

# DRAGONFLIES & DAMSELFLIES

## in SW Scotland



A guide to the species, their status  
and their distribution in  
Dumfries & Galloway and Ayrshire.



# Dragonflies & Damselflies in SW Scotland

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their distribution in Dumfries & Galloway  
and Ayrshire.*

by

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2019



# Introduction

Dragonflies and damselflies are part of the taxonomic order called Odonata, meaning ‘toothed jaw’ (relating to the formidable mouthparts of their larval stage). In the UK they are divided into two sub-orders: Anisoptera (dragonflies), and Zygoptera (damselflies). Adult Odonata have large eyes and two large pairs of wings, each with a network of veins. They spend most of their lives living underwater as larvae and have three life-cycle stages. Adult males will attempt to grasp females, attaching themselves with their clasping anal appendages. A responsive female will then mate by curling their abdomen towards the male's thorax - sometimes referred to as the 'wheel' position. Mating behaviour can aid identification, as some species couple for seconds, others for an hour or more. In some species females lay eggs (oviposit) alone, whilst in others females remain in tandem with the male. The eggs are laid in a wetland environment, either scattered randomly or placed individually on or into living plants. The larvae hatch after a few weeks (or



Emerging Four-spotted Chaser © Sean Clayton



Four-spotted Chaser & Common Blue © Mark Chambers

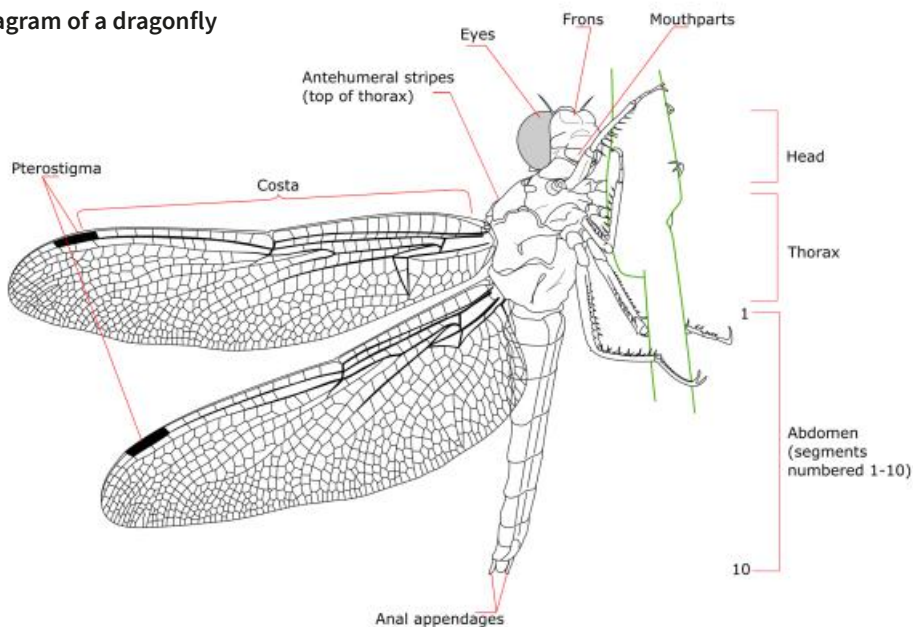
sometimes the following spring) and continue to grow. They shed their skin a number of times as they grow, going through several stages (known as instars). The time spent as a larva varies from a few months to five or more years in some larger dragonflies. In response to temperature and daylight changes, larvae go through a metamorphosis where they climb up a plant stem or other object until they emerge from the water. They then shed their larval skin and, when their wings have expanded and hardened, make their maiden flight as an adult.

All species of Odonata are significant predators, in both larval and adult forms. As a larva, their prey includes small aquatic invertebrates, snails, tadpoles and even small fish. As an adult they are aerial hunters, taking other flying insects such as midges, flies and moths. Larger dragonflies will feed on smaller damselflies.

## Separating damselflies and dragonflies

Damselflies are small in size and delicate in appearance, with thin, matchstick-like bodies. At rest, most species hold their wings together over their back. They have a weak, fluttery flight and their front and hind wings are the same shape. The adult's head is rectangular with large, separate eyes on each side.

## Diagram of a dragonfly



Dragonflies have a more robust form, with large, spherical eyes that almost completely cover the head and usually meet in the middle. Their front and hind wings are different shapes and they have a powerful, persistent flight. They often hover and, when resting, their wings are held at right angles to the body.

### Flight times

Adult dragonflies and damselflies are on the wing from April through to October, sometimes extending into November in mild autumns. The greatest diversity of species on the wing usually occurs between late June and early August. In the species accounts, a bar indicating the main flight period is included. Warmer colours (oranges/reds) indicate the months when the species is recorded more frequently.

### Dragonflies in SW Scotland

In Dumfries & Galloway and Ayrshire, twenty-two species of dragonflies and

damselflies have been recorded. This booklet provides information and distribution maps for all species regularly found in SW Scotland, and notes on the remaining species. Ten common species account for around 95% of all records and these are indicated by a green circle ● in the species header.

The distribution maps include data available to South West Scotland Environmental Information Centre (SWSEIC). We are aware

Southern Hawker larva © Richard & Barbara Mearns



that there may be some data not available at the time of production and that recording effort across the region varies.

The information for Ayrshire is likely to be less extensive than that for Dumfries & Galloway. Distribution maps should be treated as indicative rather than definitive. For more detailed information on identification, we recommend consulting one of the identification guides listed in the *Useful information* section at the back of the booklet.

### Habitats

Odonata make use of a wide variety of wetland and terrestrial habitats. Breeding sites include ditches, rivers, burns, lochs, bogs and ponds, especially where there is submerged and emergent vegetation. Most do not like the cooler temperatures and more acidic conditions of upland burns and pools or fast flowing water, though some species specialise and thrive in such habitats. Immediately after emergence as an adult, many Odonata disperse away from breeding waterbodies to feed until they become sexually mature, thus avoiding competition with other mature individuals. Adult dragonflies can often be found foraging for insects along woodland rides or in open habitats.

### Dragonfly recording

All records of dragonflies and damselflies are valuable in helping to understand their regional and national distribution. The basic information gathered should include the species, date, location (with grid reference) and the recorder's name (and determiner's name if someone assisted with ID). Extra information on habitat, numbers, sex/stage can also be useful. A photo is helpful to verify species identification.

Records can be submitted online via the iRecord website - [www.brc.ac.uk/irecord](http://www.brc.ac.uk/irecord). The website allows for upload of images associated with each record to aid verification. All records submitted through this route will be available to the national recording scheme and to SWSEIC.

There is also an excellent iRecord smartphone app which enables records to be submitted online, and is linked to the above iRecord website.

Records can also be submitted direct to SWSEIC (the local environmental records centre for SW Scotland), via the recording page on the British Dragonfly Society website or direct to the Scottish Dragonfly Recorder (see *Useful Information* for details). SWSEIC would be happy to help with identification from photographs.

**Top right:** Common Hawker habitat at Carlin's Cairn (Kirkcudbrightshire).

**Middle right:** Barend Loch (Kirkcudbrightshire), good habitat for a variety of Odonata species.

**Bottom right:** Banded Demoiselle habitat at Kirkgunzeon Lane, Dalbeattie (Kirkcudbrightshire).

© Richard & Barbara Mearns

Identifying larvae © Richard & Barbara Mearns









Male Banded Demoiselle © Mark Chambers

## Banded Demoiselle *Calopteryx splendens*

This is a large damselfly with a beautiful metallic body and graceful flight. The males cannot be mistaken for any other species in SW Scotland. The cloud of blue-black across their wings and blue-green body is distinctive. The females are metallic green and have large green-tinted wings without dark-coloured bands. Females have distinctive white dots on the edge of their wings (false pterostigmata).

### Habitat

Breeding sites are slow-flowing rivers with a silty, muddy bottom. Sites typically have rich emergent vegetation at the water's edge and no heavy shading from overhanging trees.

Males are territorial and court females by flicking their wings open and performing an

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### Size

45-48mm

### Habitat

Slow-flowing watercourses with rich bankside vegetation

### Confusion species in SW Scotland

None

aerial dance. Their distinctive fluttering wings and comparatively large size (for a damselfly) helps with identification. Males will fight in flight, competing for the best territories. Females lay their eggs into



A close-up photograph of a damselfly nymph resting on a bright green leaf. The nymph has a long, slender, green body with a dark stripe running down its side. Its wings are folded, showing a delicate, veined pattern. The background is a soft, out-of-focus green.

In Scotland, Banded Demoiselle is known only from Dumfries & Galloway and the Scottish Borders. It was first recorded in 2002 on the coast and the first breeding colony discovered on the Kirkgunzeon Lane near Dalbeattie in 2004. The Lane is a slow-flowing river and in the summer, males can often be seen displaying below the bridge on the B793 just east of the town. This area remains its stronghold, but it has since spread along the river into new 10km squares (including by the

Female Banded Demoiselle © Mark Chambers

SWSEIC office). It has also been recorded at other sites in Dumfriesshire.

**Last Recorded**

- 2010-Onwards
- 2000-2009
- 1980-1999
- Pre-1980
- 10km distribution - all years



Male Emerald Damselfly © Malcolm Yates

## Emerald Damselfly *Lestes sponsa*



Emerald Damselflies are metallic green damselflies. They have clear wings and, unlike other damselflies, typically rest with wings spread half-open. Their flight is fairly weak, slow and fluttery, though they may look more robust than many other damselflies. Mature males develop a powdery blue colouring (pruinescence) on the thorax and towards the tip of the abdomen (cf. Blue-tailed Damselfly). The females are similar; slightly duller green, with a thicker abdomen than the male and lacking any blue colouring. Numbers peak in late summer, later than most other damselfly species.

### Habitat

Emerald Damselflies breed in a range of habitats, from brackish ditches and enriched ponds to acidic bog pools. They are often

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### Size

35-39mm

### Habitat

Any wetlands with rushy margins.

### Confusion species in SW Scotland

Blue-tailed Damselfly (males only)

found at shallow standing water perched on dense emergent vegetation. Even pools that may dry out in late summer can be used for breeding, as they overwinter as eggs, with the larvae emerging in spring. Females insert their eggs into emergent plant stems, usually

starting above water but often submerging fully during oviposition. Favoured egg-laying plants include rushes, reeds, sedges and horsetails.

