

## **What's on the horizon?**

By Naomi Baxter, Biosecurity Officer

Representatives from the Falklands, South Georgia and British Antarctic Territory attended a biosecurity 'horizon scanning' workshop from 22nd-25th October in Cambridge. The workshop, organised by the Non-Native Species Secretariat and co-ordinated by the Centre of Ecology and Hydrology, worked with Overseas Territory representatives and taxonomic experts to look towards each OT's incoming pathways (flights, cargoes, people) and identify what potentially invasive species might be coming 'over the horizon' in the next ten years.

For the Falklands that meant looking to the origins of cargoes that we receive, the flights, vessels, passengers and animals, and trying to figure out what plants, insects, animals and diseases could come in with them, either accidentally or deliberately.

The workshop started by compiling a long list of plants, insects, animals and marine species that could theoretically arrive and survive in each OT. This was then whittled down with the help of local attendees, as well as support from local experts including SAERI, SMSG, Falklands Conservation, FIG's Environmental Officer and the Agriculture Department via email and Skype. Each species identified was ranked according to its importance to the economy, to human health and to biodiversity.

### **Human health and economic impacts**

We know that biosecurity is important for the economy; it's easy to see why keeping foot and mouth disease out or eradicating calafate is a good idea. Similarly, keeping things out that could impact human health makes sense.

So it was easy to see that any kind of 'berberis' plant is one to keep out, as they all tend to have similar spines to calafate (*Berberis microphylla*) and could cause the same issues. In terms of human health, the top contender was the sheep tick (*Ixodes ricinus*). This tick is normally associated with sheep and can carry Lyme disease so definitely one we want to keep out both for the impacts to farming and the human health risks it carries. Happily, it's an easy enough one to prevent as we import so few sheep these days but definitely one to keep an eye out for.

### **Biodiversity, why does it matter?**

Biodiversity is the variety of life on earth, the different types of species and the variation within those species. Of course, there is the moral argument of ensuring future generations enjoy the same level of biodiversity and ecosystems services as we do but there's also value in preserving genetic diversity in our native species to help them remain strong and resilient.

At the workshop, species that were thought to potentially have the greatest effects on biodiversity included mussels (*Mytilus spp.*) which can be transported down here on the hulls of vessels, Atlantic salmon (*Salmo salar*) and rainbow trout (*Oncorhynchus mykiss*), which could escape from Chilean fish farms, and the harlequin ladybird (*Harmonia axyridis*), as well as a range of plants.

We already have mussels in the Islands so does it really matter whether we have a native variety or another from Chile or Europe?

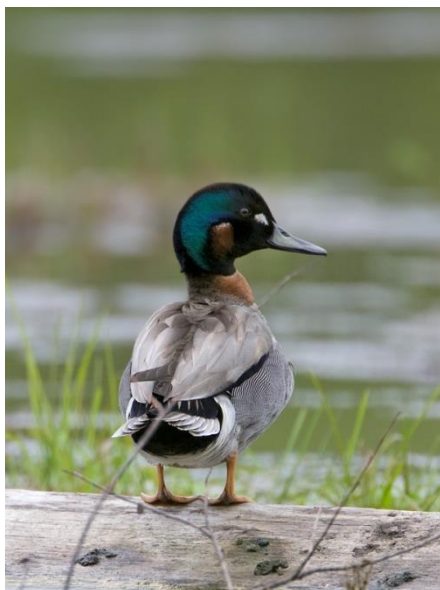
Overall biodiversity worldwide is declining. The many and varied species that we have making up our unique Islands' system have developed here and work as a unique ecosystem here, they also underpin all the 'services' we use the environment for, from churning the earth to cleaning the water and decomposing dead animals and waste. Taking one or two small but vital elements out of a system (for example replacing a native mussel with an introduced one) could have unknown consequences throughout the system. Genetic diversity is important for the species themselves as well – a smaller pool of genes means native species are less able to deal with viruses, for example, and are more vulnerable to changes in their environment.

### Escapees

The workshop also looked at species that were already here as livestock or pets which, if allowed to roam wild, might cause us some issues. Wild reindeer could destroy native habitats if let loose (as has been seen on South Georgia) and, incredibly, if a wild mallard population were to get out and about, these innocent looking birds could hybridise (breed) with the local teal or pintail ducks and create frankenstein's monster, known as "manky mallards". This has proven an issue in the Gulf of Mexico area where the mallards have been breeding with the native Mottled Duck. This threatens the genetic distinctiveness of native species, diluting the population. Probably not something we have to worry about for now as there are no known wild mallards in the Islands. But we have seen populations of domestic animals go wild in the past, such as the feral goats around No Man's Land, and the many feral cats all across the Islands, so it is something to be aware of for the future.

At the end of the workshop we had a short list of species to watch out for and a clear idea of how they might arrive. Next, we'll be sharing the lists with some local plant, insect and marine experts to sense check them and we hope to run a workshop in the new year to review what we are doing to prevent these pests, weeds and diseases getting in, what we can improve at the border and how we can monitor to make sure we spot them quickly if they do get here. We also hope to include a session on animal disease biosecurity as part of the workshop.

If you are interested in attending the workshop in, currently planned for April 2019, drop us a line and we will add you to the invite list: [biosecurity@doa.gov.fk](mailto:biosecurity@doa.gov.fk) or call 27355.



Manky mallards: Mallard x Eurasian teal hybrid (L) and mallard x northern pintail



Harlequin ladybird: they come in all colours and patterns but are typically bigger than the seven spot we have here and some have the distinctive 'W' pattern on their heads

The workshop group:

