

# HEFTED TO ISLAY

## THE ISLAY DEER MANAGEMENT STORY

Malcolm Younger

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## PREFACE

As Islay's was the first collaborative deer management group of its kind, Bruno Schroder and Sir John Mactaggart thought it would be good to write down its history as they and their families had been closely involved in it from the start. On its fiftieth anniversary they set out to find someone to write about it. This monograph is the result.



I have had the good fortune to have spent nearly half my life working on and for estates on Islay; there were ten years as resident Factor of the Islay Estate, and a continuing role on the island that includes management of Ardtalla and, for a period, Laggan.

My professional profile could be termed a 'specialist generalist', one who has some knowledge of the wide variety of activities on traditional landed estates. I like to get to know the land where I am required to advise and it has been my pleasure and privilege to have lived and worked on Islay for so many years, treading many of the island's paths and perhaps just as importantly, its 'unpaths' (thanks, Nan Shepherd, for that expression).

I had been 'scoped' on a dude ranch in Texas, wandered among vicuna on the Peruvian altiplano, crouched under a tree listening to the chorus of indri in Madagascar rainforest and paddled gingerly around hippos in the Zambezi. On the brink of a career in land management I spent a week at Aoradh, the RSPB farm, amid a cacophony of wild geese. It got me hooked on Islay.

In 1997 I was back on the island as Factor of the 55,000 acre Islay Estate. Back then my knowledge of deer was limited: roe deer were a not uncommon sight in the fields and woods of the Scottish Borders where I was brought up, but I didn't meet red deer in earnest before I came to Islay.

Working on Islay gave me the opportunity to enjoy its spectacular fauna, wild geese and harbour seals, eagles and otters, adders and marsh

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fritillary butterflies. Red deer took pride of place: listening to the roaring of stags in a cold October gloaming always gives me a visceral thrill. Stags clashing antlers on a steep hillside against the backdrop of the Sound of Islay will always remain in my memory.

Reading around the subject has been a pleasure. Those who have studied and written in depth about red deer are enthusiasts all. I was pleased to find that the famed ecologist Frank Fraser Darling wrote approvingly of red deer and their place in the Highlands. As the author of the term ‘wet desert’ (to describe treeless uplands), he is too often misquoted in support of what he himself called the ‘rabid anti-deer-forest section of society’. I have learned a great deal from reading descriptions of deer from previous centuries, and the way in which they were driven close to extinction, saved only by the remoteness of their last refuges and the hunting culture that preserved them there.

In the earlier part of my professional career on Islay the Islay Deer Management Group basked in approval from all sides, though there were warning notes in the political rhetoric that chuntered in the background about deer numbers. Now the picture is clouded not only by the growing clamour of ‘twitterati’ and other social media shouters to remove deer to make way for rewilding and burgeoning forests. New and more urgent threats are posed by a changing climate and accompanying demands for curbs on ruminant methane emitters, both wild and domestic. The case for the latter is unproven, but the necessity of addressing the disrupted climate must be brought into deer management planning just as for farming and forestry.

The longer I have followed the fortunes of our red deer, the more disenchanted I have become with conservationists paying lip service to them as national ‘icons’ while demanding without qualms that they be removed from the land to make way for other things they prefer – usually involving trees, but in some cases a full blown hankering for the return of the legendary Great Wood of Caledon.



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In 2019 I visited the Białowieża forest in Poland, primarily to see the spectacular European bison, the wisent, in its last refuge. These animals were almost driven to extinction, but are surviving, and beginning to thrive, in an area that had been the Russian czars' hunting forest, where they are now fiercely protected. Like bison, red deer are herd animals. In calling for deer densities to be reduced to, say, two animals per square kilometre lobbyists ignore their nature and needs.

Not everything that the IDMG did was successful, and the organisation itself has now disbanded. I hope that a clear-eyed appraisal may help to understand what went right and what went wrong and where appropriate to learn how deer managers can do things better. I welcome the opportunity to put the case for wild deer in Scotland. I hope too that the foresight and dedication of those who paid for, planned and carried out the work on the ground can be appreciated as a labour of love.



## ONE

### HART AND HUNTER

The Hart was once drinking from a pool and admiring the noble figure he made there.

"Ah," said he, "where can you see such noble horns as these, with such antlers! I wish I had legs more worthy to bear such a noble crown; it is a pity they are so slim and slight."

At that moment a Hunter approached and sent an arrow whistling after him.

Away bounded the Hart, and soon, by the aid of his nimble legs, was nearly out of sight of the Hunter; but not noticing where he was going, he passed under some trees with branches growing low down in which his antlers were caught, so that the Hunter had time to come up.

"Alas! alas!" cried the Hart: "We often despise what is most useful to us"

(Aesop)

### Boreal

The last blast of the Ice Age, known as the Younger Dryas, petered out around 11,700 years ago, leaving ice sheets, desert and tundra covering the northern European landmass. Sea level was metres lower than today as a vast volume of water was locked up in ice. As the glaciers retreated, much of what is now the North Sea became dry, habitable Doggerland. At that time the southern coastline of the North Sea extended from the British coast south of the River Tweed across to the northern tip of Denmark.

Doggerland formed a land bridge that was colonised by animals and plants migrating northwestwards as the climate warmed.

Among the earliest postglacial arrivals in the north were giant deer *Megaloceros giganteus*, (Irish elk), skeletal remains of which were dug from a bog at Kildalton in the 19th century. The

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enormous rack of that animal, now mounted on the wall at the Museum of Islay Life in Port Charlotte, (below) has been radiocarbon dated at 11,785 years old. It seems that red deer also made it to Islay back then in the Mesolithic period.



