

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



**Left:** Common Field Grasshopper (*Chorthippus brunneus*), 15 September. **Right:** Giant Puffball (*Calvatia gigantea*), 19 September. New Loch record. Photos Lee Brown.

Nationally, September 2022 continued the run of warmer-than-average months and the UK as a whole has now experienced nine months in a row that have been warmer than average, the longest such run since records began in 1884. Unlike some of the summer months, though, it has been Scotland and northern England that have contributed most to the above-average temperatures, with our area being 0.5°C warmer than average whereas southern England was only average. Rainfall in many areas recovered to near-normal levels, with parts of eastern and particularly NE Scotland having well-above-average rainfall totals (in our part of Fife, 150-175% of average, mostly due to some very heavy thundery downpours). Nationally it was also somewhat duller than average, although despite the high rainfall totals Fife bucked the national trend and actually had between 110 and 130% of average sunshine (Met Office, 2022).

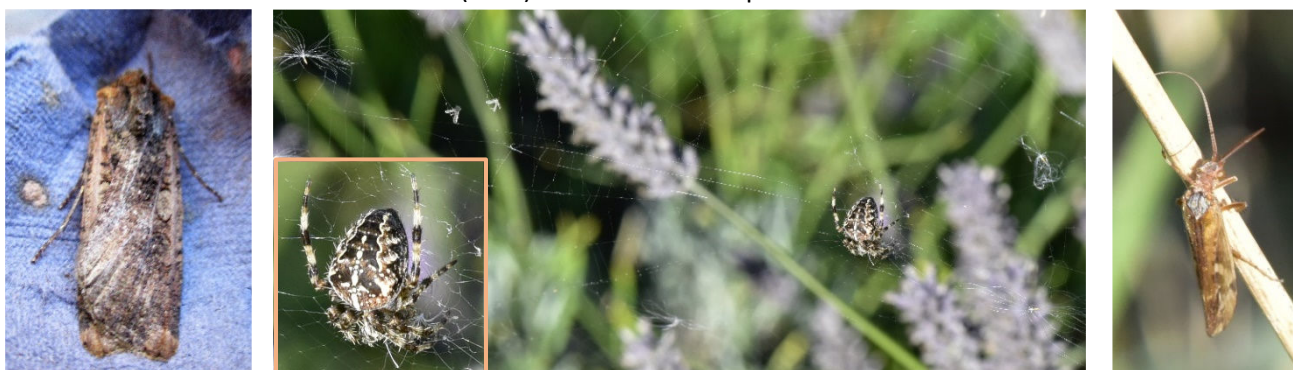
In part due to a bad cold that kept me indoors for over a week, I wasn't able to do as much walking and biodiversity recording around the Loch and village as usual during September. Largely thanks to moth trapping by George Guthrie and an updated moth list by Nigel Voaden (also made available to me by Mr Guthrie), together with seven 'armchair records' of mosses obtained from the National Biodiversity Network's database (plus one older plant record, Nordmann fir from February 2022, that for some reason has never been picked up by my spreadsheet's automatic tally), the Loch list did grow by another 34 species, from 1,420 on 31 August to **1,454** on 30 September. September's 33 new records were made up of 15 moths, 1 spider (and a possible second that needs confirmation), 3 flowering plants, 7 mosses and 7 fungi. As usual, 'new Loch record' is abbreviated NLR, especially in photo captions.