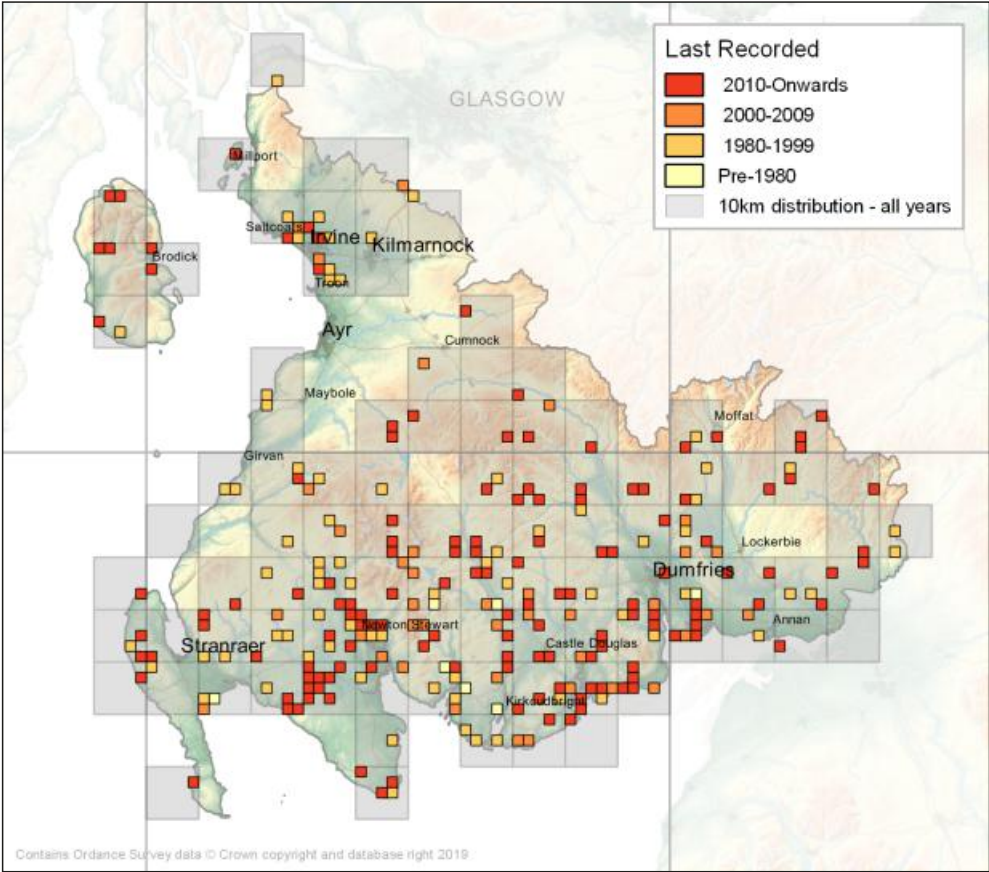
**Local distribution**

Widespread throughout SW Scotland, they are common from lowland ponds to upland bogs. There is opportunity to add new 10km squares in Ayrshire where suitable ponds occur. The highest breeding site known is the peaty Puldow Pool in the Rhinns of Kells at over 400m.



Female Emerald Damselfly © Jean Robson

**Emerald Damselfly distribution in SW Scotland**





Male Large Red Damselfly © Malcolm Yates

# Large Red Damselfly *Pyrrhosoma nymphula*

This is a distinctive and easily recognised red and black damselfly. It is usually the first species to be seen on the wing each year. Adults emerge from late April and are often very active. The abdomen is deep-red with black bands. The thorax is predominantly black with red antehumeral stripes (sometimes yellow in females). The larger black marks on the abdomen are restricted to the tip in males; these are usually more extensive in females. Both sexes have red eyes (duller in females) and black legs.

There are no similar damselfly species present in SW Scotland. The only other red Odonata species is the Common Darter, which is a larger, more robust dragonfly and rests with wings held at 90° to the body.



**Size**  
33-36mm

**Habitat**  
Most wetland types

**Confusion species in SW Scotland**  
None

**Habitat**  
This species can be found at almost any wetland type: ponds, lochs, acidic bog pools, ditches, slow-flowing streams and canals. They favour sheltered waterbodies with little



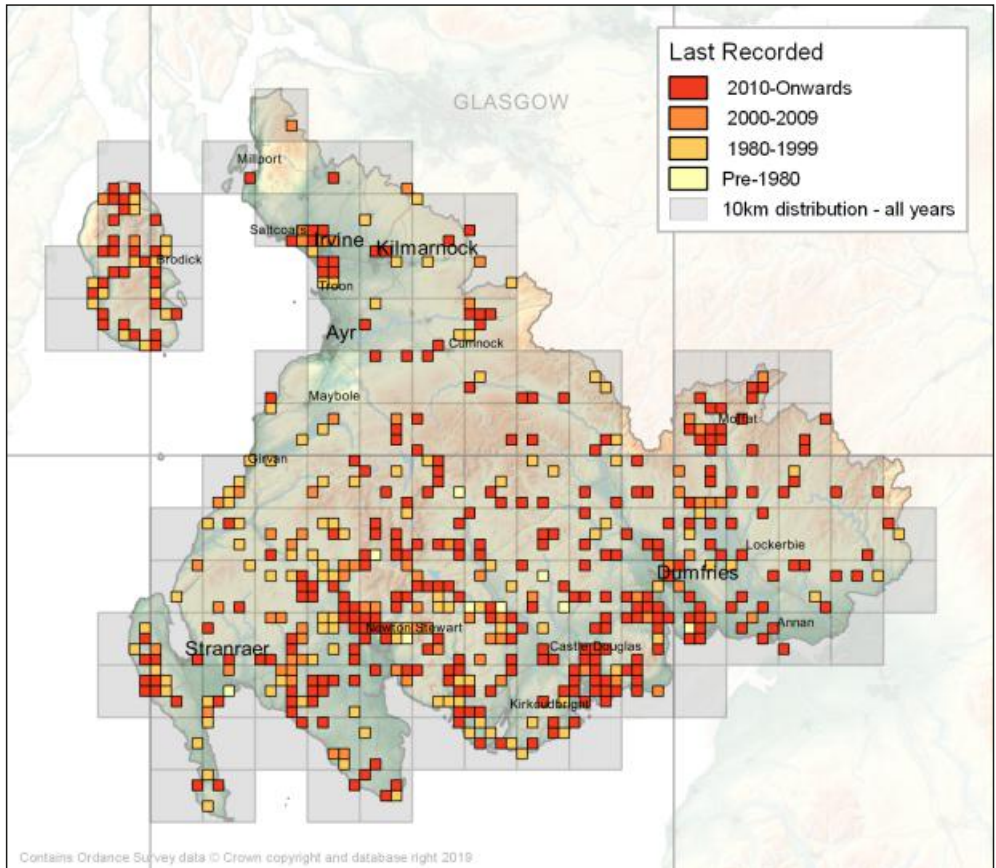
overhanging vegetation and plentiful aquatic plants, especially Broad-leaved Pondweed. Males are normally seen perched on waterside vegetation or flying out from such stands. The larvae live near the bottom of the waterbody amongst the debris and vegetation.

### Local distribution

Large Reds are widespread in SW Scotland having been recorded in almost every hectad. They occur in lowland and upland areas and have been recorded breeding at altitudes up to 620m.



### Large Red Damselfly distribution in SW Scotland





Male Azure Damselfly © Tom Wilson

## Azure Damselfly *Coenagrion puella*



One of three very similar species of blue damselflies found in the region. Males have a black U-shape near the top of the abdomen (segment 2) which is not joined to the dark ring below. The blue antehumeral stripes on the thorax are narrower than the black lines below them on both sexes (cf. Common Blue Damselfly). The side of the thorax has a black spur protruding into the blue (a characteristic of all members of the *Coenagrion* genus (also cf. Common Blue Damselfly). Females are harder to distinguish and have two common colour forms (green and blue), both of which have more extensive black along the abdomen. Identification of both sexes can also be confirmed by close examination of the hind margin of the pronotum (the small saddle-like structure behind the head), which differs in shape for all of the blue damselflies.

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### Size

33-35mm

### Habitat

Smaller lochs and ponds, prefers lower altitudes

### Confusion species in SW Scotland

Common Blue Damselfly

Variable Damselfly

### Habitat

Azure Damselflies breed in a range of waters but are most often found in garden ponds or sheltered pools where there is lots of

emergent vegetation. They are most abundant in early summer and tend not to venture far out over open water. They are sensitive to pollution but can tolerate eutrophic sites.

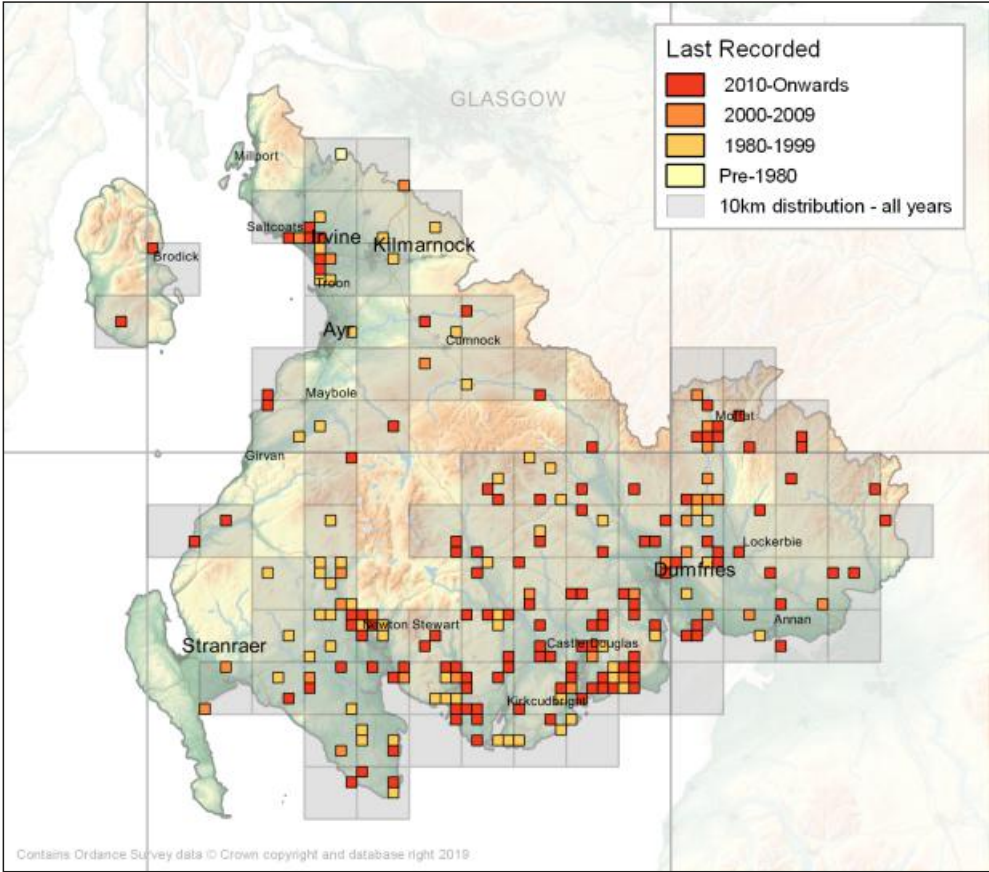
**Local distribution**

Widespread throughout SW Scotland and can occur in high numbers on favoured sites. Largely absent from the Rhins of Galloway (no records beyond Glenluce/Sandhead). Favours lowland areas though have been recorded up to 350m above sea level. Scattered records in Ayrshire, where there is plenty of potential to find new squares or update records.