*'Red deer (*Cervus elaphus*) have played a key role in human societies throughout history, with important cultural significance and as a source of food and materials. This relationship can be traced back to the earliest human cultures and continues to the present day.'*

*Humans are thought to be responsible for the movement of a considerable number of deer throughout history, although the majority of these movements are poorly described or understood'... Archaeological faunal assemblages within Britain indicate that deer were present on a range of insular locations lying at varying distances from the British mainland. Many of these islands have been isolated since the end of the last glaciation and even today host a restricted range of mammalian fauna. In Scotland, red deer are reported from Mesolithic (7500 – 5500 cal. yr BP) Inner Hebridean assemblages' (Stanton 2016).*

Emerging from the last glacial maximum, a predominantly temperate climate has favoured the Inner Hebrides up to the present day, interspersed by periodic 'little ice ages' and warmer

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interludes. In the initial warming phase, vegetation was sparse and summers short. The Boreal period, after glaciation, saw rapid colonisation of newly fertile soils and seas rich with minerals scraped from the bedrock by glaciers. When ice covered the land and sea, animals and plants were confined to *refugia* in the warmer south. Deciduous trees and grasslands supported grazing herbivores in southern Europe and Anatolia. The fossilised remains of the various predators that lived off these herds (bears, lions, hyaenas, wolves and humans), have been found in caves from southern Europe to the north Highlands.



The bones of a variety of mammal species dated to between 9,400 and 5,600 years ago have been recently uncovered by archaeologists on Islay. Among the remains found were the bones of red deer and a small deer, either roe or a now extinct race of dwarf red deer. These bone fragments, excavated from the occupation horizon of a Mesolithic settlement, had been burned - perhaps as fuel. Such settlements would have been established by

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hunter-gatherers, who would have moved between the islands to exploit the resources available at different times of year.

A dig carried out in the 1880's uncovered bones of red deer, along with those of cattle, sheep and even a fox in a cave near Kildalton. Pottery shards and other artefacts found with the bones suggested that the horizon in which they were found dated from three or four thousand years ago.

### Little Picts & Sad Heathens

Millais, an Edwardian sportsman, pictured these hunter gatherers:

*'After the severities of the Ice Age, the climate of Central Europe seems to have undergone a great change, and red deer were very abundant. It became much warmer, and this was, in itself, destructive to the plants on which the reindeer lives, whilst it favoured the succulent grasses and the growth of trees which constitute the food of the red deer. In consequence the latter rapidly increased in all the forest areas as the reindeer retreated or became extinct on the open hills. There were probably many races of virile savages, whose shattered skulls are now occasionally found in the earlier Pleistocene deposits of England and Scotland, that hunted the red deer, the reindeer and the giant fallow deer long before the little Feens, Finns, Picts, Pechts or Lapps, or by whatever name the reader chooses to call them, came upon the scene. These little Picts are supposed to have gone annually from Scotland to hunt the giant fallow deer in Ireland, just as the Jarls of Orkney crossed the stormy waters of the Pentland Firth to chase the red and reindeer in the mosses of Caithness, returning to their stone-built fortresses with spoils of skins and meat.'* (Millais, 1913).

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An archaeological dig at Rubha Port an t-Seilich, on the east coast of Islay, enables speculation about the arrival of people in the southern Hebrides following the glaciers' retreat:

*'These hunter-gatherers were arguably attracted by the emerging availability of highly productive marine environments created by changing sea levels and the mixing of ocean and ice-lake currents. Sites of these possibly marine-orientated peoples are most commonly located along island and skerry bays suitable for landing waterborne transport. The relative paucity of late glacial evidence from the interior of northern England, Wales or Ireland might suggest that the hunter-gatherers who arrived in Scotland came directly from the east, either crossing Doggerland or travelling around its northern margin, rather than from the south ... extensive ice fields in the western Highlands would have limited the movement of people across the mainland of Scotland, whereas the coastlines of western Scotland remained ice free ... Sea level was c. 5m lower than at present ... as such it is highly probable that the Isle of Islay remained cut off from Jura and the mainland due to the deep channel that separates it. Unhindered access could therefore have only been gained by people using boats probably coming from the north. With regard to the environments these pioneer hunter-gatherers encountered, western Scotland would not have been altogether inhospitable despite the cold tundra conditions having brought about an overall reduction in hunter-gatherer activity in Britain. Despite winter sea surface temperatures falling by as much as 6°C below present day, seasonality was greatly amplified, raising summer temperatures to a more continental climate, providing opportunities for seasonal incursions into the region especially during the last few centuries of the Pleistocene (the geological epoch which lasted from about two and a half million to 11,700 years ago, spanning the world's most*

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*recent period of repeated glaciations). Decreased sea-ice occurrences, reduced wind strength and generally higher temperatures are all elements that would make marine ventures less risky and thus more demographically viable for the small populations operating along the northern European margins.*

*Regional pollen records would have shown that extensive grasslands would have formed a mosaic with dwarf communities of birch and willow scrub over thin minerogenic soils almost everywhere in western Scotland, providing attractive browsing for grazing mammals. Recent biogeographical studies show that Britain's mammal community was similar to or indeed richer than those of southern parts of Scandinavia, the Netherlands and Belgium from late glacial Interstadial times. Spear points made from antler would have been used by the hunters, who also made arrow-points, knife blades and other tools by 'knapping' flint pebbles or working quartz, traces of which are found in the places they occupied. Evidence for the changing plant communities of Islay over millennia comes not only from charred hazel nut shells found during the archaeological excavations, but also from analysis of pollen from cores sampled from ancient mires such as that at Loch a' Bhogaidh on the Rinnns. The anoxic mud of the mire has preserved a record of plant communities dating back to the end of the ice age: early deposits contain abundant birch and hazel pollen, followed through time by Scots pine, elm, oak, alder and willow. More can be inferred from the presence in later depositions of charcoal residues and sediments as well as the changing species mix ... major woodland clearance dates from middle Bronze Age onwards (c. 3500 years ago) and involved a mixed farming regime ... the records show that soil deterioration was occurring as heath and acid grassland become prominent. These events may have resulted from land use pressures or climate change.' (Mithen, 2015).*

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Anything that did not fly and had a value for food, hide and fur might be caught by a hunter with ‘*spear on his shoulder, club in his hand*’ whilst accompanied by hounds or hunting from his coracle. Evidence from bone deposits shows that deer often formed a staple part of the diet in the southern Hebridean islands.

