

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



The harvestman *Leiobunum rotundum* using its eight exceptionally long legs to clamber over vegetation at the top of the wall beside the orchard near Craigencaft Farm, 31 August 2022. The body is only about 3 mm long but the legs are up to 50 mm long. New Loch record and first record of any harvestman species from the Loch. Photo Robert Mill.

August 2022 was rather more unsettled locally than the rest of the summer has been, and some welcome rain fell on some days, although not really enough for the good soaking that the land needs. Yet the warm, dry and sunny trend that has characterised the whole of 2022 so far, and especially summer, continued. Locally, during summer (Jun-Aug) this year we have had between 50-70% average rainfall, and 105-115% of average sunshine (Met Office, 2022).

The Loch's species list grew by at least another 44 species during August. Two of the additions represented completely new groups of invertebrates not previously recorded: the Loch's first **lacewing** species and its first **harvestman** species. The other additions comprised 1 amphibian (recorded in July but not made known to me till August), 1 fish, 1 butterfly, 6 moths, 1 wasp, 1 bug (a leafhopper), 1 hoverfly, 3 other flies, 11 flowering plants, 11 fungi and 5 lichens. Some data housekeeping during the month resulted in the deletion of one duplicated species from the spreadsheet. The month's net increase was therefore 43, from 1,377 on 31 July to 1,420 on 31 August. As usual, 'new Loch record' is abbreviated NLR, especially in photo captions.

Before summarising my August finds, I would like to thank Andy Pay very much indeed for drawing my attention to an error in my July report, in which I mentioned that I had found **Common Nettle Bug (*Liocoris tripustulatus*)** on 4th and 26th July, as well as in July 2021, and that the species was an overlooked new Loch record. I illustrated the article with a photograph (photo D on page 2, actually taken on 26 July although the date given was 4 July) that I thought to be of the species. The truth is that I actually found two slightly different bug species, both mainly black and yellow, on nettles in July 2022. The one I found on 4th July, whose photo was not included last month, was indeed Common Nettle Bug. However, the photo taken on 26 July that I included in my report was in fact of another bug, *Grypocoris stysi*, which Andy recorded at the Loch last year. Because I took no photograph of the black and yellow bug I saw in 2021, that could have been either of the two species. Therefore, the first definite record of Common Nettle Bug at the Loch was the one on 4 July 2022. Both photos are included here.



A: Common Nettle Bug (*Liocoris tripustulatus*), 4 July 2022, NLR. B: *Grypocoris stysi*, 26 July 2022, verified by Andy Pay on 5 September 2022. Note differences in body shape, and pale X-shaped mark in middle of abdomen in photo B (*Grypocoris*), missing in *Liocoris* (photo A). Photos Robert Mill.

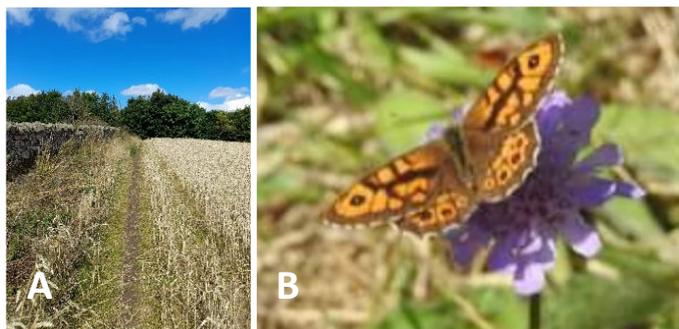


## AROUND THE LOCH

**Birds:** The total number of bird species recorded at the Loch in August 2022 was 52 – or 53, if one includes a **Domestic Chicken** that had escaped from the hen run above the developing market garden area and was roaming free on the meadow there on 7th! The species mix was broadly similar to July although neither the juvenile **Kingfisher** nor the **Common Sandpiper** were seen in August. Although **Barn Swallows** were present all month and **Sand Martins** until at least the 6th (Paul Williams), neither **House Martins** nor **Swifts** were seen. On 1st, Paul Williams saw a whole family of **Blackcaps** as well as newly fledged **Common Whitethroats**, while both **Chiffchaffs** and **Willow Warblers** remained throughout the month. The **Great Crested Grebes** successfully hatched two more chicks as a second brood, while at least one of the juveniles from the first brood remained on the Loch. **Little Grebe (Dabchick)** was also seen, or more often heard, throughout August. **Buzzard** was seen twice (by Paul Williams on 1st and myself on 12th). **Sparrowhawk** was also recorded twice: a female in front of the hide seen by me on 25th, and one reported by Paul Williams a couple of days later. Paul also recorded a **Kestrel** on 6th, while I saw a **Peregrine** dashing across the hillside north of the track from the top of Red Path Brae to the water-works on 31st; moments earlier that day I had been watching a **Raven** as it flew over the same area, croaking deeply. The full list of birds recorded at the Loch during August 2022 is: *Barn Swallow, Blackbird, Blackcap, Black-headed Gull, Blue Tit, Bullfinch, Buzzard, Carrion Crow, Chaffinch, Chiffchaff, Coal Tit, Common Gull, Common Magpie, Common Whitethroat, Coot, Dunnock, Farmyard / hybrid geese, Feral Pigeon, Goldcrest, Goldfinch, Great Crested Grebe, Great Spotted Woodpecker, Great Tit, Greenfinch, Grey Heron, Grey Wagtail, Greylag Goose (domestic), Herring Gull, Jackdaw (Eurasian), Kestrel, Lesser Black-backed Gull, Linnet, Little Grebe (Dabchick), Long-tailed Tit, Mallard, Moorhen, Mute Swan, Oystercatcher, Peregrine, Pheasant, Raven, Robin, Rook, Sand Martin, Song Thrush, Sparrowhawk, Starling, Treecreeper, Tree Sparrow, Willow Warbler, Wood Pigeon, Wren, and escaped Domestic Chicken.*

