



ZOobytes

Winter 2023

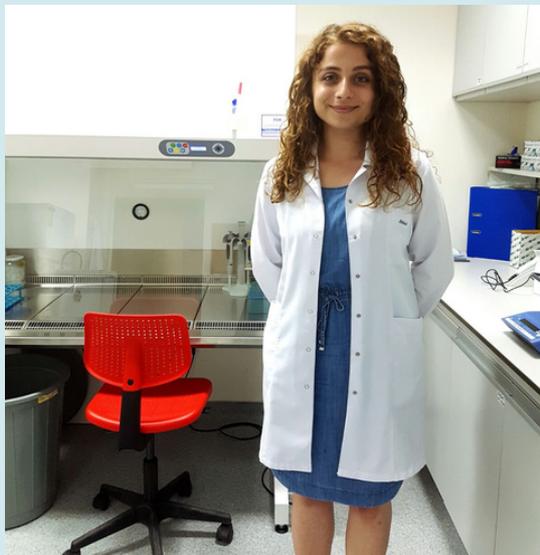


Newsletter of the Department of Zoology
Trinity College Dublin

NEW PEOPLE

Grace Aspell Research Assistant O'Connor Group

Hi, I'm Grace, and I've recently begun my role as a Research Assistant in the O'Connor lab on the Beyond Biofuel project. In 2021, I graduated from Zoology at Trinity under the supervision of Dr. Nessa O'Connor, where I investigated productivity of macroalgae in the Irish Sea. I completed my M.Sc. degree in Global Change: Ecosystem Science and Policy at UCD in 2022, where my thesis focused on implementing blue carbon ecosystem policies in Ireland and the UK. I am highly passionate about marine ecology and how such research can inform policymaking.



Ebru Talak Bastürkmen Research Assistant Murphy Group

Hello everyone, I'm Ebru, from Turkey. I have just joined the Zoology Department as a Research Assistant in the Developmental Biology group working on the mechanical regulation of tendon development. I have a BSc. in Molecular Biology and Genetics and an MSc. in Biomedical Engineering from Ankara University. My previous lab studies were related to osteochondral tissue engineering, adipose-derived stem cells and 3D Bioprinting. I look forward to getting to know you better.

ZOOLOGY IN THE NEWS

Take a Dive with Basking Sharks: Conserving Ireland's Giant Prehistoric Fish

Haley Dolton was featured in an article for the University Times, where she discussed basking shark ecology and conservation. Here's a link for the [full article](#).

ZOobytes



@tcdzoology

PROJECT FUNDING AND UPDATES

4th Ecology & Evolution Ireland Conference

Trinity hosted the very successful 4th Ecology & Evolution Ireland conference on 5-6th January, with a strong contingent of zoology and botany organisers and volunteers coordinated by **Prof Yvonne Buckley**. Plenary talks were given by world-class speakers Prof Jens Christian-Svenning (Aarhus University, Denmark), Prof Jenny McElwain (Trinity), Prof Maria McNamara (UCC) and Prof Owen Petchey (University of Zurich, Switzerland). Prof Jane Stout opened the conference with a call to arms for the importance of ecology for tackling the big challenges of climate change and biodiversity loss and she also emphasised the importance and desirability of ecological skills in the modern work-force. The conference finished with a public event on the Ecology of Food which was hosted by Ellie O'Byrne (Green Bites podcast).

The Irish Ecological Association announced its awards, with **Asst Prof Nick Payne** winning the mid-career excellence in Ecology Award, **Lucy Harding** winning the Early Career award and **Hayley Dolton** scooping the Gradam Danú postgraduate award, a great haul for the Payne lab! **Whitney Parker** (Luijckx lab) won the award for best poster. In addition, Prof Anne Magurran (St Andrews University and formerly our Zoology External Examiner) won the IEA Lifetime Achievement Award.



Prof Jens Christian-Svenning in the Museum Building



Anne receiving her award from IEA President Prof Paul Giller



Panel at the Ecology of Food event



Green Labs Update

Dr. Nessa O'Connor's marine ecology lab have recently become Green Lab certified. The lab achieved 97% which puts them in the Green Certification level. This is the highest certification level in My Green Lab's programme, and the lab group are extremely proud of their efforts. The O'Connor lab were also given feedback to improve their sustainability initiatives and to ensure they remain at Green Certification level when they are reassessed in two years. Furthermore, funding has been secured to implement Green Labs across the Zoology Discipline with the support of our Head of Discipline, **Prof. Paula Murphy**. Some sustainability initiatives are already in progress, such as waste reduction efforts and the freezer challenge. **Emma King** will coordinate the certification process across the zoology labs over the coming months. The O'Connor lab look forward to continuing initiatives to enhance lab sustainability and are excited to see other Zoology labs get involved.

