



# Wildlife at Home Challenge

**The results of SWSEIC's  
COVID-19 lockdown wildlife  
recording project**

Peter Norman & Mark Pollitt

Image: Common Carder Bee ©Jean Robson

# Background

On 23 March 2020, Prime Minister Boris Johnson made a public announcement regarding the spread of COVID-19 into the UK, banning all non-essential travel and contact with people outside the home, and closing almost all schools, businesses and amenities. People were ordered to keep apart in public and the Police were empowered to enforce the regulations. The situation was popularly termed 'the lockdown'.

Staff from South West Scotland Environmental Information Centre (SWSEIC) had already begun working from home but following the lockdown addressed the need to cancel or postpone all SWSEIC public events planned for summer 2020. Staff then began to consider safe alternatives that would allow wildlife recording to continue.

The Wildlife at Home Challenge was

devised to encourage wildlife recorders to keep submitting records to SWSEIC, despite being largely confined to their houses and gardens. It was open to all who were resident in Ayrshire and Dumfries and Galloway during the lockdown and was launched in the SWSEIC monthly e-newsletter in April, and subsequently promoted using social media contacts.

The premise of The Wildlife at Home Challenge was for participants to find, identify and record as many species as they could from within, or recordable from, their houses and gardens. A set of rules was devised relating to how records could be collected, though as there was no way of enforcing such rules, it was simply assumed that participants adhered to them – there is no evidence that they did not.

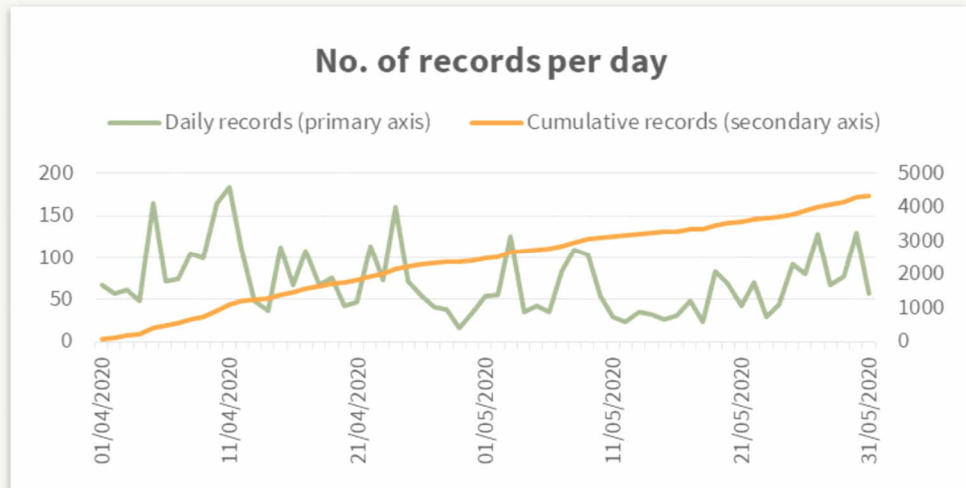
iRecord, a UK online wildlife recording system operated by the Biological Records Centre, was used

as a vehicle for submitting records to the Challenge. iRecord allows members of the public to collate and share sightings, have them checked by experts and made available to support research and decision-making at local and national levels. SWSEIC is able to download all relevant data from iRecord.

A separate 'activity' area within iRecord was established for the Wildlife at Home Challenge to enable SWSEIC to request that all data submitted followed the Challenge rules. It also ensured that the Challenge data was kept separate from the general iRecord data and enabled all participants to view all records submitted to the Challenge within minutes of them being added. This included presentation of results on various charts and graphs, automatically generated and updated by iRecord.

In addition, SWSEIC produced weekly e-newsletters that

summarised recent records and provided ideas and encouragement for future recording. A number of small prizes were offered as further encouragement to participate, with the emphasis being primarily on taking part, rather than finding rare species or submitting the most records. SWSEIC is grateful to NHBS Ltd for contributing prizes. There is little doubt that constant feedback encouraged some participants to increase their recording effort.