### **AROUND THE LOCH**

**Birds:** Fifty-four bird species were recorded at the Loch in September. Quite a few were only recorded by Paul Williams, to whom I am indebted for his monthly Loch and Seafield lists. Without his records, the September Loch total would have been significantly lower. Probably the highlight of the month was two, possibly even three **Spotted Flycatchers** seen by him on 13th. Paul also continued to record **Sand Martins** (1st and 10th) and **Swallows** over the Loch. **Chiffchaffs** and **Willow Warblers** both continued to linger, and on 29th I was surprised to hear one in full song (!) on the eastern shore during my last Loch walk of the month. Second-brood **Great Crested Grebes** remained and a pair of **Little Grebe (Dabchick)** was present (14th, Andy Pay; 29th, myself) with other records of single birds or calls on other dates. Four **Buzzards** were seen soaring east of Rodanbraes on 1st by Paul Williams who also saw one on 13th, as well as a **Sparrowhawk** on 13th over Mid Mire. Less common **ducks** included **Pochard** (1 on 12th seen by Paul; 3 on 22nd, Tim Nicholson) and **Wigeon** (heard uttering their distinctive call on 10th by myself but unfortunately not seen). Autumn's arrival was marked by skeins of **Pink-footed Geese** flying over (15 on 15th, Andy Pay; also 18th and 29th during two of

my visits). Andy Pay noted a **Raven** on 29th and Tim Nicholson posted a sighting of two **Jays** on 22nd on the Kinghorn District Wildlife Group (KDWG) Facebook page. The full list of birds recorded at the Loch during September 2022 is: *Barn Swallow*, *Blackbird*, *Black-headed Gull*, *Blue Tit*, *Bullfinch*, *Buzzard*, *Carrion Crow*, *Chaffinch*, *Chiffchaff* (incl. 1 SINGING on 29th), *Coal Tit*, *Common Gull*, *Common Magpie*, *Coot*, *Curlew*, *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), *Jay*, *Lesser Black-backed Gull*, *Linnet*, *Little Grebe* (Dabchick), *Long-tailed Tit*, *Mallard*, *Moorhen*, *Mute Swan*, *Pheasant*, *Pink-footed Goose*, *Pochard*, *Robin*, *Rook*, *Sand Martin*, *Skylark*, *Song Thrush*, *Sparrowhawk*, *Spotted Flycatcher*, *Starling*, *Treecreeper*, *Tree Sparrow*, *Wigeon*, *Willow Warbler*, *Wood Pigeon*, *Wren*, *Yellowhammer*.

**Mammals, amphibians and fish:** Paul Williams saw a **Grey Squirrel** (10th) and a **Stoat** at the hide (12th), while I saw a fresh **Mole**-hill near the sluice (29th). I don't have an update about last month's Pike in the Pond.



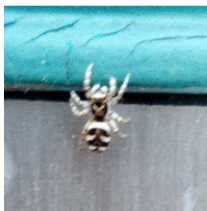
**September invertebrate records from the Loch. Left:** Pearly Underwing (*Peridroma saucia*), 15th, NLR. Photo George Guthrie. **Centre:** Furrow Spider (*Larinoides cornutus*) with part of its web across lavender bushes, 10th, NLR. Photo Robert Mill (inset, the spider enlarged). **Right:** Crescent Cinnamon Sedge caddis-fly (*Limnophilus lunatus*), 29th. Photo Robert Mill.

**Invertebrates ('minibeasts'):** Partly due to the changing season and partly because I made fewer visits, not as many invertebrate sightings were made by myself and others at the Loch in September. I myself only saw a single **butterfly** species (**Small White** on 10th). However, Paul Williams saw the same species on 13th, as well as several **Red Admirals** that day and numerous **Speckled Woods** on both 3rd and 13th. George Guthrie did **moth** trapping at Craigenalt on 15th and he is responsible for 23 of the month's 24 moth records (the other being Apple Leaf Miner, *Lyonetia clerkella*, 4th). Four of George's 23 records were NLRs: **Pearly Underwing** (*Peridroma saucia*), **Red-green Carpet** (*Chloroclysta siterata*), **Variable Smudge** (*Ypsolopha ustella*) and **Yellow Oak Button** (*Alemma loeflingiana*). Pearly Underwing is a migrant from warmer parts of Europe and the one trapped by George had a pretty worn appearance. George's email indicated that it had never previously been trapped at Craigenalt. As well as the four NLRs, three others (**Notch-wing Button**, **Canary-shouldered Thorn** and **Frosted Orange**) had apparently not been trapped at Craigenalt since the late Gerald Lincoln trapped them there in 2018. Besides these, George sent me an updated version of Nigel Voaden's list of moth species recorded at the Loch. There were eleven species on this list that were absent from the previous version received by me last year and these were duly added to my Loch spreadsheet. They were **Common Oak Purple** (*Dyseriocrania subpurpurella*), **Common Thorn Pigmy** (*Stigmella crataegella*), **Common Rowan Pigmy** (*Stigmella nylandriella*), **Least Thorn Pigmy** (*Stigmella perpygmaeella*), **White-banded Pigmy** (*Ectoedemia albifasciella*), **Rowan Slender** (*Parornix scoticella*), **Rowan Midget** (*Phyllonorycter sorbi*), **Sallow Midget** (*Phyllonorycter hilarella*), **Common Alder Midget** (*Phyllonorycter rajella*), **Beech Midget** (*Phyllonorycter maestingella*) – whose presence at the Loch I have suspected myself because of leaf mines on oak leaves I have seen that resembled its larval mines – and **Double Lobed** (*Lateroligia ophiogramma*).

