

A survey to test for red – sika hybridisation across Ireland.

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Japanese sika were introduced to Powerscourt, Enniskerry in 1860. From there they were translocated and released to other sites in Ireland and have then undergone major range expansion, so they are now present in many areas. Given similar increases in the red deer population, this has inevitably led to overlap and interaction between these two species. Hybridisation between these species was first noted in Irish deer parks, and hybrids are well established in Co. Wicklow following escape of the Powerscourt deer. Hybridisation is also known to have occurred, sometimes in the wild, in Scotland, England, the Czech Republic and New Zealand. Wherever it occurs, hybridisation has the potential to threaten the genetic integrity of both species, particularly native red deer.

It can be hard to tell the exact status of a deer from its appearance. To understand what is happening in the Scottish deer population, our colleague Helen Senn developed a diagnostic DNA profiling test for red–sika hybrids, which is the most advanced test available to date. This panel of 23 DNA markers has been used to screen individuals from several sites across Scotland and determine that, whilst the majority of sites show little or no hybridisation, there is extensive hybridisation and introgression at two sites in Argyll. The localised nature of these sites suggests to us that if hybridised populations can be found early in the process, it may be possible to control the problem.

In the 2011-12 stalking season we propose a survey of red and sika deer in Ireland, concentrating on the three major areas of overlap between the species:

1. Co. Wicklow. Hybridisation is well-established here, but there are areas where animals are consistently very sika-like in appearance. We would like to sample areas with both hybrids and sika-like animals to confirm their status.
2. Killarney National Park and surrounding areas. This area contains the only population of potentially native Irish red deer and a large population of sika. We propose to sample deer in this area to confirm that these populations are remaining separate and/or document any potential threat to the Kerry reds from hybridisation.
3. NW Ireland. Here there is extensive range overlap and some hybridisation has been reported, but its full extent has not been tested.

Sample collection from shot deer will be organised through colleagues in Coillte, the National Parks and Wildlife Service and the Natural History Museum in Dublin. We shall be very grateful for any samples provided and we shall try to report back on what we have found within a year. We hope the sampling system will prove simple and convenient to use. It will ask you to provide only most basic data about the animal, but if you wish to add more information, for example a carcass weight or a photograph, then please do so.

If you have any queries regarding the project, please do not hesitate to email your regional contact:

- Ruth Carden (Natural History Museum, Dublin) on rcarden@museum.ie
- Barry Coad (Coillte, Newtownmountkennedy, Co. Wicklow) on barry.coad@coillte.ie
- Tim Burkitt (NPWS, Killarney, Co. Kerry) on timothy.burkitt@environ.ie
- Stephanie Smith (University of Edinburgh) on S.L.Smith-9@sms.ed.ac.uk