Female Azure Damselflies ovipositing with males © Malcolm Yates

**Azure Damselfly distribution in SW Scotland**







Male Variable Damselfly © Richard & Barbara Mearns

## Variable Damselfly *Coenagrion pulchellum*

Very similar to other blue damselflies and the hardest to ID due to the variable markings. Key pointers are: pinched or broken antehumeral stripes on the thorax that often resemble an exclamation mark (both sexes); a black marking on the second abdominal section resembling a wine glass (males only); and a black bat-shaped marking on the blue tip of the abdomen (males only). However the features are variable, and close examination of the pronotum (the saddle-shaped structure behind the head) may be required to confirm identification. Females often have more extensive black markings on the abdomen and are best confirmed by the shape of the pronotum.

### Habitat

The species likes to breed in well-vegetated ditches, ponds and lowland lochs. Adults may

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### Size

33-38mm

### Habitat

Well-vegetated ponds and ditches in lowland areas.

### Confusion species in SW Scotland

Azure Damselfly

Common Blue Damselfly

be found in rich vegetation a distance from the water's edge and, as with other damselflies, seek shelter in bushes or taller vegetation when it is windy.



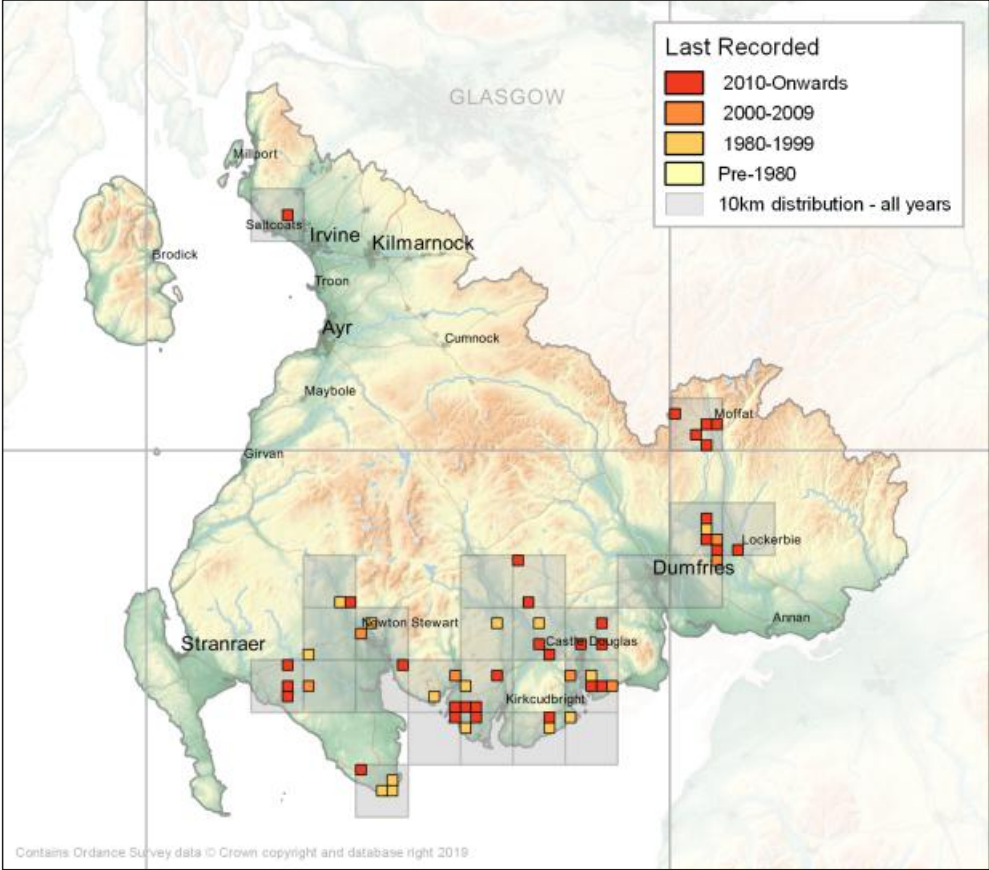
Local distribution

Variable Damselflies are absent from most of Scotland, but can be found at low altitudes across SW Scotland. It is recorded from clusters of tetrads in Galloway from Dalbeattie to the Machars, many of which are near the coast. There are also clustered records along the Annan Valley. Since 2010 it has been found in four new 10km squares, and there is potential for new sites to be discovered elsewhere. One of these was the discovery at Stevenston Loch in North Ayrshire (2018), the first confirmed record for the county. There are unverified records for the grid square NS35 – are there other



Variable Damselfly habitat © Richard & Barbara Mearns  
populations undiscovered in the Garnock Valley or elsewhere in Ayrshire or Renfrewshire?

Variable Damselfly distribution in SW Scotland





Male Common Blue Damselfly © Tom Wilson

## Common Blue Damselfly *Enallagma cyathigerum*



One of three similar blue damselflies found in SW Scotland. Males are bright blue. They can be separated from other blue damselflies by the lollipop-shaped black mark near the top of the abdomen (on segment 2) and the broad blue antehumeral stripes on the thorax which are wider than the black line below them. There is no black spur on the coloured area on the side of the thorax. Females are less brightly coloured (blue, green or brownish) with black rocket-shaped marks along the abdomen. This species can be abundant, sometimes occurring in groups of hundreds of individuals.

### Habitat

The Common Blue can be found in both alkaline and acid waters: ponds, lochs and lochans, slow-flowing watercourses, canals

J F M A M J J A S O N D



### Size

29-36mm

### Habitat

Large lochs and ponds, wide range of altitudes

### Confusion species in SW Scotland

Azure Damselfly

Variable Damselfly

and gravel pits. They tend to prefer larger ponds and lochans and are less frequently found in garden ponds (cf. Azure Damselfly). They are tolerant of both nutrient-poor and

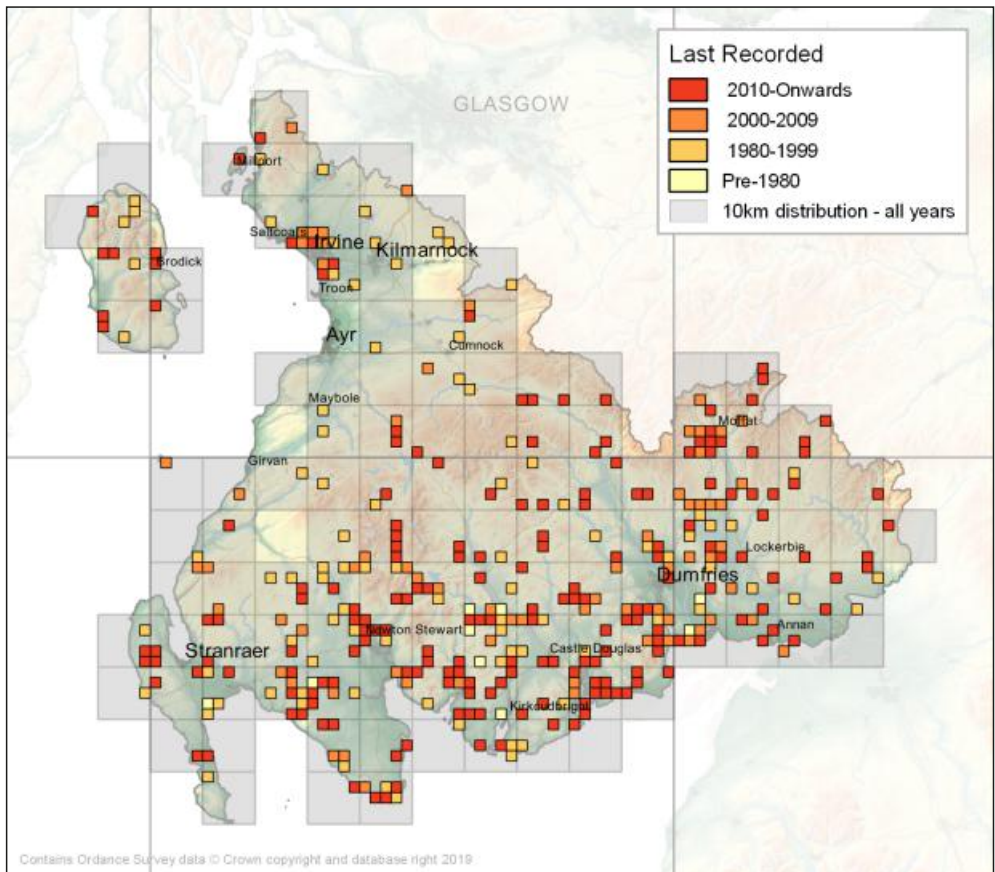
nutrient-rich conditions. They are often the commonest damselfly species on larger lochs and reservoirs.

### Local distribution

The commonest and most widespread of the blue damselflies. It is common throughout Dumfries & Galloway but less extensively recorded in Ayrshire, where there are opportunities to add to and update the regional distribution. It is found from sea level to altitudes of up to 520m (Loch Skene, Dumfriesshire).



### Common Blue Damselfly distribution in SW Scotland





Male Blue-tailed Damselfly © Tom Wilson

## Blue-tailed Damselfly *Ischnura elegans*



Blue-tailed Damselflies are a small damselfly with a dark abdomen and a bright blue segment near the tip (in most forms). In males, the thorax is black above with blue antehumeral stripes and sides. Female colouration is more varied. There are a number of different colour forms, where the thorax and antehumeral stripes can vary from blue to violet, green, buff, orange or pinkish. Whilst the 'tail' is usually blue, it can match the colour of the thorax in some female forms.

They have a weak flight and are often more active in cloudy weather than other damselflies.

The only potential confusion species in SW Scotland is the male Emerald Damselfly. Male



### Size

30-34mm

### Habitat

Almost any still or slow-flowing waterbody in lowland areas.

### Confusion species in SW Scotland

Emerald Damselfly (males)

Emeralds may have powdery blue marks towards the tip of the abdomen, but have metallic emerald green bodies rather than black.



**Habitat**

The species is found in a variety of habitats, including garden ponds, slow-moving streams, rivers, ditches, lochs and peaty pools. It is a quick colonist of new or restored ponds, and may be found in ponds where there is simple vegetation with few underwater plants.