One, or possibly two, **caddis-fly** species were seen by me on 30th on the east side of the Loch: one on a rush stem at the dipping pond was a **Crescent Cinnamon Sedge** which I also found last year, while the other (on a nettle leaf behind the Nest Café) may have been the same species although its markings looked slightly different. **Common Darter** was the only **dragonfly** spotted (Paul Williams, 13th; photo, KDWG). **Bee and wasp** diversity was less than in August, with only **Buff-tailed Bumblebee**, **Common Carder Bee**, **Honey Bee** and



**Common Wasp** being seen. No **bugs** were found at all and the only **beetle** discovered was a **7-spot Ladybird** on 10th. Only two **hoverfly** species were seen: **Banded Hoverfly** (most likely *Syrphus ribesii*) on 4th and 10th, and **Tapered Dronefly** (*Eristalis pertinax*) on 10th. Two more individuals of *Tachina fera* were seen at different parts of the Loch on 10th and two different **greenbottle** species were recorded: *Lucilia sericata* on both 2nd and 10th and *L. caesar* only on 10th. The mines of five different **leaf-mining flies** were also found, all of them having been recorded on previous occasions. Lee Brown of TEC found a **Common Field Grasshopper** (*Chorthippus brunneus*) on 15th, the Loch's second record after mine of last year. Lee also photographed a



Zebra Spider (*Salticus* sp., probably *S. scenicus*), 19th. Photo Lee Brown.

**Zebra Spider** species on a container on 19th. Because of the amount of white *apparently* present on the body parts in the first photo sent to me, I wondered if it might be *Salticus cingulatus* (and thus a possible NLR) rather than the commoner *Salticus scenicus* which is already on the Loch list. I sent Lee's unfortunately rather blurred photo to Katty Baird, a spider expert, for possible verification but her decision was inconclusive. Lee did send a slightly better photo (reproduced here) and from that my own feeling is that it is more likely to have been the commoner species, *Salticus scenicus*. A **Furrow Spider** (*Larinoides cornutus*) was also found making a web between lavender plants along the edge of the TEC car park on 10th, my only personal contribution to the month's invertebrate NLRs which were dominated by moths as noted above. Apart from these two spiders, the only other arachnid (and invertebrate) records were repeat findings of the galls of the mites *Cecidophyes rouhollahi* on Goosegrass and *Eriophyes laevis* on Alder.



**September 2022 Loch plant records.** **A**, Common Hemp-nettle (*Galeopsis tetrahit*), 2nd, NLR. **B**, presumed Common Comfrey (*Symphytum officinale*), 10th, NLR. **C**, Common Toadflax (*Linaria vulgaris*), 29th [first seen on 18th], NLR. **D**, Large Bindweed (*Calystegia silvatica*), 10th. Photos Robert Mill.

