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A Synopsis of the Scolytine Ambrosia Beetles of Thailand (Coleoptera: Curculionidae: Scolytinae)

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Abstract

The present state of knowledge of the scolytine ambrosia beetles of Thailand is summarised to provide a basis for future studies of the fauna and its economic importance in forestry, timber production and crop tree plantations. A checklist of the fauna is provided with information on local and world distribution, host trees, biology and taxonomy. Six faunal elements based on geographical distribution, and the host tree and altitudinal preferences of species are discussed. One hundred and sixty-one species are recorded from Thailand, 67 of them for the first time. The following new synonym is proposed: *Euwallacea wallacei* (Blandford) (= *Xyleborus barbatomorphus* Schedl **n.syn.**). The following new combinations are given: *Ambrosiophilus cristatulus* (Schedl), *Ambrosiophilus latisulcatus* (Eggers), *Beaverium dihingensis* (Eggers), *Beaverium lantanae* (Eggers) and *Immanus desectus* (Eggers) are transferred from their present position in *Ambrosiodmus*; *Ancipitis depressus* (Eggers) and *Ancipitis punctatissimus* (Eichhoff) are transferred from *Leptoxyleborus*; *Cyclorhipidion armipenne* (Schedl), *Cyclorhipidion inarmatum* (Eggers), *Euwallacea semiermis* (Schedl), *Fortiborus macropterus* (Schedl), *Microperus nudibrevis* (Schedl) and *Wallacellus minutus* (Blandford) are transferred from *Xyleborus*.

Key words: ambrosia beetles, biogeography, faunal synopsis, host preferences, new combinations, new records, new synonymy

Introduction

The Scolytinae is a subfamily (Alonso-Zarazaga & Lyal 2009) of bark and wood-boring weevils including more than 6 000 species. They are of considerable economic importance in both temperate and tropical forests. The majority of species attack dead or dying trees, but a few, often economically important, species attack apparently healthy trees and can cause die-back or mortality. It is likely that all species have an association with micro-organisms, including bacteria and fungi, and the latter can sometimes be pathogenic to the host trees (e.g. Klepzig & Six 2004, Hulcr & Dunn 2011, Six 2012, 2013, Ploetz *et al.* 2013). The bark beetles usually construct gallery systems in the phloem, and their larvae feed primarily on the phloem, but often also on associated fungi (e.g. Bleiker & Six 2007, Six 2012, 2013). The ambrosia beetles are wood-borers which are more intimately associated with symbiotic fungi upon which both adults and larvae feed in gallery systems constructed in the xylem. The majority of the ambrosia beetles have evolved special cuticular pockets (mycangia) in which the ambrosia fungi are transported by the newly emerged adults to the new breeding site (Beaver 1989). The mycangia may be associated with the mouthparts, or occur in the thorax or elytra, and their position is characteristic for each genus (Hulcr *et al.* 2007a). A few ambrosia beetles lack mycangia. They make use of the ambrosia fungi of other species in a relationship termed mycocleptism (Hulcr & Cognato 2010b).

The ambrosia beetle habit has evolved at least eleven times in different tribes of the Scolytinae (Beaver 1989, Hulcr *et al.* 2007b, Jordal & Cognato 2012). Five of these tribes occur in Thailand: Corthylini, Hyorrhynchini, Scolytoplatypodini, Xyleborini and Xyloterini. These can be divided into two groups differing in breeding system. In the first group (Corthylini, Hyorrhynchini except *Sueus*, Scolytoplatypodini and Xyloterini), the beetles are outbreeding, and there are approximately equal numbers of males and females in the population (Kirkendall 1983, 1993). The male and female meet and mate after dispersal to a new breeding site. In the second group (Xyleborini and *Sueus* in Hyorrhynchini), the beetles are inbreeding. Sib-mating occurs within the maternal gallery prior to dispersal, and only the female offspring disperse to new breeding sites (Kirkendall 1983, 1993). The sex ratio is strongly biased towards females. The males are usually dwarfed and have reduced eyes and reduced second pair of wings (Kirkendall 1993).

There are differences between the groups in the form and formation of the gallery system, and the way that the larvae develop. In the outbreeding species, both male and female parents participate in the construction of the gallery system. In the Scolytoplatypodini and Xyloterini (e.g. Schedl 1951, Kalshoven 1959, Beeson 1961, Browne 1961a, Kinuura & Hijii 1991), the female is responsible for the extension of the gallery, whilst the male, after mating, remains in the entrance, removing frass, and preventing the entrance of predators. The gallery system consists of fairly short branched tunnels, usually in one transverse plane. The female oviposits in separate egg niches in the roof and floor of the gallery. The larvae develop in individual barrel-shaped cells feeding on the ambrosia fungus growing on the walls of the cell, enlarging the cell as they grow, and dropping faeces into the maternal gallery, where they are removed by the parents. When fully grown the larva pupates in the cell with its

Indocryphalus intermedius (Sampson): Browne, 1970: 562.

Thai distribution: **N:** Chiang Mai. New to Thailand.

New records: **Chiang Mai**, Doi Inthanon NP, checkpoint 2, 18° 31.559' N, 98° 29.941' E, 1700 m, MT, various dates from 29.vi–13.ix.2006 (Y. Areeluck) (9).

Other distribution: Bhutan, India (Himachal Pradesh, W. Bengal), Myanmar, Nepal. (2)

Biology: Recorded from four different families and probably polyphagous (Beaver 2000). The gallery system resembles that of *Scolytoplatypus* (see above) with simply branched tunnels in one transverse plane. The eggs are laid in niches, and the larvae develop in separate cradles arranged in series above and below the main gallery (Schedl 1951, Beeson 1961).

Illustrations: D (Maiti & Saha 2009).

Doubtful records

We consider the following published records are doubtful and require confirmation.

Xyleborus canus Niisima (Hutacharn *et al.* 2007). This species is otherwise recorded only from Japan, and is apparently known only from the holotype (Niisima 1909).

Xyleborus torquatus Eichhoff (Schedl 1962a). This species is considered to be a synonym of *Xyleborus volvulus* (F.) (Wood & Bright 1992), a species which is largely neotropical. It seems likely that the single specimen determined by Schedl (1962) is actually a specimen of the closely similar species, *Xyleborus perforans* (Wollaston) (see above).

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References

- Abreu, R.L.S. de, Fonseca, C.R.V. da, Hurtado Guerrero, J.C. & Paula, E.V.C.M. de (2001) Preferência de vôo de nove espécies da família Scolytidae (Insecta: Coleoptera) na Amazônia Central. *Acta Amazonica*, 31, 61–68.
- Alonso-Zarazaga, M.A. & Lyal, C.H.C. (2009) A catalogue of family and genus group names in Scolytinae and Platypodinae with nomenclatural remarks (Coleoptera: Curculionidae). *Zootaxa*, 2258, 1–134.
- Atkinson, T.H. (2014) Bark and ambrosia beetle photos. Available from: <http://www.barkbeetles.info> (accessed 29 January 2014)
- Beaver, R.A. (1977) Bark and ambrosia beetles in tropical forests. *BIOTROP Special Publication*, No. 2, 133–147.
- Beaver, R.A. (1979a) Host specificity of temperate and tropical animals. *Nature*, 281, 139–141.
<http://dx.doi.org/10.1038/281139a0>
- Beaver, R.A. (1979b) Non-equilibrium 'island' communities. A guild of tropical bark beetles. *Journal of Animal Ecology*, 48, 987–1002.
<http://dx.doi.org/10.2307/4209>