**Local distribution**

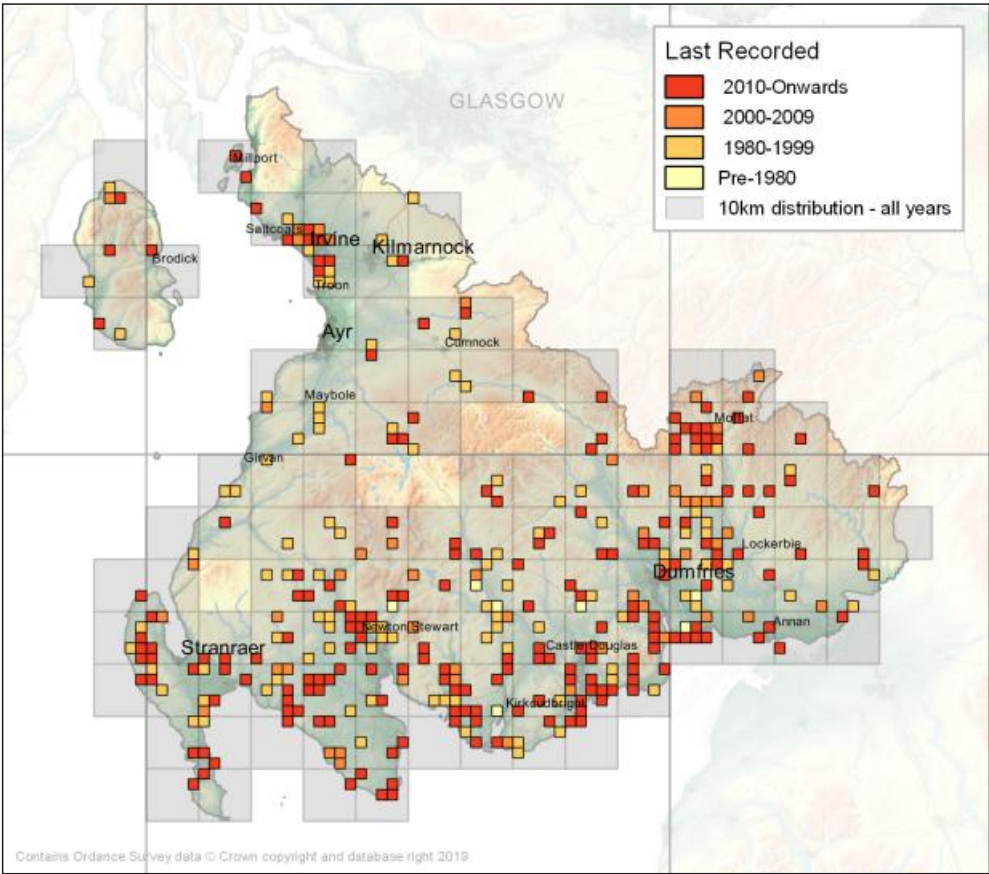
The species is very widespread on lochs and ponds throughout most of Dumfries & Galloway and, to a lesser extent, across Ayrshire. They are present mainly in lowland



Female Blue-tailed Damselfly © Tom Wilson

areas but have been recorded from sea level to over 500m (Loch Skene, Dumfriesshire).

**Blue-tailed Damselfly distribution in SW Scotland**





Male Hairy Dragonfly © Sean Clayton

## Hairy Dragonfly *Brachytron pratense*

Also known in some older guidebooks as the Hairy Hawker, this is the smallest of our region's hawker dragonflies. It is usually the first of the larger dragonfly species on the wing, appearing from mid-May onwards. Their flight period is over by the end of June. They have a dark abdomen, with pairs of pear-shaped spots, blue in males and yellow in females. As its name suggests, it has a distinctive hairy thorax, which is green on the sides. Antehumeral stripes on the thorax are yellow or greenish, shorter in females. The pterostigmata (wing spots) are long, thin and brown and the rear margin of the hindwing is not acutely angled like *Aeshna* hawkers. It has a low, darting flight and often basks in the sun high up in trees.



**Size:** :  
54-63mm

**Habitat:**  
Well-vegetated lowland lochs and ponds

**Confusion species:**  
Other hawker dragonflies

**Habitat**  
Hairy Dragonflies prefer waterbodies with diverse, rich vegetation. In SW Scotland it can be seen in ponds and lochs with lots of fringing and floating vegetation and generally

well-structured habitats. Mating normally takes place in vegetation close to water and females lay their eggs into the stems of emergent or floating vegetation.

**Local distribution**

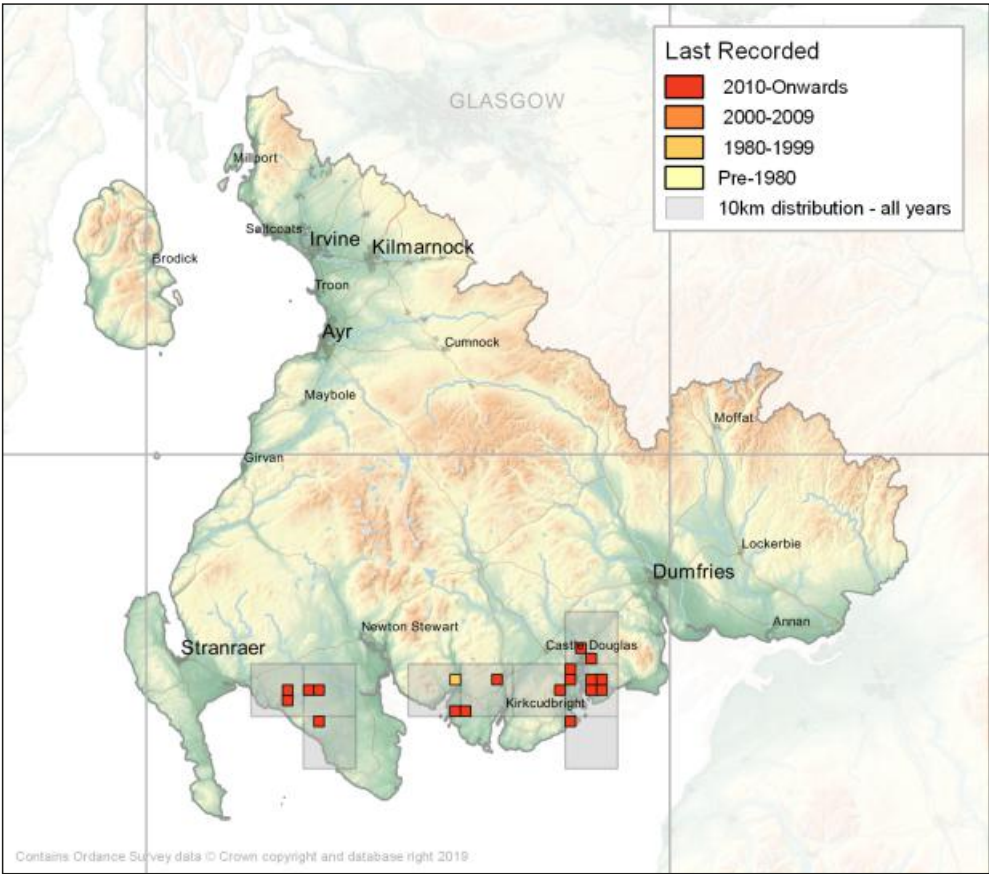
A rare species in Scotland, recorded only in Dumfries & Galloway and Argyll. Formerly restricted to a few key sites within 2km of the coast, the species has been discovered in six new 10km squares since 2011. This apparent spread in distribution may in part be due to increased observer effort. All sites are in the lowland areas of Kirkcudbrightshire and



Male Hairy Dragonfly © Gavin Chambers

Wigtownshire (median altitude 48m above sea level).

**Hairy Dragonfly distribution in SW Scotland**







Male Azure Hawker © Richard & Barbara Mearns

## Azure Hawker *Aeshna caerulea*

A medium-sized hawk. The male is strikingly blue, with blue eyes and paired blue dots along the abdomen. It lacks the yellow abdominal spots of the other male hawkers. The female has two forms: a male-like blue form and a brown form with yellowish markings on the abdomen. Both sexes have a brown costa (cf. Common Hawker). The antehumeral stripes on the thorax are short and very narrow in males and absent in females.

### Habitat

Typical habitat is amongst moorland bog pools. They will feed in nearby woodland rides and along streams. They favour sites with open water and lots of *Sphagnum* and areas with blanket bog often in valley bottoms.

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### Size:

54-64mm

### Habitat:

Blanket bog and moorland pools

### Confusion species:

Other hawk dragonflies

The males are active in sunny weather and fly low over moorland, bogs and pool margins looking for females. They sometimes settle and bask on rocks and sheltered places. Mating happens away from the ponds, in vegetation or on rocks and the female



oviposits alone into the edges of pools or amongst *Sphagnum*.

Local distribution

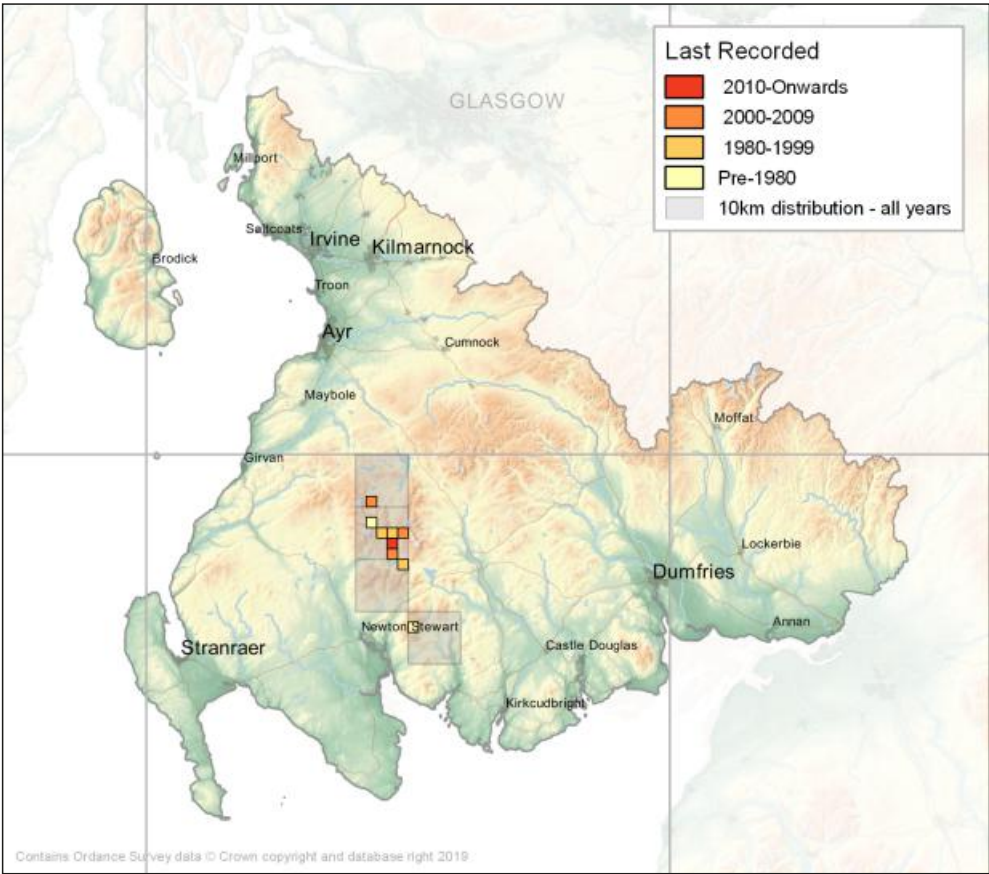
The species is on the southern edge of its British range in the Galloway Forest Park, being more widespread, but seldom common, in the NW Highlands. There are some historic records from the 1970s, 80s and 90s at Cairnsmore of Fleet and Ellergower Moss but Silver Flowe has long been the species' main stronghold in Galloway. It was once easy to find adults and larvae on the Silver Flowe NNR, but in recent years there have been many attempts to find larvae with only one



Azure Hawker habitat at Silver Flowe © Richard & Barbara Mearns

success - a single larva in 2016. Two adults were reported at Silver Flowe in 2014, and a possible sighting of two adults there in 2018 gives hope that the species clings on. Sadly it seems that climate change may be affecting their southernmost Scottish population.