**Mammals, amphibians and fish:** No mammals were reported during the month. I had a late observation (from 2 July) sent to me by TEC of a **Smooth (= Common) Newt (*Lissotriton vulgaris*)** at the dipping pond, while on 1st August TEC staff and volunteers found a **Pike (*Esox lucius*)** in the pond under renovation at the marsh area at the west end of the Loch. How it got there is not certain and efforts to catch and remove it had been unsuccessful up till the end of the month. Both these were technically new Loch records although people had reported both newts and pike previously without dates or other evidence.

**Invertebrates ('minibeasts'):** August was notable for the first Loch records of **lacewings (Neuroptera)** and of

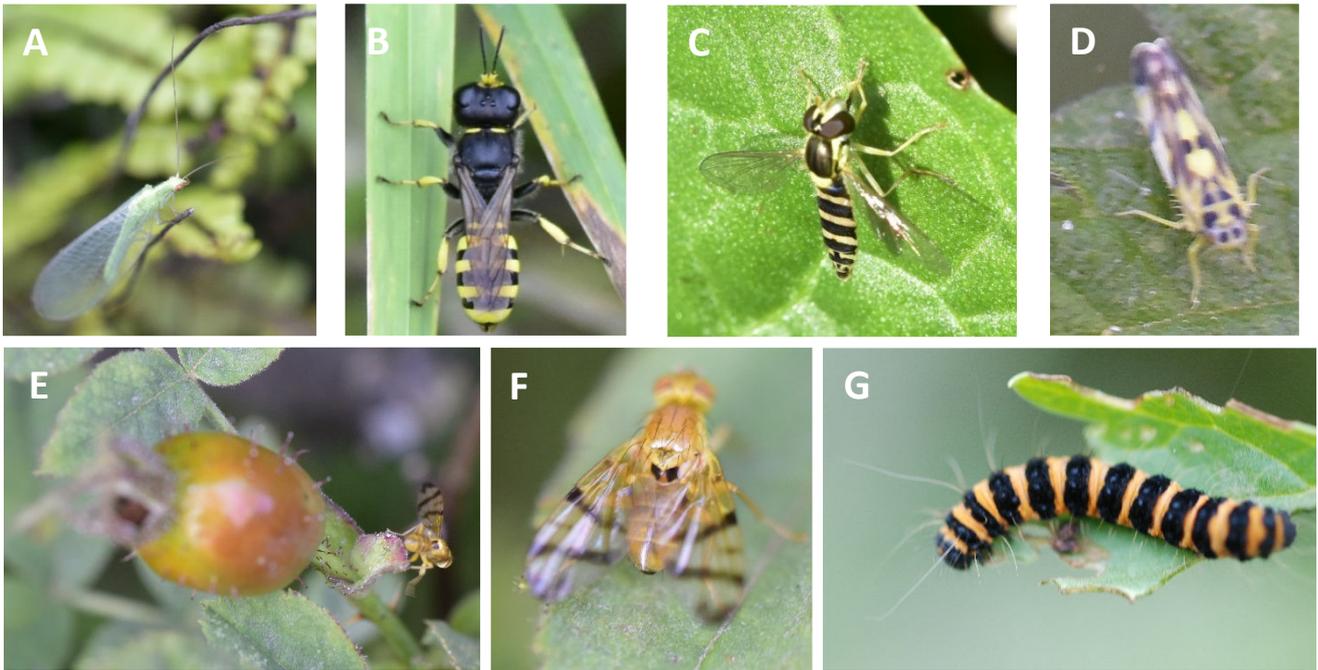


**A**, The spot near the Kinghorn/Burntisland boundary on the track from the Loch to the Binn where Andy Pay saw a Wall butterfly five minutes previously on 20 August 2022. **B**, Wall butterfly (*Lasiommata megera*) at Seafield, 5 August 2022.

Photos: **A**, Andy Pay; **B**, Paul Williams.

**harvestmen (Opiliones)**. The lacewing was a very common green lacewing, *Chrysoperla carnea*, while the harvestman was also a common species, *Leiobunum rotundum*. Harvestmen are arachnids, but differ from spiders in that the two parts of their bodies appear to be fused into one, and they have a single pair of eyes; spiders have 3-4 pairs of eyes and there is a definite constriction between the two parts of their bodies. Harvestmen, including the one found at the Loch, also often have exceptionally long legs relative to the often small body size; *Leiobunum rotundum* has a body only about 3 mm long but the legs can be up to 50 mm.

