

## KINGHORN BIODIVERSITY MONTHLY REPORT - JULY 2022 by Robert Mill



Grousewing caddisfly (*Mystacides longicornis*), 30th. NLR. Note the two very long antennae that occupy most of the height and width of the photo above the insect's head.

With regard to its weather, July 2022 was a record breaker in many ways. Nationally, the UK well and truly broke its previous maximum temperature record, with 40.3°C recorded in Lincolnshire on 19th, during a heatwave when extreme heat warnings were in force over large parts of England and southern Scotland including Fife. Scotland broke its own temperature record on the same day, with 34.8°C recorded in the Borders. Mean temperatures for the month in Fife were about 2°C above the long-term average (Met Office, 2022). Although over Scotland as a whole 81% of average rainfall fell during July, this was very unequally spread, with most in the north-west. Fife and the rest of the Scottish east coast only had about 40% of the average July rainfall. Down south it was even drier, with no rain at all falling in some south coast localities until the very end of the month and 13 counties of southern England reported their driest July since records began in 1836 (Met Office, 2022).

A further 27 species were added to the Loch list during July: 6 moths, 1 caddisfly, 1 sawfly, 1 gall wasp, 5 bugs (2 shieldbugs, 1 leafhopper, 2 others), 4 flies, 7 flowering plants and 2 powdery mildews. The identity of one of June's new plant records was corrected but with no difference to last month's total as the correctly identified plant was also new for the Loch. Consequently, the cumulative Loch total increased from 1,350 on 30 June to **1,377** on 31 July. 'New Loch record' is abbreviated NLR, especially in photo captions.