Azure Hawker distribution in SW Scotland





Male Common Hawker © Gavin Chambers

## Common Hawker *Aeshna juncea*



This is a large, powerful dragonfly. Males have a black abdomen with paired blue spots and smaller yellow marks. Females are browner and may have a yellow-, green- or blue-spotted abdomen. The antehumeral stripes on the thorax are narrow or absent. The leading edge of the wing (costa) is golden yellow in colour in both sexes, which can help to distinguish them from similar species. As a wary species that seldom approaches people closely, and one which perches infrequently, this feature can be tricky to see. In flight the abdomen is usually held straight or slightly up-tilted. As with other hawkers they have large eyes, with broad contact between them.

Males are very active and like to fly low over water, investigating the edges of pools in search of females. Females oviposit alone,

J F M A M J J A S O N D



### Size:

65-80mm

### Habitat:

Acidic lochs and pools

### Confusion species:

Other hawker dragonflies

laying eggs into vegetation in the margins of suitable pools. Common Hawkerc rarely settle in the open. They are a high summer species, emerging in July and continuing until September. Early adults are sometimes on the wing in June.

**Habitat**

Common Hawkers breed in acid and neutral still waters, including lochs and moorland/bog pools. They will sometimes use garden ponds. Common Hawker often feed high up in the open or woodland/forest rides and can be found well away from water.

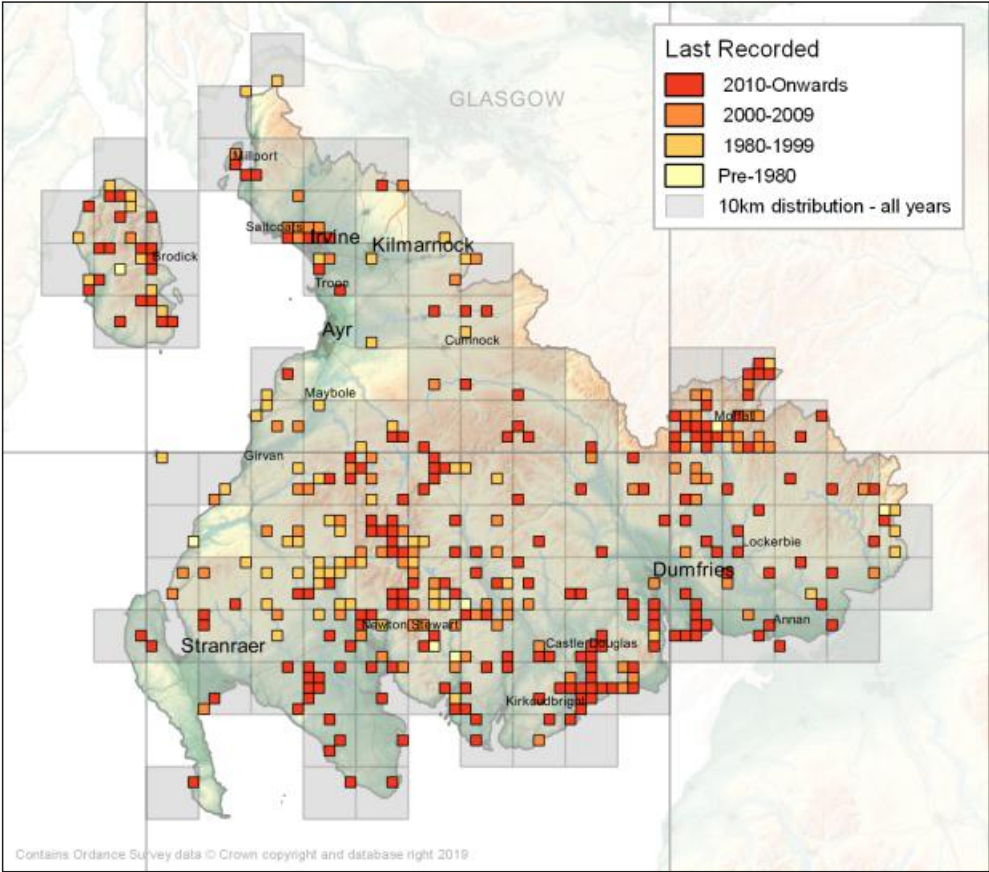
**Local distribution**

The Common Hawker is the most widespread hawker dragonfly in SW Scotland. They occur at all altitudes from sea level to the high mountains. The highest confirmed breeding site in Dumfries & Galloway is at Carrifran ponds (Moffat Hills) at 710m above sea level.



Female Common Hawker © Gavin Chambers

**Common Hawker distribution in SW Scotland**







Male Migrant Hawker © Richard & Barbara Mearns

## Migrant Hawker *Aeshna mixta*

A late summer dragonfly, slightly smaller than the Common Hawker. Males have blue eyes and a dark brown abdomen with paired blue spots and yellow flecks. The females have a similar abdominal pattern though spots are smaller and usually yellowish rather than blue. In both sexes the antehumeral stripes on the thorax are very restricted or absent altogether and there is a distinctive yellow tee-peg shape at the top of the abdomen. The wings are clear and the costa is brown (cf. Common Hawker). During flight, the abdomen is often held above horizontal.

### Habitat

The species prefers small ponds, lakes, gravel pits and slow-flowing rivers with lots of emergent vegetation for breeding. They have been found to tolerate brackish waters and



### Size:

56-64mm

### Habitat:

Well vegetated lochs, ponds and gravel pits

### Confusion species:

Other hawker dragonflies

tend to avoid acidic wetlands. They can sometimes be found well away from water, hawking for insects along woodland rides, scrub or hedgerows. Migrant Hawkers perch more readily than Common Hawkers, and



will often bask low down on vegetation. Unlike other hawkers, Migrant is not territorial, so several males may be seen together without any aggression.

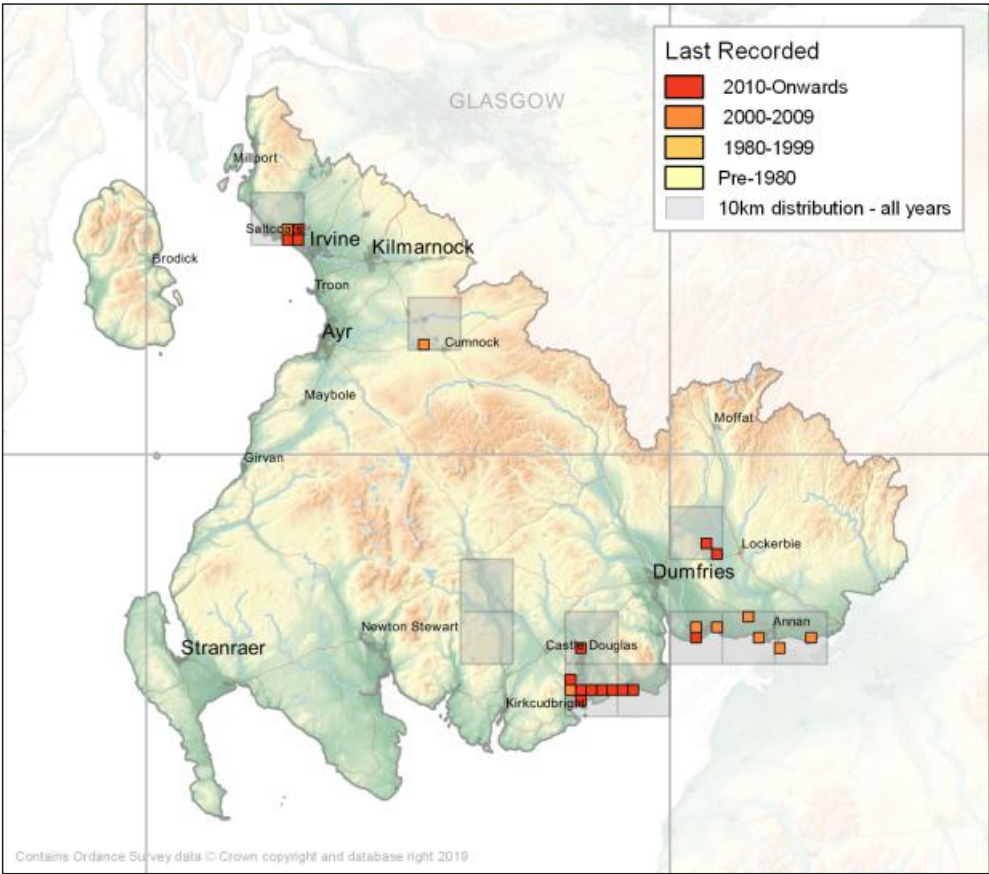
**Local distribution**

The avoidance of acidic wetlands means the distribution is restricted to lowland areas. There are recent records from North Ayrshire, Dumfriesshire and the Kirkcudbrightshire coast. The species has been confirmed breeding at Colvend Lochs and Mersehead RSPB reserve.



Migrant Hawker © Richard & Barbara Mearns

**Migrant Hawker distribution in SW Scotland**





Female Southern Hawker © Jean Robson

## Southern Hawker *Aeshna cyanea*

The Southern Hawker is a large, boldly-coloured hawk. The thorax has largely green sides and very broad antehumeral stripes. Wings are clear with dark wing veins and dark pterostigmata. There is a dark 'T' mark on the frons. In the males, the abdomen is black with paired apple-green spots and blue flecks. These join and turn blue to become bands on the last two abdominal segments. Females are browner, with bright green markings. Males will fly close to people when territorial. The abdomen is held straight and close to horizontal in flight, and the bold antehumeral stripes on the thorax are often described as looking like a pair of headlights! Emergence of adults is from July, with records extending into August and September.

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### Size:

56-64mm

### Habitat:

Woodland and garden ponds and pools, including moderately shaded sites

### Confusion species:

Other hawk dragonflies

### Habitat

Favoured breeding habitats are traditionally woodland ponds, though it is commonly found in garden ponds. It is more tolerant of

shading than other species. Although there is an apparent preference for alkaline or neutral waterbodies, it has been recorded breeding in peaty pools in Dumfries & Galloway and may tolerate mildly brackish conditions elsewhere in its range.

