

Eye D

Club-tailed Dragonflies

Distribution

The Club-tailed dragonfly (*Gomphus vulgatissimus*), also known as the Common Club-tail, is anything but common in the UK and is a very special dragonfly for Sussex. Although it is the most widespread Gomphid species in Europe and can be found widely across Scandinavia, Russia, France and Italy, the species is listed as nationally vulnerable in the UK and it is found in less than 100 10km-squares in Britain

The River Dee supports the most northerly population, and otherwise it is found on the mature stages of seven river systems and their tributaries; five of these rise in the Welsh Uplands (the Dee, Severn, Wye, Tywi and Teifi) and two in Southern England (Thames and Arun). It is therefore a very localised species but in suitable habitats it can be found in very large numbers.



Mature Club-tailed dragonfly. Note the bulbous abdomen © D Sadler

Appearance

The Club-tail is a medium-sized dragonfly with a fairly distinctive shape and colour. Males and females are both have yellow bodies with strong black and yellow markings along the abdomen. As the name suggests however, it is the bulbous 'Club-tailed' appearance of the end of their abdomen which makes them distinct from other dragonflies.

Unlike most dragonflies the eyes are separate and do not meet at the top of the head, which aids identification. In mature adults the eyes are dull green. As the male matures most of the yellow markings turn green although abdominal segments 7-9 remain bright yellow. The shape of the hind wing differs between the male and female and can be used to help distinguish the sex of insects even while they are immature.



Adult Female Club-tailed dragonfly © D Sadler

Larvae of the Common Club-tail are unique, and unlike other British species have short bulbous antennae. The shape of the exuvial case is diagnostic and easy to identify with the head appearing triangular due to the way the antennae always form an apex at the front of the head

Club-tail Eye-D Continued

Behaviour

This dragonfly is elusive as an adult, but can be seen most frequently during emergence or as a teneral insect. Once it has settled in the vegetation or upon stones, its cryptic colouration makes it difficult to observe.

Common Club-tails spend most of their adult life away from water perching on the ground, on bushes and in treetops. They are often found in woodland and use the tree canopy more than most species. They are elusive insects and consequently knowledge about their terrestrial requirements is limited.

Mature males are territorial, preferring to fly low over open water rather than along the shoreline, to defend territories or to hunt. Copulation is rarely seen, but has been witnessed some distance from water. It can be seen in woodland glades, where males will display over bracken to encourage females to fly down to mate. Females oviposit alone, favouring quieter stretches in an attempt to avoid male attention. They fly low over the water, dipping their abdomen below the surface several times before disappearing.

It is likely that their preference for slow flowing water prevents them from being washed too far downstream and they appear reluctant to wander, except at low current speeds .



Older male Club-tailed dragonfly showing greener colouring © D Sadler



Emerging Club-tailed dragonfly © D Sadler

Emergence and flight period

They are an early species and are most likely to be seen from May to the end of June/early July. They have a tightly synchronised emergence triggered by increasing day length and rising water temperature in May and June. The larvae wait for the sun to come up before leaving the water and may travel up to 20m or more to find a suitable emergence site.

Club-tail Eye-D Continued

Habitat

In Britain the Common Club-tail is a riverine species typically associated with moderate to slow flowing water. It breeds in unpolluted, meandering rivers, which have a depositional nature, so more naturalised river channels are favoured. Silty substrates are favoured over stretches with rock beds as the larvae are burrowers. Inhabited reaches are typically adjacent to woodland rather than more open habitats, as woodland provides cover for the adults.

The larvae of the Common Club-tail live within silt and mud on the riverbed for 3 to 5 years, and research shows that they prefer the inside bends of meanders, with clumps of emergent vegetation. The de-silting of river channels can therefore be extremely detrimental to their life cycle.

Confusion with other species



Golden-Ringed dragonfly © J Luck

The Club-tailed dragonfly is unlikely to be confused with any other species, but to the untrained eye it is possible for it to be mistaken for the Golden-ringed Dragonfly *Cordulegaster boltonii*, or the Black-tailed Skimmer *Orthetrum cancellatum*.

The Club-tailed is much smaller than the Golden-ringed however, and the pattern of pale markings is very different. The Golden-ringed is found largely on heathy areas such as Ashdown Forest and it can often be separated from other species by habitat use alone.



Black-tailed Skimmer © D Mitchell

A complete beginner may confuse Common Club-tails and the females of some dragonflies including Hawkers and Darters which also have yellow colouring with dark markings but generally the females markings are nowhere near as distinctive as those of the Club-tail.

Of course the best thing to do if you're not sure is to send us a photo so we can get our resident experts to identify them for you. Otherwise, good luck searching for these beautiful and unusual insects and let us know if you find any.

Club-tail Eye-D Continued

As with many wetland species, and particularly the more specialist species such as the Common Club-tail, there are a number of threats to their survival. These threats include :-

- Water pollution
- River maintenance (Excessive dredging and vegetation removal)
- Sediment deposition
- River Improvement schemes
- Recreational use of rivers
- Adverse weather
- Habitat loss
- Habitat disturbance
- Changing hydrology of rivers
- Predation



Separated eyes on the top of the Club-Tailed dragonflies head is a handy identification feature © D Sadler

Club-tailed dragonfly teneral female. The shape of the hind wings differs between immature males and females © D Sadler

