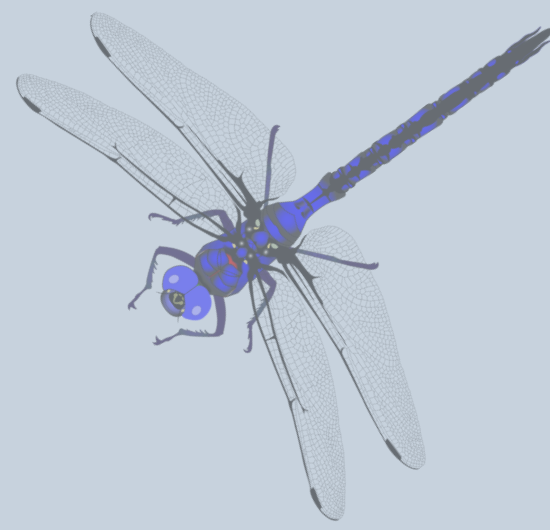


CREATING POOLS FOR ODONATA: AZURE HAWKER ON CORROUR ESTATE



The **Azure hawker** *Aeshna caerulea* is a rare medium-sized dragonfly, males being bright blue, with females having brown or blue colour forms with pale yellow spots. They are concentrated in peatland habitats in north-west Scotland, breeding in small bog pools with floating mats of sphagnum with a peat detritus bottom. The larvae can take 3-4 years to develop in these pools.

The key threats facing this species are plantation forestry, drainage, water pollution, wind farms, and climate change with many pools are drying out in the spring and summer. It is classified as *Near Threatened* on the IUCN European Red List and *Vulnerable* in Scotland.



Male Azure hawker



Drying out Azure hawker pool



Corrour is a remote 23,000 hectare estate on the edge of Rannoch Moor in the central highlands of Scotland. Over 30% of the estate is blanket bog, most in poor condition, and restoration work is progressing at pace. The area was identified as one of the key sites for Azure hawker in Scotland in 2019.

Surveys in 2019 found over 139 Azure hawker larvae in 9 pools near the Corrour train station. After a very dry spring/summer in 2021 only 3 larvae were found in the same pools, many of which had dried out. A trial was proposed by the British Dragonfly Society to create deeper pools. Working with contractors GS Campbell, and the estate, 12 new pools were created in early 2023.



Colonisation of these new pools happened within months with large Azure hawker larvae found in 6 pools by May 2023. The larvae must have travelled over-ground for at least 20-30 metres from existing pools to reach the new pools, a **previously unknown ability**.

Design guide for new pools



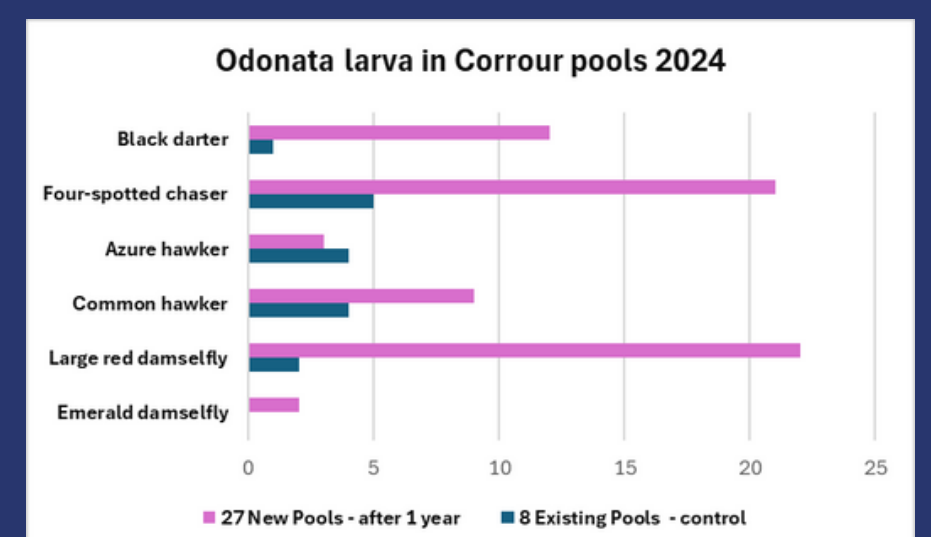
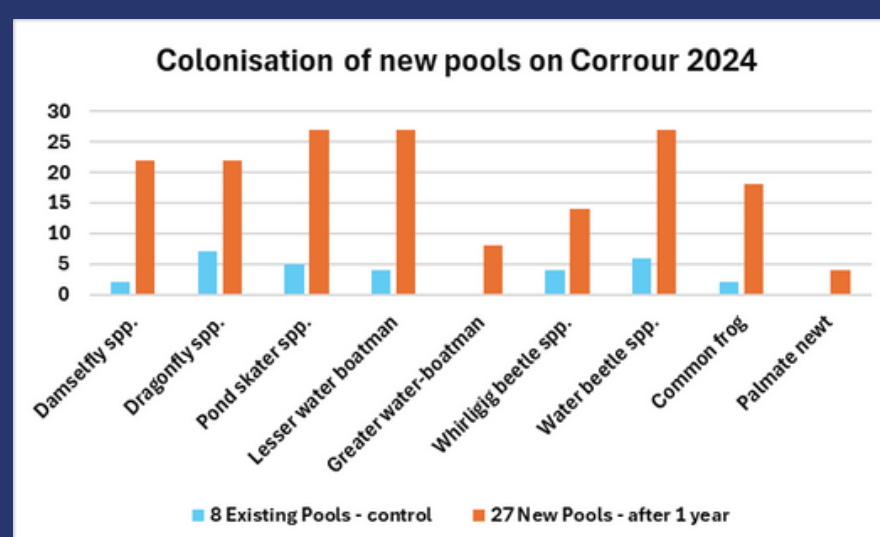
Azure hawker larva (left)
Common hawker (right) note differences in labial mask

- Variety of shapes and sizes, generally 5 to 30 metres square
- Long, sinuous pools are good
- At least 70cm -100cm deep
- Steep sided, +30cm deep edges
- Build only in areas of deep peat, greater than 1 metre
- Cluster 3 or 4 pools ten metres apart
- Seed with *Sphagnum cuspidatum*, tucking carefully into sheltered edges
- Align N to S to reduce wave action from wind
- Take advantage of topography, and areas below wet flushes



Pool Monitoring 2024

Two areas of peatland restoration were surveyed in 2024 to gather data on the colonisation of new pools. 27 newly created pools, all under 1 year old, and 8 existing, control, pools were visited twice in late Spring/Summer. All areas of the pool were sampled using a standard pond net or colander. Freshwater invertebrates were identified down to species level for all the Odonata and some of the beetle fauna. Animals were returned, unharmed to the pools. Amphibians, if present were also recorded as well as colonisation by aquatic plants, size of pools, water pH, and water depth.



Project partners Corrour Estate, the British Dragonfly Society and Corcoran Consulting. Thanks to Sarah Watts, Pat Batty and Daniele Muir. For further information please contact Stephen Corcoran at stephenjcorcoran@hotmail.com, 07957 696971. All photos by Stephen Corcoran