Local distribution

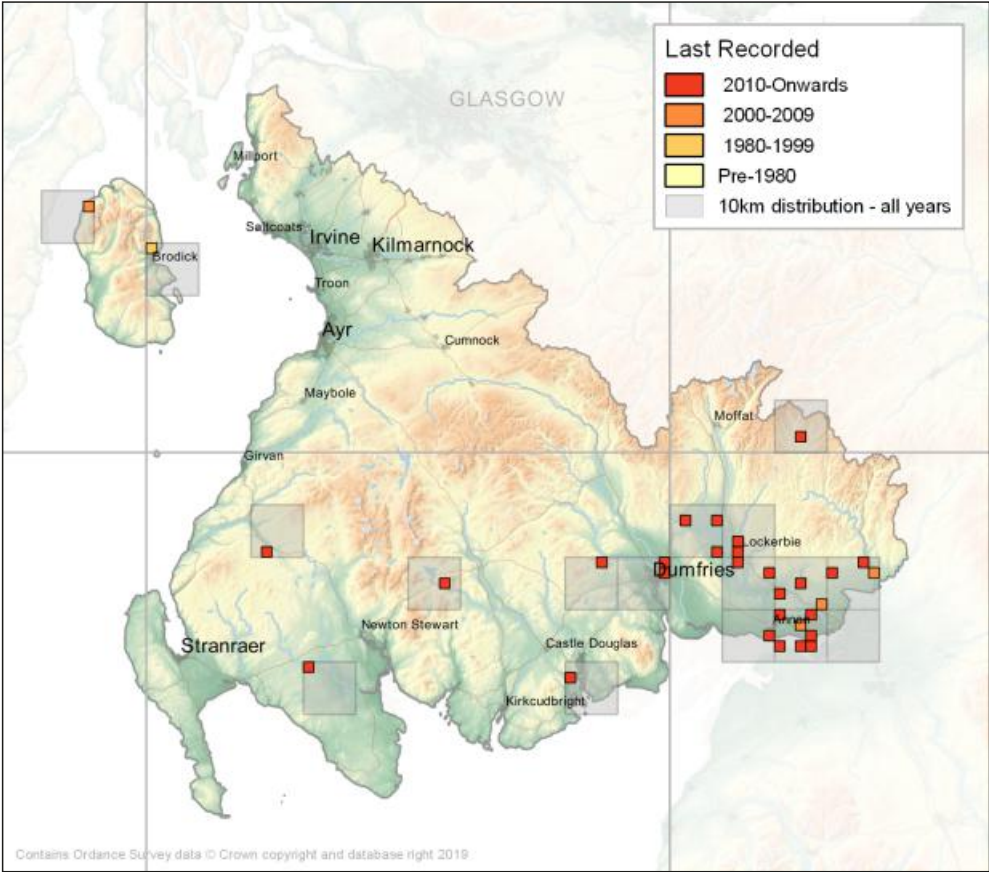
The species is common throughout most of England and Wales. In Scotland it is present in parts of Argyll, Inverness-shire and Moray and it has been spreading in these areas. It is a fairly recent colonist to mainland SW Scotland (2003); some earlier records in Arran may well relate to wandering individuals



Southern Hawker © Jean Robson

from the Argyll population. It is now confirmed breeding in Dumfries & Galloway, where most records are clustered in lowland parts of Dumfriesshire.

Southern Hawker distribution in SW Scotland







Male Emperor Dragonfly © Charles J Sharp CC BY SA 4.0

## Emperor Dragonfly *Anax imperator*

This is a large, robust blue and green dragonfly, similar in size to a Golden-ringed Dragonfly. Males and females have an apple-green thorax without any black markings. The abdomen is blackish with more-or-less continuous blue markings along the sides in males (green in females) (cf. paired spots in other hawkers). It has a yellow costa.

It often flies with a drooping abdomen. Males may patrol waterbodies for long periods. As the dominant species at a site, they readily chase away intruders into their territory. Its large size, colourful appearance and drooping abdomen help to distinguish it from other hawker dragonflies in flight.



### Size:

66-84mm

### Habitat:

Large ponds and standing waters in lowland areas

### Confusion species:

Hawker dragonflies

### Habitat

The species prefers ponds and waterbodies with lots of aquatic plants and dense vegetation at the edges. Females lay their eggs in floating pondweeds.



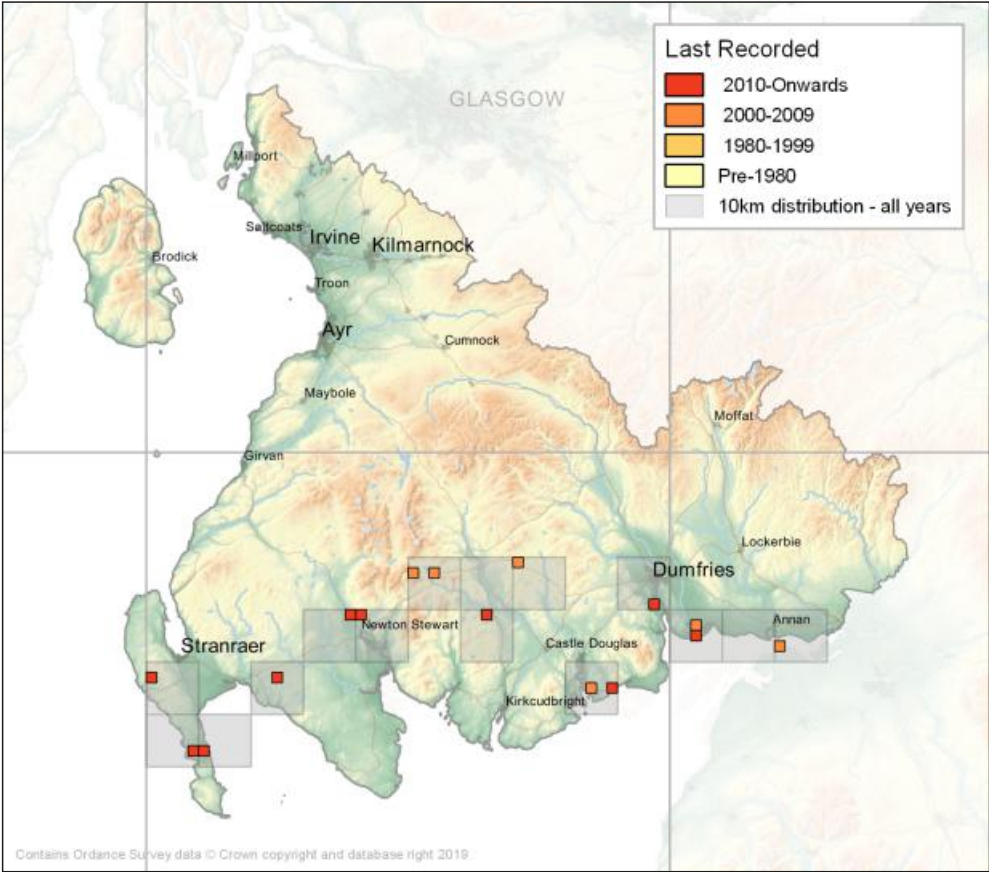
Local distribution

The Emperor Dragonfly is a common species in southern England and has been spreading northwards. There are scattered records of this species in SW Scotland since 2001; all have been from Dumfries & Galloway, with no records so far in Ayrshire. It has not been seen every year, but there were regular records from 2005 to 2014, since when no further records have been received. Given the scattered nature of records, there is a possibility that wandering individuals may have arrived from both Ireland and Cumbria. So far it has not been proved to breed, although it has been observed ovipositing.



Emperor Dragonfly in flight © Gavin Chambers

Emperor Dragonfly distribution in SW Scotland





Male Golden-ringed Dragonfly © Mark Chambers

## Golden-ringed Dragonfly *Cordulegaster boltonii*



One of the largest British dragonflies. Both sexes are similarly marked, having black bodies with yellow markings on the thorax and yellow rings along the abdomen. Their eyes are large, bright green and only just touch each other (cf. hawker dragonflies). The male's abdomen is slightly swollen at the tip giving a club-shaped appearance. Females have a prominent, pointed ovipositor.

Confusion species include hawker dragonflies, particularly females which have yellow markings along a dark abdomen. If seen well these are easily distinguished by their browner colour.

The species is notably inquisitive and will often approach people to investigate them.

J F M A M J J A S O N D



### Size:

77-83mm

### Habitat:

Narrow streams and rivers, including in upland areas

### Confusion species:

Hawker dragonflies

### Habitat

Unlike most other dragonflies, the Golden-ringed has a preference for small acidic streams and rivers. They do not breed in standing water. They are found in open

moorland, heathland and open woodland habitats and feed along woodland rides.

The female flicks her eggs into shallow stream beds. Larvae are long-lived and can take up to five years to develop. Males patrol slowly up and down suitable breeding areas, hovering regularly.

**Local distribution**

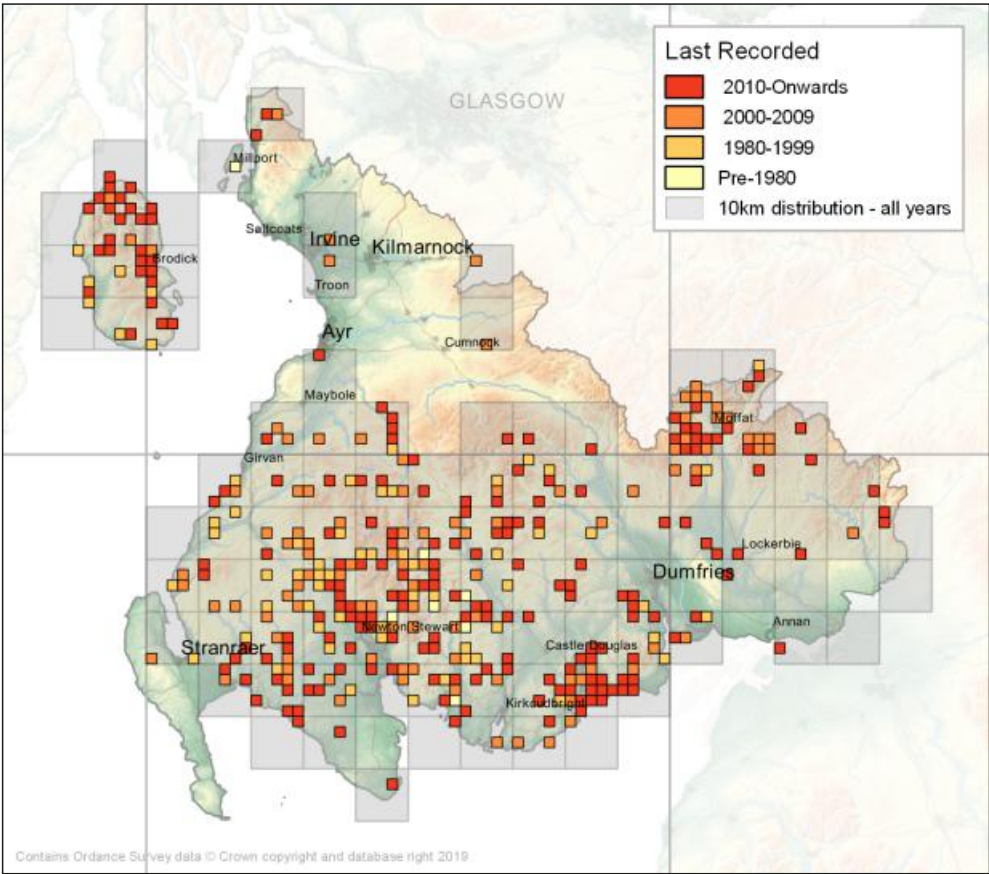
A common species of moorland streams in the region. They are widely distributed throughout Dumfries & Galloway, South Ayrshire and Arran, with fewer records in



Female Golden-ringed Dragonfly © Richard & Barbara Mearns

North and East Ayrshire. Found at a range of altitudes, from sea level to 520m (median altitude 130m).

