

Soay Sheep Project submission of 7 August 2023

PE2021/E: Ensure the definition of protected animals in the Animal Health and Welfare (Scotland) Act 2006 applies to the sheep on St Kilda

From the Soay Sheep Project (SSP), represented by Professors Dan Nussey and Josephine Pemberton, University of Edinburgh

We thank the Citizen Participation and Petitions Committee for the opportunity to contribute to the committee's consideration of the petition.

We fully endorse the Scottish Government's current position on the status of these sheep as wild, based on best current knowledge of their history and biology. The petition centres on the statement: "St Kilda sheep have been feral since 1930, but millennia of domestication have altered their physiology, making them unsuited to life unmanaged." As we discuss below, Soay sheep have been living wild under natural selection, and adapting to their habitat on St Kilda for millennia, and there is no clear biological evidence that these sheep are meaningfully different to other wild mammal populations.

Soay sheep have existed on the island of Soay since before written records began and it is generally thought they have been there for 2-3,000 years (1). Their bones resemble those of Bronze Age domestic sheep (2) and genetically they are more closely related to the wild mouflon found in the Middle East, the ancestor of domestic sheep, than to most domestic sheep breeds (3, 4). It is clear that the St Kildans made expeditions from Hirta to Soay during which they caught Soay sheep for meat and wool (5). Soay is surrounded by steep cliffs with very limited landing spots and is inaccessible under all but calm sea conditions. Soay has no walls or enclosures to help gather sheep; Soay sheep scatter rather than flock under pressure and the St Kildans' capture method involved dogs with filed-down teeth that ran down individual sheep (6). This was opportunistic harvesting rather than any form of husbandry. Although there are no historical records either way, it is inconceivable to us that sufficient sheep were removed annually from Soay to avoid substantial natural winter mortality. Consequently, they

have been living in a wild state for millennia. Consistent with this, they shed their fleeces naturally and do not have the problems with hooves, teeth and giving birth that are typical of domestic sheep. For these reasons we disagree with the petition's claim that Soays are 'unsuited to life unmanaged' or are 'reliant on man'.

It is the fate of all animals to die, and in wild animals this is often in large numbers as a result of natural processes including starvation, predation, infection, ageing and exposure to harsh weather. In most cases this is unseen – for example one rarely finds a dead blue tit, but the fact is that for the population to remain stable nine out of every ten blue tit chicks that fledge each year must die. In the St Kilda islands, in some years, puffin chicks die of starvation in large numbers, unseen, in their burrows. The Soay sheep on Hirta are unusual in that our long-term study documents deaths precisely. The numbers and manner of deaths observed on Hirta are not unusual among wild large mammals. For example, the reindeer of Svalbard, the Saiga antelope of Kazakhstan and the wildebeest of the Serengeti have all been recorded dying in large numbers of starvation and disease as distinct from predation (7-9).

Soay sheep, living under the current regime on Soay and Hirta, are part of the cultural history of the St Kilda islands, cited in the World Heritage Site designation. The petitioners do not indicate what management to avoid winter mortality would look like, so we do so here. We estimate it would be necessary to annually remove around 600 Soays from Hirta, and 150 from Soay, each summer/autumn. From our personal experience, it would be totally impractical to catch this number alive (as well as hazardous to humans), shipping them off the islands would have its own welfare issues and the animals would have little live value after the first wave, so would presumably go to slaughter. A more practical alternative would be to shoot the number required on the islands. Aside from the issue of carcass disposal in such a remote location, we believe a large-scale, regular cull of a previously unmanaged population would have serious welfare implications for the remaining sheep (e.g. premature orphaning of lambs). This is also very unlikely to remove all winter mortality: red deer populations are regularly culled to reduce density, but there remains an independent effect of winter weather on mortality, which can be substantial in bad winters (10). Finally, any management of this nature will radically change the process of natural selection under which the animals have been living over millennia, changing the characteristics of this iconic Scottish animal.

The history and biology of Soay sheep on St Kilda are unique. The SSP has been studying the lives of these remarkable animals on Hirta for almost four decades. We feel the petition has presented complex issues in a narrow and factually inaccurate way – the sheep have been living wild far longer than claimed and evidence suggests they are well suited to life unmanaged. We do care about the welfare of these wild animals and we welcome considered discussion and appropriate action in relation to their welfare. We approached one of the petitioners via email to open detailed discussion of their concerns, but they declined the invitation. We will continue to have open and constructive discussions of the issues with stakeholders and the public who visit St Kilda.

References:

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