With the arrival of the first farmers on Islay, the competition from livestock had repercussions for wild deer. Grazing land was monopolised for cattle and sheep, and reliance on deer and other wild game for the pot dwindled. As farmers moved onto the better land, we can surmise that deer were pushed into the wilder hills and brush.

Evidence of the culture of the islanders of earlier millennia is limited to what has survived there, or may be inferred from finds in other parts of Britain. There are many stone monuments and remains of structures, but organic materials have most likely perished. Some antler and bone artefacts from the period have survived. Headdresses, made by drilling holes in the back of trimmed down red deer skulls, have been unearthed at Mesolithic sites, notably Starr Carr in Yorkshire; these are considered to have been used in shamanist rites. The interpretation is that deer were treated as totemic symbols for some kinship groups, by which they identified and differentiated themselves from others.

Deer feature on  
Pictish symbol stones:

*‘It is  
possible that what  
we have in these  
scenes is a motif  
for the passing of  
paganism itself,  
the deer having  
such a complex  
and integral role  
in so much of  
what we know of*



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*the essentially pagan traditions of the early British peoples.'*  
(McHardy, 2012).

In ancient Scotland, deer are associated with the various figures of the *Cailleach*, the dual Mother Goddess in her winter aspect. Evidence suggests there were druidical cults of deer priestesses.

Stories of deer infuse Celtic legends. Sadu, wife of the legendary warrior, Finn McCoul, was spirited away and turned into a hind by an evil druid, perhaps a shamanistic reference to shape-shifting by goddesses and priestesses of the cult. Such stories are woven into Highland tales, told by the fireside: one such legend tells of Ossian, son of Finn McCoul, and his favourite deerhound, Bran. A version of this story, 'Oisean an deigh na feinne,' was collected by Iain og Ile, John Francis Campbell of Islay, in 1860.

*'When he (Ossian) went to bed he implored his ancient gods – for he was a sad heathen, and considered psalm-singing no better than the howling of dogs – to resuscitate, if but for one hour, the hounds, the stags, and the blackbirds of his youth ... His prayers done, he fell on slumber, and just before dawn a weight upon his breast awoke him. He put forth his hands and stroked a shaggy hide. Ossian's prayers were answered, for there, upon his breast, in the dark of the morning, was couched his favourite hound. He spoke to it, called it by name, and the faithful creature whimpered and licked his hands and face. Swiftly he got up and called his little grandson, and they went out with the hound. When they came to the top of a little eminence, Ossian said to the child, "put your fingers in your ears, little one, else I will make you deaf for life." The boy put his fingers in his ears, and then Ossian whistled so loud that the whole sky rang as if it had been*

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*the roof of a cave. He then asked the child if he saw anything. “Oh, such large deer!” said the child. “But a small herd by the trampling of it,” said Ossian; “we will let that herd pass.” Presently the child called out, “Oh, such large deer!” Ossian bent his ear to the ground to catch the sound of their coming, and then, as if satisfied, he let slip the hound, who speedily overtook and tore down seven of the fattest.’ (Smith, 1865).*

Carved stones are a noted feature of the Pictish tradition, and there are many beautifully observed figures of animals. Fabulous depictions of hunting are seen on the monumental stones carved during the Pictish and later mediaeval periods; notable examples are the carved hunting scenes on the 15th century MacMillan Cross in Knapdale (on the mainland opposite Islay) and at Oronsay Priory. Grave slabs and religious monuments of the Lords of the Isles and their chieftains bear effigies of deer, hounds and hunters, among other motifs.

A fragment on a tapered slab at Kildalton shows a hunting scene with a huntsman carrying a horn slung round his waist in the act of stabbing an animal, probably a deer, which at the same time is beset by three hounds. A further Islay cross-shaft stone from Texa, commemorating Reginaldus or Ranald of Islay (the son of John, first



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Lord of the Isles (d. 1380), and of Amie Macrurie) shows a stag beset by two hounds, one at its throat while the other lies prone. There are other notable examples of stone-carving at Nerabus.

*'These early images of the chase tell us something of the way in which deer were managed, where large areas of land were set aside as 'Forest': this word, which today causes some puzzlement when used to refer to treeless hills, was introduced by the Normans as a legal term (appearing in Latin texts like the Magna Carta) denoting an uncultivated area legally set aside for hunting by the King and feudal lords: such 'forest' was not necessarily wooded much, if at all.'* (Wikipedia).

*Mediaeval literature on the theme (of hunting) is permeated by a sense of dedicated enjoyment, the fulfilment of an enduring compulsion to retain a link with nature in a period barely emerging from the primitive, when immersing oneself in the forests of Europe could still create the illusion of being amid a limitless wilderness with infinitely renewable sources of game. Planning the chase was a mental challenge, taking part in it was physically and emotionally satisfying, and the spoils provided delight for the stomach. Something so enjoyable, so self-indulgent, and so expensive had to be explained and justified.* (Cummins, 1988).