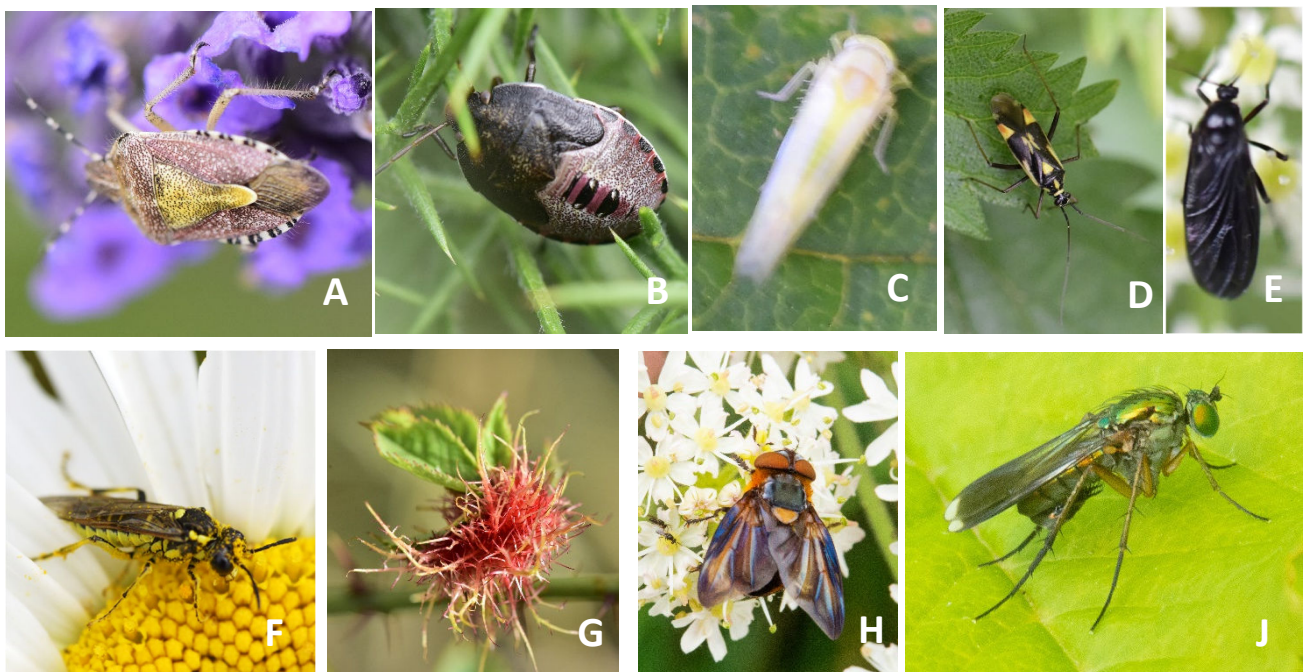
### **AROUND THE LOCH**

**Birds:** 55 species were recorded at the Loch during July, even though it is typically one of the quietest months for bird-watching (literally as well, as the woods tend to fall silent as songbirds finish their breeding seasons and begin moulting). 'Bird of the month' was a juvenile **Kingfisher** seen by Elaine O'Rourke at the west end of the Loch on 1st but not thereafter; my thanks to Pauline Bell for passing this record to me. There were also two further Loch records of **Common Sandpiper** (1st, Jeremy Dickens, eBird website; 26th, Paul Williams). Andy Pay saw the first returning **Black-headed Gull** on 3rd. One **Tufted Duck** was seen by Paul Williams on 21st, the month's only definite record of that species, although a flock of 13 seen flying over East Braes by Graham Sparshott on 3rd might have come from the Loch. Small numbers of all three hirundines (**Barn Swallow**, **House Martin**, **Sand Martin**) as well as **Swifts** were reported on various dates. The pair of **Great Crested Grebes** began a new nest in a different site at the west end of the Loch in preparation for a probable second brood. **Dabchicks** also remained

throughout the month. Three **Buzzards** were present on 8th (Dan Haas, eBird) and one on 1st (Jeremy Dickens), while a **Sparrowhawk** was also reported by Jeremy Dickens on 1st. Both **Grey** and **Pied Wagtails** were recorded twice. Paul Williams saw a **Yellowhammer** on 2nd while **Linnet** was recorded three times (2nd and 26th, Paul Williams; 30th, myself). The full list of birds recorded at the Loch during July 2022 is: *Barn Swallow, Blackbird, Blackcap, Black-headed Gull, Blue Tit, Bullfinch, Buzzard, Carrion Crow, Chaffinch, Chiffchaff, Coal Tit, Common Gull, Common Magpie, Common Sandpiper, Common Swift, Coot, Dunnock, Farmyard / hybrid geese, Feral Pigeon, Goldcrest, Goldfinch, Great Black-backed Gull, Great Crested Grebe, Great Spotted Woodpecker, Greenfinch, Grey Heron, Grey Wagtail, Greylag Goose (domestic and wild), Herring Gull, House Martin, House Sparrow, Jackdaw (Eurasian), Kingfisher, Lesser Black-backed Gull, Linnet, Little Grebe (Dabchick), Long-tailed Tit, Mallard (domestic and wild), Moorhen, Mute Swan, Pheasant, Pied Wagtail, Robin, Sand Martin, Skylark, Song Thrush, Sparrowhawk, Starling, Treecreeper, Tree Sparrow, Tufted Duck, Willow Warbler, Wood Pigeon, Wren, Yellowhammer.*

**Mammals and amphibians:** **Brown Hare** (1st, Stephen Sorbie), **Grey Squirrel** (2nd, Pauline Bell), **Rabbit** (26th, Paul Williams) and **Roe Deer** (in the willow carr by the marsh, 30th, seen by myself) were the only mammal records of which I'm aware and no amphibians were reported.

### **Invertebrates ('minibeasts'):**



**New invertebrate records, Kinghorn Loch area, July 2022. A & B,** Two new Shield-bugs for Kinghorn Loch. **A:** Hairy Shield Bug (*Dolycoris baccarum*) on Lavender, 26 July 2022. **B:** Gorse Shield Bug (*Piezodorus lituratus*) on Gorse, final instar nymph, 27 July 2022. **C,** Leafhopper *Alebra wahlbergi* on Horse Chestnut, 26th; possible new record for Fife. **D,** Common Nettle Bug (*Liocoris tripustulatus*), 13 July 2021 (overlooked NLR) and 4 July 2022. **E,** Fungus gnat *Sciara hemerobioides*, 16th. **F,** Sawfly *Tenthredo notha*, 16th. **G,** Robin's Pincushion gall caused by gall wasp *Diplolepis rosae*, 27th. **H,** a parasite fly, *Phasia hemiptera*, 2nd. **J,** a semaphore fly, *Poecilobothrus nobilitatus*, 2nd. Photos: A-G, Robert Mill; H & J, Andy Pay.