**Flowering plants and ferns:** The only **pteridophytes** (ferns and their allies) found in September were **Wall-rue** and **Water Horsetail**. I noted 112 wild **flowering plant** species still in flower during September, a drop of 33 from August's 145. Besides these, there were over 30 different cultivated species in bloom in the areas I was able to cover during the month. Even this late in the flowering season, I was still able to add three new Loch records. The first was **Common Hemp-nettle** (*Galeopsis tetrahit*) on disturbed ground in the nursery area of the Loch's east bank (2nd). This is another arable weed belonging to the suite of species that has appeared along the Burnside Path since it was widened earlier in the year. Several others of this group of species have also turned up in the area of the Loch nearest to the Burnside Path; this is another example. The second was what appears to be genuine **Common Comfrey** (*Symphytum officinale*), found along the track from the hen run up to the allotments

on 10th. Most comfrey plants found at the Loch have turned out to be the hybrid *Symphytum* × *uplandicum* (**Russian Comfrey**), which was also found by a different part of the same track. The last new record of the month was possibly the most surprising: several plants of **Common Toadflax** (*Linaria vulgaris*) between the TEC access road and the adjacent larch plantation. These were first spotted by me on 18th but I did not have my camera with me that day and because of illness I was unable to return to the spot until 29th when, fortunately, it was still in flower. Finally, I carefully examined all the **bindweed** (*Calystegia*) plants around the eastern and northern sides of the Loch, in the areas from the sluice to the jetty and up the track to the allotments. All of them had previously been recorded as the native species Hedge Bindweed (*Calystegia sepium*) but, on account of their inflated 'calyces' (with overlapping epicalyx bracts), they all turned out to be the introduced species **Large Bindweed** (*Calystegia silvatica*) that is now widespread in towns and villages across the UK.

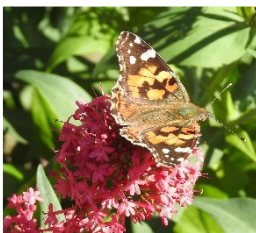
## Cryptogams



**Fungal NLRs, September 2022.** A, *Golovinomyces cucurbitacearum* on Pumpkin leaf. B, *Podosphaera epilobii* on Great Willowherb seed-pods. C, *Ramularia gei* on Water Avens leaves. D, *Puccinia porri* (Leek Rust) on Shallot. Photos Robert Mill, all 2nd.

Again in part due to fewer dedicated recording visits, I paid less attention to cryptogams than last month. Twenty-seven **fungi** species were recorded in September, all but one of them by myself. The exception was also one of the month's NLRs: a very large **Giant Puffball (*Calvatia gigantea*)** found by Lee Brown of TEC on 19th that was about 12 cm in diameter. **Brown Birch Bolete (*Leccinum scabrum*)** was found by myself again on 2nd, while on 10th I also found **Field Mushrooms (*Agaricus campestris*)** on the bottom of the grassy bank opposite the TEC 'sanctuary' area (the same spot as where I found it last year). I found 16 different powdery mildews, of which four (all found on 2nd) were NLRs: ***Erysiphe knautiae*** on Field Scabious (*Knautia arvensis*), ***Golovinomyces cucurbitacearum*** on Pumpkin leaves in the nursery area, ***Golovinomyces montagnei*** on Knapweed leaves and ***Podosphaera epilobii*** on Great Willowherb (*Epilobium hirsutum*) leaves and seed-pods near the sluice. Also on 2nd, ***Neoerysiphe galeopsidis*** was found on the leaves of a bronze-leaved Bugle (*Ajuga*) cultivar, while one of last month's NLRs, ***Erysiphe cruciferarum*** was found on *Brassica* leaves. Both of these were hosts on which I had not previously found the respective mildew. The month's other fungal NLRs, also both made on 2nd, were ***Ramularia gei*** on Water Avens leaves and **Leek Rust (*Puccinia porri*)** on Shallot. No **terrestrial algae** or **lichens** were noted during September but **Anabaena**-type cyanobacteria continued to form a green scum on parts of the Loch. However, while extracting records from the Kinghorn area from the National Biodiversity Network's Atlas database while stuck indoors suffering from my cold, I did unearth seven 'new' **bryophyte** records for the Loch made by my former Royal Botanic Garden Edinburgh colleague David Chamberlain and others during April 2011. Five of them (**Flat Neckera *Neckera complanata***, **Rock Bristle-moss *Orthotrichum rupestre***, **Many-fruited Thyme-moss *Plagomnium affine***, **Bristly Fringe-moss *Racomitrium heterostichum*** and **Stirton's Yoke-moss *Zygodon stirtonii***) were mosses while the other two, **Micheli's Least Pouncewort (*Lejeunea cavifolia*)** and **Cliff Scalewort (*Porella cordaeana*)** were liverworts.