## Records and Recorders

This short report represents a summary of the results of the Challenge. The activity ran from 1st April to 31st May 2020. In total, 4,343 records were submitted during this period (see chart above). Most records were submitted directly through the iRecord website though

contributions were also received via the iRecord smartphone app.

The total number of people joining the iRecord Wildlife at Home Challenge activity was 80. Of these, 54 people submitted records. Participants included local experts, some at county recorder level, as well as less experienced recorders.

# Top species

Not surprisingly, given their popularity, visibility and ease of identification, all of the most frequently recorded species were birds. The resident garden birds of Blackbird, Blue Tit, House Sparrow, Dunnock and Starling occupied the top 5 places. The timing of the Challenge was ideal for the recording of summer migrant birds, but only Swallow and Swift made it into the top 20.

More surprisingly, the next most frequently recorded species were bees. Bumblebees are popular with the public but require a little practice to identify due to the variation in queens, workers and males. Despite this, two species made it into the top 10, Tree Bumblebee and Large Red-tailed Bumblebee. These are two of the easier species to identify, but Tree Bumblebees have only been present in SW Scotland since 2013. Solitary bees are even more difficult to identify, so the presence of Red

## Top 20 species recorded during the Challenge

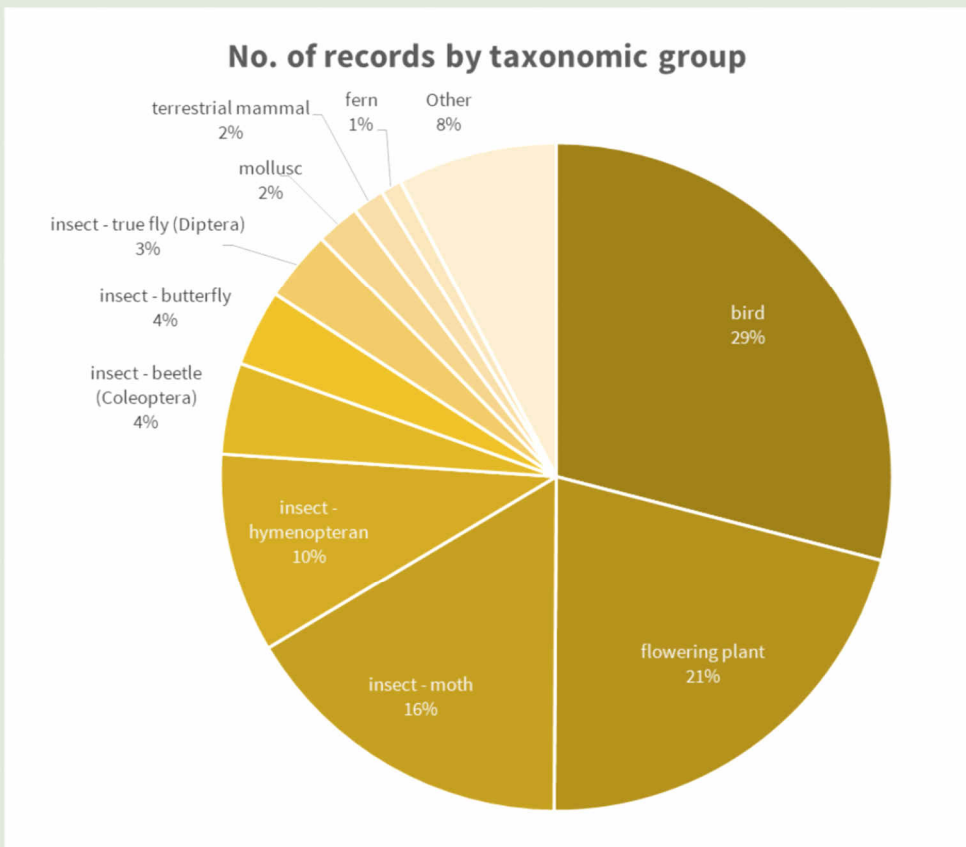
Common name	Scientific name	Taxon group	No. of records
Blackbird	<i>Turdus merula</i>	bird	92
Blue Tit	<i>Cyanistes caeruleus</i>	bird	82
House Sparrow	<i>Passer domesticus</i>	bird	78
Dunnock	<i>Prunella modularis</i>	bird	74
Starling	<i>Sturnus vulgaris</i>	bird	70
Goldfinch	<i>Carduelis carduelis</i>	bird	64
Carrion Crow	<i>Corvus corone</i>	bird	63
Woodpigeon	<i>Columba palumbus</i>	bird	56
Tree Bumblebee	<i>Bombus hypnorum</i>	insect - hymenopteran	54
Large Red-tailed Bumblebee	<i>Bombus lapidarius</i>	insect - hymenopteran	47
Swallow	<i>Hirundo rustica</i>	bird	44
Great Tit	<i>Parus major</i>	bird	39
Swift	<i>Apus apus</i>	bird	38
Orange-tip	<i>Anthocharis cardamines</i>	insect - butterfly	38
Hebrew Character	<i>Orthosia gothica</i>	insect - moth	38
Buzzard	<i>Buteo buteo</i>	bird	35
Buff-tailed Bumblebee	<i>Bombus terrestris</i>	insect - hymenopteran	35
Honey Bee	<i>Apis mellifera</i>	insect - hymenopteran	31
Red Mason Bee	<i>Osmia bicornis</i>	insect - hymenopteran	31
Peacock	<i>Aglais io</i>	insect - butterfly	30

