: Taiwan^(1, 30, 31, 34). (FE 1)

Hosts: *Castanopsis kawakamii* (Fagaceae)⁽³⁰⁾.

Genus *Treptoplatypus* Schedl, 1939 管長小點屬

Treptoplatypus Schedl, 1939, Verh. VII. Int. Kongr. Entomol. Berlin (1938) 7: 401.

Type species: *Crossotarsus trepanatus* Chapuis, 1865, Monogr. Platypides: 75.

36. *Treptoplatypus severini* (Blandford, 1894), New Combination 災管長小點

Platypus severini Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 136.

Distribution: Japan and Taiwan^(2, 25, 34). (FE 2)

Hosts: Taiwan: none recorded; elsewhere, polyphagous⁽³⁵⁾.

Remarks: This species is related to *T. solidus* (Walker), and must be transferred to the genus *Treptoplatypus*.

37. *Treptoplatypus solidus* (Walker, 1859) 斜紋管長小點

Platypus solidus Walker, 1859, Ann. Mag. Nat. Hist. Ser. 3⁽³⁾: 261.

Treptoplatypus solidus (Walker). Wood, 1993, Gt. Basin Nat. 53: 279.

Distribution: Sri Lanka, India through Southeast Asia to Australia and Micronesia, Japan, Korea, and Taiwan^(4, 25, 29, 34, 35). (FE 4)

Hosts: Taiwan: *Psidium guaiacum* (Myrtaceae)⁽²⁹⁾; elsewhere, polyphagous⁽⁵²⁾.

38*. *Treptoplatypus xylographus* (Schedl, 1969), New Combination 松管長小點

Platypus xylographus Schedl, 1969, Kontyu 37: 216.

Distribution: Taiwan^(1, 36, 44). (FE 1)

Hosts: *Picea* sp. and *Pinus* sp. (Pinaceae)⁽⁴⁴⁾.

Remarks: This species was described by 2 specimens from timber imported to Japan. It clearly belongs in the genus *Treptoplatypus*.

DUBIOUS RECORDS

The following species have been recorded from Taiwan, but we were unable to find any voucher specimens. Their actual occurrence needs to be reconfirmed prior to including them in the ambrosia beetle fauna of Taiwan.

1. *Crossotarsus concinnus* Blandford, 1894 雙刺星長小蠹

Crossotarsus chapuisi Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 129. (preoccupied).

Crossotarsus concinnus Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 578.

Nobuchi⁽³⁵⁾ and Wood and Bright⁽⁵²⁾ include Taiwan in the distribution of this species, but Nobuchi's⁽³⁸⁾ checklist of Japanese Platypodidae restricts the distribution to Japan (Kyushu) only.

2. *Dinoplatypus calamus* (Blandford, 1894) 蠶毒黃刺星長小蠹

Platypus calamus Blandford, 1894, Trans. Entomol. Soc. Lond. 1894: 137.

Dinoplatypus calamus (Blandford). Wood, 1993, Gt. Basin Nat. 53: 279.

Taiwan is included in the distribution of the species by Schedl⁽⁴⁵⁾, Nobuchi^(35, 38), Choo and Woo⁽¹⁹⁾, and Wood and Bright⁽⁵²⁾, but it is not mentioned by Nobuchi⁽³⁴⁾ in his checklist of Taiwanese species, and we have seen no actual record from Taiwan.

3. *Dinoplatypus luniger* (Motschulsky, 1863) 迷月黃刺星長小蠹

Platypus luniger Motschulsky, 1863, Bull. Soc. Imp. Nat. Moscou 36: 510.

Dinoplatypus luniger (Motschulsky). Wood, 1993, Gt. Basin Nat. 53: 279.

Platypus caliculus Chapuis, 1865, Monogr. Platypides: 280. Synonymy: Wood, 1969, Gt. Basin Nat. 29: 160.

Schedl⁽⁴⁵⁾ (as *P. caliculus*) and Wood and Bright⁽⁵²⁾ include Taiwan in the distribution, but again we were unable to locate any actual record.