**VILLAGE, BEACHES AND COASTAL PATH** Several **Bottlenose Dolphins** were once again off Kinghorn on 16 September at least; Bruce Meldrum posted more stunning photographs of them on the KDWG Facebook page and one is now its 'cover photo'. Paul Williams' Seafield bird list for September totalled 44 species. Nearly all were commonly recorded species with no large duck flocks as were seen by him in August. Waders seen by him included **Bar-tailed Godwit**, single **Dunlins** on 1st and 10th, two **Sanderling** on 1st and a single **Knot** on 13th. He also noted a **Kestrel** on 8th and a juvenile **Kingfisher** on 1st; a photo of the Kingfisher was posted on the KDWG Facebook page. Paul also saw four **Stonechats** and one, possibly two, **Whinchats** in the field (part of Grangehill Farm?) across the road from the Alcan site on 13th. Again, photos of them are on the KDWG Facebook page. Paul also saw a **Painted Lady** butterfly and a **Red Admiral** in a village garden (13th).



Painted Lady (*Vanessa cardui*) on Red Valerian in a Kinghorn village garden, 13th. Photo Paul Williams.

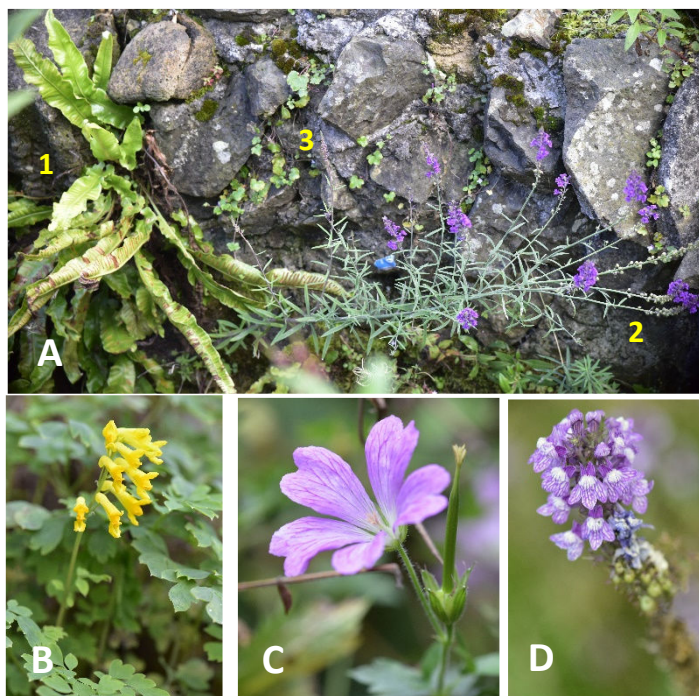
Graham Sparshott conducted several bird migration watches, from East Braes on 2nd, 3rd, 10th, 11th and 26th and from Pettycur Harbour on 4th, 9th, 17th and 30th. All his records are available at <https://www.trektellen.org>. Probably the most notable of all his

September sightings was a **Leach's Petrel (*Hydrobates leucorhous*)** off Pettycur on 9th; a **Little Tern** was present there the same day with **Common** and **Arctic Terns**. Major migration movements included 440 **Little Gulls** moving SW off Pettycur on 30th (possibly the second-highest Kinghorn total for that species), 378



**Meadow Pipits** going NE over East Braes on 10th and 147 moving in the opposite direction there the following day; and 82 **Teal** flying SW over East Braes on 11th.

