

***Pogonocherus caroli* Mulsant, 1863 (Cerambycidae: Lamiinae) new to Britain, from two localities in Scotland**

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Introduction

In summer 2006, dead branches of Scots pine *Pinus sylvestris* from 2-5 cm in diameter were collected by MR in two old pine forest localities in Scotland 75 km apart, with a view to rearing longhorn beetles (Cerambycidae) using the method described in Rejzek (2006). One recently fallen branch was collected from the ground and found to contain suspected *Pogonocherus* larvae, after which several similar dead branches were taken from trees. During August 2006, three adult female specimens of *Pogonocherus caroli* Mulsant, 1863 emerged, from branches from both localities. These are the first specimens of this rare western European longhorn beetle known from the British Isles, and the species is hereby added to the British List.

The genus *Pogonocherus* includes 15 species in Europe (Sama, 2010; Sama, 2013), of which three are known to occur in Britain: *Pogonocherus fasciculatus* (De Geer) is associated with pine, while *P. hispidulus* (Piller & Mitterpacher) and the common *P. hispidus* (Linnaeus) use a range of deciduous trees. *Pogonocherus caroli* is immediately distinguished from *P. fasciculatus* by the apices of its elytra being produced into spines, and from *P. hispidus* and *P. hispidulus* by its larger size, and its colouration (Fig. 1), which comprises shades of lighter and darker brownish grey, as opposed to the dark brown elytra with strongly contrasting white shoulders of the two latter species. *P. caroli* is not likely to be confused with any other cerambycid occurring in Britain.

Material Examined

British material:

Grid references are approximate centroids. Two specimens are in the Rejzek collection, Norwich (MRC), and one in the Natural History Museum, London (BMNH).

2 females hatched from pupal cells in dead branches of *Pinus sylvestris*: Perth, Black Wood of Rannoch, W Pitlochry, 265 m, NN572570 (N56°41' W04°20'), 26.viii.2006, lgt. M. Rejzek (BMNH, MRC).

1 female hatched from a pupal cell built in a thick dead branch of *Pinus sylvestris*: Inverness, Abernethy Forest, NE Aviemore, 304 m, NH979177 (N57°14' W03°42'), 28.viii.2006, lgt. M. Rejzek (MRC).

Other European Material:

The Natural History Museum's collection includes 17 specimens of *P. caroli*, all from France, mainly the southern Departments of Hérault, Gers and Vaucluse. 14 are from the Rothschild collection, two from the Voříšek collection and one from the Chevrolat collection. Months of collecting, where given, are August (2), September (3) and October (1). An outlying specimen from the northern Department of Seine-Maritime, city of Rouen, was labelled by the renowned cerambycid expert Louis Chevrolat as a type of the unpublished name '*Pogonocherus advena*' ('immigrant *Pogonocherus*') and thought to have been brought from the Caribbean island of Martinique. Chevrolat was clearly unfamiliar with this species, although it is a native of his own country – but he ultimately refrained from describing it as a new, exotic species. His specimen was later correctly identified by Breuning. Whether it is from the vicinity of Rouen, or brought from elsewhere in France with timber, is not known.

MR has examined further specimens in private collections, from France (Departments of Tarn and Var, collected 10 June, 31 August and 3 September), and the islands of Gotska Sandön (4 exx.) and Gotland (1 ex.) off the south Swedish coast (all collected in July).

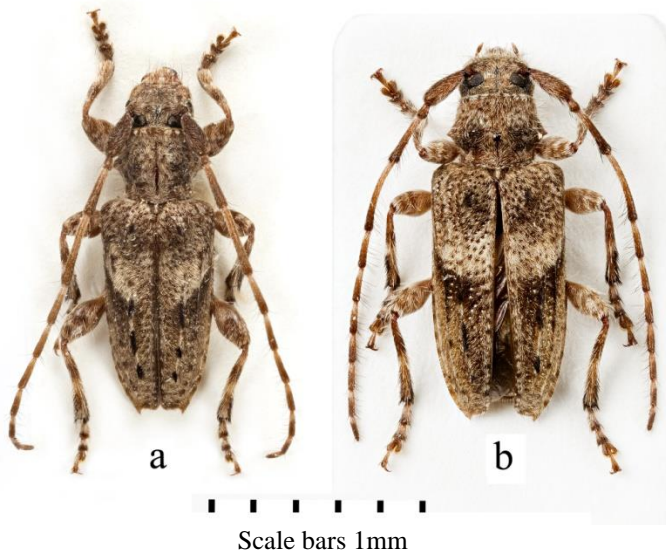


Fig. 1 *Pogonocherus caroli* Mulsant; (a) Male. France, Vaucluse, Mt. Ventoux, viii.1976, lgt. R. Mourglia, NHMUK010367754; (b) Female. Scotland, Black Wood of Rannoch, 26.viii.2006, lgt. M. Rejzek, NHMUK010830785

Discussion

The discovery of a new beetle for the British Isles always raises the question of whether the species is an overlooked member of the native fauna, or an 'introduction' (i.e. a more recent arrival from continental Europe, having spread either naturally or by artificial means). In this case the first author is inclined toward the former explanation, while the second author is more circumspect. The first author has a better knowledge and understanding of the distribution and biogeography of the European Cerambycidae, whilst the second is more experienced with the British fauna and the history of collecting in the British Isles. It is accepted that the concept of a 'native fauna' is fluid and somewhat arbitrary in any area, and especially in a group of islands that has been separated from the adjoining land mass for only a few millennia, and free of glacial ice for a similar period of time.