July's invertebrate records were swelled by dry, sunny warm weather as well as two batches of moth trapping records, for June and July, sent to me by George Guthrie. Six **butterfly** species were recorded by myself and others: **Small White** (26th, 27th and 30th), **Comma** and **Red Admiral** (26th, both by Paul Williams), **Peacock** and **Small Tortoiseshell** (27th) and **Meadow Brown** (30th). George Guthrie sent lists of moths trapped at Craigencalt on 9 June (30 species, all of them previously recorded at the Loch) and 9 July. In total, 80 moth species were recorded at the Loch during July, 76 by George and four by myself. Six of them were new Loch records: **Chequered Fruit-tree Tortrix**, **Larch-boring Argent**, **Large Emerald** and **Small Grey** on 9th trapped by George, and the leaf mines made by the larvae of **Broken-barred Pigmy** (16th) and **Common Oak Midget** (26th and 27th) seen by myself. Of June's 30 species trapped by George,

15 were also trapped in July, meaning that the combined total of different species for the two trapping sessions this year was 91, and the grand total of all moth species recorded in June and July was 99. One new **caddisfly** was found at the Loch in July: **Grousewing (*Mystacides longicornis*)** on 30th. The second part of its scientific name, *longicornis*, refers to its extremely long antennae, which are banded black and white all the way up (see photo, top of page 1). Eleven **hymenopterans** (bees, wasps, ants and sawflies) were recorded, two of which were NLRs. These were a black-and-yellow sawfly, ***Tenthredo notha*** on a Shasta Daisy flower (16th), and the conspicuous **Robin's Pincushion Gall** caused by the gall wasp ***Diplolepis rosae*** on Dog Rose stems (27th). A very small **ichneumon wasp**, several of which were found ovipositing on nettle flowers on 26th, almost certainly also represents an additional NLR but has not yet been identified (there is an enormous number of species in Britain, most of which are extremely difficult to identify). Only six **hoverfly** species were seen, four of them by Pauline Bell on 2nd: **Broad-banded Epistrophe (*Epistrophe grossulariae*)**, **Furry Dronefly (*Eristalis intricarius*)**, **Dark-saddled Leucozonia (*Leucozonia laternaria*)** and **Pellucid Plumehorn (*Volucella pellucens*)**. The other two were **Marmalade Hoverfly (*Episyrphus balteatus*)** on several dates throughout the month, and **Pale-saddled Leucozonia (*Leucozonia glaucia*)** by Andy Pay on 3rd. At least 15 other **fly** species were recorded, either as adult flies or as the leaf mines or galls caused by them. Of these, three of the adult flies found were NLRs: the **semaphore fly, *Poecilobothrus nobilitatus*** (2nd, Andy Pay), a parasite fly, ***Phasia hemiptera*** (2nd, Andy Pay) and a relatively large all-black fungus gnat, ***Sciara hemerobioides*** (16th, by myself). The leaf mines of eight species were found, of which ***Chromatomyia horticola*** on several plant species including **Weld (*Reseda lutea*)**, **Hedge Mustard (*Sisymbrium officinale*)** and **Opium Poppy (*Papaver somniferum*)** was a NLR. The conspicuous red galls of ***Wachtliella persicariae*** were once again found on Amphibious Bistort at the marsh (30th) but in much less quantity than last year. It was an excellent month for **bugs**. Nine species were found, five of which were NLRs. One of these, **Common Nettle Bug (*Liocoris tripustulatus*)** on 4th and 26th, was actually mentioned in my July 2021 report as a NLR (first found 13 July 2021) but it somehow did not find its way into my spreadsheet last year and therefore not into the grand tally! No photograph of it was printed in last year's report but one is included as illustration **D** on the previous page. Of the four bugs totally new for the Loch's list, possibly the most noteworthy was a mostly white leafhopper, ***Alebra wahlbergi***, that I found on one of its hosts, Horse Chestnut, on 26th. This is an uncommon species in Scotland and although the National Bioversity Network records it from the Edinburgh area there are no records of it in NBN Atlas from Fife, so the Loch one could possibly be the first although more research is needed. Two **shieldbugs** were NLRs: **Hairy Shieldbug (*Dolycoris baccarum*)** on lavender by the TEC car park on 26th, and **Gorse Shieldbug (*Piezodorus lituratus*)** found as a final-instar nymph (i.e., the last moult before adulthood) on gorse above Craigencait Farm on 27th. Having diligently searched the gorse bushes several times last year and this year unsuccessfully, I was very pleased to find this at last! A third shield bug species was also recorded: **Hawthorn Shield Bug (*Acanthosoma haemorrhoidale*)**, as a 'passenger' in a kayak on 7th! (Debi Ives, KDWG Facebook page, with photo). The final NLR among the July bugs was **Common Green Capsid (*Lygocoris pabulinus*)** on 4th. **Red Soldier Beetles (*Rhagonycha fulva*)** were found on several dates, **7-spot Ladybirds (*Coccinella septempunctata*)** on 16th and 27th, and **Common Pollen Beetle (*Brassicogethes aeneus*)** on 16th and 26th. **Common Blue Damselflies (*Enallagma cyathigerum*)** were near the sluice on 16th and at the marsh on 26th. The galls of three different **gall mites** were found, two on alder (***Eriophyes inangulis*** and ***E. laevis***) and one, ***Cecidophyes rouhollahi***, one of May 2022's NLRs, found on Goosegrass at more sites around the Loch.