Zoological Museum News

Andrew Bacon Memorial Fund

Three undergraduate students have been granted financial assistance through the Andrew Bacon Memorial Fund to support their studies in Zoology. The award is presented in memory of the late Andrew Bacon who sadly passed away in 2020, a year after he graduated in Zoology.

Museum Research Methods Seminar

In early November, The Zoological Museum in conjunction with the Department of History of Art and Architecture, hosted a research methods seminar for MPhil students where the focus was on the history and use of collections from an arts and humanities perspective.

Great Auk Project

Dr Julian Hume from the British Museum (Tring) visited the museum recently as part of a morphometric and illustrative study on the winter plumage of juvenile great auk skins. Julian specialises in extinct island avifaunas and is comparing great auk specimens with equivalent aged and winter plumages in the razorbill.

On-Line Exhibition

Reminder of the online exhibition: 'Reading the Book of Nature', a collaborative project between the Zoological Museum and the Edward Worth Library, Dr Stevens' Hospital, Dublin.
<https://aldrovandi.edwardworthlibrary.ie/>

VOLUNTEERS NEEDED!

Clinton Haarlem is looking for volunteers willing to participate in a visual perception speed experiment. The experiment involves observing an LED-light that flickers at different frequencies, in order to determine an individual's threshold for flicker perception. The task only takes about 5 minutes per measurement, and Clinton can drop by your office or place of work to run the task. He would need to take 3 quick measurements, on 3 different days. If you are interested in participating, please email haarlemc@tcd.ie for more details. Any help is appreciated!



Sharks International Conference

Haley Dolton presented in person at Sharks International where she won 'best student talk' for her presentation, 'are planktivorous basking sharks regionally endothermic?'. Congrats Haley!



Orthopaedic Research Society Annual Meeting

Dr **Rebecca Rolfe**, **Grace Morris** and **Paula Murphy** attended the Orthopaedic Research Society annual meeting in Dallas Texas February 9th- 14th. This first fully in person meeting of the society since COVID had over 2000 attendees made up of biologists, engineers and clinicians working toward inter-disciplinary solutions to unmet clinical needs in orthopaedics. The Trinity delegates met with their collaborators on the SFI-NSF funded US-Ireland Partnership Grant focussed on tendon reconstruction.



PUBLICATIONS

Dolton, H.R., Jackson, A.L., Drumm, A., Harding, L., Ó Maoiléidigh, N., Maxwell, H., O'Neill, R., Houghton, J.D. and Payne, N.L. (2022). Short-term behavioural responses of Atlantic bluefin tuna to catch-and-release fishing. *Conservation Physiology*, 10(1). <https://doi.org/10.1093/conphys/coac060>

Holland, C., Sepidarkish, M., Deslyper, G., Abdollahi, A., Valizadeh, S., Mollalo, A., Mahjour, S., Ghodsian, S., Ardekani, A., Behniafar, H. and Gasser, R.B. (2022). Global prevalence of *Ascaris* infection in humans (2010–2021): a systematic review and meta-analysis. *Infectious Diseases of Poverty*, 11(1), p.113. <https://doi.org/10.1186/s40249-022-01038-z>

Kelly, D.J., Marples, N.M., Byrne, R.L., Fogarty, U., Kenny, K., Cameron, H., Griffin, D. and Holland, C.V. (2022). An investigation of *Mycobacterium bovis* and helminth coinfection in the European badger *Meles meles*. *International Journal for Parasitology: Parasites and Wildlife*, 19, pp.311-316. <https://doi.org/10.1016/j.ijppaw.2022.11.001>

Lynch, K.E., Penk, M.R., Perrin, P.M. and Piggott, J.J. (2022). Cattle Grazing of a Celtic Sea Saltmarsh Affects Invertebrate Community Composition and Biomass, but not Diversity. *Wetlands*, 42(8), p.125. <https://doi.org/10.1007/s13157-022-01643-6>

Sherlock, C., Holland, C.V. and Keegan, J.D. (2023). Caring for Canines: A Survey of Dog Ownership and Parasite Control Practices in Ireland. *Veterinary Sciences*, 10(2), p.90. <https://doi.org/10.3390/vetsci10020090>

WHERE ARE THEY NOW?