That deer were on Islay and Jura during the mediaeval era can be inferred by scrutinising Gaelic and Norse place names for references that might indicate their presence. Many apparently Gaelic names are, in fact, Norse in origin. *Beinn tart a'mhill* on the Rinnns is thought to come from *hjartafall* (stag mountain) rather than the Gaelic 'hill of the thirsty hill'. *Cnoc ghuireasdeal* may come from the Norse *dyrdalr*, valley of the deer (MacNiven, 2015).

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Some names may be anglicised versions of Gaelic versions of old Norse names: some of them make more sense in the flesh; stags can be seen on Beinn tart a'mhill today.

Gaelic names predominate in Islay's countryside, a number pointing to associations with deer and hunting; there is *diollaíd nam fiadh* (saddle of the deer) on the southern flank of Ardtalla's beinn bheigier; *druim nam fiadh* (knoll of the deer) overlooks Mid Carrabus on the Islay Estate; between those there is a *cnoc na h-eilde* (hill of the hind), north of the River Laggan near Mulindry; to the south are *allt an daimh* (burn of the stag) and *rubb a'bhuic* (headland of the roebuck) on the Oa. It is possible that *cnoc amanta* near Kilenan and *gleann amaind* near Ballimony may be derived from Gaelic *a'maing*, (thus hill/glen of the young stag or brocket). *Cnoc na seilge* (hill of the hunting grounds) is located amidst the present-day forest of Staoisha on the Islay Estate, while *am fásach* (the wilderness) is preserved in a remnant of ancient woodland near Balole. Across the Sound of Islay, almost at its narrowest, is *damh-sgeir* (stag skerry) on *Diùra chreagach nam fiadh* (rocky Jura of the deer): amorous stags might set out from there, drawn across the Sound by the allure of Islay's hinds; to the north of that *sgeir an fhèidh*, (deer rock) also speaks of the Sound as a crossing point for deer.

## Faire Games

Writing in 1549 Donald Monro, Dean of the Isles, depicted Islay as:

‘*An ile of twentie mile lenthe from the north to the south, and sixteen myle in breadth from the eist to the west, fertill, fruitfull, and full of natural grassing, with maney grate diere, maney woods, faire games of hunting beside every toune ...*’ (in James Macdonald, 1811).

Almost fifty years later Captain Thomas, a naval officer, enthused: ‘*This ile is plenteous of woodis, quhairin are mony deir,*

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*raes, and wild foulis.* '(in Gregory Smith, 1895). He also noted the island's potential to 'raise 800 men' for military service, an indication of an island population of at least two or three thousand.

'Yla', noted John Monipennie in 1612, was '*abundant in store, cornes, deere, and lead.*' (in Gregory Smith, 1895), a list prefigured by Timothy Pont's 1590's survey: '*pecorum, frumenti, cervorum, item plumbi fertilis*' (Blaeu's Atlas of Scotland, 1654).

The mediaeval sport of kings, chiefs, and gentlemen of the clans was the deer drive, the Tainchel. Such hunt-gatherings were held annually in autumn in the Highlands, often on a huge scale. A colourful portrait of a Tainchel was penned by John Taylor, self-styled 'water-poet' from London, in an account of his journey into Scotland. In the late summer of 1618, he joined a throng of lords and their ladies in Mar Forest in the Eastern Highlands:

*'There did I find the truly Noble and Right Honourable Lords John Erskine Earl of Mar, James Stuart Earl of Murray, George Gordon Earl of Enzie, son and heir to the Marquess of Huntly, James Erskine Earl of Buchan, and John Lord Erskine, son and heir to the Earl of Mar, and their Countesses, with my much honoured, and my best assured and approved friend, Sir William Murray Knight, of Abercairney, and hundred of others Knights, Esquires, and their followers ... All and every man in general in one habit, as if Lycurgus had been there, and made laws of equality: for once in the year, which is the whole month of August, and sometimes part of September, many of the nobility and gentry of the kingdom (for their pleasure) do come into these Highland Countries to hunt, where they do conform themselves to the habit of the Highland men, who for the most part speak nothing but Irish; and in former time were those people which were called the Red-shanks. Their habit is shoes with but one sole apiece; stockings (which they call short hose) made of a warm stuff of divers colours, which they call tartan: as for breeches, many of them, nor their forefathers never wore*

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*any, but a jerkin of the same stuff that their hose is of, their garters being bands or wreaths of hay or straw, with a plaid about their shoulders, which is a mantle of divers colours, of much finer and lighter stuff than their hose, with blue flat caps on their heads, a handkerchief knit with two knots about their neck; and thus are they attired... any man of what degree soever that comes amongst them, must not disdain to wear it; for if they do, then they will disdain to hunt, or willingly to bring in their dogs: but if men be kind unto them, and be in their habit; then are they conquered with kindness, and the sport will be plentiful. This was the reason that I found so many noblemen and gentlemen in those shapes...*

*Now their weapons are long bows and forked arrows, swords and targets, harquebusses, muskets, dirks, and Lochaber axes. With these arms I found many of them armed for the hunting ...*

*Five or six hundred men do rise early in the morning, and they do disperse themselves diverse ways, and seven, eight, or ten miles' compass: they do bring, or chase in, the deer in many herds (two, three or five hundred in a herd) to such or such a place, as the noblemen shall appoint them: then, when day is come, the lords and gentlemen of their companies do rise or go to the said places, sometimes wading up to the middles through burns and rivers; and then, they being come to the place, do lie down on the ground, till those foresaid scouts, which are called the tinkhell, do bring down the deer; but as the proverb says of the bad cook so these tinkhell men do lick their own fingers; for besides their bows and arrows, which they do carry with them, we can hear now and then, a harquebuss or musket go off, which they do seldom discharge in vain. Then after we had staid there three hours or thereabouts, we might perceive the deer appear on the hills round about us (their heads making a show like a wood) which being followed closely by the tinkhell, are chased down into the*

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*valley where we lay; then all the valley on each side being waylaid with a hundred couple of strong Irish greyhounds, they are all let loose as occasion serves upon the herd of deer, that with dogs, guns, arrows, dirks, and daggers, in the space of two hours four score fat deer were slain; which after are disposed of, some one way and some another twenty and thirty miles, and more than enough left for us to make merry with all at our rendezvous.* (Taylor, 1618).