Mason Bee, another species apparently spreading in Scotland, in the top 20 most frequently recorded species was unexpected.

The only other species to feature in the top 20 were butterflies. The timing of the Challenge coincided with the main flight period of Orange-tip, so it came as no surprise to receive good numbers of records for this species.

If the number of records for each species group is examined (see pie chart, right), birds (with 29% of all records) were again the most popular group. However, flowering plants with 21% of all records were not too far behind, despite the fact that no individual species made into the top 20.

Of the insects, moths were more frequently recorded than either Hymenoptera (bees, wasps & ants) or butterflies. And if all the insect groups were combined, they were the most frequently recorded group,



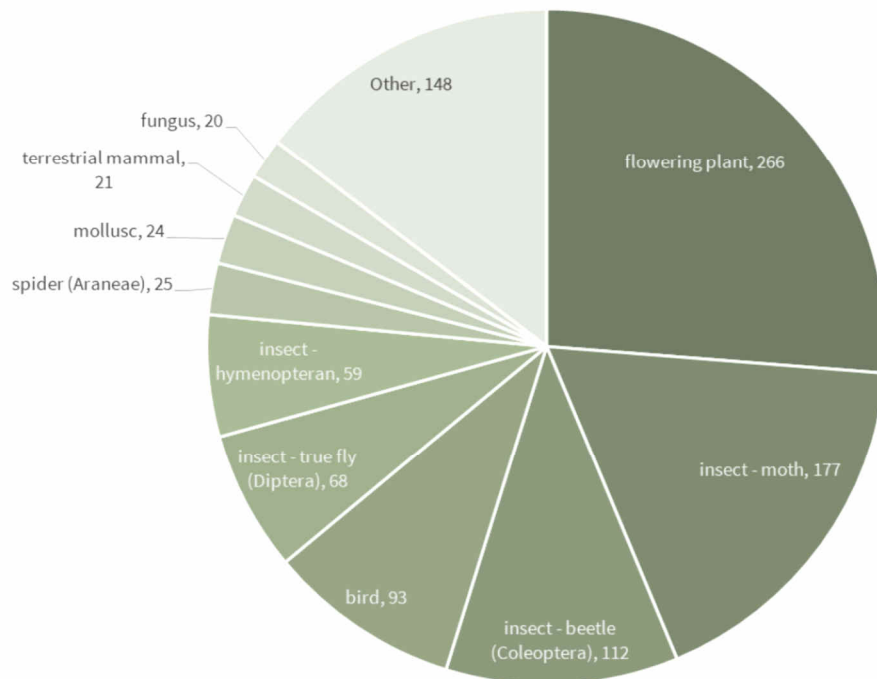
surpassing the number of bird records.