FAUNAL ELEMENTS

The 38 species of the Platypodidae from Taiwan are fairly easily divided into 6 faunal elements (FE). The system basically follows those of Beaver and Browne^(4, 5) and Bright⁽⁷⁾, with some modifications.

FE 1. Endemic species (13 species). Species are known only from Taiwan. Some of these are only known from timber imported to Japan from Taiwan, and their actual occurrence in Taiwan needs to be confirmed. A number of these species will doubtless be found to occur elsewhere in the region.

FE 2. Eastern Palearctic element (9 species). These species reach their southernmost distribution in Taiwan. They occur also in 1 or more of the following countries: China, Japan, Korea, and Russia (Far East provinces).

- FE 3. Indian element (7 species). This element includes species known from the Indian subcontinent (usually only in the north), whose ranges extend eastward across Asia to Taiwan, sometimes including China and Japan, but which are absent from Malaysia and Indonesia. The origin of the species is not certain, and many may have originated in the Indochinese area rather than in India.
- FE 4. Indomalaysian element (6 species). This element includes species which occur in both the Indian-Indochinese and Malaysian-Indonesian areas, but appear to have originated on the Asian side of Wallace's line.
- FE 5. Papuasian element (1 species). This element includes only *Crossotarsus piceus*, a species unknown to occur on the Asian mainland, but probably originating in the New Guinea/Moluccas area, East of Wallace's line. Its distribution suggests that it spread westwards through the Philippines to Taiwan.
- FE 6. Circumtropical element (2 species). This element includes only *Crossotarsus externedentatus* and *Diapus quinquespinatus*. Both these species are distributed from Africa, through the Oriental region to Australia and the Pacific islands.

HOST PREFERENCES

A majority of the species of Platypodidae are polyphagous (breeding in several to many different families of trees). For such species, the size and suitability of the host tree for the growth of the symbiotic fungi, on which the larvae depend for their food and development, are more important than its taxonomic affinity⁽²⁾. However, some species are oligophagous, that is, they show a strong preference for a particular host tree family, and rarely attack others. In the case of Taiwanese species, this family is almost always the Fagaceae. The following species show a distinct preference for this family: *Diapus aculeatus*, *Platypus beaveri*, *P. horishensis*, *P. koryoensis*, *P. lewisi*, *P. quercivorus*, and possibly *P. kiushuensis*. A single species, *Crossotarsus rengetensis*, seems to show a preference for the family Lauraceae. *Platypus curtus* shows a preference for the family Dipterocarpaceae outside Taiwan, but its hosts in Taiwan are not known. Because of the difficulty of finding suitable hosts in species-rich forests, host preferences are only likely to develop for hosts that are either common, and/or produce volatiles that make suitable trees easier to locate⁽¹⁾. In Taiwanese forests, the Fagaceae is the most common family of trees, while the Lauraceae, although less common, produces aromatic volatiles.

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摘 要

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全世界已知約有 1400 種以上的長小蠹蟲科昆蟲, 臺灣記錄有 38 種, 另有雅截尾長小蠹 (*Crossotarsus concinnus* Blandford)、蘆葦黃截尾長小蠹 (*Dinoplatypus calamus* (Blandford)) 及迷月黃截尾長小蠹 (*Dinoplatypus luniger* (Motschulsky)) 等三種作者並無法確認是否分佈於臺灣。本文將黃拱截尾長小蠹 (*Dinoplatypus flectus* (Nijima & Murayama))、高山黃截尾長小蠹 (*D. kusukusensis* (Murayama))、災管長小蠹 (*Treptoplatypus severini* (Blandford))、松管長小蠹 (*T. xylographus* (Schedl)) 等 2 屬 4 種自 *Platypus* 屬移出, 將種名予以重新組合。本研究之名錄除列出每一種之分佈修訂、全世界與臺灣之寄主記錄, 以及未來本科需要進一步探討的分類課題, 亦討論本科之經濟重要性及臺灣產長小蠹蟲相之組成與寄主偏好。

(關鍵詞: 長小蠹蟲科、臺灣、寄主、分佈)

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