- Beaver, R.A. (1984) The biology of the ambrosia beetle, *Sueus niisimai* (Eggers) (Col., Scolytidae) in Fiji. *Entomologist's Monthly Magazine*, 120, 99–102.
- Beaver, R.A. (1988) Biological studies on ambrosia beetles of the Seychelles (Col., Scolytidae and Platypodidae). *Journal of Applied Entomology*, 105, 62–73.
<http://dx.doi.org/10.1111/j.1439-0418.1988.tb00162.x>
- Beaver, R.A. (1989) Insect-fungus relationships in the bark and ambrosia beetles. In: Wilding, N., Collins, N.M., Hammond, P.M. & Webber, J.F. (Eds.), *Insect-fungus interactions*. Academic Press, London, pp. 121–143.
<http://dx.doi.org/10.1016/b978-0-12-751800-8.50011-2>
- Beaver, R.A. (1990) New records and new species of bark and ambrosia beetles from Thailand (Coleoptera: Scolytidae and Platypodidae). *Deutsche Entomologische Zeitschrift*, 37, 279–284.
<http://dx.doi.org/10.1002/mmnd.4810370408>
- Beaver, R.A. (1995a) New synonymy and taxonomic changes in Oriental and Australasian Scolytidae and Platypodidae (Insecta: Coleoptera). *Annalen des Naturhistorischen Museums in Wien*, 97B, 197–204.
- Beaver, R.A. (1995b) Additions and corrections to the bark and ambrosia beetle fauna of Fiji (Coleoptera: Scolytidae). *South Pacific Journal of Natural Science*, 14, 11–26.
- Beaver, R.A. (1999) New records of bark and ambrosia beetles from Thailand (Coleoptera: Scolytidae). *Serangga*, 4, 175–183.
- Beaver, R.A. (2000) The ambrosia beetle genus *Indocryphalus* Eggers (Coleoptera: Scolytidae): a new species from Peninsular Malaysia, new synonymy and a key to species. *Serangga*, 5, 165–179.
- Beaver, R.A. (2010) A review of the genus *Hadrodemius* Wood, with new synonymy and a key to species (Coleoptera: Curculionidae: Scolytinae). *Zootaxa*, 2444, 51–57.
- Beaver, R.A. (2011) New synonymy and taxonomic changes in bark and ambrosia beetles (Coleoptera: Curculionidae: Scolytinae, Platypodinae). *Koleopterologische Rundschau*, 81, 277–289.
- Beaver, R.A. & Browne, F.G. (1975) The Scolytidae and Platypodidae (Coleoptera) of Thailand. *Oriental Insects*, 9, 283–311.
<http://dx.doi.org/10.1080/00305316.1975.10434499>
- Beaver, R.A. & Browne, F.G. (1979) The Scolytidae and Platypodidae (Coleoptera) of Penang, Malaysia. *Oriental Insects*, 12, 575–624.
<http://dx.doi.org/10.1080/00305316.1978.10432538>
- Beaver, R.A. & Gebhardt, H. (2004) Notes on the tribe Hyorrhynchini (Col., Curculionidae, Scolytinae). *Serangga*, 9, 91–102.
- Beaver, R.A. & Gebhardt, H. (2006) A review of the Oriental species of *Scolytoplatypus* Schaufuss (Coleoptera, Curculionidae, Scolytinae). *Deutsche Entomologische Zeitung*, 53, 155–178.
<http://dx.doi.org/10.1002/mmnd.200600014>
- Beaver, R.A. & Hulcr, J. (2008) A review of the ambrosia beetle genus *Cryptoxyleborus* Schedl (Coleoptera: Curculionidae: Scolytinae). *The Coleopterists Bulletin*, 62, 133–153.
<http://dx.doi.org/10.1649/1026.1>
- Beaver, R.A., Kurahashi, H. & Goto, H. (2008) Taxonomic changes and new records of Japanese bark and ambrosia beetles (Coleoptera, Curculionidae, Scolytinae). *Elytra, Tokyo*, 36, 231–239.
- Beaver, R.A. & Liu, L.-Y. (2010) An annotated synopsis of Taiwanese bark and ambrosia beetles, with new synonymy, new combinations and new records (Coleoptera: Curculionidae: Scolytinae). *Zootaxa*, 2602, 1–47.
- Beaver, R.A. & Liu, L.-Y. (2013) A synopsis of the pin-hole borers of Thailand (Coleoptera: Curculionidae: Platypodinae). *Zootaxa*, 3646 (4), 447–486.
<http://dx.doi.org/10.11646/zootaxa.3646.4.7>
- Beaver, R.A. & Löytyniemi, K. (1991) Annual flight patterns and diversity of bark and ambrosia beetles (Col., Scolytidae and Platypodidae) attracted to bait logs in Zambia. *Journal of Applied Entomology*, 112, 505–511.
<http://dx.doi.org/10.1111/j.1439-0418.1991.tb01084.x>
- Beeson, C.F.C. (1929) Platypodidae and Scolytidae. *Insects of Samoa, part 4 Coleoptera*, Fasc. 4, 217–248.
- Beeson, C.F.C. (1930) The biology of the genus *Xyleborus* with more new species. *Indian Forest Records*, 14, 209–272.
- Beeson, C.F.C. (1961) *The ecology and control of the forest insects of India and the neighbouring countries*. Government of India, New Delhi, 1007 pp. + 36 pls.
- Biedermann, P.H.W., Klepzig, K.D. & Taborsky, M. (2009) Fungus cultivation by ambrosia beetles: behavior and laboratory breeding success in three xyleborine species. *Environmental Entomology*, 38, 1096–1105.
<http://dx.doi.org/10.1603/022.038.0417>
- Biedermann, P.H.W., Klepzig, K.D. & Taborsky, M. (2011) Costs of delayed dispersal and alloparental care in the fungus-cultivating ambrosia beetle, *Xyleborus affinis* Eichhoff (Scolytinae: Curculionidae). *Behavioral Ecology and Sociobiology*, 65, 1753–1761.
<http://dx.doi.org/10.1007/s00265-011-1183-5>
- Bigger, M. (1988) *The Insect Pests of Forest Plantation Trees in the Solomon Islands*. Overseas Development Natural Resources Institute, Chatham, 190 pp.
- Blandford, W.F.H. (1893) The Scolyto-platypini, a new subfamily of Scolytidae. *Transactions of the Entomological Society of London*, 1893, 425–442.
<http://dx.doi.org/10.1111/j.1365-2311.1893.tb02075.x>
- Blandford, W.F.H. (1894a) The rhynchophorous Coleoptera of Japan. Part III. Scolytidae. *Transactions of the Entomological*