A Day in the Life of a Biodiversity Monitoring Ranger

Written by Joe Bliss, 2014 Trinity Zoology graduate

Starting off a career in conservation is not easy. A degree alone is often not enough to walk into paid work in the job you want. Gaining work experience is key to showing that you are keen and capable and it can also give insight into what opportunities are out there. I began, as many conservation workers do, with volunteer work. I led students on forestry surveys with Operation Wallacea in Indonesia, and was a volunteer research assistant with the University of Groningen studying a population of pied flycatchers. Connections and experience from these led to paid research assistant work and eventually to the job I have today, working as a Biodiversity Monitoring Ranger for the Department of Conservation (DOC) in New Zealand.

New Zealand was the last major landmass to be settled by humans. It has been isolated since the breakup of Gondawana in the Late Cretaceous period. The flora and fauna have followed their own evolutionary path with the notable absence of land mammals. This has resulted in a unique biota and a high degree of endemism. The recent arrival of humans and the introduction of mammalian browsers and predators has thrown this previously untouched ecosystem far out of equilibrium. Now without intervention we would leave countless species sliding to extinction.

One third of New Zealand is public conservation land which is managed by DOC. A national network of over 1000 monitoring plots were set up by DOC to monitor the flora and fauna, assess what condition it is in, and track how it changes. It takes a five year period to visit them all, then the cycle starts all over again and the sites are revisited.

Here is an example of a period of my work during the 6 month field season when we are out visiting sites to gather the field data: It's February, mid-summer in New Zealand, the snow has melted off the mountains and it's prime time to visit the plots in the alpine zone. I turn up to work at the Invercargill DOC office, it's the first day of a 10 day working stint. Our supervisor has divided us up into field teams and my team will be attempting to visit three plots in Fiordland. We are going to be camping in the field for six days. Today and tomorrow we are busy preparing our camping gear and field equipment, the team leader is checking the weather forecast, contacting the helicopter for transport, and finalising plans. We take off from the hangar and fly across lake Te Anau into the remote and mountainous Fiordland National Park. I am in the front, GPS in hand guiding the pilot to our site. My stomach lurches as we enter a side valley where our plot is located, the terrain looks impossibly steep. But sure enough there is a small flat area at the top of the valley, just as notes from the team who visited five years ago said there would be. We pitch our tents before a careful descent of a few hundred metres to where our plot is located. We find the corner marker stakes and lay out tapes to mark out the vegetation survey plot. The botanist gets to work on identifying all the species present in the plot, there were over 50 here last time with a surprising number of small herbs and grasses hiding amongst the larger tussock grasses. I start by taking some measurements from the plot, slope, aspect, and ground cover percentages for vegetation, rock etc. Our other team member has started running out transect lines from the corners of the plot, deploying baited 'chewcards' for possum monitoring and conducting faecal pellet counts to detect other mammals. Acoustic recording devices are placed at the end of the transect line to detect nocturnal birds and bats. The next day I conduct rounds of 5 minute bird counts and we bring in the acoustic recorders and chewcards. We pack up and await our scheduled pick up to be transferred to our next survey location.

Continued on next page...



I have worked as a Biodiversity Monitoring Ranger for five years and learnt a lot by developing into specialist roles within the team. Recently I have taken a break from this job to work as a biosecurity SCUBA diver, controlling the spread of an invasive seaweed in Fiordland. If you are interested in SCUBA, Trinity's DUSAC is a great place to start!

Earthquakes in Türkiye and Syria

In the aftermath of the devastating earthquakes that hit Türkiye and Syria, we are thinking in particular of our colleagues and students from the regions. Trinity Global are co-ordinating a College wide response but if anyone wants to donate funds here are just a few possible avenues:

- [UNICEF](#)
- [International Federation of the Red Cross & Red Crescent](#)
- [UNHCR Ireland](#)

Edited by Whitney Parker (@whitneyk127)

Do you have news to share in the next issue of Zoobytes? Whether staff or student, if you have news (big or small!) get in touch with me at parkerw@tcd.ie using the email subject "Zoobytes."

Are you a Zoology Alumnus doing something interesting? We'd love to hear what you're up to and include you in the next issue's "Where are they now?" section.

[Trinity Zoology Website](#)

[Trinity Zoology on Twitter \(@tcdzoology\)](#)

[Trinity Zoology on Facebook](#)

[EcoEvo@Trinity Blog](#)