**Golden-ringed Dragonfly distribution in SW Scotland**







Four-spotted Chaser © Jean Robson

## Four-spotted Chaser *Libellula quadrimaculata*



The Four-spotted Chaser is a medium-sized, brownish-gold dragonfly which is largely similar in both sexes. The abdomen is black towards the tip and has narrow yellow markings along the sides. Each wing has a dark node at the centre of the leading edge of the wings, a feature not present on any other UK species and giving rise to the species' common name. The pterostigmata (wing spots) at the end of the wings are dark. The wings are often suffused with yellow at the bases and there are black patches at the base of the hind wings. Immature dragonflies do not show their four spots until they darken.

Confusion is only possible with female skimmers or darters which are yellowish in colour, but which lack the extra black marks on the wings.



### Size:

40-48mm

### Habitat:

Wide range of standing waters.

### Confusion species:

None

The species emerges early in the year, usually from mid-May onwards and peaks in mid-late June.

### Habitat

Four-spotted Chasers breed in neutral and



acidic still water habitats or slow moving streams. They readily use boggy habitats in Scotland and breed in boggy pools, lochs and lochans as well as gravel pits and other still waters. They sometimes breed in good numbers in larger garden ponds. They rapidly colonise new sites.

Males are territorial and often defend and return to a favoured perch. Females oviposit by flicking eggs into the water.

Local distribution

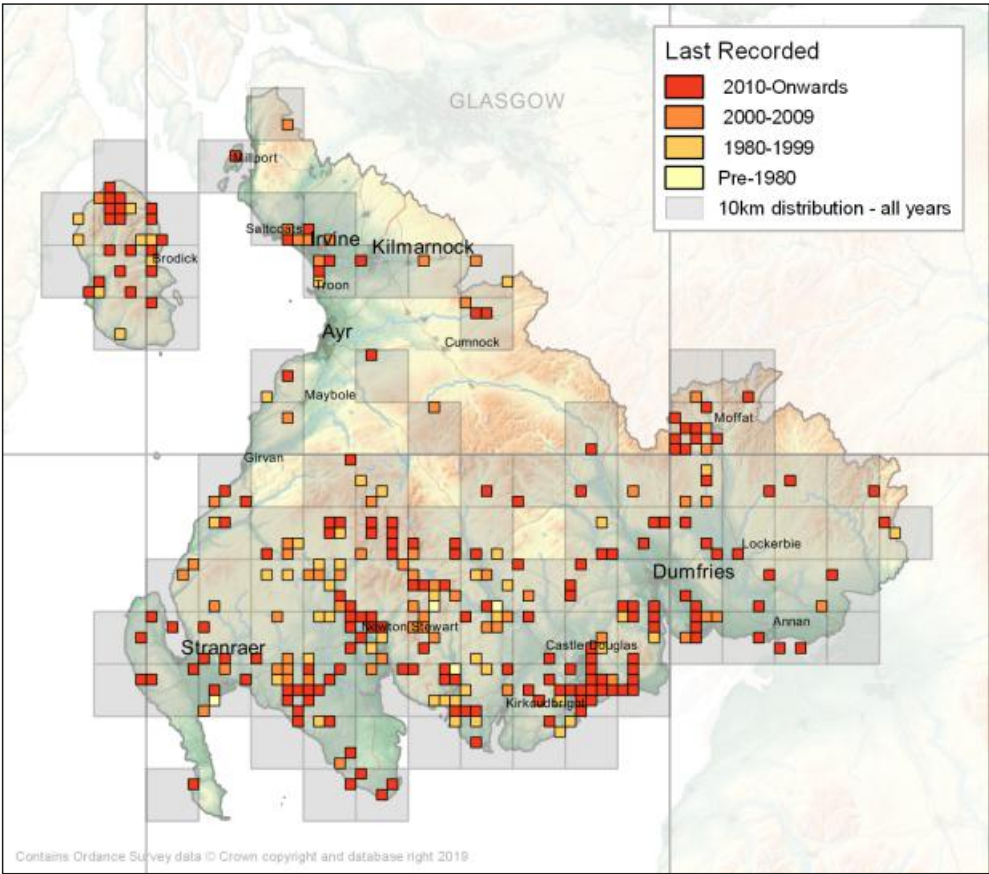
A widespread species in SW Scotland although they are commoner at lower



Four-spotted Chaser © Mark Chambers

altitudes, their tolerance of acidic conditions means they have been recorded at pools over 600m in the Rhinns of Kells (Galloway) and breeding confirmed at over 400m.

Four-spotted Chaser distribution in SW Scotland





Male Keeled Skimmer © Iain Leach

## Keeled Skimmer *Orthetrum coerulescens*

A fairly small dragonfly. Males have a slender, powder-blue abdomen which is distinctive amongst local species. Immatures and females are yellow-ochre or brown, with a thin, dark line down the abdomen and short, dark bars crossing the 'keel' close to segment divisions. In females the thorax is brown above with pale antehumeral stripes and sides are plain (cf. female darters). When mature, both sexes have yellow-orange pterostigmata (wing-spots), pale yellow costa and a series of small yellow cross-veins on the wings.

Adults are on the wing from mid-June to August. They are fast and somewhat erratic in flight and will hover frequently. At rest the wings are often held well forward.

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### Size:

36-45mm

### Habitat:

Well vegetated and slow-moving acidic streams, runnels and ditches and associated pools

### Confusion species:

Darter dragonflies (females)

### Habitat

The Keeled Skimmer favours acidic sites with streams, ditches, runnels and pools with plentiful aquatic vegetation or *Sphagnum*.

Males will defend their territories from low perches. Females oviposit in flight by dipping the abdomen in water.

**Local distribution**

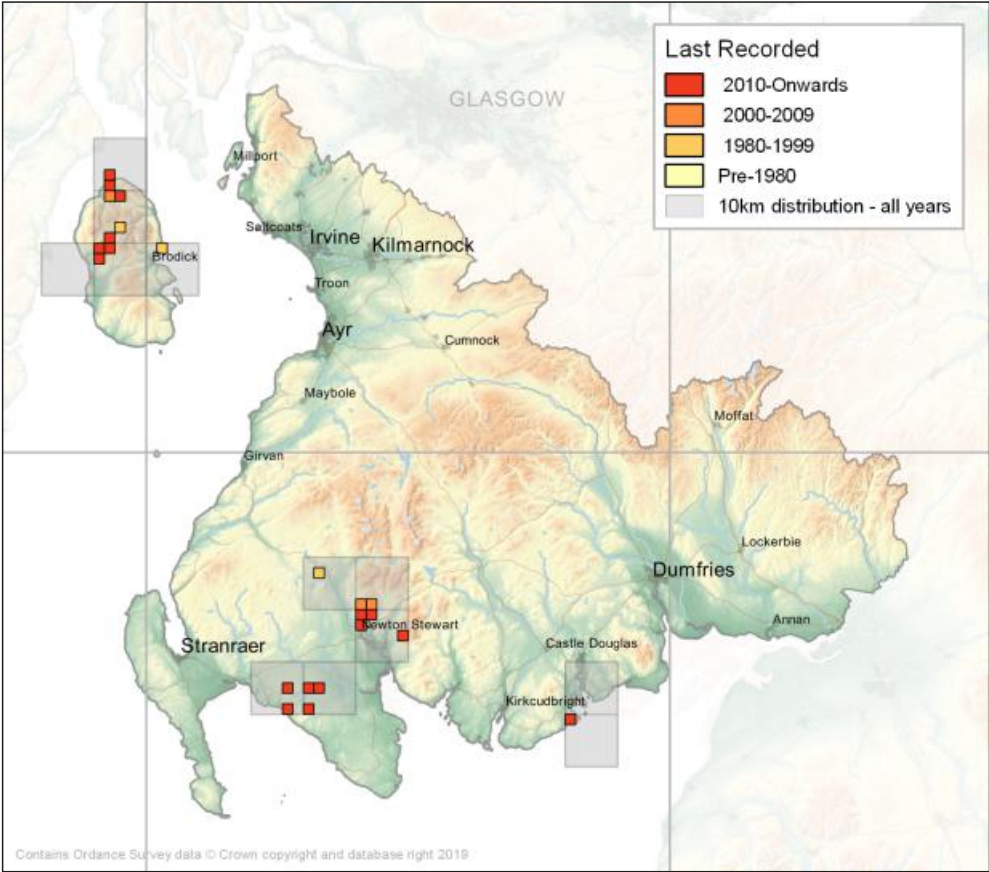
Long-established in the northern half of Arran, the first record in mainland SW Scotland came from the Ayrshire-Kirkcudbrightshire border in 1988. They were first confirmed breeding in Dumfries & Galloway in 2007 at Cumloden Deer Parks near Newton Stewart. In 2018, more than 100 adults were recorded at the site on one day. The species is now established at several sites in the Cree Valley and on the Wigtownshire



Female Keeled Skimmer © Gavin Chambers

Machars. It has been recorded breeding at up to 200m above sea level. There is potential for discovery of new sites as it appears to be spreading.

**Keeled Skimmer distribution in SW Scotland**





Male Black Darter © Iain Leach

## Black Darter *Sympetrum danae*



This is Britain's smallest dragonfly species and is active in late summer. Males are distinctive, being almost all black in colour with a pinched (waisted) abdomen. Females are yellow and black and have more black than other darters; they have a distinctive black triangle on the top of the thorax (cf. Common Darter). Both sexes have black legs and wing spots and a very broad base to the hindwings. In both sexes, a bold black panel separates yellow sides on the thorax, within which there are three yellow spots.

Females can be confused with other female darters or chasers which may share some of the same sites. The dark triangular marking on the thorax is a useful indicator.

J F M A M J J A S O N D



### Size:

29-34mm

### Habitat:

Acidic pools and ditches in heathland and bogs

### Confusion species:

Darter dragonflies (females)

Adults can often be seen perched on stones, paths or bare ground to warm up on cool days.



**Habitat**

Black Darters prefer acidic shallow pools with bog mosses, rushes and sedges. They will breed in ditches in lowland raised bogs, heathland and blanket bog. Sites with significant shade over the pools are avoided. Eggs are laid into the wet margins of suitable pools, often where there is *Sphagnum* present.