- Society of London*, 1894, 53–141.
<http://dx.doi.org/10.1111/j.1365-2311.1894.tb02347.x>
- Blandford, W.F.H. (1894b) Notes on Scolytidae and their food plants. *Insect Life*, 6, 260–265.
- Blandford, W.F.H. (1895) A list of the Scolytidae collected in Ceylon by Mr. George Lewis, with descriptions of new species. *Annals and Magazine of Natural History*, Series 6, 15, 315–328.
<http://dx.doi.org/10.1080/00222939508677888>
- Blandford, W.F.H. (1896a) Descriptions of new Scolytidae from the Indo-Malayan and Austro-Malayan regions. *Transactions of the Entomological Society of London*, 1896, 191–228.
<http://dx.doi.org/10.1111/j.1365-2311.1896.tb00962.x>
- Blandford, W.F.H. (1896b) Contributions à la faune indo-chinoise. 16^e mémoire. *Annales de la Société Entomologique de France*, 65, 19–22.
- Blandford, W.F.H. (1898) On some Oriental Scolytidae of economic importance, with descriptions of five new species. *Transactions of the Entomological Society of London*, 1898, 423–430.
<http://dx.doi.org/10.1111/j.1365-2311.1898.tb03298.x>
- Bleiker, K. & Six, D.L. (2007) Dietary benefits of fungal associates to an eruptive herbivore: potential implications of multiple associates on host population dynamics. *Environmental Entomology*, 36, 1384–1396.
[http://dx.doi.org/10.1603/0046-225x\(2007\)36\[1384:dbofat\]2.0.co;2](http://dx.doi.org/10.1603/0046-225x(2007)36[1384:dbofat]2.0.co;2)
- Brader, L. (1964) Étude de la relation entre le scolyte des rameaux du caféier, *Xyleborus compactus* Eichh. (*X. morstatti* Hag), et sa plante-hôte. *Mededelingen van de Landbouwhogeschool te Wageningen*, 64 (7), 1–109.
- Brar, G.S., Capinera, J.L., McLean, S., Kendra, P.E., Ploetz, R.C. & Peña, J.E. (2012) Effect of trap size, trap height and age of lure on sampling *Xyleborus glabratus* (Coleoptera: Curculionidae: Scolytinae), and its flight periodicity and seasonality. *Florida Entomologist*, 95, 1003–1011.
<http://dx.doi.org/10.1653/024.095.0428>
- Brar, G.S., Capinera, J.L., Kendra, P.E., McLean, S. & Peña, J.E. (2013) Life cycle, development, and culture of *Xyleborus glabratus* (Coleoptera: Curculionidae: Scolytinae). *Florida Entomologist*, 96, 1158–1167.
<http://dx.doi.org/10.1653/024.096.0357>
- Bright, D.E., Jr. & Skidmore, R.E. (1997) *A Catalog of Scolytidae and Platypodidae (Coleoptera), Supplement 1 (1990–1994)*. NRC Research Press, Ottawa, vii + 368 pp.
- Bright, D.E., Jr. & Skidmore, R.E. (2002) *A Catalog of Scolytidae and Platypodidae (Coleoptera), Supplement 2 (1995–1999)*. NRC Research Press, Ottawa, viii + 523 pp.
- Browne, F.G. (1949) Notes on Malayan Scolytoidea (Coleoptera) with descriptions of new species. *Annals and Magazine of Natural History*, Series 12, 1, 892–912.
<http://dx.doi.org/10.1080/00222934808653953>
- Browne, F.G. (1950) New Scolytidae and Platypodidae (Coleoptera) from Malaya. *Annals and Magazine of Natural History*, Series 12, 3, 641–650.
<http://dx.doi.org/10.1080/00222935008654090>
- Browne, F.G. (1955) Synonymy and descriptions of some Oriental Scolytidae and Platypodidae (Coleoptera). *Sarawak Museum Journal*, 6, 343–373.
- Browne, F.G. (1961a) The biology of Malayan Scolytidae and Platypodidae. *Malayan Forest Records*, 22, 1–255.
- Browne, F.G. (1961b) Borer beetles from Bako National Park. *Sarawak Museum Journal*, 10, 300–318.
- Browne, F.G. (1963) Taxonomic notes on Scolytidae (Coleoptera). *Entomologische Berichten*, 23, 53–59.
- Browne, F.G. (1965) On some Scolytidae and Platypodidae (Coleoptera), mainly from Africa and the Oriental region. *Zoologische Mededelingen*, 40, 187–209.
- Browne, F.G. (1968) *Pests and diseases of forest plantation trees*. Clarendon Press, Oxford, 1330 pp.
- Browne, F.G. (1970) Some Scolytidae and Platypodidae (Coleoptera) in the collection of the British Museum. *Journal of Natural History*, 4, 539–583.
<http://dx.doi.org/10.1080/00222937000770511>
- Browne, F.G. (1972) Some Oriental Scolytidae and Platypodidae (Coleoptera). *Oriental Insects*, 6, 19–32.
<http://dx.doi.org/10.1080/00305316.1972.10434049>
- Browne, F.G. (1977) Three new species of Scolytidae and Platypodidae (Coleoptera) from Malaysia. *Oriental Insects*, 11, 369–371.
<http://dx.doi.org/10.1080/00305316.1977.10433817>
- Browne, F.G. (1980a) Bark beetles and ambrosia beetles (Coleoptera, Scolytidae and Platypodidae) intercepted at Japanese ports, with descriptions of new species, I. *Kontyû*, 48, 370–379.
- Browne, F.G. (1980b) Bark beetles and ambrosia beetles (Coleoptera, Scolytidae and Platypodidae) intercepted at Japanese ports, with descriptions of new species, III. *Kontyû*, 48, 482–489.
- Browne, F.G. (1981a) Bark beetles and ambrosia beetles (Coleoptera, Scolytidae and Platypodidae) intercepted at Japanese ports, with descriptions of new species, V. *Kontyû*, 49, 125–136.
- Browne, F.G. (1981b) Bark beetles and ambrosia beetles (Coleoptera, Scolytidae and Platypodidae) intercepted at Japanese ports, with descriptions of new species, VI. *Kontyû*, 49, 597–606.
- Bussler, H. & Immler, T. (2007) Neue Borkenkäferarten in Bayern. *Forstschutz Aktuell*, 38, 5–8.

- Cognato, A.I., Rabaglia, R.J. & Vandenberg, N. (2013) Another Asian ambrosia beetle, *Xyleborinus artestriatus* (Eichhoff 1878) (Coleoptera: Curculionidae: Scolytinae: Xyleborini), newly detected in North America. *Pan-Pacific Entomologist*, 89, 27–31.
<http://dx.doi.org/10.3956/2012-53.1>
- Davis, M.A. & Dute, R.R. (1997) Fungal associates of the Asian ambrosia beetle, *Xylosandrus crassiusculus*. *Southern Nursery Association Research Conference*, 42, 106–112.
- Dole, S.A. & Beaver, R.A. (2008) A review of the Australian species of *Xylosandrus* Reitter (Coleoptera: Curculionidae: Scolytinae). *The Coleopterists Bulletin*, 62, 481–492.
<http://dx.doi.org/10.1649/1108.1>
- Dole, S.A. & Cognato, A.I. (2010) Revision of *Xylosandrus* Reitter (Curculionidae: Scolytinae). *Proceedings of the California Academy of Science*, 61, 451–545.
<http://dx.doi.org/10.1016/j.ympcv.2009.11.011>
- Eggers, H. (1920) 60 neue Borkenkäfer (Ipidae) aus Afrika, nebst zehn neue Gattungen, zwei Abarten. *Entomologische Blätter*, 16, 33–45.
- Eggers, H. (1923) Neue indomalayische Borkenkäfer (Ipidae). *Zoologische Mededelingen*, 7, 129–220.
- Eggers, H. (1926) Japanische Borkenkäfer I. *Entomologische Blätter*, 22, 133–138.
- Eggers, H. (1927a) Neue indomalaysche Borkenkäfer (Ipidae). I. Nachtrag. *Treubia*, 9, 390–408.
- Eggers, H. (1927b) Neue indomalaysche Borkenkäfer (Ipidae). II. Nachtrag. *Philippine Journal of Science*, 33, 67–108.
- Eggers, H. (1930) Neue *Xyleborus*-Arten (Col., Scolytidae) aus Indien. *Indian Forest Records*, Entomology Series, 14, 177–208.
- Eggers, H. (1936) Neue indomalaysche Borkenkäfer (Ipidae). III. Nachtrag. *Tijdschrift voor Entomologie*, 79, 77–91.
- Eggers, H. (1939a) Entomological results from the Swedish expedition 1934 to Burma and British India. Coleoptera: Ipidae. *Arkiv för Zoologi*, 31A (4), 1–14.
- Eggers, H. (1939b) Japanische Borkenkäfer II. *Arbeiten über Morphologische und Taxonomische Entomologie, Berlin-Dahlem*, 6, 114–123.
- Eggers, H. (1940) Neue indomalayische Borkenkäfer (Ipidae) III. Nachtrag (Fortsetzung). *Tijdschrift voor Entomologie*, 83, 132–154.
- Eichhoff, W. (1868) Neue amerikanische Borkenkäfer-Gattungen und Arten. *Berliner Entomologische Zeitschrift*, 11 (1867), 399–402.
<http://dx.doi.org/10.1002/mmnd.18670110320>
- Eichhoff, W. (1869) Neue exotische *Xyleborus*-Arten. *Berliner Entomologische Zeitschrift*, 12 (1868), 280–282.
<http://dx.doi.org/10.1002/mmnd.18680120214>
- Eichhoff, W. (1875) Tomicides. In: Chapuis, F. & Eichhoff, W.J. (Ed.), *Scolytides recueillis au Japon par M. G. Lewis. Annales de la Société entomologique de Belgique*, 18, 195–204.
- Eichhoff, W. (1877) Japanische Scolytidae. *Deutsche Entomologische Zeitschrift*, 21, 117–128.
<http://dx.doi.org/10.1002/mmnd.4800210121>
- Eichhoff, W. (1878a) Neue oder noch unbeschriebene Tomicinen. *Entomologische Zeitung, Stettin*, 39, 383–392.
- Eichhoff, W. (1878b) Ratio, descriptio, emendatio eorum Tomicinorum qui sunt in Dr. medic. Chapuisii et autoris ipsiae collectionibus et quos praeterea recognovit scriptor. *Mémoires de la Société Royale de Sciences de Liège, Série 2e*, 8, 1–531 + pl. I–V.
- Eichhoff, W. (1880) Description of a new species of the family Scolytidae from Sumatra. *Notes from the Leyden Museum*, 2, 189–190.
- Eichhoff, W. (1886) Zwei neue ost-indische Scolytiden—Gattungen. *Notes from the Leyden Museum*, 8, 24–26.
- Entwistle, P.F. (1972) *Pests of Cocoa*. Longman, London, xxiv + 779 pp.
- Erichson, W.F. (1842) Beitrag zur Fauna von Vandiemensland, mit besonderer Berücksichtigung der geographischen Verbreitung der Insecten. *Archiv für Naturgeschichte*, 8, 83–287.
- Eskalen, A., Stouthamer, R., Lynch, S.C., Rugman-Jones, P.F., Twizeyimana, M., Gonzalez, A. & Thibault, T. (2013) Host Range of *Fusarium* dieback and its ambrosia beetle (Coleoptera: Scolytinae) vector in Southern California. *Plant Disease*, 97, 938–951.
<http://dx.doi.org/10.1094/pdis-11-12-1026-re>
- Faccoli, M., Frigimelica, G., Mori, N., Toffolo, E.P., Vettorazzo, M. & Simonato, M. (2009) First record of *Ambrosiodmus* (Hopkins, 1915) (Coleoptera: Curculionidae, Scolytinae) in Europe. *Zootaxa*, 2303, 57–60.
- FAO (2008) Map and list of provinces of Thailand. Available from: <http://faorap-pcas.org/thailand.html> (accessed 11 January 2014)
- Formby, J.P., Krishnan, N. & Riggins, J.J. (2013) Supercooling in the redbay ambrosia beetle (Coleoptera: Curculionidae). *Florida Entomologist*, 96, 1530–1540.
<http://dx.doi.org/10.1653/024.096.0435>
- Fraedrich, S.W., Harrington, T.C., Rabaglia, R.J., Ulyshen, M.D., Mayfield III, A.E., Hanula, J.L., Eickwort, J.M. & Miller, D.R. (2008) A fungal symbiont of the redbay ambrosia beetle causes a lethal wilt in redbay and other Lauraceae in the southeastern United States. *Plant Disease*, 92, 215–224.
<http://dx.doi.org/10.1094/pdis-92-2-0215>