The number of records of Diptera (true flies, mainly records of hoverflies) and molluscs (slugs and

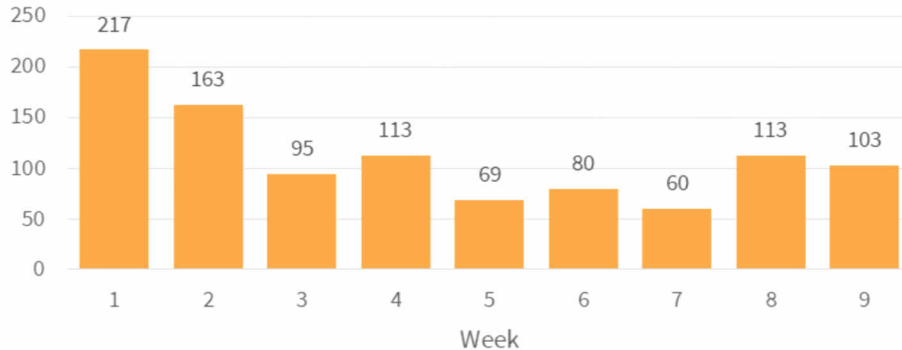
snails) was higher than might have been expected, but much of this can be attributed to the online support of iRecord expert verifiers.

If the number of taxa recorded in each group is examined (see pie chart, right), the picture is very different to the number of records. Flowering plants, with 266 taxa, were the most diverse group, followed by moths and beetles. Birds, with 93 recorded species, was only the fourth most diverse group. This situation reflects the national position, in which there are many more species of flowering plants than birds, and substantially more insects than either of them. Indeed, if the totals for the number of taxa in all insect groups recorded in the Challenge are combined, once again insects top the rankings, being the most diverse taxonomic group overall.

**Number of taxa recorded by taxonomic group**

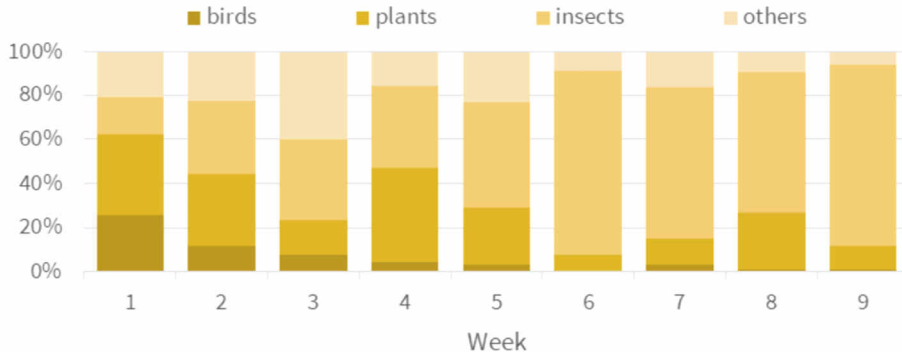


### Newly recorded taxa by week



The passage of spring was evident in the records submitted, with each week seeing the addition of newly recorded taxa as they developed, arrived or emerged (see chart, top left). After the initial flurry in the first two weeks of the Challenge, on average around 90 previously unrecorded taxa were added each week.