Probably the month's most exciting new record, however, was a **butterfly**, the **Wall Butterfly (*Lasiommata megera*)**, one of the 'browns'. This species has



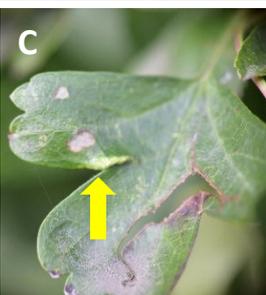
**New and other invertebrate records, Kinghorn Loch area, August 2022.** **A**, Common Green Lacewing (*Chrysoperla carnea*), 19th, NLR: the Loch's first record of any member of the Neuroptera group of insects. **B**: *Ectemnius* sp., a solitary wasp species, 26th, NLR. **C**, A hoverfly, *Sphaerophoria* sp., 26th: NLR for the genus. **D**, A leafhopper species, *Eupteryx aurata*, 12th, NLR. **E & F**, Rose-hip Fly (*Rhagiola alternata*), 17th, NLR (E, on a rose-hip; F, close-up on a nearby leaf). **G**, Caterpillar of the Cinnabar Moth (*Tyria jacobaeae*), 1st. Photos Robert Mill.

been gradually spreading into Scotland from the south; the first Fife record was in 2019, at Seafield. As noted elsewhere in this report it was seen there again in August this year, while on 20th Andy Pay saw one basking on the track between the Binn and the Loch, just inside the Kinghorn side of the boundary between Kinghorn and Burntisland. This is the first 'inland' record of the Wall butterfly from Fife since the nineteenth century.

Five other butterfly species were recorded in August: **Green-veined White** (10th), **Small White** (10th, 12th, 26th), **Peacock** (three on 10th), **Meadow Brown** (1st) and **Speckled Wood** (10th and 17th by myself, 28th by Paul Williams).

Seventy-one **moth** species were recorded at the Loch in August. Of these, 65 were trapped by George Guthrie at Craigenalt on 6th, representing 392 individual moths. Five of these 65 species were NLRs: two examples each of **Blue-bordered Carpet** (*Plemyria rubiginata*), **Straw Grass-veneer** (*Agriphila straminella*) and **Ground-moss Grey** (*Eudonia truncicolella*), and one each of **Copper Underwing** (*Amphipyra pyramidea*) and **Juniper Argent** (*Argyresthia dilectella*). Besides these, I found numerous caterpillars of the **Cinnabar Moth** (*Tyria jacobaeae*) on their host, ragwort (*Jacobaea vulgaris*) on 1st, and the leaf mines of five other species. One of them, **Apple Leaf Miner** (*Lyonetia clerkella*), was surprisingly another NLR; I say 'surprisingly' as when worked and recorded wildlife at the Royal Botanic Garden Edinburgh, it was one of the leaf mines I found most often.

Eight **hymenopterans** (bees, wasps, ants and sawflies) were recorded, one of which was a NLR. This was a black-and-yellow solitary wasp seen by me on 26th and belonging to the genus *Ectemnius* (kindly verified by Andy Pay). However, there are two or three species that are fairly common in Scotland, all difficult to separate, and it has not been possible to identify it to species. Two different active **Common Wasp** nests were found, one in a hole in the ground beside the hawthorn hedge at the foot of Woodland Rise, the other near the foot of the track up from the jetty to Craigenalt Farm, in the retaining wall by the orchard. Five **hoverfly** species were seen, one of which, a female *Sphaerophoria* species (26th), was a NLR even though it could not be identified to species, as the genus had not previously been recorded from the Loch. Females of the genus can only be identified to species by microscopic examination. Even if I had had the necessary equipment, the insect was very active, flitting from flower to flower at the pollinator beds and scarcely settling for a moment



**Invertebrates, August 2022.** A, *Tachina fera*, 26th. B, *Opomyza florum*, 12th, NLR. C, *Phyllocoptes goniothorax* (gall arrowed), 27th. Photos Robert Mill.