- Freeman, S., Sharon, M., Maymon, M., Mendel, Z., Protasov, A., Aoki, T., Eskalen, A. & O'Donnell, K. (2013) *Fusarium euwallaceae* sp. nov., a symbiotic fungus of *Euwallacea* sp., an invasive ambrosia beetle in Israel and California. *Mycologia*, 105, 1595–1606.
<http://dx.doi.org/10.3852/13-066>
- Gardner, S., Sidisunthorn, P. & Anusarnsunthorn, V. (2000) *A Field Guide to Forest Trees of Northern Thailand*. Kofbair Publishing Project, Bangkok, 545 pp.
- Gorzlancyk, A.M., Held, D.W., Kim, D.-J. & Ranger, C.M. (2013) Capture of *Xylosandrus crassiusculus* and other Scolytinae (Coleoptera: Curculionidae) in response to visual and volatile cues. *Florida Entomologist*, 96, 1097–1101.
<http://dx.doi.org/10.1653/024.096.0349>
- Gray, B. & Wylie, F.R. (1974) Forest tree and timber insect pests in Papua New Guinea. II. *Pacific Insects*, 16, 67–115.
- Haack, R. (2006) Exotic bark- and wood-boring Coleoptera in the United States: recent establishments and interceptions. *Canadian Journal of Forest Research*, 36, 269–288.
<http://dx.doi.org/10.1139/x05-249>
- Hagedorn, M. (1904) Enumeratio Scolytidarum e Sikkim et Japan natarum Musei historico-naturalis Parisiorum, quas Dominus J. Harmand annis 1890 et 1891 collegit descriptionibus specierum novarum adjectis. *Bulletin du Muséum d'Histoire Naturelle, Paris*, 10, 122–126.
- Hagedorn, M. (1908) Diagnosen bisher unbeschreibener Borkenkäfer. I. Serie. *Deutsche Entomologische Zeitschrift*, 1908, 369–382.
<http://dx.doi.org/10.1002/mmnd.48019080310>
- Hanula, J.L., Mayfield III, A.E., Fraedrich, S.W. & Rabaglia, R.J. (2008) Biology and host associations of redbay ambrosia beetle (Coleoptera: Curculionidae: Scolytinae), exotic vector of laurel wilt killing redbay trees in the Southeastern United States. *Journal of Economic Entomology*, 101, 1276–1286.
[http://dx.doi.org/10.1603/0022-0493\(2008\)101\[1276:bahaor\]2.0.co;2](http://dx.doi.org/10.1603/0022-0493(2008)101[1276:bahaor]2.0.co;2)
- Harrington, T.C., Yun, H.Y., Lu, S.-S., Goto, H., Aghayeva, D.N. & Fraedrich, S.W. (2011) Isolations from the redbay ambrosia beetle, *Xyleborus glabratus*, confirm that the laurel wilt pathogen, *Raffaelea lauricola*, originated in Asia. *Mycologia*, 103, 1028–1036.
<http://dx.doi.org/10.3852/10-417>
- Hill, D.S. (1983) *Agricultural Insect Pests of the Tropics and their Control*. 2nd Edition. Cambridge University Press, Cambridge, 746 pp.
<http://dx.doi.org/10.1017/s0014479700017841>
- Hulcr, J. (2010) Taxonomic changes in palaeotropical Xyleborini (Coleoptera: Curculionidae: Scolytinae). *Zookeys*, 56, 105–119.
<http://dx.doi.org/10.3897/zookeys.56.520>
- Hulcr, J. (2012) Xyleborini ambrosia beetles. Available from: <http://Xyleborini.myspecies.info/gallery> (accessed 15 June 2014)
- Hulcr, J. (2013) Xyleborini ambrosia beetles of New Guinea: a taxonomic monograph. On-line keys and images. Available from: http://www.ambrosiasymbiosis.org/PNG_Xyleborini/ (accessed 29 May 2014)
- Hulcr, J. & Cognato, A.I. (2009) Three new genera of oriental Xyleborina (Coleoptera: Curculionidae: Scolytinae). *Zootaxa*, 2204, 19–36.
- Hulcr, J. & Cognato, A.I. (2010a) New genera of Palaeotropical Xyleborini (Coleoptera: Curculionidae: Scolytinae) based on congruence between morphological and molecular characters. *Zootaxa*, 2717, 1–33.
- Hulcr, J. & Cognato, A.I. (2010b) Repeated evolution of theft in fungus farming ambrosia beetles. *Evolution*, 64, 3205–3212.
<http://dx.doi.org/10.1111/j.1558-5646.2010.01055.x>
- Hulcr, J. & Cognato, A.I. (2013) *Xyleborini of New Guinea: A Taxonomic Monograph*. Thomas Say Publications in Entomology, Entomological Society of America, Lanham, Maryland, 176 pp.
- Hulcr, J. & Dunn, R.R. (2011) The sudden emergence of pathogenicity in insect-fungus symbioses threatens naïve forest ecosystems. *Proceedings of the Royal Society, Series B*, 278, 2866–2873.
<http://dx.doi.org/10.1098/rspb.2011.1130>
- Hulcr, J., Dole, S.A., Beaver, R.A. & Cognato, A.I. (2007a) Cladistic review of generic taxonomy in Xyleborina (Coleoptera: Curculionidae: Scolytinae). *Systematic Entomology*, 32, 568–584.
<http://dx.doi.org/10.1111/j.1365-3113.2007.00386.x>
- Hulcr, J., Kolarik, M. & Kirkendall, L.R. (2007b) A new record of fungus-beetle symbiosis in *Scolytodes* bark beetles (Scolytinae, Curculionidae, Coleoptera). *Symbiosis*, 43, 151–159.
- Hulcr, J., Mann, R. & Stelinski, L.L. (2011) The scent of a partner: ambrosia beetles are attracted to volatiles from their fungal symbionts. *Journal of Chemical Ecology*, 34, 1374–1377.
<http://dx.doi.org/10.1007/s10886-011-0046-x>
- Hutacharern, C. & Tubtim, N. (1995) *Checklist of Forest Insects of Thailand*. Office of Environmental Policy and Planning, Bangkok, 392 pp.
- Hutacharern, C., Tubtim, N. & Dokmai, C. (2007) *Checklist of Insects and Mites in Thailand*. Department of National Parks, Wildlife and Plant Conservation, Bangkok, 319 pp.
- Ito, M. & Kajimura, H. (2009) Genetic structure of Japanese populations of *Xylosandrus brevis* (Curculionidae: Scolytinae). *Environmental Entomology*, 38, 1324–1335.