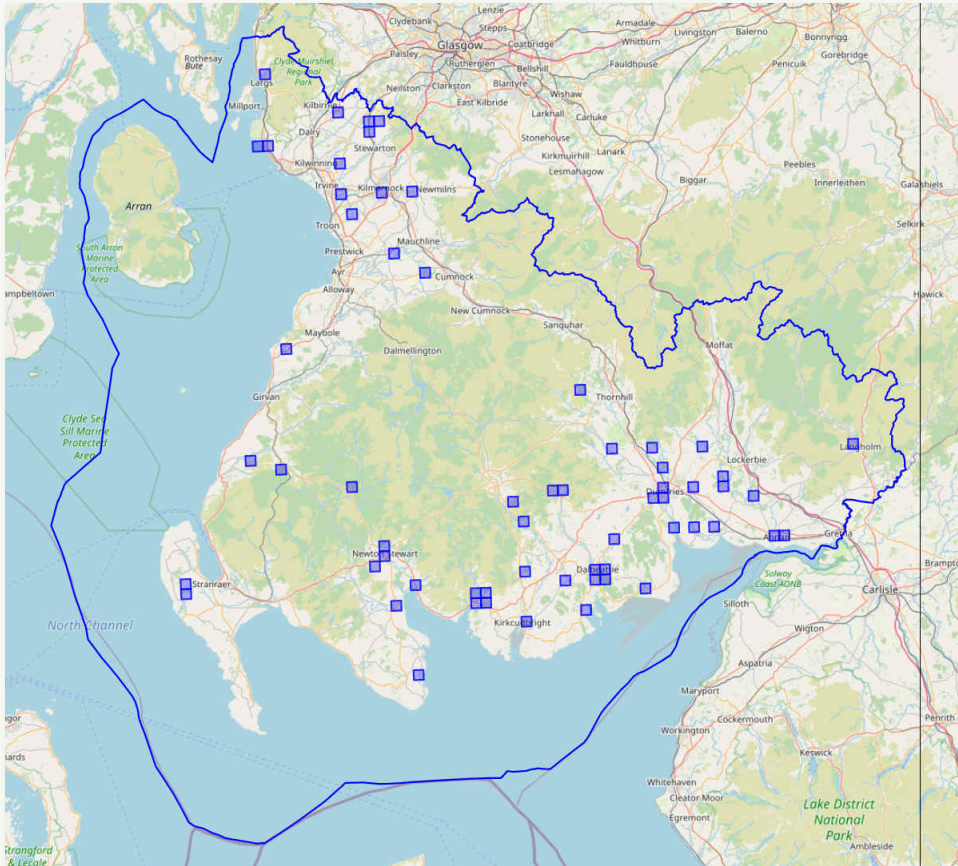
### Weekly proportion of newly recorded taxa



As spring continued, an increasing proportion of the newly recorded taxa were insects (see chart, bottom left). This reflects the great diversity of this group in and around our gardens and their lifecycle progression, as more species matured into readily detectable and recognisable adult stages as the weeks progressed. In contrast most species of bird had been recorded by the end of April (week five of the Challenge) and very few new species were added in the later weeks of the Challenge.



## Location of records submitted for the Challenge



## Locations

Generally the spread of records throughout SW Scotland was good, with the only significant hole being, not surprisingly, in the centre of the region, a hilly area with a sparse population. The areas with the greatest number of recorders were the more populated areas such as the Solway coastal plain between Lockerbie and Gatehouse of Fleet, and in North Ayrshire.

In total records were received for 61 different tetrads (2x2 km squares) covering 42 different hectads (10km squares). The vice counties of Dumfriesshire (VC72) and Kirkcudbrightshire (VC73) accounted for more than three-quarters of all records submitted.



# Highlights

The purpose of the Challenge was to keep recorders active during the lockdown and to highlight the diversity and importance of local wildlife. It was not designed or intended for the Challenge to record rare species. Nevertheless, a number of uncommon species came to light as a result of the Challenge.

A record of a pill woodlouse from a garden in Glencaple was confirmed on iRecord as **Southern Pill Woodlouse** *Armadillidium depressum*, the first record for Scotland. It is active at night on loosely mortared walls, especially with limestone or lime mortar. It is considered an introduction outside of its main range in SW England. The most northerly record was previously in Lancashire.

