

# the noble chafer

The striking noble chafer beetle lives a reclusive life in traditional orchards. But, as agricultural intensification and neglect reduce its habitat, this handsome beetle is becoming increasingly rare.

COMMON NAME Noble chafer

SCIENTIFIC NAME *Gnorimus nobilis*

**DESCRIPTION** The noble chafer is a very attractive beetle. The adult is approximately 20mm long and has a metallic-green body which is speckled with white. The whole body displays a brilliant iridescence which can flash copper, gold and even violet when the light strikes it. The noble chafer resembles a much more common species called the rose chafer (*Cetonia aurata*). The principal differences between them are that the middle and hind legs of the noble chafer are smooth whereas they are 'toothed' on the rose chafer, and a small triangular area between the wing cases forms an equilateral triangle on the noble chafer but is elongated on the rose chafer. The rose chafer is also a much globular and smoother-looking insect than the noble chafer.

**HABITAT** This rare beetle is associated with traditional orchards where it is dependent on old, decaying wood within live trees especially cherry, plum and apple. They exhibit a preference for orchards that contain mature fruit trees between 50 and 80 years old. These sites are vulnerable to removal or clearance, particularly if the trees are reaching the end of their productive life.

**DIET** The larvae feed on the accumulations of decayed wood debris in the hollowed trunks and boughs. They produce characteristic droppings, called frass, which may become abundant and accumulate like fine gravel in hollow branches or trunks.

**HABITS** Adult noble chafers emerge in early summer and live for about 4-6 weeks. The peak flight season is from late-June through July and August. On emergence the adult beetle can sometimes be found visiting flowers such as hogweed, meadow sweet and elder.

**BREEDING** After emergence the adult females lay up to 35 eggs in areas of wood mould formed by the action of fungi beneath the bark or in the centre of the trunk of old, decaying fruit trees. The larvae hatch about two weeks later. They are white c-shaped larvae, grow to about 3cm long and remain feeding within the tree for 2 to 3 years, until they pupate.



mating pair



noble chafer larvae

**DISTRIBUTION** The noble chafer is widely distributed throughout Europe. The key area of distribution in England seems to be the fruit growing regions - Worcestershire, Gloucestershire and Herefordshire with outlying populations in the New Forest and south Oxfordshire. Excitingly a population has recently been discovered in Kent. Historically the species was also known to exist in Essex, Northamptonshire, Buckinghamshire, Devon and Cumbria.

**CONSERVATION STATUS** In Britain, the species has been rare for the past century. It is a Biodiversity Action Plan (BAP) species and is classified as 'Vulnerable'.

Images: Mark Sanders, Chris Harris, Andrew Curran, PTES



The noble chafer beetle is often confused with the rose chafer. The rose chafer however has a globular shape and lacks the 'waist' of the noble chafer.



rose chafer



# surveying fruit trees for noble chafer beetles

Where old fruit trees in an orchard exhibit decay features, look for noble chafer signs...



- With your arm, a long handled spoon or similar implement, reach into any accessible hollows.
- Collect a handful of the wood mould that is inside. This will be fine, woody material produced by fungal activity during the decay process.
- Inspect the wood mould for noble chafer frass. It may be useful to use a white sheet or piece of paper for this as when shaken the pellets usually come to the surface. Noble chafer frass is approximately 3mm long and lozenge-shaped.
- If noble chafer frass is discovered please take a small sample and send it to the PTES office, with address or grid reference for confirmation and recording.
- If noble chafer larvae are discovered please leave them where they are but take a photograph if possible.
- Return the wood mould to the hollow.
- Always be aware that other species inhabit tree hollows so please explore with care and keep disturbance to a minimum.

*frass from the noble chafer larvae*



## noble chafer-friendly orchard management

If you are lucky enough to find evidence of the noble chafer in your orchard, follow these steps to ensure the beetles continue to thrive ...

- Take care when pruning and leave thick branches alone as these may contain noble chafer larvae.
- Encroaching scrub should be controlled around trees that are known, or suspected, to have noble chafer within them as increased shading may cool the trunk which in turn may affect the development of the larvae.
- Fallen trees should be left undisturbed as they may contain developing noble chafer larvae. Where they need to be moved for access, move them to the side of the orchard where they can continue to support deadwood invertebrates and fungi.
- Aim for an organic approach to the management of your orchard. Pesticides may poison noble chafer and fertilisers may compromise tree health through impacts on fungal mycorrhizae which have many benefits to trees.
- Keeping your orchard well-stocked with trees will maintain a diverse age structure and ensure the continued presence of wood-decay habitats and future habitat for the noble chafer.
- An active management programme is beneficial to orchard wildlife in maintaining the open structure which favours noble chafer and other key species.