<http://dx.doi.org/10.1603/022.038.0444>

- Jordal, B.H. & Cognato, A.I. (2012) Molecular phylogeny of bark and ambrosia beetles reveals multiple origins of fungus farming during periods of global warming. *BMC Evolutionary Biology*, 12, 133.
<http://dx.doi.org/10.1186/1471-2148-12-133>
- Kajimura, H. & Hijii, N. (1992) Dynamics of the fungal symbiosis in the gallery system and the mycangia of the ambrosia beetle, *Xylosandrus mutilatus* (Blandford) (Coleoptera: Scolytidae) in relation to its life history. *Ecological Research*, 7, 107–117.
<http://dx.doi.org/10.1007/bf02348489>
- Kajimura, H. & Hijii, N. (1994) Reproduction and resource utilization of the ambrosia beetle, *Xylosandrus mutilatus*, in field and experimental populations. *Entomologia Experimentalis et Applicata*, 71, 121–132.
<http://dx.doi.org/10.1111/j.1570-7458.1994.tb01778.x>
- Kalshoven, L.G.E. (1958) Studies on the biology of Indonesian Scolytoidea. I. *Xyleborus fornicatus* Eichh. as a primary and secondary shot-hole borer in Java and Sumatra. *Entomologische Berichten*, 18, 147–160.
- Kalshoven, L.G.E. (1959) Studies on the biology of Indonesian Scolytoidea 4. Data on the habits of Scolytidae. Second part. *Tijdschrift voor Entomologie*, 102, 135–173 + Plates 15–22.
- Kalshoven, L.G.E. (1961) A study of the twig borer, *Xylosandrus morigerus* Blandford, mainly based on observations in Java. *Tijdschrift voor Entomologie*, 104, 93–110.
- Kalshoven, L.G.E. (1962) Note on the habits of *Xyleborus destruens* Bldf., the near-primary borer of teak trees on Java. *Entomologische Berichten*, 22, 7–18.
- Kalshoven, L.G.E. (1964) The occurrence of *Xyleborus perforans* (Woll.) and *X.similis* in Java (Coleoptera, Scolytidae). *Beaufortia*, 11, 131–142.
- Kangkamane, T., Sittichaya, W., Ngampongsai, A., Permkam, S. & Beaver, R.A. (2011) Wood-boring beetles (Coleoptera: Bostrichidae, Curculionidae: Platypodinae and Scolytinae) infesting rubberwood sawn timber in Southern Thailand. *Journal of Forest Research*, 16, 302–308.
<http://dx.doi.org/10.1007/s10310-010-0224-7>
- Kendra, P.E., Montgomery, W.S., Niogret, J., Deyrup, M.A., Guille, L. & Epsky, N.D. (2012) *Xyleborus glabratus*, *X. affinis*, and *X. ferrugineus* (Coleoptera: Curculionidae: Scolytinae): electroantennogram responses to host-based attractants and temporal patterns in host-seeking flight. *Environmental Entomology*, 41, 1597–1605.
<http://dx.doi.org/10.1603/en12164>
- Kikata, Y., Hijii, N. & Kajimura, H. (1994) Monograph of the new species of bark beetles and ambrosia beetles (Coleoptera: Scolytidae and Platypodidae) from some tropical countries, intercepted at Japanese ports. Shizuo Ohno collection. *Bulletin of the Nagoya University Furukawa Museum, Special Report*, 3, 1–188.
- Kinuura, H. (1995) Symbiotic fungi associated with bark beetles. *Japan Agricultural Research Quarterly*, 29, 57–63.
- Kinuura, H. & Hijii, N. (1991) Life history and reproduction of the ambrosia beetle, *Scolytoplatus mikado* Blandford (Coleoptera, Scolytidae). *Japanese Journal of Entomology*, 59, 763–773.
- Kirkendall, L.R. (1983) The evolution of mating systems in bark and ambrosia beetles (Coleoptera: Scolytidae and Platypodidae). *Zoological Journal of the Linnean Society*, 77, 293–352.
<http://dx.doi.org/10.1111/j.1096-3642.1983.tb00858.x>
- Kirkendall, L.R. (1993) Ecology and evolution of biased sex ratios in bark and ambrosia beetles. In: Wrensch, D.L. & Ebbert, M.A. (Eds.), *Evolution and diversity of sex ratio in insects and mites*. Chapman & Hall, New York, pp. 235–345.
http://dx.doi.org/10.1007/978-1-4684-1402-8_8
- Klepzig, K.D. & Six, D.L. (2004) Bark beetle-fungal symbiosis: context-dependency in complex associations. *Symbiosis*, 37, 189–205.
- Koch, F.H. & Smith, W.D. (2008) Spatio-temporal analysis of *Xyleborus glabratus* (Coleoptera: Curculionidae: Scolytinae) invasion in Eastern U.S. forests. *Environmental Entomology*, 37, 442–452.
[http://dx.doi.org/10.1603/0046-225x\(2008\)37\[442:saogc\]2.0.co;2](http://dx.doi.org/10.1603/0046-225x(2008)37[442:saogc]2.0.co;2)
- Lea, A.M. (1910) On Australian and Tasmanian Coleoptera with descriptions of new species. Part I. *Proceedings of the Royal Society of Victoria*, New Series, 22 (1909), 113–152.
- Le Pelley, R.H. (1968) *Pests of coffee*. Longmans, London and Harlow, 590 pp.
- Löbl, I. & Smetana, A. (2003) *Catalogue of Palaearctic Coleoptera. Vol. 1. Archostemata – Myxophaga – Adephaga*. Apollo Books, Stenstrup, 819 pp.
- Löbl, I. & Smetana, A. (2004) *Catalogue of Palaearctic Coleoptera. Vol. 2. Hydrophiloidea – Histeroidea – Staphylinoidea*. Apollo Books, Stenstrup, 942 pp.
- Löbl, I. & Smetana, A. (2006) *Catalogue of Palaearctic Coleoptera. Vol. 3. Scarabaeoidea – Scirtoidea – Dascilloidea – Buprestoidea – Byrrhoidea*. Apollo Books, Stenstrup, 690 pp.
- Löbl, I. & Smetana, A. (2007) *Catalogue of Palaearctic Coleoptera. Vol. 4. Elateroidea – Derodontoidea – Lymexyloidea – Cleroidea – Cucujoidea*. Apollo Books, Stenstrup, 935 pp.
- Löbl, I. & Smetana, A. (2008) *Catalogue of Palaearctic Coleoptera. Vol. 5. Tenebrionoidea*. Apollo Books, Stenstrup, 670 pp.
- Löbl, I. & Smetana, A. (2010) *Catalogue of Palaearctic Coleoptera. Vol. 6. Chrysomeloidea*. Apollo Books, Stenstrup, 924 pp.
- Löbl, I. & Smetana, A. (2011) *Catalogue of Palaearctic Coleoptera. Vol. 7. Curculionoidea I*. Apollo Books, Stenstrup, 373 pp.
- Löbl, I. & Smetana, A. (2013) *Catalogue of Palaearctic Coleoptera. Vol. 8. Curculionoidea II*. Koninklijke Brill, Leiden, 700 pp.