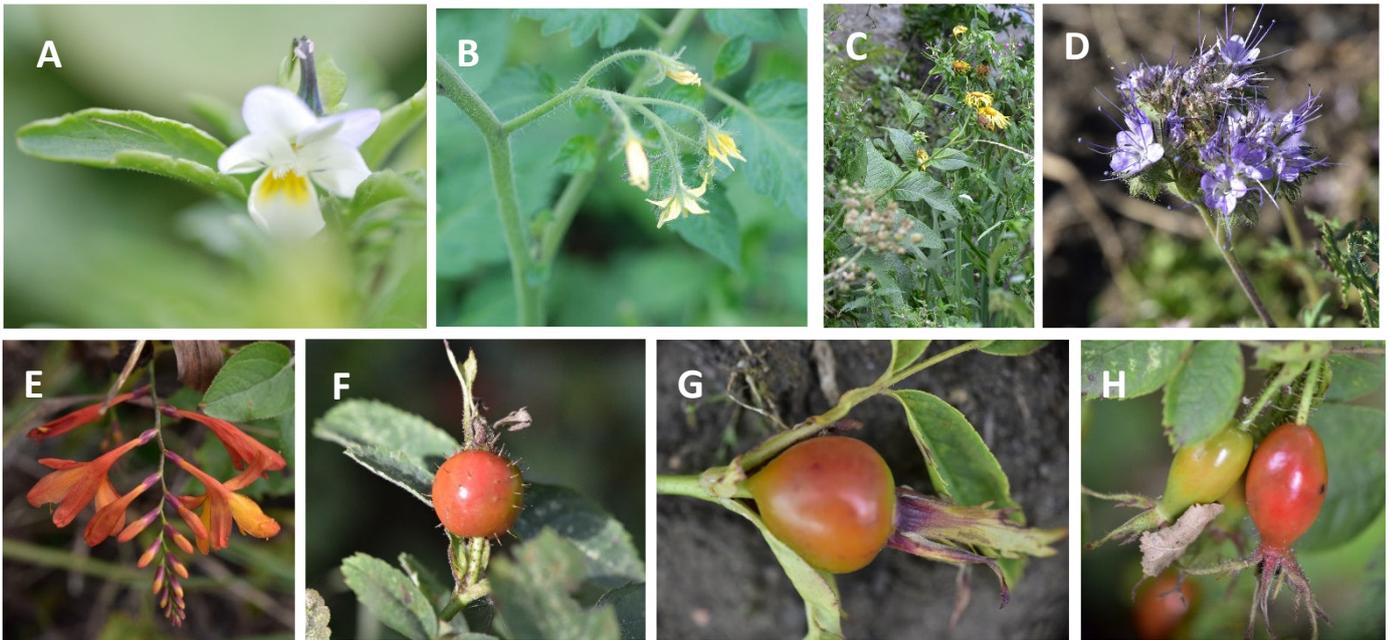
so even photography was almost impossible. **Banded Hoverflies (*Syrphus* spp.)** were recorded several times, including two *Syrphus ribesii* on Greater Knapweed at the roundabout on 26th. **Marmalade Hoverflies** were seen on 1st and 10th but in low numbers; it does not seem to have been a good year for them at all (in some previous years, when I recorded wildlife at the Royal Botanic Garden Edinburgh, I would see hundreds per day and several at a single flower). At least 14 other fly species were recorded, either as adult flies or as the leaf mines or on a rose hip on 17th and was one of the month's fly NLRs; the others were **Yellow Cereal Fly (*Opomyza florum*)** on 12th and the leaf-miner *Chromatomyia periclymeni* whose larval mine was found on honeysuckle leaves on 19th. *Tachina fera* was near the sluice at the SE corner of the Loch on 26th – a rather more pale orange individual than is typical for the species. There is one other record of it from the Loch, dating from 2006 (NBN Atlas Scotland). The leaf mines of eight species were found, including the above-mentioned NLR. Five species of bugs were found, of which a leafhopper, *Eupteryx aurata*, found on the same leaf as another **Common Nettle Bug** on 12th, was a NLR. **Common Flower Bugs (*Anthocoris nemorum*)** seemed unusually numerous at the beginning of the month. **Red Soldier Beetle (*Rhagonycha fulva*)** (1st) and **7-spot Ladybird (*Coccinella septempunctata*)** on 26th were August's only beetle records. **Common Blue Damsel flies (*Enallagma cyathigerum*)** were seen near the sluice on 1st, while Paul Williams photographed both sexes of **Common Darter dragonflies (*Sympetrum striolatum*)** on 27th/28th (photos on Kinghorn District Wildlife Group's Facebook page). The galls of three different gall mites were found, one of which, *Phyllocoptes goniothorax* (27th), was confirmation of a 2018 BioBlitz record; this causes rolling of the leaf margins of Hawthorn leaves. The other two were *Eriophyes laevis* on Alder and *Cecidophyes rouhollahi* on Goosegrass.

**Flowering plants and ferns:** Five ferns (**Bracken, Common Polypody, Black Spleenwort, Maidenhair Spleenwort and Wall-rue**) were recorded in August as well as **Water Horsetail**. There were 145 species of **flowering plant** in flower around the Loch



**Some new plant records from the Loch, August 2022.** A, Cornflower (*Centaurea cyanus*), 10th. B, Corn or Field Sowthistle (*Sonchus arvensis*), 31st. C, Vervain (*Verbena officinalis*), 17th. Photos Robert Mill.

in July, plus an extra 20 or more obviously cultivated. Many plants were suffering the effects of the long dry spell and finished flowering earlier than usual. However, some species responded to the rain towards the end of the month by having a second flowering. Eleven of the 145 represented new Loch records. Most represented a mixture of arable weeds including some of those that have appeared along the Burnside Path since the recent improvement works there (**Field Pansy *Viola arvensis***, 1st; **Cornflower *Centaurea cyanus***, 10th; **Field Sowthistle *Sonchus arvensis***, 31st). Others were 'garden' plants growing in 'wild' situations (**Tomato *Lycopersicon esculentum***, 1st onwards; **Scorpion-weed *Phacelia tanacetifolia***, 10th (also found last month along the Burnside Path, see my July report); **Montbretia *Crocsmia × crocosmiiflora***, 12th onwards; **Vervain *Verbena officinalis***, 17th; **Elecampane *Inula helenium***, 17th). Two of the new records resulted from an attempt to establish how many species of wild dog roses (the *Rosa canina* aggregate) grow around the Loch. These are best identified from their hips, which are now ripening, as well as the hairiness or otherwise of the leaves and other characters. So far, I have identified two dog rose taxa: **Sherard's Downy Rose (*Rosa sherardii*)**, and **Glaucous Northern Dog-rose (*Rosa caesia* subsp. *glauca*)**. Both of these represent new Loch records. "Dog Rose (*Rosa canina* agg.)" is currently also retained for roses that have not