The Islay historian and polemicist Domhnall Gruamach explains the role of Tartan:

*'The Ancient Tartans were primarily designed for use in battle, as vitally essential indications of who was friend and who was foe. The ancient Tartans can always be distinguished by their relatively crude and "loud" colours and the ancient scarlet Cath-Dath (Battle-Colour) of Clan*

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*Donald is a good example of this. If worn while hunting, it can be guaranteed to scare every deer off the hill and into the next parish, so at a later date the green Hunting Tartan was evolved. It provides most excellent camouflage'*  
(Domhnall Gruamach, 1967).

One might imagine that Gruamach's garish Battle-Colour was effective in Islay Tainchels. Its wearers might have included MacGill'fhaolin ('son of the wild lad', perhaps a famous deer hunter in his day), and Fleisdear (the 'arrow-maker') whose MacLellan and Fletcher descendants remain prominent on the island to this day.

Dean Monro's travelogues were among the earliest of the modern era, written in the twilight of the Lordship of the Isles. Of Jura he wrote:

*'...Duray, ane ather fyne forest for deire... quhar is twa loches, meetand uthers throughe mide iyle of salt water, to the lengthe of ane half myle, and all the deire of the west pairt of that forrest will be callit be tainchess to that narrow entry, and the next day callit west againe be tainchess through the said narrow entries, and infinit deire slain there, pairt of small woods.'* (in James Macdonald, 1811).

The bones of red deer were among Mediaeval remains excavated during a 2019 archaeological dig at Dùn Naomhaig, the coastal stronghold of the Lords of the Isles at Lagavulin. In contrast to the hue and cry of the hundreds engaged in the bloody slaughter that the Tainchel involved, participating in what would have been a very social occasion, the solitary pursuit of deer through the wilderness has a different appeal. Gaelic literature of the period shows how deeply engrained was the love of the chase with deerhound and weapon. Here Domhnall Gruamach's Hunting Tartan might come in more useful, but whether their pursuers wore the scarlet Cath-Dath or most excellent camouflage, the effect was the same: deer were no more on Islay.

## None Left

It was to be three centuries before red deer could match the abundance of earlier times. The introduction of the firearm, the '*harquebuss or musket*' (Taylor, 2009), irreversibly altered the balance in favour of the hunter.

A memorandum dated 10 April 1677, from Sir Hugh Campbell of Cawdor to his uncle James, (his bailie in Islay), enjoins him to:

*'tack great care to preserve the deer, the rabbetis, and the black cocks, and that he suffer noe person of what quality soever or of what relatione soever to intermedle with them' (and to speak to) 'Glenlyon, to Charles Stewart, the tutor of McNab, to Glenorchies uncles, to McConichie Ineraw, and to the baillie of Jura, Ewin McCharles, McConichie Roy and Alexander McAlister Roy's son, and such others in Ilay and Jura as conveniently may catch and foster alse many young deer as possibly they may get, and about Lambes, I shall, God willing, send for them; and that they be more curious to preserve the hynd than the hart.'*  
(Smith, 1895).

Whether these instructions were carried out is unclear, but it does not appear from subsequent reports that many, if any, such 'young deer' can have been brought to Islay, as the numbers evidently continued to fall.

Touring the Hebrides in 1695, Martin Martin didn't comment if he had seen any deer on Islay, but noted that in Jura:

*'The hills ordinarily have about three hundred deer grazing on them, which are not to be hunted by any without the steward's licence.'* (Martin Martin, 1695).

The 1696 grave slab of Charles MacArthur of Proaig (below), which lies in the mediaeval chapel of Kildalton, bears the

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carved outline of a long gun, powder horn and hound. It commemorates a life spent in the happy pursuit of game across the wilds of Islay, but it also tells of the technology to kill game from greater distance. The earlier matchlock rifles were not very accurate, but the steady improvement in weaponry stacked the cards in favour of the hunter.



Thomas Pennant and John Lightfoot arrived in late June at Craighouse on Jura, in 1772. Pennant wrote of:

*'A boat filled with women and children crosses over (Small Isles Bay) from Jura, to collect their wretched daily fare, limpets and periwinkles.'*

A rising population in the Hebrides generally, but Jura specifically, struggled to provide sufficient food for its needs, particularly in periods of adverse weather, and some of the island's deer must have ended up in the cooking pots of the more resourceful. Pennant reckoned that '*the quadrupeds of Jura are about a hundred stags*' (the word 'stag' was then used to denote red deer of either sex).

Clambering to the top of Beinn an Òir, the highest of the three Jura 'Paps,' he marvelled at:

*'The stupendous scene of rock, varied with lakes innumerable... even this vast heap of stones was not uninhabited: a hind passed along the side full speed, and a brace of ptarmigan often favoured us with their appearance, even near the summit.'* (Pennant, 1772).

