

The discovery of *Ophioglossum azoricum* Small Adder's-tongue in Kincardineshire

David Elston, for Scottish Botanists' Conference 2023

1. The site

St Cyrus National Nature Reserve has been known since Victorian times as a botanical hotspot with fine displays of many species such as *Campanula glomerata*



(**Clustered Bellflower**). The volcanic cliffs create a sheltered microclimate which provides a home to many species of plants at, or close to, their northern limit in Great Britain. One of these is *Silene nutans* (**Nottingham Catchfly**) which, in Scotland, only occurs here and nearby in Angus.

2. The microsite

There are many different habitats at St Cyrus NNR, including large areas with a sandy substrate transitioning from mobile dunes to dune heath and stabilised grassland. However, there is very little by way of dune slacks: the only substantial area was unknown to the county recorders until September 2021 due to inclusion within an area protected for breeding birds from April to August. Its discovery was memorable as it hosts a large population of *Gentianella campestris* (**Field Gentian**).



3. The day

As county recorder, I was asked to lead a Wildflower Society walk, which took place on 5 July 2023. The weather was good, the participants a pleasure to show round, and in amongst nice finds was confirmation of the presence of *Gallium boreale* (**Northern Bedstraw**) and discovery of a large population of *Phelum arenarium* (**Sand Cat's-tail**).

However, since the microsite was out of bounds and there was plenty to see elsewhere, it was not on the itinerary.



4. A chance discovery

After the Wildflower Society group departed, I returned to the microsite to continue searching for *Gentianella campestris* which I found hard to accept failing to find with NatureScot staff on a recce the previous week. By a path leading to the slack I found *Carex hirta* (**Hairy Sedge**), previously recorded elsewhere on site but not by me. Believing this find to be of interest to the staff I went to find a branch to mark the spot. It was only when I had my nose to the ground inserting the branch in the damp, sandy turf that I noticed the small fern-ally growing below the graminoid canopy.



5. Identification

The only previous records for *Ophioglossum* in Kincardineshire are for *O. vulgatum* (**Adder's-tongue**) prior to 1860, so this was a good find. But was it this species or was it *O. azoricum* (**Small Adder's-tongue**)?

On site, I counted the numbers of sporangial slits which ranged from 14 to 18 which according to Stace 4 is more consistent with *O. vulgatum* than *O. azoricum*. However, given the height of surrounding vegetation the plants were small with many fronds in pairs which are *O. azoricum* traits.

So off the above photo went to referee Fred Rumsey who said he had seen similar-looking plants in the New Forest and they were definitely *O. azoricum*.

In detail, his assessment was based on: "the disposition and shape of the sterile blades, the fact that some are paired, the number of sporangial pairs and the fact that the fertile shoots far exceed the length of the sterile blades".

6. Publicity

With help from James Harding-Morris and Louise Marsh, a press release on this discovery was written and articles based on it appeared in The Scotsman and Yahoo!News on 23 August 2023. Many equally or more newsworthy records of wild plants are made each year, and BSBI staff are keen to produce further press releases along similar lines.

Contact: elstoncox@yahoo.co.uk