SPECIES MANAGEMENT SHEET

Hornet robberfly

(Asilus crabroniformis)

The Hornet robberfly is a predatory fly that can grow to more than an inch long, making it arguably the largest fly in the UK. This is a distinctive species with its hairy face, thick black proboscis, brown body and yellow tail, although the latter can be hidden beneath the brown-tinged wings when the fly is at rest. Hornet robberflies are associated with animal grazing, particularly by cattle, as the dung provides habitat for the larvae.

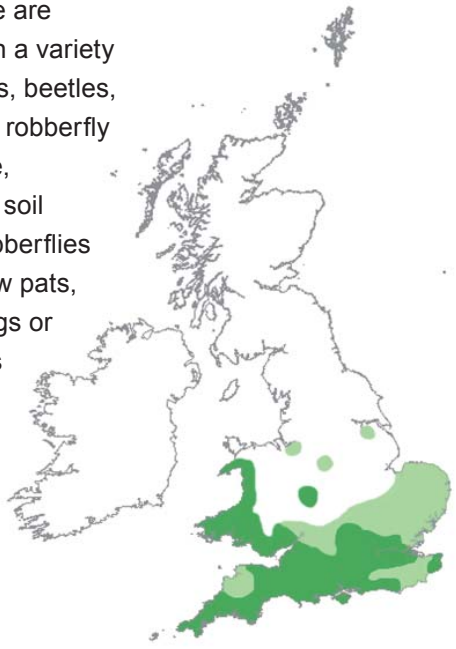
Hornet robberflies are most active in temperatures above 20°C, below 16°C they are unlikely to fly and may be difficult to find. The adults may hang or lie upside down when resting, exposing their brown underparts which act as camouflage. Adults can be territorial, with males establishing larger territories than the females, but they may also behave more gregariously. Females disperse further and are more likely to discover new habitats where they can lay their eggs.

Life cycle

The adults can be seen from late July to early October, but are most frequent in August. Both adults and larvae are predatory. The adults will feed on a variety of insects, including grasshoppers, beetles, bees, wasps and other flies. The robberfly larvae prey on dung beetle larvae, especially the larvae found in the soil beneath animal dung. Hornet robberflies lay their eggs on edges of dry cow pats, horse dung, under rabbit droppings or on nearby vegetation. The adults may be seen sitting on other types of dung, such as sheep or dog, but they are more likely using these as hunting perches rather than for egg-laying.

Distribution map

The Hornet robberfly has a widespread distribution in southern Britain but its range is declining and it has already disappeared from East Anglia. This robberfly has also suffered significant declines in other Western European countries.



Dark green = recent records (after 1980)
Light green = historic records (before 1980)

Threats and causes of decline

The removal of livestock or substantial changes in grazing can cause local extinctions. Hornet robberfly populations disappeared from sites in Hampshire when cattle were replaced by sheep. The use of avermectins against gut parasites causes dung to be insecticidal and often sterile. This results in the loss of prey items for the larvae.

Habitat

The Hornet robberfly favours heaths and downs and is thought to prefer the light, well-drained soils associated with these habitats. It is not restricted to these habitats, however, and is occasionally found in open woodland clearings or even in marshland.
A supply of cattle or rabbit dung is a critical factor, at least through the summer and early autumn, as well as a supply of other invertebrates for the adults and larvae to feed on.

Habitat management

Ensure cattle, horse or rabbit grazing from at least early July to mid-September to coincide with emergence and egg-laying times. Exclude livestock from sites for a month after avermectin treatment and avoid bolus treatments. A continuity of grazing activity across a wider area will benefit this species as females will disperse between suitable areas in the search for new breeding sites. Rabbit grazing is, in moderation, good for invertebrate populations as it creates a more diverse vegetation structure than other grazing regimes. It also leaves scrapes and burrows. In areas where rabbits need to be controlled it is better to limit the damage they cause rather than exterminate the population.

Management for Woodlarks should benefit Hornet robberflies where this maintains mosaics of bare ground and different sward heights on heathland or in woodland clearings and light stocking rates on low input pasture or the accommodation of rabbit populations. The ELS and HLS options chosen for this species need to be combined with cattle, horse or rabbit grazing where this is not already implicit.

Environmental stewardship options

HLS options

HC12-14 Maintenance/restoration/creation of wood pasture and parkland
HK6-8 Maintenance/restoration/creation of species rich, semi-natural grassland
HK15-17 Maintenance/restoration/creation of grassland for target features
HO1-2 Maintenance/restoration of lowland heathland
HO3 Restoration of forestry areas to lowland heathland
HO4 Creation of lowland heathland from arable or improved grassland
HO5 Creation of lowland heathland on worked mineral sites
HR1 Cattle grazing supplement

ELS options

EE1-3 Buffer strips on cultivated land
EE4-6 Buffer strips on intensive grassland
EK1 Take field corners out of management

References

This sheet can be accessed on the web at www.buglife.org.uk

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Larger Brachycera Recording Scheme:
Biological Records Centre www.brc.ac.uk

The Dipterists' Forum www.dipteristsforum.org.uk

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