Distinguishing female *Pityogenes* Bedel, 1888 (Coleoptera, Curculionidae) of the *chalcographus* group *sensu* Pfeffer 1995

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Introduction

Hitherto unrecorded in midland England a female *Pityogenes trepanatus* (Nördlinger, 1848) that flew to a 250 watt Mercury Vapour light at Little Comberton, Worcestershire (52002'N 02009'W VC37 SO93) during the night of 6th September 2023 (01, 02) initially proved somewhat difficult to identify. Of the three species in the *Pityogenes chalcographus* group, namely *P. chalcographus* (Linnaeus, 1761), *P. saalasi* Eggers, 1914 and *P. trepanatus* (Nördlinger, 1848) identification has frequently placed emphasis on the arrangement of the distal denticles of the male elytra (Bevan, 1987; Pfeffer, 1989; 1995).



01. *Pityogenes trepanatus*, female habitus, Little Comberton, Worcestershire. In nocturnal flight after 2100 hrs BST, 21oC, 6 September 2023. Paul Whitehead.

Discussion

Following discussion with Dr Roger Beaver the finer details of the *P. trepanatus* in question were considered, in particular the 'stirngrube' or mycangium (Bright, 1993) a depression on the frons of female beetles. In this regard I was able to compare *P. chalcographus and P. trepanatus* directly. *Pityogenes saalasi* has no documented presence in Britain but almost certainly did have in the past; it is especially associated with Siberian Spruce *Picea obovata* Ledeb., 1833 which occurred in what is now England during the early phases of the Devensian or last glaciation as originally confirmed by Whitehead (1977). Female *P. saalasi* are highly distinctive in having a circular mycangium on the top of the head (Izhevskey, Nikitsky, Volkov & Dolgin, 2005, p. 139, fig. 212). All of these extant species of *Pityogenes* may coexist at a few time-honoured locations (Mokrzycki, 2001).

The objective here is to clarify the shape and arrangement of the mycangia of female *P. trepanatus* which are neatly incised and quadrangular (02) and female *P. chalcographus* which are weakly defined ellipses (03) marked by frontal callosities. Both species are localised in Britain, the former keeping the company (Duffy, 1953; Duff, 2016) of a large cohort of beetles that have strongholds in Scotland with secondary populations in English plantations. In contrast the frons of female *P. bidentatus* are plane and coarsely tomentose (04). On the basis that a picture conveys a thousand words, it is hoped that these illustrations will facilitate the

identification of these female beetles which have rarely been illustrated in this way.



02. *Pityogenes trepanatus* female, head and pronotum frontal aspect. Little Comberton, Worcestershire, 6 September 2023. The welldefined quadrangular interocular mycangium is clearly visible. Paul Whitehead.



03. *Pityogenes chalcographus* female, unusually from Silver Fir Abies alba Mill.,Pol'ana volcanic caldera, Slovakia, 48062'N 19048'E, 970 m a.s.l., 25 May 1995. Frontal aspect showing the weakly defined elliptical interocular mycangium and callosity. Paul Whitehead.



04. *Pityogenes bidentatus* female, from population on planted Norway Spruce *Picea abies* (L.) H. Karst., Bredon, Worcestershire, 52002'N 02009'W, VC37, 30 m a.s.l., 29 March 1993. Head and pronotum in frontal aspect showing the plane frons and coarse indumentum which in the absence of a mycangium may act as an agent of fungal spore dispersal. Paul Whitehead.

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References

Bevan, D. 1987. Forest Insects. Forestry Commission Handbook 1. H.M.S.O., London. Bright, D. E. 1993. Systematics of bark beetles. pp. 23-36 in Schowalter, T. D. & Filip, G.M., Beetle-pathogen interactions in conifer forests. Academic Press Ltd, London. Duff, A.G. 2016. Beetles of Britain and Ireland 4: Cerambycidae to Curculionidae. A. G. Duff Publishing, Norfolk. Duffy, E. A. J. 1953. Coleoptera. Scolytidae and Platypodidae. Handbooks for the identification of British insects. V. 15. Royal Entomological Society, London. Izhevskey, S. S., Nikitsky, N. B. Volkov, O. G. & Dolgin, M. M. 2005. Illustrated guide to the coleopteran xylophagous pests of forest and timber in Russia [in Russian]. Grif, Tula, Russia. Mokrzycki, T. 2001. Scolytidae, Platypodidae. pp. 203-204 in Gutowski, J. M. & Jaroszewicz, B. Catalogue of the fauna of Białowieża primeval forest. Instytut Badawczy Leśnictwa, Warsaw. Pfeffer, A. 1989. Kurovcovití Scolytidae a jádrohlodovití Platypodidae [in Czech]. Vydala Academia, Prague. Pfeffer, A. 1995. Zentral- und westpalaarktische Borken- und Kernkäfer. Pro Entomologia, Naturhistorisches Museum, Basel. Whitehead, P. F., 1977. A note on Picea in the Chelfordian Interstadial organic deposit at Chelford, Cheshire. Quaternary Newsletter 23:8-10.

Images

01. *Pityogenes trepanatus*, female habitus, Little Comberton, Worcestershire. In nocturnal flight after 2100 hrs BST, 21oC, 6 September 2023. Paul Whitehead.

02. *Pityogenes trepanatus* female, head and pronotum frontal aspect. Little Comberton, Worcestershire, 6 September 2023. The welldefined quadrangular interocular mycangium is clearly visible. Paul Whitehead.

03. *Pityogenes chalcographus* female, unusually from Silver Fir *Abies alba* Mill.,Pol'ana volcanic caldera, Slovakia, 48o62'N 19o48'E, 970 m a.s.l., 25 May 1995. Frontal aspect showing the weakly defined elliptical interocular mycangium and callosity. Paul Whitehead.

04. *Pityogenes bidentatus* female, from population on planted Norway Spruce Picea abies (L.) H. Karst., Bredon, Worcestershire, 52002'N 02009'W, VC37, 30 m a.s.l., 29 March 1993. Head and pronotum in frontal aspect showing the plane frons and coarse indumentum which in the absence of a mycangium may act as an agent of fungal spore dispersal. Paul Whitehead.