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Pennant did not include deer among his list of Islay's quadrupeds either, and it may be assumed that there were few, if any, on Islay by the time of his visit. His 'Sketch of Caledonian Zoology' within Lightfoot's Flora Scotica notes that the Stag is:

*'Found in a state of nature over all the Highlands, and in great herds: inhabits also the isles of Arran, Jura, Mull, Rum, Skie, Harris and Lewis... Is the principal venison of the Highlands; less coarse than those confin'd in parks in S. Britain. Is very destructive to corn: in Skie the farmer is obliges to watch his crop. The Duke of Argyle has, in some parts of his estate, humanely permitted the tenant to destroy an animal so noxious to his labors.'*  
*(Lightfoot 1777).*



The number of people living on Islay was rising fast: between Dr Webster's 1755 census and Sir John Sinclair's first Statistical Account of 1794, the population increased from 5,344 to 8,400. Pennant recorded that the island was extensively farmed but its cattle were '*often overstocked, and numbers die in March for*

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*want of fodder.*' Cattle, other than milk cows, were overwintered outside. In a largely subsistence economy the inhabitants were vulnerable to famine in difficult years, averted '*by the seasonable arrival of a mealship.*'

The Reverend John McLiesh of Kilchoman, enthused in the Statistical Account of 1794, that:

*'Any one, that has a right to keep a gun and dog, may find plenty of game here; such as partridges, moorfowl, plovers, wild geese and ducks, and wild pigeons; also otters, rabbits and hares, sea and land barnicles.'*

Neither McLiesh nor the other two ministers on Islay made mention of deer in their reports, but their counterpart in Jura, the Reverend Francis Stewart, observed: '*there are one or two herds of red deer traversing the mountains.*'

John MacCulloch, physician and geologist, wrote with apparent certainty: '*Sky still possesses a few red deer; and there are a considerable number in the mountainous part of Lewis; excepting which, and Jura, there are none left in the islands.*' (MacCulloch, 1824).

The trend was clear: '*after 1750, deer numbers over much of the country fell further ... by 1811 only six deer forests had substantial numbers of deer on their ground.*' (Clutton-Brock *et al*, 1989). Scrope, describing the various Scottish deer forests of the day, rated Jura highly:

*'The number of deer are estimated at about five hundred. They have the whole range of the island, and thus wander from one end of it to the other. As there are but few inhabitants (scarcely a thousand souls), they are seldom disturbed, and have of late years greatly increased ... the chief of Islay has also a right of shooting over the island of Jura and of taking with him such assistance as he may require. Deer, however, have been known to save him this short voyage, and to cross of their own accord to Islay, a*

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*distance of about a mile; and, in particular, six hinds and one hart did so a few years ago, and returned again to Jura. This was probably in the rutting season, and thus the hart seems to have taken a pretty effectual mode of securing to himself peacable possession of his little seraglio.’ (Scrope, 1839).*

In the second Statistical Account of 1845, the Reverend MacTavish of Kildalton reported, perhaps wistfully, that: ‘*The only animals which formerly existed in the parish, but are now extinct, are red-deer and foxes.*’ Conversely, the Reverend Alexander Kennedy, Minister on Jura rejoiced that: ‘*Game, in all its varieties, abounds in Jura from the stately red deer to the humble snipe.*’ (General Assembly of the Church of Scotland, 1845).

Jura’s population at this time was estimated in the Statistical Account at a little over 2,000. The uninhabited, rugged and roadless western side of the island continued to provide a refuge for deer at a time when large wild animals were unwelcome across much of the rest of the country. Along with the animals themselves, the brushwood that provided them with shelter had dwindled.

*‘In the Island of Ila ... about two hundred acres of coppice were observed in different places; most of it, indeed, consisted but of mere bushes springing from old roots. The ash seemed to thrive best, which is indeed, the most useful wood for the country. Some trees of this sort, which had accidentally escaped the ravages of the cattle, were above thirty feet high, and fresh and vigorous. (Throughout the Highlands) the annual growth of natural wood, sufficient for the use of the country, is cut off by the cattle; by browsing on coppice, the black cattle, sheep, goats, and deer, do certainly destroy wood, to the amount of many thousand pounds sterling annually, and that without adding anything material to their subsistence.’* (Walker, 1808).

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A generation later, AG Cameron concluded:

*'Large game must inevitably disappear, sooner or later, from any limited tract of country which is free to a growing community for the support of life. Deer became scarce and haunts of deer were thinned on the common lands of the 'fasach' by constant and indiscriminate destruction of both, while the reserved hunting-grounds, which remained in their primitive state, imposing remnants of primeval times, gave sanctuary to game and gradually acquired for themselves the distinctive title of 'forest' in memory of the greater forest that had once encompassed them all.'* (Cameron, 1923).

Red deer did not disappear altogether, and in the 21<sup>st</sup> century healthy herds are once more to be found in many parts of the Highlands and Islands.

### Mony Deir

The 'Grate Diere' or Stags are not the only species to be found in Scotland. 70 years ago, Frank Fraser Darling felt able to write:

*'turning to happier mammalian introductions in the Highlands, there are fallow deer and Japanese sika deer.'* (Fraser Darling 1947).

Some of today's more purist ecologists are not so blithe about them. It has been made illegal to import and release non-native deer, though long before this measure was enacted feral populations of fallow had become established, including in Islay, though not spreading significantly or interbreeding with other deer species.

However, the same cannot be said of Japanese sika: they are closely related to red deer but differ somewhat in appearance, being

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smaller and darker. Sika are woodland-dwellers and have thrived in the greatly expanded, dense forests across the country.

Testing of tongue tissues from red deer culled on Islay was carried out some years ago at the behest of Deer Commission Scotland. This indicated that the Islay population of red deer was unspotted by sika genes (the sika deer is also known as the spotted deer), and the island was accordingly classed as a *refugium* of pure Scottish red deer.

Some years ago a beast resembling a sika was shot at Rockside Farm on the Rinn; genetic analysis found it to have been a pure red deer. In 2017, another sika-like deer was reported to have been shot on the Oa but its genetics are not known. If it was a sika, there was no obvious explanation for its presence there; the nearest mainland population is on Kintyre, well beyond swimming range.

