

# Eye D

## Emerald Dragonflies

The Emeralds (family Corduliidae) are amongst the hardest dragonflies to study; they are secretive, fly very rapidly and normally only settle out of the view of the observer. In Southern Britain we need concern ourselves with only two species:

1) the Downy Emerald (*Cordulia aenea*) and 2) the Brilliant Emerald (*Somatochlora metallica*).

Unfortunately you need to get quite close to the Emeralds to be able to properly identify them. In particular try and look at 1) the frons (nose), 2) the anal appendages, 3) in flight adult coloration, 4) Flight times & 5) Behavioural differences.



### 1) Frons



Downy with completely dark frons (nose)



Brilliant with yellow side markings on frons

### 2) Anal appendages

The anal appendages of the males are clearly different.

Downy - appendages blunt & outward pointing

Brilliant – appendages pointed & turned inwards

In flight the abdomen of the Brilliant Emerald also always looks more obviously pointed at the end

# Emerald Dragon Eye-D Continued .....

## 3) Adult coloration

Identification problems start as the adults mature and are usually only seen in flight. However the Downy Emerald (below left) appears quite dull in coloration compared to the more iridescent green coloration and yellow nose of the Brilliant (below right).



Downy Emerald © Steve Cham



Brilliant Emerald with yellow nose

A word of caution however, the Downy Emerald does start life with brighter colours but quickly loses its iridescence and appears uniformly dull whilst the Brilliant Emerald retains its metallic sheen.

## 4) Flight times

Accepted wisdom is that the Downy Emerald flies earlier in the year and is over by the time the Brilliant Emerald is present. Such wisdom should be viewed with extreme caution as the Downy Emerald can emerge in late April, with the Brilliant Emerald is not far behind commencing in mid May

## 5) Behavioural differences

The Downy Emerald generally flies a low regular beat around the perimeter of a lake hovering frequently and seeing off rivals. The Brilliant Emerald is more laid back in its approach, flying irregularly along banks but often maintaining territory by hovering for long periods in sunspots far from the bank. Downy Emerald is often an early riser and if weather conditions permit will be one of the first dragonflies to appear, whereas the Brilliant Emerald is hardly about before mid morning.

In the UK records for the Downy Emerald after 1st August are unusual whilst the Brilliant Emerald can be seen to the end of August here. In Europe there are records up to late September but it is uncertain whether this happens in the UK.



### A word of caution

Identification problems become even more complex as the insects age.

**Spot the Difference!**  
Downy (left) and Brilliant (right). Only the yellow on the frons and the anal appendages separate the two!





# Emerald Dragon Eye-D Continued .....

Confused – well let's summarise what we can to separate these two species!

ID Feature	Downy Emerald	Brilliant Emerald
Head (Frons)	Dark	Yellow on sides
Eye colour	Dull but can be bright green	Bright green (unreliable feature)
Thorax	Dull and dark with little irridescence	Green and usually very metallic except in very old insects
Abdomen	Dull and dark except in very young insects	Metallic green but becoming dark with age
Anal appendages	Blunt and out curving	Pointed and incurving
Flight season (UK)	May-July	June - August
Behaviour	Regular low beat around perimeter	Irregular beat hovering in sunspots

So — best of luck with the observations. If all else fails, take a photo and we'll do our best to identify the image for you!



Downy Emerald © S Smith