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Review of the biology of the genus *Anilara* Saunders, 1868 (Coleoptera: Buprestidae)

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Abstract: A review of the biology and host plant records for nine of the approx. twenty described species of the genus *Anilara* Saunders, 1868 is provided here.

Introduction

The Australian genus *Anilara* Saunders, 1868 contains about 20 described species of mostly very small, dull black to coppery-brown buprestids, the larvae of which are known to be associated with the timber of *Eucalyptus* and *Melaleuca* (Myrtaceae) and *Flindersia* species (Flindersiaceae) in Australia. The genus is presently included in the subfamily Buprestinae, tribe Curidini (Bellamy, 2003). A review of the biology and host plants of nine species is provided here.

Biological review

Anilara anthaxioides Thèry, 1911

Distribution: Australia (New South Wales, Victoria).
Larval host-plant: Not recorded.
Adult host-plant: *Eucalyptus albens* Benth. (Myrtaceae)(?)(Carter, 1927).
Biology: Carter (1927) was provided detailed field notes by the well known carabidologist T.G. Sloane who observed *Anilara* and *Chrysobothris* specimens on a fallen branch of *Eucalyptus albens* Benth. near Young, New South Wales: adult beetles of *A. anthaxioides* were present during a week in February during very hot weather, running on the rough bark of the fallen branch during 1100-1400 hrs and were not associated with the leaves; the beetles were accompanied by individuals of *Chrysobothris mastersi* Macleay, which were supposed by Sloane to lay eggs in the crevices of the bark of the branch. It is possible that the *Anilara anthaxioides* larvae also utilise the bark of this species for development, since other *Anilara* species are known to breed in *Eucalyptus* species (Volkovitsh & Hawkeswood, 1993).
Life-stages: The egg, larva and pupa have not been described.
Published collection records with biological data: None available.
Further comments: Bellamy (2003) failed to cite the observations of T.G. Sloane in Carter (1927).

Anilara antiqua Thèry, 1911

Distribution: Australia (Queensland).
Larval host-plant: *Eucalyptus crebra* F. Muell. (Myrtaceae)(Volkovitsh & Hawkeswood,

1993).
Adult host-plant: Not recorded.
Biology: The larvae bore into and develop within the bark and sapwood of *Eucalyptus crebra* F. Muell. growing in woodlands in south-eastern Queensland (Volkovitsh & Hawkeswood, 1993).
Life-stages: The egg and pupa have not been described. The larva has been described in detail by Volkovitsh & Hawkeswood (1993). Larvae of *Anilara* spp. (*A. antiqua* Thèry and *A. nigrita* Kerremans) are compared with those of *Neocuris gracilis* (Macleay), *Diadoxus erythrurus* (White) and various genera of extra-Australian Buprestidae (Volkovitsh & Hawkeswood, 1993).
Published collection records with biological data: Near Toowoomba, Queensland (c. 27°22'S, 151°40'E), July-Aug. 1988, T.J. Hawkeswood, three last instar larvae, ex dead wood of *Eucalyptus crebra* F. Muell. (Myrtaceae)(Volkovitsh & Hawkeswood, 1993).
Further comments: Bellamy (2003) failed to cite the host record of Volkovitsh & Hawkeswood (1993) but listed the paper in the references.

Anilara convexa Kerremans, 1898

Distribution: Australia (New South Wales).
Larval host-plant: *Melaleuca decora* (Solander ex Gaertner) Smith (Myrtaceae)(Hawkeswood & Turner, 2003).
Adult host-plant: Not recorded.
Biology: Hawkeswood & Turner (2003) noted that the larval galleries of *A. convexa* are quite distinctive when the bark is peeled away; they can measure up to 11 cm in length and are found partly in the sapwood and partly in the adjacent layer of the bark with the larvae pupating in an oval-shaped chamber measuring, on average, 7 mm wide and 4 mm high, which is partly excavated into the sapwood; the larva packs the chambers behind it with frass as it chews through the wood; the adult beetle lies on its side in the chamber with legs facing outwards from the centre of the host plant; it appears that the adults emerge sideways from the host plant as evidenced by the position of the exit holes.
Life-stages: The egg and pupa have not been described. Larva is illustrated by Hawkeswood & Turner (2003).
Published collection records with biological data: Upper Castlereagh, New South Wales (33°41'S, 150°39'E), 7 October 1995, J.R. Turner, 8 males & 10 females, from stem billet of *Melaleuca decora* (Solander ex Gaertner) Smith (Myrtaceae)(Hawkeswood & Turner, 2003).
Further comments: Bellamy (2003) did not cite this paper as it was published in the same year as the catalogue and was therefore not available before publication.

Anilara nigrita Kerremans, 1898

Distribution: Australia (Queensland).
Larval host-plant: *Eucalyptus crebra* F. Muell. (Myrtaceae)(Volkovitsh & Hawkeswood, 1993).
Adult host-plant: Not recorded.

