# The Alice McCosh Trust

## Latest news and updates

SC035938

## **Back to normal – fingers crossed!**

After a bumpy couple of years, we have our fingers crossed that we are now back on track.

The award winners in 2019 (International Otter Survival Fund (IOSF) and Buffy Smith) both had to postpone and redesign their projects. However, fortunately they have now managed to get into the field and complete their fieldwork.

Their full reports can be found <u>here</u> on the AMT website and summaries are provided below.

Due to difficulties with international travel in 2021 the

Trustees decided that they would only consider applications for work undertaken in the country in which the applicant was resident.

While this limited applications a little we are delighted to have been able to award a grant to Betsy Brown to undertake field work into urban wilding initiatives on butterfly communities in Leicestershire.

So, watch this space as she hopes to undertake the field work in the spring of 2023....

## The poop of the day...

After endless lock downs and travel restrictions we are delighted to report the IOSF were finally able to launch their student research grant over the summer.

The award allowed two students, *Ron Pasieczna* from Sheffield University and *Rachel Wick* from Brighton University to spend time on the Isle of Barra. The aim was to learn the various techniques involved in surveying otters, including post-survey work such as diet analysis.

They covered approximately 25km of coastline (about 30% of the Island's coastline) and 5km of inland freshwater lochs. This included recording over 550 data points and over 440 spraints (otter poo ) for further analysis.

We hope Ron and Rachel have been inspired and wish them luck in their ongoing studies.



Ron and Rachel examining a sprainting site © Andrew Rothwell

### Hang the traps 1.5m off the ground Flies are trapped in the outer tube Conical inner tube encourages flies upwards Bait is suspended below the trap and covered with a mesh bag to prevent the flies from accessing it. No. of DNA sequences in sample (log10) blowfly Herbivore Omni Species Diet

### iDNA aka "invertebrate-derived DNA"

This is an emerging technique where invertebrates are caught, and their stomach contents analysed to reveal the DNA of species that they have fed on.

Buffy Smith intended to spend time in Malawi collecting the data and further developing iDNA techniques and to open-source the developed protocols.

However, due to covid, she was unable to travel so re-thought her options and decided to utilise some of the zoos in the UK to conduct a similar study to the one proposed in Malawi.

Using various traps Buffy was able to collect both mosquitoes and blowflies at five different zoos in the UK.

DNA was then extracted from the mosquitoes and blow flies and samples sent to Source Bioscience for sequencing.

She found that mosquitoes have a less specific diet compared to blowflies and blowflies were easier to catch and therefore provided more data.

The results suggested that with increased sampling effort mosquitoes would be a more effective invertebrate for sampling mammalian communities in the field.

This work has led to further funding being granted and the research continuing.

#### With Thanks

This year we are extremely grateful to have been kindly supported by some very generous donors - thank you to you - you know who you are

#### It is with great sadness

that we inform you that Alice's mum, Margaret Carswell, died on the 7<sup>th</sup> of April this year. Without a doubt she had a huge influence on Alice, contributing to Alice's fascination with the natural world and her endless enthusiasm and spirit of adventure. Margaret was also a great supporter of the Trust.

#### 2023

All details and how to apply for awards can be found <u>here</u> and as the world has opened up again there are currently no travel restrictions.