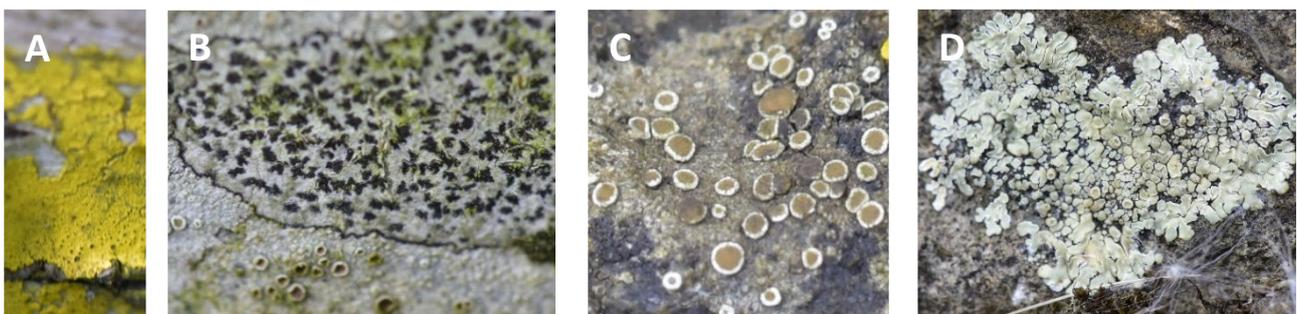


**More August 2022 plant records.** **A**, Field Pansy (*Viola arvensis*), 1st. **B**, Tomato (*Lycopersicon esculentum*), 1st. **C**, Elecampane (*Inula helenium*), 17th. **D**, Scorpion-weed (*Phacelia tanacetifolia*), 10th. **E**, Montbretia (*Crocosmia x crocosmiiflora*), 12th. **F & G**, Two slightly different forms of Sherard's Downy Rose (*Rosa sherardii*): **F**, 17th in the larch wood near TEC; **G**, 19th on the 'Great North Road' track from Craigencaft Farm to the B923. **H**, Glaucous Northern Dog-rose (*Rosa caesia* subsp. *glauca*), 19th. All NLRs. All photos Robert Mill.

yet been determined to the exact species, but whether Dog Rose itself (*Rosa canina* in the strict sense) actually grows at the Loch is not known yet, although Ballantyne (2002) stated that it is "widespread and common" in Fife. The final new August plant record was an unusual bedstraw that most nearly matched **Heath Bedstraw (*Galium saxatile*)**.

During July and August, TEC staff and volunteers have gradually reintroduced numerous marsh and water plants to the Pond area at the west end of the Loch in response to a report I prepared for TEC last autumn. The plants were purchased using money kindly donated by the Pitcairn Society, Glenrothes. All were listed as growing there around 120 years ago in a survey of the Loch conducted by the botanist George West in 1905, as part of a wider documentation of all Scottish lochs that was published a few years later (West, 1910), but which had disappeared there over the past 120 years. Stocks of several other species that had become very scarce there were also increased. Those reintroduced include **Water-plantain, Hairy Sedge, Common Spike-rush** (recently found wild elsewhere around the lochside), **Floating Sweet-grass, Reed Canary-grass, Branched Bur-reed** (one poorly plant of which was found growing at the marsh last year), and **Brooklime** (re-found near the sluice this year, but now absent from the marsh prior to the reintroduction effort). Other plants on West's list may be reintroduced in the future if and when habitats can be re-created for them.