Recent research suggests that intromission of sika genes into the red deer population in Scotland is wider spread than had previously been thought. Professor Pemberton, of the University of Edinburgh, has shown that any hybridisation between red deer and sika isn't necessarily obvious externally; the appearance of many red deer with sika genes is no different to pure-bred animals, and *vice versa* among sikas. Only a proportion of the hybrids have characteristics of both species.

*'All the different colour forms and patterns, white, yellow, red, brown and black bodies; with and without, spots, keels down the back, and black streaks down the centre of the tail and lining the flanks down the haunches occur in both red and sika deer.'* (Lowe, 2014).

Lowe goes on to note that the two species can easily be distinguished by their antlers, with the brow points of the sika leaving the main beam at an angle of less than 90 degrees, while those of the red is always more than 90.

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Another question is whether the Islay deer themselves are local in origin, derived it may be presumed from the remnant that clung on in Jura during the nadir of the 18th and 19th centuries. It was formerly quite common for estates seeking to boost the size of trophies to introduce deer, often from the south, as John Bullough did on Rum:

*'He wished to have stags with heads like those he had seen in mainland deer parks, so he started to import park deer assuming the small size and poor antlers of the Rum animals were due to some genetic deficiency in the native stock. By 1909, six of the park stags were in such poor condition after returning from the rut that they had to be shot.'* (Lowe, 2014).

Today's Rum deer are the descendants of beasts imported from Wester Ross by Lord Salisbury after 1845; unsurprisingly, they proved to be better suited to the harsh climate and sparse forage than park deer.

Writing to the naturalist Thomas Buckley in 1891, Mrs Ramsay of Kildalton said that in the 1860's her husband had introduced red deer on his estate, though the number and how they fared is not recorded. These deer came from Jura, Stornaway and elsewhere. In a more recent report, two red deer known to have been brought in to Islay died without being accepted by the herd.

The cost and effort of such importations might have been spared: a 1937 review of the effects of translocating large-bodied deer to improve the bloodlines of inferior stock demonstrated conclusively that even when these fine but foreign beasts had been able to do their duty:

*'within a few generations the populations concerned reverted to dimensions typical of the original stock. This was because body size in deer is determined phenotypically, and not genetically, being entirely dependent on nutrition'* (Lowe, 2014).

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Islay's deer are celebrated for their size: the year that I arrived on the island one stag weighing 32 stone (203 kilograms) was, somewhat controversially, culled near Loch Gruinart.

It is perhaps not unconnected that Dean Monro, whose Islay was '*fertile, fruitful, and full of natural grassing, with many grate diere, many woods*', contrasted Rum as '*ane forest of heigh mountains and abundance of little deire on it*'. Sadly, Rum's '*little deire*' had vanished by the end of the eighteenth century, just like the '*grate diere*' of Islay, though the latter were holding fast in Jura.

Roe deer (*Capreolus capreolus*) seem to be indigenous to Islay as very large numbers of their bone fragments were unearthed among the Mesolithic remains excavated at Storakaig and Rubha Port an t-Seilich.

They have rated mention in various of the earlier historical records of Islay, for example in 1595, '*mony deir, raes, and wild foulis*' (Captain Thomas) and in another manuscript of 1612, '*many deer hant it and raes.*' (in Gregory Smith, 1895).

Pennant did not mention having seen roe on the island in his 'Sketch of Caledonian Zoology', but they were to be found in plenty elsewhere in Scotland:

*'from the wooded banks of Lough-Lomond, to the forest near Langwell in the S. of Caithness, in Mull and in Skie. The skin and horns articles of commerce. Brouze much: fond of the rubus saxatilis, called in Scotland the roe-buck-berry. The fawns, when taken, are with great difficulty reared, eight out of ten dying.'* (Lightfoot 1777).

Half a century on, MacLoc wrote that roe were:

*'now almost extinct among us, except in some parts of the highlands of Scotland.'* (MacLoc, 1823).

It may be that roe survived in small numbers as they were in a position to take advantage of the significant planting of new woods by the Campbells of Shawfield in the early 19th century.

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Some could, perhaps, have swum the Sound of Islay from Jura like the red deer. They tend to avoid other deer and few are to be met with in the Kildalton and Ardtalla woods.



It is not known when fallow deer (*Dama dama*) were first introduced to Islay. Pennant's account concluded there were:

*'none wild in Scotland; confin'd to parks, and not common: probably introduced there from Denmark by James VI, in his return from his visit to that court in 1589; for Moyses, a servant of his, mentions in his memoirs, under the year 1586, that his majesty one morning passed over from Leith to Falkland, and had along with him a tame fallow deer, presented to him by the Queen of England: a proof of its being a great rarity at that time'.*  
(Lightfoot 1777).



Things must have changed by 1842 as James Wilson was able to note: '*The game on Islay is abundant. Besides roe, and occasional red-deer which come across from Jura, fallow-deer exist almost in a state of nature.*' (Wilson, 1842).

The 1852 sale particulars for the Islay Estate refer to the extensive stock of wild fallow deer in the area of Ardimersay in the south east of the island.



In a demonstration of the making of myth, NatureScot's Management Statement for the Ardmore, Kildalton & Callumkill Woodlands SSSI, asserts:

*'The fallow deer are allowed to graze undisturbed by the landowners as they are regarded as having a religious and cultural significance. (The fallow deer were brought to Kildalton by monks who established a monastery around 800AD).'*

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The claim of a monastic introduction is belied by historical records, but has been repeated as fact:

*'Historians believe they were introduced to Islay by the monks at Kildalton, in the south of the island, in AD 900.'* (Fauna Scotica, 2012).

