

Life at Golden Water

Seven stalwarts turned up on Saturday, June 23, for a Fair Isle Wildlife Club exploration in and around Golden Water, amongst them Leona from the Czech Republic, our first international participant. We began by pond dipping at the southern end of the lochan. Tom and Daniel had come well equipped for the shin-deep water and were quickly landing at least two species of water boatman, including some sizable examples of the Fair Isle speciality, *Corixa iberica*. The name translates roughly as Iberian water bug. Our Iberian friend was discovered new to science as recently as 1986 and is still only known from a scatter of sites from north Portugal to Shetland. It is thought to be a relict species from the last ice age. Unable to compete with a similar widespread British and European species it has sought refuge in pools exposed to Atlantic gales, hence its narrow Atlantic fringe distribution. The dominant species appears not to like ponds sprayed with salt every winter. Our species does not seem to mind at all and is found in every permanent pool on the isle. In addition, it has few predators on the isle (there are no freshwater fish apart from visiting eels). Fair Isle must be an important haven for this rarity.

While attention was focused at one end, Lowri slipped away with his father to make the most unexpected find of the day, an immature *Rana temporaria*. I use this term because I do not know whether to describe the beastie as a tadpole or a frog. It was to all intents and purposes a tiny frog, but still had the long tail of the tadpole. Amy and Alice joined us just then and it was not long before everyone was spotting “baby frogs” hopping over the mud or half-concealed in the floating mat of bog pondweed and water starworts near the shore. At least six were caught and several more seen. I have no previous records of frogs at Golden Water. Let’s hope they will not be a problem for the rare water bug.

I was hoping that the pond dipping would produce some adult water beetles but we did not even see any. The boys did catch some large beetle larvae, though. The water boatmen were also immature so a further visit in late summer is needed. Any lack of adult insects was more than compensated by the capture of a number of copepods. The commonest species appeared to be a dull, pale brown and there was a smaller, narrower “Cyclops” type which was bright red.

We transferred our attentions next to Easter Lother Water. The lochan appears devoid of plant growth. However, a sweep through the water resulted in green nets and green water in the holding tray. The water was full of micro algae, individual plants too tiny for the eye to see. The nets also produced water boatmen, though not as many as in Golden Water; and more copepods. If copepods were common in Golden Water they were super abundant in Easter Lother. Based on the samples we took, I estimate that there were several thousand to the litre. The red Cyclops was again present and the other species as well it seemed, though appearing a little yellower in tone.

For those attending there were several undeclared bonuses. Firstly, the surprise discovery, for some, of a cannon and cannon balls from the Gran Grifón, a Spanish Armada ship which sank offshore; secondly, a fascinating, expert interpretation by Pat of the archaeological significance of the area; and finally, a trip to North Light to see the frog orchid colony, some plants in full flower, others still to come. They should be flowering until at least mid July.

We released most of what we found back into their respective Waters. But I did carry some copepods home to look at them more closely under the microscope. The dull brown one from Golden Water turned out to be mainly transparent, the colour coming from the “innards” of the beastie. With its long, saw-toothed tail and other features I was able to identify it as *Daphnia hyalina*. The narrower red beastie had very long antennae and was *Diaptomus castor*. Much to my surprise there was a microscopic other copepod scurrying about. It eventually settled long enough for me to track it down to *Chydorus ovalis*.

Moving next to the Easter Lother Water sample, I quickly confirmed that the red one there was also *Diaptomus castor*. I then turned my attention to the Daphnia and realized that it was different in more than just colour tone. It had a short tail, or virtually none at all, and was larger. It was *Daphnia magna*. This was extremely interesting because my book states that it is “rare, yellowish to reddish, found in warmer waters”. Easter Lother Water is very shallow, much more so than Golden Water. I would expect Easter Lother therefore to warm up quickly and reach higher temperatures during the summer months. *Daphnia hyalina* is clearly not as “choosy” as it was there too but in much smaller numbers, about 1 for every 25 *magna*. Habitats may look similar but each has its own subtle differences. That’s one of the qualities of the Isle.

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