### ***Flowering plants and ferns***

Four **ferns** (**Male Fern, Bracken, Common Polypody** and **Wall-rue**) were noted in July as well as **Water Horsetail**. 154 species of **flowering plant** were in flower around the Loch in July, together with others that were being cultivated. Among the 154, seven were new Loch records: **Henbit (*Lamium amplexicaule*)** on 4th, a very atypical dwarf form of **Purple Loosestrife (*Lythrum salicaria*)** at the dipping



**Some new Loch plant records, July 2022.** A, Henbit (*Lamium amplexicaule*), 4th. B & C, dwarf form of Purple Loosestrife (*Lythrum salicaria*), 16th (C) and 26th (B). D, Ribbed Melilot (*Melilotus officinalis*), 27th. E & F, Small Catstail (*Phleum bertolonii*), 27th. All NLRs. Photos Robert Mill.

pond near the sluice on 16th, **Ribbed Melilot (*Melilotus officinalis*)**, again as a rather atypical low-growing form on 16th, and **Lesser Yellow-sorrel (*Oxalis exilis*)**, **Russian Vine (*Reynoutria baldschuanica*)**, **Small Catstail (*Phleum bertolonii*)** and **Common Couch (*Elymus repens*)** on 27th. In addition to these, I have a confession: the presumed “Garden Asparagus (*Asparagus officinalis*)” listed as one of last month’s new records came into flower and turned out to actually be **Fennel (*Foeniculum vulgare*)**!! We all make mistakes sometimes, and there is no change in the “new Loch record” statistics because Fennel was also previously unrecorded from the Loch. July 2022’s “first-flowerers” included **Teasel (*Dipsacus fullonum*)**, **Lesser Water-parsnip (*Berula erecta*)**, **Common Water-plantain (*Alisma plantago-aquatica*)**, **Greater Bird’s-foot Trefoil (*Lotus pedunculatus*)**, **Water Forget-me-not (*Myosotis scorpioides*)** and **Wood Burdock (*Arctium nemorosum*)** from 16th, **Harebell (*Campanula rotundifolia*)** from 26th and **Water Mint (*Mentha aquatica*)**, **Bulrush (*Typha latifolia*)**, **Marsh Bedstraw (*Galium palustre*)** and **Square-stalked St John’s-wort (*Hypericum tetrapterum*)** from 27th. **Wood Sage (*Teucrium scorodonia*)** was also first found flowering at the Loch on 27th although on that date it was obvious that it had been in flower for some time.

### Cryptogams



**New and other mildew records, July 2022.** Left: *Podosphaera erigerontis-canadensis* on Pineapple-weed, 27th, NLR. Centre: *Golovinomyces senecionis* on Coltsfoot, 27th, NLR. Right: *Podosphaera aphanis* var. *aphanis* on Herb Bennet, 30th. Photos Robert Mill.

Seventeen **fungi** were recorded during July although it was another month when I did not particularly focus on cryptogams. Most were re-finds of species recorded last year, but ***Podosphaera erigerontis-canadensis***, on Pineapple-weed leaves, and ***Golovinomyces senecionis*** on Coltsfoot leaves (both 27th), were new Loch records. **EMARaV (European Mountain Ash ringspot-associated Virus)** was again recorded on Rowan (*Sorbus aucuparia*) leaves. No bryophytes or lichens were recorded but ***Trentepohlia aurea*** was again found on dry-stone walls.

## VILLAGE, BEACHES AND COASTAL PATH



Scorpion-weed (*Phacelia tanacetifolia*),  
Burnside Path, 1 July 2022. Photo Robert  
Mill.

It was a really good month for marine mammals. Apart from the almost ever-present **seals**, a **Minke Whale (*Balaenoptera acutorostrata*)** was off East Braes on 1st and a **Harbour Porpoise** was there on 15th; both were recorded by Graham Sparshott, the Fife bird recorder, during bird migration watch sessions. **Bottlenose Dolphins** were off the coastal path between Kinghorn and Seafield on 14th (Bruce Meldrum, KDWG) and 22nd (Paul Williams, KDWG).