- Madoffe, S.S. & Bakke, A. (1995) Seasonal fluctuations and diversity of bark and wood-boring beetles in lowland forest: implications for management practices. *South African Forestry Journal*, 173, 9–15.
<http://dx.doi.org/10.1080/00382167.1995.9629684>
- Maiti, P.K. & Saha, N. (1986) Contributions to the knowledge of the bark and timber beetles (Scolytidae: Coleoptera) of the Andaman and Nicobar Islands. *Records of the Zoological Survey of India, Miscellaneous Publications, Occasional Papers*, 86, 1–182.
- Maiti, P.K. & Saha, N. (2004) *Fauna of India and the Adjacent Countries. Scolytidae: Coleoptera (Bark and Ambrosia Beetles). Vol. 1. Part 1.* Zoological Survey of India, Kolkata, 268 pp.
- Maiti, P.K. & Saha, N. (2009) *Fauna of India and the Adjacent Countries. Scolytidae: Coleoptera (Bark and Ambrosia Beetles). Vol. 1. Part 2.* Zoological Survey of India, Kolkata, 245 pp.
- Maner, M.L., Hanula, J.L. & Braman, S.K. (2013) Gallery productivity, emergence, and flight activity of the redbay ambrosia beetle (Coleoptera: Curculionidae: Scolytinae). *Environmental Entomology*, 42, 642–647.
<http://dx.doi.org/10.1603/en13014>
- Mayfield, A.E.III, MacKenzie, M., Cannon, P.G., Oak, S.W., Hwang, J. & Kendra, P.E. (2013) Suitability of California bay laurel and other species as hosts for the non-native redbay ambrosia beetle and granulate ambrosia beetle. *Agricultural and Forest Entomology*, 15, 227–235.
<http://dx.doi.org/10.1111/afe.12009>
- Mendel, Z., Protasov, A., Sharon, M., Zveibil, A., Yehuda, S. Ben, O'Donnell, K., Rabaglia, R., Wysoki, M. & Freeman, S. (2012) An Asian ambrosia beetle *Eurwallacea fornicatus* and its novel symbiotic fungus *Fusarium* sp. pose a serious threat to the Israeli avocado industry. *Phytoparasitica*, 40, 235–238.
<http://dx.doi.org/10.1007/s12600-012-0223-7>
- Miller, D.R. & Rabaglia, R.J. (2009) Ethanol and (–)-alpha-Pinene: attractant kairomones for bark and ambrosia beetles in the southeastern US. *Journal of Chemical Ecology*, 35, 435–448.
<http://dx.doi.org/10.1007/s10886-009-9613-9>
- Motschulsky, V. (1863) Essai d'un catalogue des insectes de l'île de Ceylan (Suite). *Bulletin de la Société Impériale des Naturalistes de Moscou*, 36, 421–532.
- Motschulsky, V. von (1866) Essai d'un catalogue des insectes de l'île Ceylan. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 39, 393–446.
- Murayama, J. (1936) Notes sur les scolytides (Coléoptères) de Honshû et Kiushû, Japon. *Tenthredo*, 1, 121–149.
- Murayama, J. (1950) A new genus and some new species of Scolytidae from Japan (Coleoptera). *Transactions of the Shikoku Entomological Society*, 1, 49–53.
- Murayama, J. (1952) Notes on the scolytid beetles from the Southern and Western parts of Izu Peninsula, Shizuoka Prefecture. *Bulletin of the Faculty of Agriculture, Yamaguti University*, 3, 15–23.
- Murphy, D.H. & Meepol, W. (1990) Timber beetles of the Ranong mangrove forests. *Mangrove Ecosystems Occasional Paper*, No.7, 5–8.
- Niisima, Y. (1909) Die Scolytiden Hokkaidos unter Berücksichtigung ihrer Bedeutung für Forstschaden. *Journal of the College of Agriculture, Tohoku Imperial University, Sapporo*, 3, 109–179 + Plates III–IX.
- Nobuchi, A. (1964) Studies on Scolytidae III. *Bulletin of the Government Forest Experiment Station*, 171, 129–134 + Plate 1.
- Nobuchi, A. (1966) Bark beetles injurious to pine in Japan. *Bulletin of the Government Forest Experiment Station*, 185, 1–49 + Plates 1–6.
- Nobuchi, A. (1967) Formosan Scolytoidea (Coleoptera). *Bulletin of the Government Forest Experiment Station*, 207, 11–30 + Plate 1.
- Nobuchi, A. (1978) Ambrosia beetles found in imported tropical timbers from Southeast Asia and others (Coleoptera: Scolytidae). *Bulletin of the Forestry and Forest Products Research Institute*, 301, 1–46 + Plates 1–4.
- Nobuchi, A. (1981) Studies on Scolytidae. XXIII. The ambrosia beetles of the genus *Xylosandrus* Reitter from Japan (Coleoptera). *Bulletin of the Forestry and Forest Products Research Institute*, 314, 27–37.
- Nunberg, M. (1959) Die Gattung *Xyleborus* Eichhoff (Coleoptera: Scolytidae). *Ergänzungen, Berichtungen und Erweiterung der Diagnosen. Beiträge zur Entomologie*, 9, 413–466.
- Nunberg, M. (1961) Zur Kenntnis der Malayischen und Aethiopischen Borken- und Kernkäferfauna (Col. Scolytidae und Platypodidae). *Annals and Magazine of Natural History, Series 13*, 3 (1960), 609–632.
<http://dx.doi.org/10.1080/00222936008651066>
- Nunberg, M. (1972) Die Gattung *Cnestus* Sampson (Coleoptera, Scolytidae). *Annales Zoologici, Warszawa*, 29, 473–478.
- Nunberg, M. (1978) Die Gattung *Xyleborus* Eichhoff (Coleoptera: Scolytidae). *Ergänzungen, Berichtungen und Erweiterung der Diagnosen, IV. Teil. Annales Zoologici, Warszawa*, 34, 101–120.
- Nunberg, M. (1982) Die Gattung *Xyleborus* Eichhoff (Coleoptera: Scolytidae). *Ergänzungen, Berichtungen und Erweiterung der Diagnosen, V. Teil. Annales Zoologici, Warszawa*, 36, 425–446.
- Nunberg, M. & Chûjô, M. (1961) Coleoptera from South-East Asia. 25. Scolytidae, 26. Platypodidae. *Nature and Life in South-East Asia*, 1, 358.
- Ohno, S. (1990) The Scolytidae and Platypodidae (Coleoptera) from Borneo found in logs at Nagoya port. 1. *Research Bulletin of the Plant Protection Service, Japan*, 26, 83–94.
- Ohno, S., Yoshioka, K., Yoneyama, K. & Nakazawa, H. (1988) The Scolytidae and Platypodidae (Coleoptera) from Solomon