Biology: The larvae bore into and develop within the bark and sapwood of *Eucalyptus crebra* F. Muell. growing in woodlands in south-eastern Queensland (Volkovitsh & Hawkeswood, 1993).
Life-stages: The egg and pupa have not been described. The larva has been described and compared with that of *A. antiqua* Thèry by Volkovitsh & Hawkeswood (1993). Larvae of *Anilara* spp. (*A. antiqua* Thèry and *A. nigrita* Kerremans) are compared with those of *Neocuris gracilis* (Macleay), *Diadoxus erythrurus* (White) and various genera of extra-Australian Buprestidae (Volkovitsh & Hawkeswood, 1993).
Published collection records with biological data: Near Toowoomba, Queensland (c. 27°22'S, 151°40'E), July-Aug. 1988, T.J. Hawkeswood, 15 last instar larvae, ex dead wood of *Eucalyptus crebra* F. Muell. (Myrtaceae)(Volkovitsh & Hawkeswood, 1993).
Further comments: Bellamy (2003) failed to cite the host record of Volkovitsh & Hawkeswood (1993) but listed the paper in the references.

Anilara obscura (Macleay, 1872)

Distribution: Australia (Queensland, New South Wales, Victoria, South Australia).
Larval host-plant: *Flindersia xanthoxyla* (A. Cunn. ex Hook.) Domin (Flindersiaceae)(Hawkeswood, 1988).
Adult host-plants: ?*Eucalyptus* sp. (Myrtaceae)(Carter, 1926); *Leptospermum polygalifolium* (Salisb.) J. Thompson [= *L. flavescens* Sm.](Williams & Williams, 1983).
Biology: Carter (1926) briefly noted that adults of this species often can be collected in considerable numbers by shaking of beating dead eucalypt branches, but it is not clear from the note whether the insects inhabited the live foliage as well or if this represents an oviposition record on dead wood. Williams & Williams (1983) noted that a species of *Anilara* (possibly not *A. obscura* as they questioned the identity) was found to be rare at Blackheath in the Blue Mountains during December on *L. polygalifolium* [as *L. flavescens* Sm.]. Several adults and larvae were collected from timber of *Flindersia xanthoxyla* (Hawkeswood, 1988).
Life-stages: The egg, larva and pupa have not been described.
Published collection records with biological data: Mt. Mee, south-eastern Queensland (27°05'S, 152°42'E), 1 Dec. 1981, T. Weatherhead, from *Flindersia xanthoxyla* (A. Cunn. ex Hook.) Domin (Flindersiaceae)(Hawkeswood, 1988).
Further comments: Bellamy (2003) overlooked the biological note of Carter (1926).

Anilara sp. near *A. obscura* (Macleay, 1872)

Distribution: Australia (New South Wales).
Larval host-plant: *Flindersia maculosa* (Lindl.) Benth. (Flindersiaceae)(Hawkeswood & Peterson, 1982).
Adult host-plant: Not recorded.
Biology: Hawkeswood & Peterson (1982) briefly recorded an unidentified species of *Anilara* breeding in and causing extensive damage to *Flindersia maculosa* in northern New South Wales.
Life-stages: The egg, larva and pupa have not been described.

Published collection records with biological data: Moree, New South Wales (29°30'S, 149°50'E), 23 March 1966, K.M. Moore, breeding in *Flindersia maculosa* (Lindl.) Benth. (Flindersiaceae)(Hawkeswood & Peterson, 1982).
Further comments: Bellamy (2003) ignored the record of Hawkeswood & Peterson (1982).

Anilara olivia Carter, 1926

Distribution: Australia (Queensland).
Larval host-plant: *Flindersia xanthoxyla* (A. Cunn. ex Hook.) Domin (Flindersiaceae) (Hawkeswood, 1988).
Adult host-plant: Not recorded.
Biology: Several adults and larvae of this species were collected in association with specimens of *A. obscura* (Macleay) noted above from *Flindersia xanthoxyla* in south-eastern Queensland (Hawkeswood, 1988).
Life-stages: The egg, larva and pupa have not been described.
Published collection records with biological data: Mt. Mee, south-eastern Queensland (27°05'S, 152°42'E), 1 Dec. 1981, T. Weatherhead, from *Flindersia xanthoxyla* (A. Cunn. ex Hook.) Domin (Flindersiaceae)(Hawkeswood, 1988).

Anilara pagana (Obenberger, 1915)

Distribution: Australia (New South Wales, Victoria).
Larval host-plant: Not recorded.
Adult host-plant: *Eucalyptus* sp. (Myrtaceae)(Williams & Williams, 1983).
Biology: Williams & Williams (1983) noted that a museum specimen of this species was collected at Kurrajong, New South Wales, on 25 Jan. 1913, from the leaves of dying *Eucalyptus*.
Life-stages: The egg, larva and pupa have not been described.
Published collection records with biological data: None available.
Further comments: Bellamy (2003) overlooked the record of Williams & Williams (1983).

Anilara sulcipennis Kerremans, 1898

Distribution: Australia (Queensland, New South Wales).
Larval host-plant: Not recorded.
Adult host-plant: *Casuarina littoralis* Salisb. (Casuarinaceae)(Williams & Williams, 1983).
Biology: Williams & Williams (1983) noted that this species was found to be common at Lapstone Hill in the lower Blue Mountains, New South Wales during December to January on *Casuarina*.
Life-stages: The egg, larva and pupa have not been described.
Published collection records with biological data: None available.

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