I only managed two short coastal excursions during September, to Kinghorn beach on 5th and Seafield on 13th. Little of note was found on either occasion although on the latter trip much seaweed had been blown onshore by the gale of the previous day.



**Village plants, September 2022.** A, Hart's-tongue Fern (*Phyllitis scolopendrium*: 1), typical Purple Toadflax (*Linaria purpurea*: 2) and Ivy-leaved Toadflax (*Cymbalaria muralis*: 3) all together on a wall by the Mill Burn. B, Yellow Corydalis (*Pseudofumaria lutea*). C, French Cranesbill (*Geranium endressii*). D, dwarf lilac form of Purple Toadflax (*Linaria purpurea*). All photos Robert Mill on 27th.

While recovering from my cold, I undertook two explorations of Kinghorn's narrow alleyways that link different parts of the old part of the village. On 26th I focused my attention on Castle Wynd and found **French Cranesbill** (*Geranium endressii*) just north of the cliff face, several **Fuchsia magellanica** bushes including one growing out of the cliff face, and a **Snowberry** (*Symphoricarpos rivularis*) bush at the south end of the cliff face. At the entrance to a small yard, there were several plants of two curious dwarf forms of what could only be **Purple Toadflax** (*Linaria repens*), both only about a foot tall with very short flower-spikes, some the typical deep purple, others lilac. They were presumably garden cultivars but growing in a 'wild' situation. On 27th, as well as revisiting Castle Wynd with my camera in much better weather than the previous day, I explored a very narrow apparently dead-end alley running alongside a non-culverted stretch of the Mill Burn. This had quite a variety of weedy plants such as **Sun Spurge** (*Euphorbia helioscopia*), as well as a plant of **Fox-and-Cubs** (**Orange Hawkweed**: *Pilosella aurantiaca*) on the wall overlooking the burn and the old Plash Mill building. There also seemed to be much of

botanical interest at stream-level (several metres below the alley) but this will have to be studied next year when it is in flower. More **Fox-and-Cubs** was found on Castle Wynd where I had not noticed it the previous day, and **Red Valerian** (*Centranthus ruber*) was found on a wall along Castlehill Walk.

My final outing of the month was to the Kinghorn harbour area and Doo Dell Paths network on 30th. Perhaps the most unexpected plant find was a small **Rosemary** (*Rosmarinus officinalis*) bush growing out of the harbour wall at least 2 metres above ground level. Quite how it got there is a mystery to me; it is unlikely to have been deliberately planted there, although there is another, obviously planted, bigger rosemary bush growing in a tub beside a bench directly below from which the one high up on the wall has presumably been dispersed as a seed. However, rosemary seeds are gravity dispersed and also, once wetted or moistened, they 'glue' themselves to the soil (Garcia-Fayos et al., 2017), thereby making dispersal by ants, that otherwise might have transported a seed from the ground up the 2 metres of wall, much less likely. **Dwarf Mallow** (*Malva neglecta*) was flowering at the foot of the steps up from the lifeboat station and **Black Nightshade** (*Solanum nigrum*) growing and flowering well at the top of the flights of steps. Close by was yet another flowering plant of **Fox-and-Cubs**, while on the cliff-top near the Harbour View, **Musk Mallow** (*Malva moschata*) was still in bloom.

## References

- GARCIA-FAYOS, P., CASTELLANOS, M. C. & SEGARRA-MORAGUES, J. G. (2017). Seed germination and seedling allogamy in *Rosmarinus officinalis*: the costs of inbreeding. *Plant Biology* 20(3): 627-635.
- MET OFFICE (3 October 2022). September continues run of warm months. <<https://blog.metoffice.gov.uk/2022/10/03/september-continues-run-of-warm-months/>> accessed 3 October 2022.