- Islands found in logs at Nagoya port. 1. *Research Bulletin of the Plant Protection Service, Japan*, 24, 91–95.
- Okins, K.E. & Thomas, M.C. (2010) New North American record for *Xyleborinus andrewesi* (Coleoptera: Curculionidae: Scolytinae). *Florida Entomologist*, 93, 133–134.
<http://dx.doi.org/10.1653/024.093.0122>
- Olivier, A.G. (1795) *Entomologie, ou Histoire Naturelle des Insectes. Coléoptères. Vol. IV. Part 78*. Lanneau, Paris, 16 pp.
<http://dx.doi.org/10.5962/bhl.title.49479>
- PaDIL (2014) Australian Biosecurity. Available from: <http://www.padil.gov.au/pests-and-diseases> (accessed 29 January 2014.)
- Petrov, A., Mandelshtam, M.Y. & Beaver, R.A. (2007) *Urocorthylus* gen.n.: a remarkable monotypical scolytine genus from northern Vietnam (Coleoptera: Curculionidae: Scolytinae). *Koleopterologische Rundschau*, 77, 249–254.
- Ploetz, R.C., Hulcr, J., Wingfield, M.J. & de Beer, Z.W. (2013) Destructive tree diseases associated with ambrosia and bark beetles: black swan events in tree pathology? *Plant Disease*, 95, 856–871.
<http://dx.doi.org/10.1094/pdis-01-13-0056-fe>
- Rabaglia, R.J., Dole, S.A. & Cognato, A.I. (2006) Review of American Xyleborina (Coleoptera: Curculionidae: Scolytinae) occurring North of Mexico, with an illustrated key. *Annals of the Entomological Society of America*, 99, 1034–1056.
[http://dx.doi.org/10.1603/0013-8746\(2006\)99\[1034:roaxcc\]2.0.co;2](http://dx.doi.org/10.1603/0013-8746(2006)99[1034:roaxcc]2.0.co;2)
- Rangel, R., Pérez, M., Sánchez, S. & Capello, S. (2012) Fluctuación poblacional de *Xyleborus ferrugineus* y *X. affinis* (Coleoptera: Curculionidae) en ecosistemas de Tabasco, México. *Revista de Biología Tropical*, 60, 1577–1588.
<http://dx.doi.org/10.15517/rbt.v60i4.2075>
- Ranger, C.M., Reding, M.E., Gandhi, K.J.K., Oliver, J.B., Schultz, P.B., Canas, L. & Herms, D.A. (2011) Species dependent influence of (–)- α -pinene on attraction of ambrosia beetles (Coleoptera: Curculionidae: Scolytinae) to ethanol-baited traps in nursery agroecosystems. *Journal of Economic Entomology*, 104, 574–579.
<http://dx.doi.org/10.1603/ec10243>
- Reding, M.E., Schultz, P.B., Ranger, C.M. & Oliver, J.B. (2011) Optimizing ethanol-baited traps for monitoring damaging ambrosia beetles (Coleoptera: Curculionidae, Scolytinae) in ornamental nurseries. *Journal of Economic Entomology*, 104, 2017–2024.
<http://dx.doi.org/10.1603/ec11119>
- Reding, M.E., Ranger, C.M., Oliver, J.B. & Schultz, P.B. (2013) Monitoring attack and flight activity of *Xylosandrus* spp. (Coleoptera: Curculionidae: Scolytinae): the influence of temperature on activity. *Journal of Economic Entomology*, 106, 1780–1787.
<http://dx.doi.org/10.1603/ec13134>
- Reitter, E. (1913) Bestimmungstabelle der Borkenkäfer (Scolytidae) aus Europa und den angrenzenden Ländern. *Wiener Entomologische Zeitung*, 32 (Beiheft), 1–116.
- Saha, N. & Maiti, P.K. (1984) On a collection of scolytid beetles (Scolytidae: Coleoptera) from Sikkim, India. *Records of the Zoological Survey of India*, 81 (3–4), 1–8.
- Saha, N. & Maiti, P.K. (1996) Insecta: Coleoptera: Scolytidae. *Fauna of West Bengal*, 6B, 775–866.
- Sampson, F.W. (1911) On two new wood-boring beetles. *Annals and Magazine of Natural History*, Series 8, 8, 381–384.
<http://dx.doi.org/10.1080/00222931108693046>
- Sampson, F.W. (1913) Some hitherto undescribed Ipidae and Platypodidae from India and Burma. *Annals and Magazine of Natural History*, Series 8, 12, 443–452.
<http://dx.doi.org/10.1080/00222931308693422>
- Sampson, F.W. (1914) Coleoptera: Platypodidae and Ipidae from the Seychelles Islands. *Transactions of the Linnaean Society of London, Zoology*, 16, 379–391.
<http://dx.doi.org/10.1111/j.1096-3642.1913.tb00155.x>
- Sampson, F.W. (1919) Notes on Platypodidae and Scolytidae collected by Mr. G.E. Bryant and others. *Annals and Magazine of Natural History*, Series 9, 4, 105–114.
<http://dx.doi.org/10.1080/00222932108632486>
- Sampson, F.W. (1921) Further notes on Platypodidae and Scolytidae collected by Mr. G. E. Bryant and others. *Annals and Magazine of Natural History*, Series 9, 7, 25–37.
<http://dx.doi.org/10.1080/00222932108632486>
- Sampson, F.W. (1922) Previously undescribed Scolytidae and Platypodidae from the Indian area. *Annals and Magazine of Natural History*, Series 9, 10, 145–152.
<http://dx.doi.org/10.1080/00222932208632753>
- Sampson, F.W. (1923) Previously undescribed Scolytidae and Platypodidae from the Indian area. Part II. *Annals and Magazine of Natural History*, Series 9, 11, 285–289.
<http://dx.doi.org/10.1080/00222932308632858>
- Schedl, K.E. (1934) Neue indo-malayische Scolytidae. II. Beitrag. *Entomologische Berichten*, 9, 84–92.
- Schedl, K.E. (1935a) Fauna Philippinensis (Platypodidae et Scolytidae). III. *Philippine Journal of Science*, 56, 395–403.
- Schedl, K.E. (1935b) New bark beetles and ambrosia beetles (Col.). *Stylops*, 4, 270–276.
<http://dx.doi.org/10.1111/j.1365-3113.1935.tb00659.x>
- Schedl, K.E. (1936a) Notes on Malayan Scolytidae and Platypodidae. *Journal of the Federated Malay States Museum*, 18, 1–18.

- Schedl, K.E. (1936b) Some new Scolytidae and Platypodidae from the Malay Peninsula. *Journal of the Federated Malay States Museum*, 18, 19–35.
- Schedl, K.E. (1937) Scolytidae and Platypodidae. #4. Contribution. Fauna Borneensis, Part I. *Sarawak Museum Journal*, 4, 543–52.
- Schedl, K.E. (1939a) Malaysian Scolytidae and Platypodidae (IV). *Journal of the Federated Malay States Museum*, 18, 327–364.
- Schedl, K.E. (1939b) Scolytidae und Platypodidae. 47. Beitrag. *Tijdschrift voor Entomologie*, 82, 30–53.
- Schedl, K.E. (1942a) Neue Scolytidae aus Java. 76 Beitrag. *Tijdschrift voor Entomologie*, 85, 1–49.
- Schedl, K.E. (1942b) Interessante und neue Scolytiden und Platypodiden aus der australischen Region. *Mitteilungen der Münchener Entomologischen Gesellschaft*, 32, 162–201.
- Schedl, K.E. (1942c) Zur Scolytoiden-Fauna der Malayischen Halbinsel. V. *Kolonialforstliche Mitteilungen*, 5, 169–218.
- Schedl, K.E. (1951) Bestimmungstabellen der Paläarktischen Borkenkäfer. Teil V. Tribus Xyloterini. *Mitteilungen der Forstlichen Bundesversuchsanstalt Mariabrunn*, 47, 74–100.
- Schedl, K.E. (1952) Zur Synonymie der Borkenkäfer. I. *Entomologische Blätter*, 47/48, 158–164.
- Schedl, K.E. (1953a) Fauna Indomalayensis, III. *Annals and Magazine of Natural History*, Series 12, 6, 288–304.
- Schedl, K.E. (1953b) Fauna Sinensis I. *Entomologische Blätter*, 49, 22–30.
- Schedl, K.E. (1954a) Fauna Indomalayensis, IV. *Philippine Journal of Science*, 83, 137–159.
- Schedl, K.E. (1954b) Scolytoidea (beetles) from Borneo. *Sarawak Museum Journal*, 6, 154–163.
- Schedl, K.E. (1958) Zur Synonymie der Borkenkäfer. II. *Tijdschrift voor Entomologie*, 101, 141–155.
- Schedl, K.E. (1962a) Borken- und Ambrosia-Käfern aus Hinterindien. *Verhandlungen der Naturforschenden Gesellschaft in Basel*, 73, 184–193.
- Schedl, K.E. (1962b) Zur Synonymie der Borkenkäfer. VI. *Entomologische Blätter*, 58, 201–211.
- Schedl, K.E. (1963) Scolytidae und Platypodidae Afrikas, Band II. *Revista de Entomologia de Moçambique*, 5, 1–594.
- Schedl, K.E. (1964a) Zur Synonymie der Borkenkäfer. XIV. *Reichenbachia*, 2, 209–223.
- Schedl, K.E. (1964b) Scolytoidea from Borneo III. *Reichenbachia*, 4, 241–254.
- Schedl, K.E. (1969) Bark beetles and pinhole borers (Scolytidae and Platypodidae) intercepted from imported logs in Japanese ports. III. *Kontyû*, 37, 202–219.
- Schedl, K.E. (1970) Bark beetles and pinhole borers (Scolytidae and Platypodidae) intercepted from imported logs in Japanese ports. IV. *Kontyû*, 38, 353–370.
- Schedl, K.E. (1971) Indomalayan bark and timber beetles. *Oriental Insects*, 5, 361–399.
<http://dx.doi.org/10.1080/00305316.1971.10434023>
- Schedl, K.E. (1972) Scolytidae and Platypodidae from the Papuan subregion and Australia. *Papua New Guinea Agricultural Journal*, 23, 61–72.
- Schedl, K.E. (1975) Die Unterfamilie Scolytoplatypinae (Coleoptera, Scolytidae). *Entomologische Abhandlungen Staatliches Museum für Tierkunde in Dresden*, 40, 199–267.
- Schedl, K.E. (1979) New Scolytidae and Platypodidae from Papua New Guinea (Coleoptera). 5. *Faunistische Abhandlungen Staatliches Museum für Tierkunde in Dresden*, 7, 95–120.
- Schneider, I. (1987) Verbreitung, Pilzübertragung und Brutsystem de Ambrosiakäfers *Xyleborus affinis* im Vergleich mit *X.mascarensis* (Coleoptera: Scolytidae). *Entomologia Generalis*, 12, 267–275.
<http://dx.doi.org/10.1127/entom.gen/12/1987/267>
- Sittichaya, W. (2012) Bark and ambrosia beetles (Coleoptera: Curculionidae: Scolytinae and Platypodinae) infesting mango trees (*Mangifera indica* L.) in Southern Thailand, with two new species recorded for Thailand. *Songklanakarinn Journal of Science and Technology*, 34, 153–155.
- Sittichaya, W. & Beaver, R.A. (2009) Rubberwood-destroying beetles in the eastern and gulf areas of Thailand (Coleoptera: Bostrichidae, Curculionidae: Scolytinae and Platypodinae). *Songklanakarinn Journal of Science and Technology*, 31, 381–387.
<http://dx.doi.org/10.1007/s10310-010-0224-7>
- Sittichaya, W., Permkam, S. & Cognato, A.I. (2012) Species composition and flight pattern of Xyleborini ambrosia beetles (Col.: Curculionidae: Scolytinae) from agricultural areas in southern Thailand. *Environmental Entomology*, 41, 776–784.
<http://dx.doi.org/10.1603/en11271>
- Sivapalan, P. (1975) The dispersion of brood galleries of *Xyleborus fornicatus* Eichh. (Coleoptera, Scolytidae) in tea plants. *Bulletin of Entomological Research*, 65, 501–506.
<http://dx.doi.org/10.1017/s0007485300006167>
- Sivapalan, P. (1977) Population dynamics of *Xyleborus fornicatus* Eichhoff (Coleoptera: Scolytidae) in relation to yield trends in tea. *Bulletin of Entomological Research*, 67, 329–335.
<http://dx.doi.org/10.1017/s0007485300011159>
- Six, D.L. (2012) Ecological and evolutionary determinants of bark beetle–fungus symbioses. *Insects*, 3, 339–366.
<http://dx.doi.org/10.3390/insects3010339>
- Six, D.L. (2013) The bark beetle holobiont: why microbes matter. *Journal of Chemical Ecology*, 39, 989–1002.
<http://dx.doi.org/10.1007/s10886-013-0318-8>
- Six, D.L., Stone, W.D., de Beer, Z.W. & Woolfolk, S.W. (2009) *Ambrosiella beaveri*, sp.nov., associated with an exotic

