

This shiny green beetle is dependent on dead wood to complete its life cycle. It is closely associated with traditional orchards, but as orchard loss and neglect reduce its habitat, this handsome beetle has become a rare sight.

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, speckled with white. The whole body displays a brilliant iridescence which can flash copper, gold and even violet. The noble chafer resembles a much more common species, the rose chafer (*Cetonia aurata*). The main difference between them is the small triangular area (the scutellum) between the wing cases forms an equilateral triangle on the noble chafer but is elongated on the rose chafer. The rose chafer is also more globular looking and lacks the 'waist' of 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 have 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. In the New Forest they are thought to breed within old oak and beech trees - they have only been seen so far as adults visiting flowers on road verges.

DIET The larvae feed on decaying wood in hollowed trunks and boughs. They produce characteristic droppings called frass, which may become abundant and accumulate in hollow branches or trunks. Adults feed on pollen and nectar from a range of umbellifers (plants with clusters of tiny flowers).



HABITS Adult noble chafers emerge in early summer and live for about 4-6 weeks. The peak flight season is June and July. In the morning, after emerging from the tree, beetles will bask for a short while to warm up their flight muscles, then fly to feed on nearby flowers. Later on in the day they may be found up in the canopy some distance from their larval habitat.

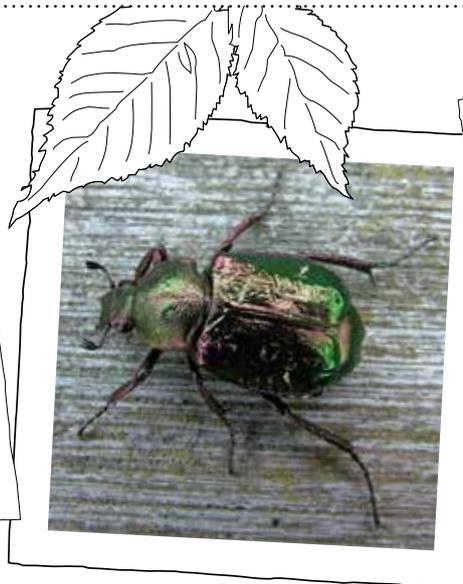
BREEDING The adult females lay up to 35 eggs in areas of wood mould formed by the action of fungi beneath the bark or in the centre of the trunk of old, decaying fruit trees. The larvae hatch about two weeks later. They are white, c-shaped and grow to about 3cm long. They remain feeding within the tree for two to three years, until they pupate. It is thought that some beetles never leave their host tree.

DISTRIBUTION The noble chafer is found throughout Europe. In England populations are centred around the fruit growing counties of Gloucestershire, Herefordshire and Worcestershire, with outlying populations in the New Forest and South Oxfordshire. Recently, noble chafers have been discovered in two adjacent orchards in Kent and two unconnected orchards in Buckinghamshire. Historically this beetle was also known to live in Essex, Northamptonshire, 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'.



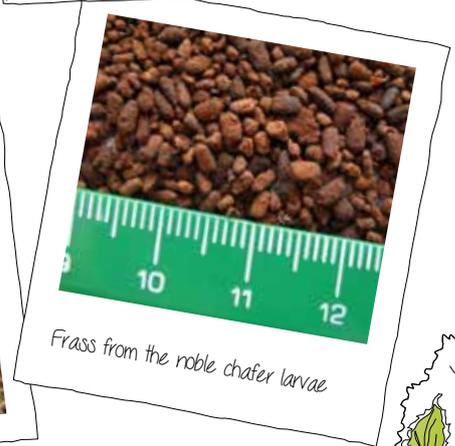
The noble chafer beetle is often confused with the rose chafer, above. The rose chafer however has a globular shape and lacks the 'waist' of the noble chafer, right.



How to survey 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 or adults are discovered please leave them where they are but take a photograph to send to us (address below) 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.