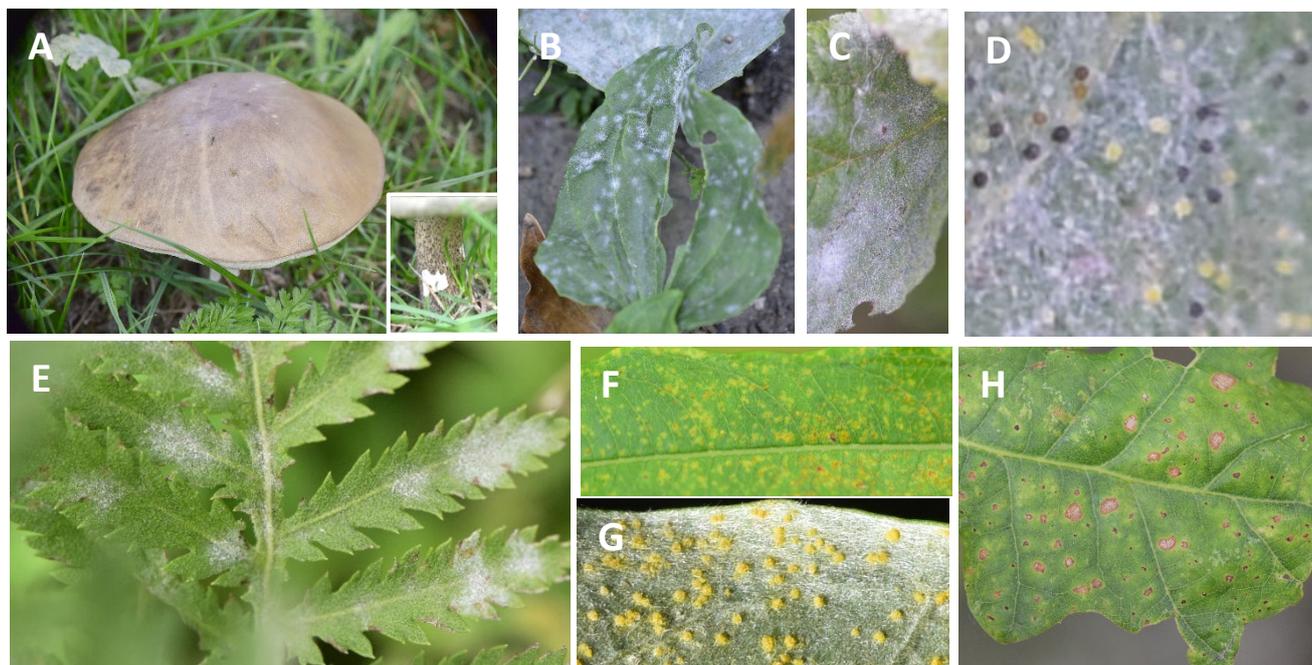
**Cryptogams**



**New lichen records, August 2022.** **A**, *Chrysothrix candelaris*, 25th. **B**, *Arthonia radiata*, 31st. **C**, *Myriolecis dispersa*, 26th. **D**, *Protoparmeliopsis muralis*, 26th. Photos Robert Mill.

Partly because many of the flowering plants were past their best, I turned my attention to cryptogams. Another reason was that this year has been a good (or bad, depending on your point of view!) one for **mildews** as well as other plant pathogens.

Fourteen **lichen** species were identified, with several others currently remaining unidentified. Five represented NLRs: **Arthonia radiata** on an ash tree trunk (31st), **Chrysothrix candelaris** on birch bark (25th), **Arthonia varians** lichenicolous in the fruiting bodies of another lichen (*Lecanora rupicola*: 12th), and **Myriolecis dispersa** and **Protoparmeliopsis muralis** on rock near the 'Throne Viewpoint' (both 26th). The last two used to be known as *Lecanora dispersa* and *Lecanora muralis* but the genus *Lecanora* has in recent years been divided into several segregate genera of which *Myriolecis* and *Protoparmeliopsis* are just two.



**Loch fungal records, August 2022.** **A**, Brown Birch Bolete (*Leccinum scabrum*), 31st, photographed 2 September (inset, stipe). **B**, *Golovinomyces sordidus*, powdery mildew on *Plantago major*, 12th, NLR. **C & D**, *Phyllactinia mali* on blackthorn, 17th, NLR (**C**, habit; **D**, enlargement of part of leaf surface showing fruiting bodies (chasmothecia: yellow and black) in different stages of development). **E**, *Golovinomyces macrocarpus* on Tansy, 26th, NLR. **F & G**, The rust *Melampsora epitea* on Osier (*Salix viminalis*), 26th, NLR: **F**, upper leaf surface; **G**, lower leaf surface. **H**, *Sphaerulina quercicola* on Oak, 12th, NLR. Photos Robert Mill.

I recorded 37 fungi species in August, only one of which (**Brown Birch Bolete, *Leccinum scabrum*** on 31st and also at the beginning of September) was a 'mushroom'. Fifteen were powdery mildews, five of them being NLRs: ***Erysiphe cruciferarum*** on Wall Rocket (*Sisymbrium officinale*) on 12th, ***Erysiphe lycopsidis*** on the basal leaves of Evergreen Alkanet (*Pentaglottis sempervirens*), ***Phyllactinia mali*** on Blackthorn (*Prunus spinosa*) both on 17th, ***Golovinomyces macrocarpus*** on Tansy (*Tanacetum vulgare*) on 26th, and ***Golovinomyces sordidus*** on Greater Plantain (*Plantago major*) leaves on 12th. Four were downy mildews, with ***Mycosphaerella confusa*** on Bramble (*Rubus fruticosus* agg.: 12th) being an NLR. Five were rusts of various kinds, two of which, ***Melampsora epitea*** on Osier (*Salix viminalis*: 26th, 27th) and ***Puccinia annularis*** on Wood Sage (*Teucrium scorodonia*: 19th), were NLRs. Ten were leaf spots, two being NLRs: ***Peronospora sparsa*** on Burnet Rose (*Rosa spinosissima*: 19th) and ***Sphaerulina quercicola*** on Oak (*Quercus robur*: 12th). **Ash Dieback (*Hymenoscyphus fraxineus*: NLR)**, which is devastating British ash trees, has been found at the Loch and sadly a programme is under way to remove many of the ash trees. The other two fungi recorded in August were **Campion Smut (*Microbotryum lychnidis-dioicae*)** and a lichenicolous fungus, ***Unguiculariopsis thallophila***; both have been previously recorded. **Anabaena**-type cyanobacteria formed a green scum on parts of the Loch, due to the prolonged warm weather, prompting Fife Council to put up signs warning users of the potential dangers to themselves and their dogs from exposure to the toxins produced by these blue-green algae. **Terrestrial algae** found during August were ***Desmococcus olivaceus*** (green) and ***Trentepohlia abietina*** (orange) on tree trunks.

**VILLAGE, BEACHES AND COASTAL PATH Bottlenose Dolphins** were again seen by several observers during August, off Kinghorn and Pettycur; Bruce Meldrum posted more photographs on the KDWG Facebook page. Forty dolphins were off Kinghorn Harbour on 3rd.