Pogonocherus caroli is at present known only from France, Switzerland, Spain and southern Sweden (Bense, 1995; Sama, 2010). Bense (1995) gives North African records, but these are excluded from later works, and were presumably reidentified. Sama (2010) lists Britain, based on informal knowledge of the records given here. Ehnström & Axelsson (2002) state that larvae develop in *Pinus sylvestris*, *P. mugo uncinata* & *Picea abies*, and that adults have been reared from pine branches 2-5 cm thick. R. Petterson (pers. comm. to MR, 2006) has collected it in window traps on Gotska Sandön Island off southern Sweden, an island with intact pine fauna including several rarities, and associates it with smaller dying pines or dying pine branches around 5 cm thick. Due to its rarity we have only been able to examine 26 European specimens, 17 in the collection of the Natural History Museum (all from France), and 9 in private collections (four from France and five from Sweden). Its presence in Britain is compatible with its strongly western European distribution, and adding another country considerably enlarges the known range of this rare beetle, so is of international interest for conservation. While the question of the origin of British populations of *P. caroli* may never be resolved, if it were an introduced species it might be expected to be reported more frequently as time passes, and there have been no further records in the intervening 10 years. The Scottish forests where it was collected are some of the oldest and the largest native pine forests in the UK, and its presence at old forest localities some distance from sites where foreign pine timber is likely to have been used, combined with the fact that it is probably not a very mobile species, support a view that it may be native. Additionally, the Caledonian pine forest presents a very similar habitat to several high altitude localities in France where the species occurs (MR pers. obs.).

On the other hand, Aviemore and the Black Wood of Rannoch have been two of the most collected localities in Scotland for generations, and none of the older generations of collectors, in spite of their considerable field craft and dedication, collected it at either location. This may be because it was reared from branches, which is not a technique much used by early entomologists, many of whom travelled up only for short visits by train and collected by hand. Furthermore, the specimens under study emerged in August, and the majority of collection specimens examined

are from late summer or autumn, after the activity period of most adult British Cerambycidae, and the entomologists who study them. Several other, commoner, species of *Pogonocherus* also have a peak of adult activity in autumn, winter and early spring, which may also lead to their being overlooked or under-recorded.

There are other saproxylic beetles recently reported as new for Britain from the old forests of the Scottish highlands. Examples include *Ostoma ferrugineum* (Linnaeus) (Trogossitidae), first reported in 1952, and *Chrysanthia nigricornis* Westhoff (Oedemeridae), first reported in 1971. Both of these have been interpreted as rare natives and given a status of 'Red Data Book 1: Endangered' (Hyman, 1992). Possibly *P. caroli* has a better claim than either to be an overlooked native, since *Chrysanthia* and *Ostoma* are both conspicuous insects that can occur in large numbers, and are active in spring and early summer, so their absence in old collections is more surprising. They also occur abundantly in countries from which Britain has historically imported pine timber, while *P. caroli* has a much narrower range in mainland Europe and is generally uncommon where it occurs. Indeed, when the French entomologist Chevrolat encountered a native specimen of *P. caroli* (now in BMNH, see above) it was, in spite of his expertise, so unfamiliar to him that he mistook it for an import from the Caribbean colonies.

We think *P. caroli* should be, with some caution, treated as an overlooked native species and assessed for a conservation status accordingly, but with the caveat that this should be revisited if it becomes notably more abundant or widespread, as introduced species are apt to do. Some other pine associated species that have appeared in Britain during the same time frame, such as *Plegaderus vulneratus* (Panzer) (Histeridae) and *Magdalis memnonia* (Gyllenhal) (Curculionidae) are treated as introductions, largely because they were first reported in southern Britain outside the generally recognised native range of *Pinus*. The caution is urged because, if these two species had been reported first in Scottish pine forests, they may well have been regarded as overlooked natives. Such an example was *Cicones undatus* (Guérin-Méneville) (Colydiidae), which was first recorded in Windsor Forest (Mendel & Owen, 1987), and was considered a rare and restricted native (Hyman, 1992) and given 'Red Data Book 1: Endangered' status. It subsequently became widespread over much of the south of England and was reinterpreted as an introduced species; it was presumably first noted in a high quality natural habitat simply because such places receive more attention from entomologists. It is possible that in future, DNA examination may help clarify the origin and native status, or otherwise, of British *Pogonocherus caroli*.

The Food and Environment Research Agency (FERA) has been notified of the discovery of this plant-feeding beetle in Britain, even though in this case there is almost no possibility of it becoming a pest.

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