**New Zealand Bitter-cress** *Cardamine corymbosa* is a small annual that naturally is found in alpine tundra and rocky coastal habitats in New



Zealand and a small area of Australia, but was first recorded in Scotland as a weed on the rock garden at the Royal Botanic Garden Edinburgh in 1975. It has since spread via the horticultural trade and has become naturalised on paths, cultivated ground and in pavement cracks. Its discovery in a garden in Ochiltree during the Challenge was the first record for Ayrshire.

**Southern Pill Woodlouse** *Armadillidium depressum* recorded at Glencaple by Alison Robertson

**Narrow-bordered Bee Hawk-moth** *Hemaris tityus* is day-flying moth that mimics bumblebees. Once widespread in the UK, it has declined significantly, now being mainly restricted to moorland in western Britain. It is now very rare in SW



Narrow-bordered Bee Hawkmoth  
*Hemaris tityus* recorded at Glentrool by  
Buzz Clark

Scotland with few recent records, but was recorded during the Challenge at Glentrool. A second record at a site near New Abbey was received just after the end of the Challenge.

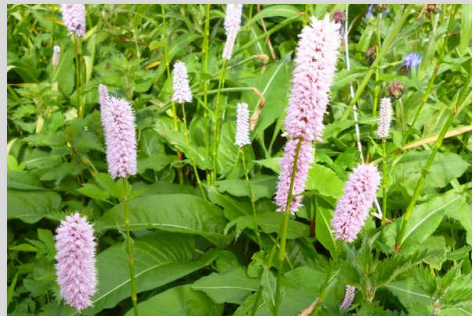
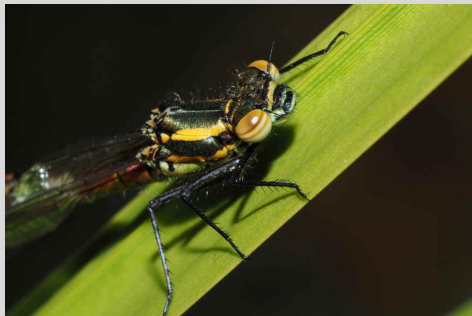
**Comma** *Polygonia c-album* is a common and widespread species of butterfly in England, and was until relatively recently scarce in Scotland; indeed it remains an uncommon species in SW Scotland. A single record of this species was recorded during the Challenge from a garden in Annan.

Several species of bee with few previous records in SW Scotland were recorded as part of the Challenge, largely due to the efforts of a small number of recorders with specialist bee identification skills, the true distribution of such species being unknown. One such species was **Turquoise Furrow Bee** *Lasioglossum cupromicans* at Creetown.

## Acknowledgements

We would like to offer our thanks to all of the wildlife recorders who took part in the Challenge for the contribution of their records and for submitting the photographs used in this summary. We are also grateful for the contributions of the iRecord verifiers who help to verify the records submitted and provide encouragement for us all. Our thanks also go to NHBS who sponsored some of the prizes awarded as part of the Challenge.

# Gallery



Left to right, top to bottom: **Large Red Damselfly** *Pyrrhosoma nymphula* ©Jon Noad; **Common Bistort** *Persicaria bistorta* ©Sue Hall; **Garden Snail** *Cornu aspersum* ©Buzz Clark; **Kidney-spot Ladybird** *Chilocorus renipustulatus* ©Jean Robson; **Pale Prominent** *Pterostoma palpina* ©Gill Smart; **Great Tit** *Parus major* ©Jim Logan; **Common Carder Bee** *Bombus pascuorum* ©Jean Robson





Left to right, top to bottom: **Garden Spider** *Araneus diadematus* ©Nic Coombey; **Golden-ringed Dragonfly** *Cordulegaster boltonii* ©Carol Dunsterville; **Vine Weevil** *Otioryhynchus sulcatus* ©Alison Robertson; **Common Frog** *Rana temporaria* ©Jim Logan; **Germander Speedwell** *Veronica chamaedrys* ©Helen McDowall; **Golden Pigmy** *Stigmella aurella* mine ©Peter Norman; **Wood Mouse** *Apodemus sylvaticus* ©Alison Robertson; **Water Louse** *Asellus aquaticus* ©Jean Robson