Paul Williams sent in a list of 55 birds recorded in the Seafield area during August. **Ducks** included over 140 **Goosander** on 4th, a small flock of **Common Scoter** on 11th, and **Teal** on 28th (six) and 29th (eight). The more notable **waders** were a **Greenshank**, a **Whimbrel**, a **Common Sandpiper**, a **Dunlin** and three **Sanderling** (all 3rd), as well as two **Purple Sandpipers** on 3rd and nine on 30th. Seventeen **Swifts** were also there on 3rd, and one **Mediterranean Gull** (possibly two) on 28th. Graham Sparshott's August migration records are available at <https://www.trektellen.org>. His more notable records from East Braes were an astonishing 500 **Shag** present on 13th, one **Great Northern Diver** and two **Red-throated Divers** on 14th, two **Black-throated Divers** (27th), 7 **Manx Shearwaters** going SW on 6th and 27 going NE the same day and another 17 heading NE on 7th, three **Pochard** going SW on 7th, a **Little Gull** on 14th, up to four **Mediterranean Gulls** on various dates, 12 **Knot** and 16 **Whimbrel** going SW on 27th, 8 **Black-tailed Godwits** on 13th, and three **Arctic Skuas** there as well as another six heading SW on 27th. He and Jon Sparshott also recorded at Pettycur Harbour on 20 August, the most notable records from there being a **Red-throated Diver**, a **Mediterranean Gull**, nine **Golden Plover**, six **Manx Shearwaters**, two **Arctic Skuas** and two **Great Skuas**, all migrating southwest.

Paul Williams saw three **Wall butterflies** at Seafield on 4 August and one on 5th (see photo, p. 2), confirming a

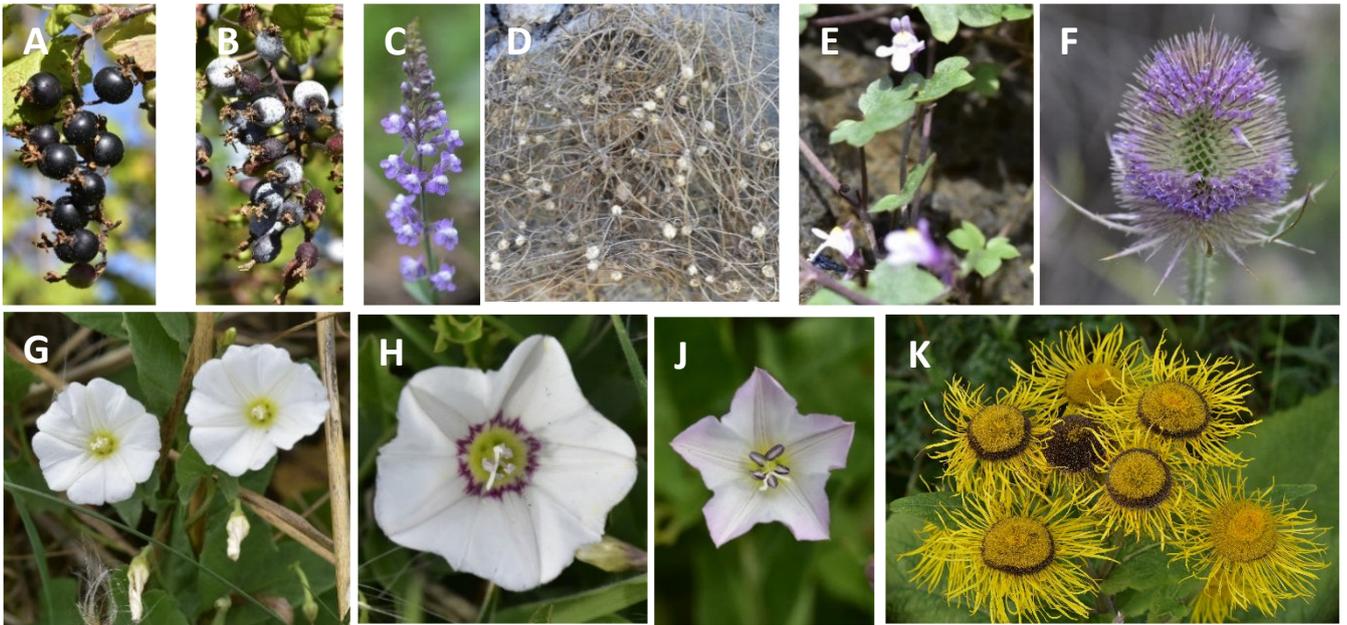


**Seashore life, August 2022. A,** Lion's Mane Jellyfish (*Cyanea capillata*), Pettycur, 3rd. **B,** Blue Jellyfish (*Cyanea lamarckii*), Seafield, 8th. **C,** Pod Razor shell (*Ensis ensis*), Pettycur, 18th. Photos Robert Mill.

2019 sighting that had been the first Fife record of this species since 1870. He suspected that breeding might be taking place and expected it to spread further inland. As noted in the Loch section of this report, that has been confirmed by Andy Pay's record from the Kinghorn/Burntisland boundary on the track from the Loch to the Binn. On 11th, Paul Williams saw several other butterflies (**Small Copper**, **Speckled Wood**, **Peacock** and **Small White**) at Seafield and posted photos on the KDWG Facebook page. Numerous **Meadow Browns** and a **Small White** were behind the dunes at Pettycur on 3rd and some were at Seafield on 8th.