The most notable bird seen in the Kinghorn area during July 2022 was a **Cory's Shearwater (*Colonectris borealis*)** photographed, at some distance, by Pauline Bell on 27th; her photos are on the Kinghorn District Wildlife Group's Facebook

page. Graham Sparshott carried out more migration watches at East Braes in July (records at <https://www.trektellen.org>). Notable species were **Mediterranean Gull** on several dates, with three on 27th; maxima of 38 **Common Scoter** on 22th and 82 **Goosander** on 7th; a returning **Whimbrel** on 22nd; **Common Sandpiper** on several dates with two on 10th; a **Great Skua** on 22nd; and four **Red-throated Diver** on 17th. John Nadin saw a **Pomarine Skua** off Kinghorn Harbour on 15th (<https://www.trektellen.org>). On my own walk along the coastal path on 17th July, I saw a **Shelduck** as well as **Linnet** and **Yellowhammer**. Once again Paul Williams recorded 51 species at Seafield in July; they included the first returning waders of the autumn (yes, autumn starts in July, as far as wader migration is concerned!), such as small numbers of **Bar-tailed Godwits** from 22nd, 37 **Curlew** on 22nd and two **Sanderling** on 24th. Single **Common Sandpipers** were also present on both 22nd and 30th, and there were 113 **Goosander** on 24th. There were also single **Kestrel** and **Peregrine** on 22nd, and a **Sparrowhawk** on 31st.

**Ringlet** butterflies were flying on the Donkey Field Path, which joins the east end of the Burnside Path, on 1st.



**Burnside Path plants, 1 July 2022.** *Left*, The Corncockle (*Agrostemma githago*) first found in June continued to flower and then set seed. *Right*, main photo shows probably the commonest of several forms of **Knotgrass (*Polygonum aviculare* agg.)** that varied in habit and flower colour. Inset is a deeper pink form. Photos Robert Mill.

On 1st July I walked the length of the Burnside Path studying the tremendous mixture of arable weeds that have appeared along the renovated, supposedly 'landscaped' section. As well as the **Corncockle** found last month (which continued flowering at least in the first half of July), I found **Scorpion-weed (*Phacelia tanacetifolia*)**, also known as Lacy Phacelia (photo, top of this page). This is a native of western North America that is often grown by farmers and in gardens on account of its importance as a pollinator attractant: it is much loved by both bees and hoverflies. There was also much **Knotgrass (*Polygonum***

*aviculare*) which I have concluded is probably all one species even though the plants vary considerably in habit (from upright to completely prostrate) and flower colour (from rich deep pink to white with a heavy purple tinge on the outside, as shown in my photos on p. 5).



**Coastal plants, 17 July 2022.** A, Peruvian Lily (*Alstroemeria*, resembling the Chilean *A. diluta* var. *chrysantha*). B, Harebell, or 'Bluebell of Scotland' (*Campanula rotundifolia*). C, Field Bindweed (*Convolvulus arvensis*), 2nd. D, Himalayan Balsam (*Impatiens glandulifera*). E, Meadow Cranesbill (*Geranium pratense*). Photos Robert Mill.

My only walk along the coastal path during July was on 17th. Beside the railway bridge, I was surprised to find a plant of **Peruvian Lily (*Alstroemeria*)** whose mostly yellowish flowers, scarcely marked with dots and with reddish-purple tips to three of the 'petals', most nearly matched those of ***Alstroemeria diluta* subsp. *chrysantha*** rather than those of the possibly more commonly cultivated *A. aurea*. Many cultivars of both taxa exist, of garden hybrid origin, and the plant could easily have been one of those. However, the flowers are a tolerable match to the illustration of *A. diluta* subsp. *chrysantha* in Finot et al. (2018) and therefore even if not an exact, genetically pure, example of that subspecies, it would have appeared to have played an important part in the genetic origin of the Kinghorn plant. The common name 'Peruvian Lily' is a bit of a misnomer: the two main centres of diversity of the genus *Alstroemeria* are Chile (38 species: Finot et al., 2018) and eastern Brazil (41 species: Assis et al., 2020), whereas only two species grow in Peru (Hofreiter & Rodríguez, (2006) .

Other plants noted in flower that day between the railway bridge and the zig-zag just south of Linton Court (the site of the old Kirkcaldy / Kinghorn 'Combination Poorhouse') included **Field Bindweed (*Convolvulus arvensis*)**, **Wood Sage** and **Russian Vine**.

## References

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