**Local distribution**

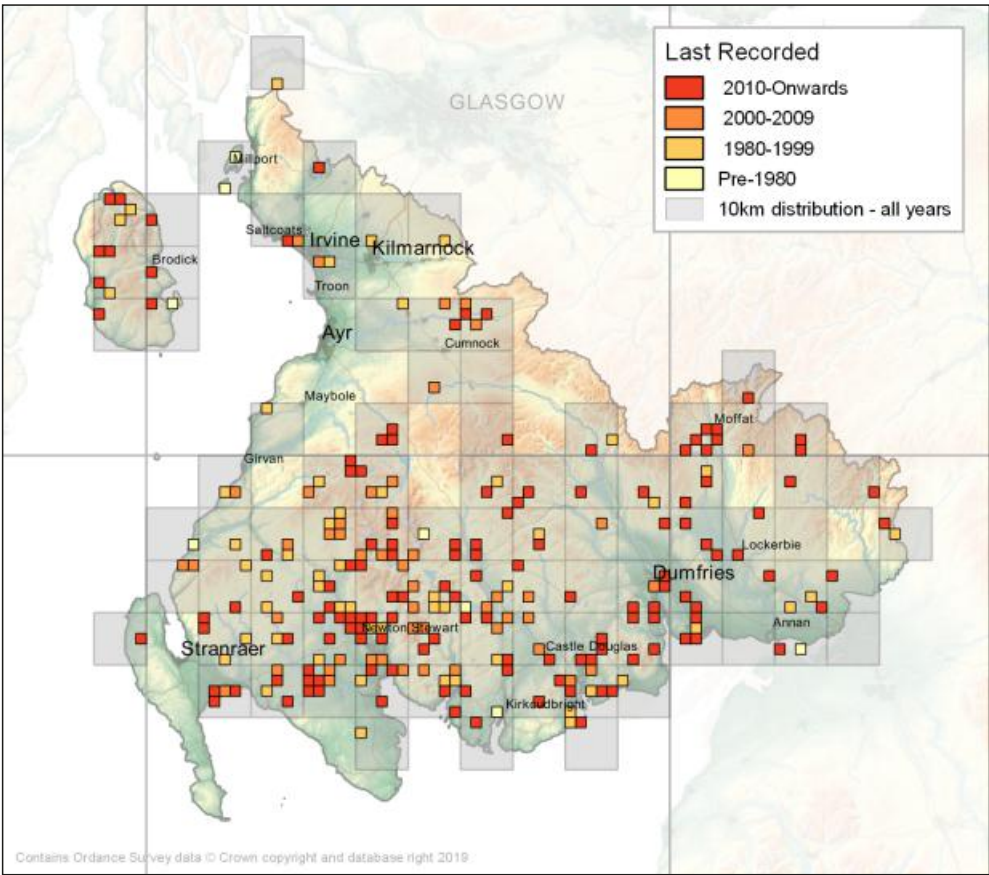
Widely distributed in SW Scotland. They can be found at suitable acidic pools from sea level to high in the uplands (median altitude 138m) and have been recorded at pools over 500m at Dow Loch, Kirkcudbrightshire. The



Female Black Darter © Mark Chambers

species' tolerance of acidic habitats means they have been recorded in more 10km squares in SW Scotland than the Common Darter and are more frequently encountered in upland areas than other darters and chasers.

**Black Darter distribution in SW Scotland**





Male Common Darter © Tom Wilson

## Common Darter *Sympetrum striolatum*



This is a medium-sized red dragonfly and the commonest and most widespread dragonfly in lowland areas. It emerges from late June onwards and flies well into the autumn period. The abdomen is orange-red in males and yellowish in immatures and females. In both sexes the eyes are red-brown above and green below. The legs are brown-black with a yellow stripe (cf. Black Darter). It has yellow to reddish-brown wing spots. At the side of the thorax there are two large yellow patches divided by a central panel, reddish-brown in males, yellowish in females. Intensity of colour can vary with age.

Adults dart from favoured perches to catch prey or intercept passing dragonflies, often returning to the same perch. It can often be found basking on footpaths or stones.

J F M A M J J A S O N D



### Size:

33-44mm

### Habitat:

Wide range of wetland types

### Confusion species:

Other darters and skimmers (females)

### Habitat

Common Darters can be found in many wetland types, from ponds, ditches, sluggish rivers to lochs, bog pools and has been seen ovipositing into brackish merse pools. Small pools with plenty of submerged aquatic

vegetation are favoured breeding sites, though they will quickly colonise new ponds. The females oviposit in flight, sometimes in tandem with the males, into the water over aquatic plants.

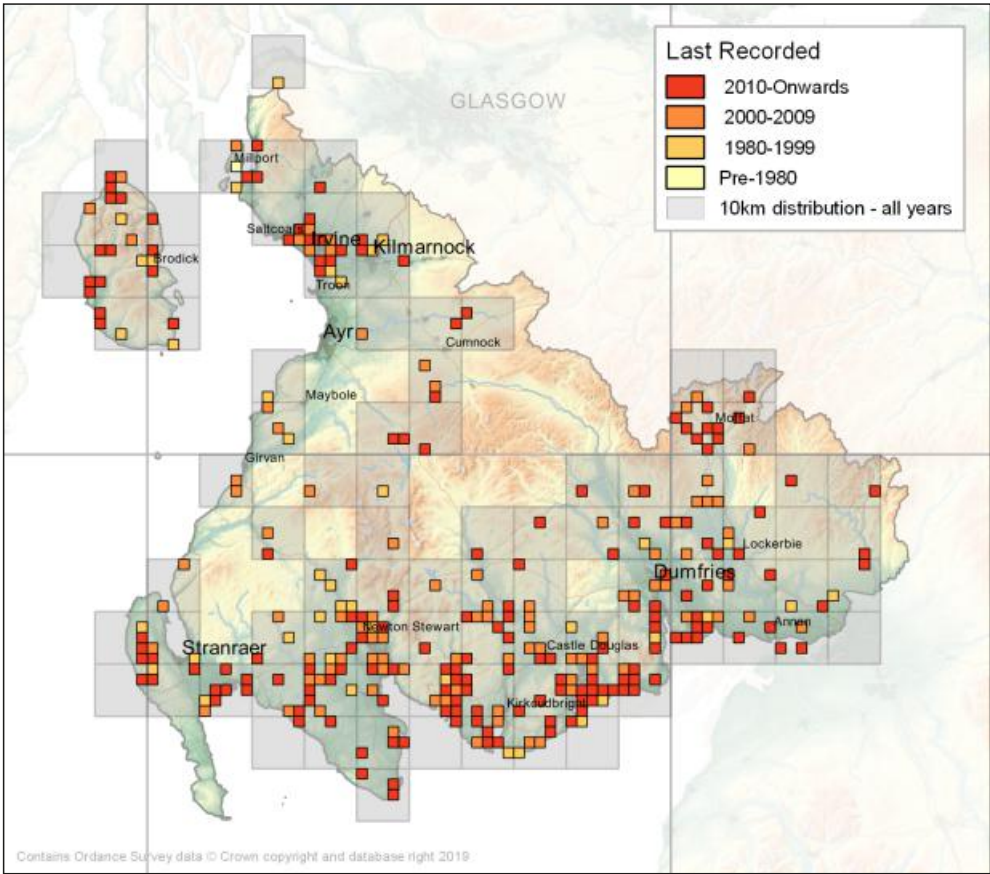
**Local distribution**

Widespread throughout lowland parts of SW Scotland. Although recorded at altitudes of up to 420m, they prefer lower altitudes (median altitude 58m). Breeding has been confirmed at 260m (Craigieburn Wood ponds, Moffat Dale). Potential to record new hectads in South and East Ayrshire.



Female Common Darter © Tom Wilson

**Common Darter distribution in SW Scotland**





# Scarce and vagrant species



Brown Hawker © Alan Cann CC BY SA 2.0

## **Brown Hawker** *Aeshna grandis*

A large brown hawker dragonfly with distinctive brown-tinged wings. Two historical records from the Colvend area (Kirkcudbrightshire) in 1845 and 1873. Not recorded since. On the western side of Britain it reaches to south Cumbria and wandering individuals could potentially occur in the south of the region.



Male Broad-bodied Chaser © Alastair Rae CC BY SA 2.0

## **Broad-bodied Chaser** *Libellula depressa*

A distinctive chaser dragonfly, with a flat, wide abdomen. Males develop a blue pruinescence on the abdomen. In females it is yellow-ochre, sometimes also with blue pruinescence. A female was recorded ovipositing at an ornamental pond opposite Crichton Hall in Dumfries in 2006. In the same year a single adult was seen at a small

pond just west of Dalshinnie Pond, Mable Forest, Kirkcudbrightshire. One record from near Silver Flowe (2009). Other unconfirmed records have been received from the Ecclefechan area in 2009-2010.



Male Red-veined Darter © Gavin Chambers

## **Red-veined Darter** *Sympetrum fonscolombii*

The Red-veined Darter differs from other red darters in its pale pterostigmata which are outlined in black. The lower half of the eyes has a blue tinge. The species occurs as an irregular vagrant in the UK. The Red-veined Darter was first recorded in Arran in 1911. An influx to the UK in 2009 brought two records in Dumfries & Galloway: at Lochenkit Loch, Kirkcudbrightshire and at the Mull of Galloway, Wigtownshire.

## **Vagrant Emperor** *Anax ephippiger*

A medium-sized hawker with yellowish brown colouring. Occurs as a vagrant to the UK, often being associated with strong southerly airflows. A male Vagrant Emperor was caught at Caerlaverock WWT Reserve in 1996, which was the first record for the region. Two further SW Scotland sightings were recorded in 2011. A number of records occurred across the UK in February 2019 following a period of unseasonably warm weather and strong southerly winds.

# Useful reference material

## Books

Brooks, S. (2005) *Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland*. 5th ed. Italy: Trento, S.r.l.

Cham, S., Nelson, B., Parr, A., Prentice, S., Smallshire, D. and Taylor, P. (2014) *Atlas of Dragonflies in Britain and Ireland*. Telford: Field Studies Council.

Smallshire, D. and Swash, A. (2010) *Britain's Dragonflies: A field guide to the damselflies and dragonflies of Britain and Ireland*. 2nd ed. Hampshire: WildGuides Ltd.

## Further Information

SWSEIC is the local environmental records centre for Dumfries & Galloway and Ayrshire. For details of how to send in records visit [swseic.org.uk](http://swseic.org.uk).

The British Dragonfly Society aims to conserve dragonflies by carrying out research and engaging the public with dragonflies and their wetland habitats. Visit [british-dragonflies.org.uk](http://british-dragonflies.org.uk) to submit records, download recording forms or to find out more.

The Scottish Dragonfly Recorder is Pat Batty - [dragonfly.batty@gmail.com](mailto:dragonfly.batty@gmail.com)

Southern Hawker habitat at Charlie's Mire © Richard & Barbara Mearns





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