Two or three **Lion's Mane Jellyfish** (*Cyanea capillata*) were washed up at Pettycur on 3rd, and several small **Blue Jellyfish** (*Cyanea lamarckii*) at Seafield on 8th. At Pettycur on 18th I found both **Pod Razor** (*Ensis siliqua*, shell valves straight) and **Common Razor** (*Ensis ensis*, shell valves gently curved) washed up on the beach along with the usual **Common Cockles**, **Baltic Tellins** and the occasional smaller, pink **Thin Tellin**.

At Pettycur on 3rd, a variety of plants were in flower at the foot of the cliffs, including **Red Goosefoot** (*Oxybasis rubra*), **Goldenrod** (*Solidago virgaurea*), **Wild Mignonette** (*Reseda lutea*), **Wild Thyme** (*Thymus drucei*) and **Field Bugloss** (*Anchusa arvensis*). **Goldenrod** was also in flower at Seafield, near the ramp up from the beach to the car park next to the supermarket (8th). On a walk through the village on 4th I noted massive sprays of **Hedge Bedstraw** (*Galium mollugo*) at Quarrels Brae, a tall **Cotton Thistle** (*Onopordum acanthium*) at the foot of Harbour Road, and berries of both **Black Currant** (*Ribes nigrum*) and **Flowering Currant** (*Ribes sanguineum*) on the bank beside Quarrels Brae. I was shocked to find brown, leafless Dodder-like stems of **Ivy-leaved Toadflax** (*Cymbalaria muralis*) on a wall just off Townhead, presumably due to drought; the same species remained healthy up at Craigencait Farm.



**Village and coastal path plants, August 2022.** **A**, Black Currant fruits (*Ribes nigrum*), 4th. **B**, Flowering Currant fruits (*Ribes sanguineum*), 4th. **C**, Pale Toadflax (*Linaria repens*), 5th. **D**, Drought stricken plants of Ivy-leaved Toadflax (*Cymbalaria muralis*), village, 4th; compare **E**, healthy plants at Craigenfalt Farm. **F**, Teasel (*Dipsacus fullonum*), 5th. **G-J**, Three colour forms of Field Bindweed (*Convolvulus arvensis*): **G**, f. *arvensis*, 5th; **H**, unnamed form similar to f. *quinquevulnerus* except flowers white (not pink), 5th; **J**, f. *pallidiroseus*, 28th. **K**, Hooker's Fleabane (*Inula hookeri*), 5th. Photos Robert Mill.

The next day (5th) I explored the Doo Dell Paths above Kinghorn Beach and found **Pale Toadflax (*Linaria repens*)**, **Teasel (*Dipsacus fullonum*)**, **Hemp Agrimony (*Eupatorium cannabinum*)** and two forms of **Field Bindweed (*Convolvulus arvensis*)**. One was the typical form with pure white flowers (**forma *arvensis***). The other was a form with a yellow throat surrounded by ten conspicuous purple marks. This is similar to **C. *arvensis* forma *quinquevulnerus*** except that the corolla lobes are pure white, not tinged pink as in that form (for illustration of that form see web page by Crewe, 2020-21). It is the 'mystery bindweed' I mentioned in my August 2021 report; this year I have found it over a larger area of the Doo Dell Paths but never together with *forma arvensis*. I noticed **Traveller's Joy (*Clematis vitalba*)** climbing up and over the wall at the entrance to the primary school; whether this is native there or has been planted I have no idea although I suspect the latter is more likely. Along the Burnside Path on the same day, I found a single plant of **Hooker's Fleabane (*Inula hookeri*)** going past its best; this had either germinated from a seed carried in the wind from a garden or had been thrown out. It's a good plant to grow in gardens; it attracts hoverflies and other pollinators.

On a walk along our local stretch of the coastal path on 28th, from Nethergate to the stony beach just before Seafield Tower, I found a third form of ***Convolvulus arvensis*** climbing up the fence beside the caravan park. Its flowers were delicately washed with pale pink and it was identified as **forma *pallidiroseus*** using Crewe (2020/21). Nearer the Kiln Rocks, **Common Michaelmas Daisy (*Symphyotrichum x salignum*, perhaps better known in its old genus *Aster* as *Aster x salignus*)** was in flower while on the beach there were patches of **Sea Rocket (*Cakile maritima*)** still in flower as well as non-flowering patches of **Sea Milkwort**. The latter is another plant whose scientific name has changed recently as a result of DNA research into relationships: it used to be known botanically as *Glaux maritima* which is the name you'll find in all but the most up-to-date flower books but it has now been merged in a much-enlarged version of the loosestrife genus as ***Lysimachia maritima***.

## References

- BALLANTYNE, G.H. (2002). *Wild Flowers in Fife and Kinross*. Fife Nature.
- CREWE, M. (2020-2021). Bindweeds. Flora of East Anglia, an Identification Guide. [http://webidguides.com/templates/group\\_bindweeds.html](http://webidguides.com/templates/group_bindweeds.html) accessed 7 September 2022.
- MET OFFICE (1 September 2022). Joint hottest summer on record for England. <<https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/joint-hottest-summer-on-record-for-england>> accessed 5 September 2022.
- WEST, G. (1910). A further contribution to a comparative study of the dominant phanerogamic and higher cryptogamic flora of aquatic habit in Scottish lakes. *Proc. Roy. Soc. Edinburgh* 30: 65–181 + 124 figures.