- ambrosia beetle, *Xylosandrus mutilatus* (Coleoptera: Curculionidae, Scolytinae), in Mississippi, USA. *Antonie van Leeuwenhoek*, 96, 17–29.
<http://dx.doi.org/10.1007/s10482-009-9331-x>
- Sreedharan, K., Balakrishnan, M.M., Samuel, S.D. & Bhat, P.K. (1991) A note on the association of wood boring beetles and a fungus with the death of silver oak trees on coffee plantations. *Journal of Coffee Research*, 21, 145–148.
- Stebbing, E.P. (1907) On some Assam sal (*Shorea robusta*) insect pests, with notes upon some insects predaceous and parasitic upon them. *Indian Forest Bulletin*, 11, 1–66.
- Stebbing, E.P. (1914) *Indian Forest Insects*. Eyre & Spottiswoode, London, 648 pp.
<http://dx.doi.org/10.5962/bhl.title.9203>
- Stone, W.D. & Nebeker, T.E. (2007) Distribution and seasonal abundance of *Xylosandrus mutilatus*. *Journal of Entomological Science*, 42, 409–412.
- Stone, W.D., Nebeker, T.E. & Gerard, P.D. (2007) Host plants of *Xylosandrus mutilatus* in Mississippi. *Florida Entomologist*, 90, 191–195.
[http://dx.doi.org/10.1653/0015-4040\(2007\)90\[191:hpxmi\]2.0.co;2](http://dx.doi.org/10.1653/0015-4040(2007)90[191:hpxmi]2.0.co;2)
- Tang, W-Q. (2000) Biological characteristics of *Xyleborus mutilatus* and its control. *Journal of Zhejiang Forestry College*, 17, 417–420. [in Chinese with English summary]
- UNEP (1997) Environmental Assessment Program for Asia and the Pacific. Thailand. Available from: <http://www.rrcap.ait.asia/lc/cd/html/thailand.html> (accessed 11 January 2014)
- Walgama, R.S. & Zalucki, M.P. (2006) Temperature-dependent development of *Xyleborus fornicatus* (Coleoptera: Scolytidae), the shot-hole borer of tea in Sri Lanka: implications for distribution and abundance. *Insect Science*, 14, 301–308.
<http://dx.doi.org/10.1111/j.1744-7917.2007.00156.x>
- Whitmore, T.C. (1984) *Tropical Rain Forests of the Far East*. Clarendon Press, Oxford, 352 pp.
- Wollaston, T.V. (1857) *Catalogue of the coleopterous insects of Madeira in the collection of the British Museum*. Taylor & Francis, London, 234 pp.
<http://dx.doi.org/10.5962/bhl.title.9900>
- Wood, S.L. (1977) Introduced and exported American Scolytidae (Coleoptera). *Great Basin Naturalist*, 37, 67–74.
- Wood, S.L. (1978) A reclassification of the subfamilies and tribes of the Scolytidae (Coleoptera). *Annales de la Société Entomologique de France*, New Series, 14, 95–122.
- Wood, S.L. (1980) New genera and new generic synonymy in Scolytidae (Coleoptera). *Great Basin Naturalist*, 40, 89–97.
- Wood, S.L. (1982) The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. *Great Basin Naturalist Memoirs*, 6, 1–1359.
- Wood, S.L. (1984) New generic synonymy and new genera of Scolytidae (Coleoptera). *Great Basin Naturalist*, 44, 223–230.
- Wood, S.L. (1989) Nomenclatural changes and new species of Scolytidae (Coleoptera). Part IV. *Great Basin Naturalist*, 49, 167–185.
- Wood, S.L. (1992) Nomenclatural changes and new species in Platypodidae and Scolytidae (Coleoptera), Part II. *Great Basin Naturalist*, 52, 78–88.
- Wood, S.L. (2007) *Bark and ambrosia beetles of South America (Coleoptera, Scolytidae)*. Monte L. Bean Life Science Museum, Brigham Young University, Provo, Utah, 900 pp. + Plates I–CCXXX.
- Wood, S.L. & Bright, D.E. (1987) A catalog of Scolytidae and Platypodidae (Coleoptera), Part 1: Bibliography. *Great Basin Naturalist Memoirs*, 11, 1–685.
- Wood, S.L. & Bright, D.E. (1992) A catalog of Scolytidae and Platypodidae (Coleoptera), Part 2: Taxonomic index. *Great Basin Naturalist Memoirs*, 13, 1–1553.
- Wood, S.L. & Yin, H.-F. (1986) Relict occurrence of three “American” Scolytidae (Coleoptera) in Asia. *Great Basin Naturalist*, 46, 461–464.
- Yanovskii, V.M. (1999) Annotated list of scolytids (Coleoptera, Scolytidae) of North Asia. *Entomological Review*, 79, 493–522.
- Yin, H.-F., Huang, F.-S. & Li, Z.-L. (1984) *Economic Insect Fauna of China, Fasc.29, Coleoptera: Scolytidae*. Science Press, Beijing, 205 pp. + Plates I–XIX.