Not only has no evidence come to light to verify that fallow deer were brought to Islay by monks, recent archaeological investigation around the early Mediaeval Kildalton Cross, which dates from the 8<sup>th</sup> century CE, revealed no evidence of a monastic settlement there.

Nevertheless, the story has been told by the current chatelaine of Kildalton, Fiona, who wrote in her autobiography that:

*'The Columban monks are believed to have introduced the fallow deer to Kildalton around AD 900. They still thrive in the woodland and lower ground of south east Islay. The big red deer favour the higher hill land, while the tiny roe-deer prefer the woods – although their shy natures make sightings infrequent. A drawing of*

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*the castle in 1884 shows a number of fallow on the front lawn, lying contentedly in the summer sun – just as they do now, but today the castle is a ruin inside.’* (Fiona & McKenna 1995).

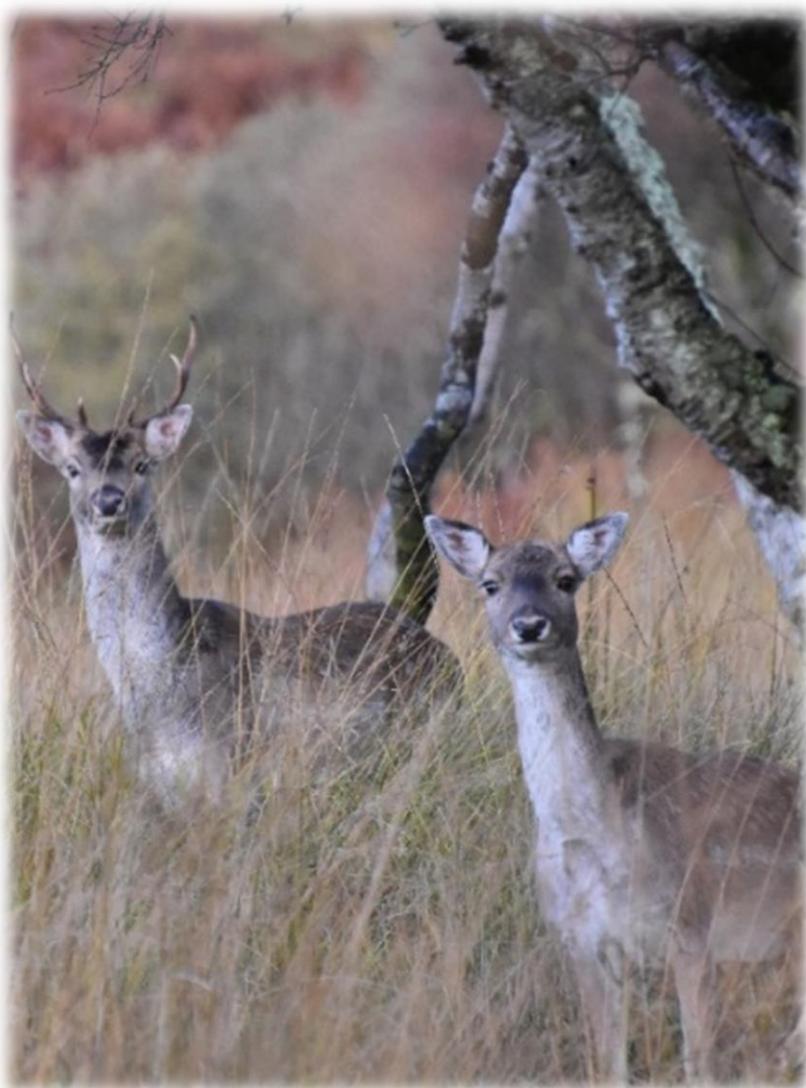
It is rather more probable that the fallow were imported to the island during the stewardship of the Campbells of Shawfield, who in the early 1820s had built themselves a Cottage Orné (a picturesquely designed small country house) at Ardimersay, within their hunting ground in the south east of Islay.

An area of the present-day Kildalton estate known as the Deer Park, has the remains of a high wrought iron fence, where it may be presumed the animals were kept. They haven’t strayed very far and today inhabit much the same area. That is typical behaviour of the species, it having been observed that:

*‘Interestingly, fallow deer seem slow to disperse themselves when released into suitable environments and often remain within a very limited area for many decades.’* (Fletcher, 2004).

*‘When turned out, fallow deer at once revert to wild conditions ... they are sensitive about crossing roads or human tracks, even in a park, and will spring as if to avoid some snare: a wild trait that centuries of confinement has not eradicated.’* (Millais, 1913).

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## TWO

### CAUTIOUS MANOEUVRING

**'Passionate love is often expressed in hunting'**  
(Paul van Vlissingen, *in Milner, Alexander & Griffin, 2002*)



#### Provision

*'Hunting provided sustenance, drama, excitement, fear, awe and reverence. By its very nature, hunting an animal requires an intense interaction between humans and their environment. It sometimes meant the difference between the life and death of the hunter, or even the whole clan. It made the hunter alive to the beauty of the hunted creatures and the land they inhabited, and, in order*

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*to hunt them effectively, he had not only to learn their habits, but also to think as one of them. He learned to see the world outside himself, to put himself into perspective within Creation and through that to feel the Divine.'*  
(Isaacson, 2001).

Deer-stalking, in the words of Chambers Encyclopaedia (1863), is:

*'the art of following the red deer by cautious manoeuvring, for the purpose of shooting it with the rifle; and as practised in the Highlands of Scotland, is perhaps unequalled as a sport in fatigue as well as in excitement.'*



Queen Victoria and Prince Albert visited Atholl in 1844, their delight with the Highlands and subsequent acquisition of Balmoral setting in motion:

*'A fashion for Highland sport across the nation. The vivid paintings of Landseer, imbued with the awesome spirit of unbridled nature, and the rapturous reception given to the deerstalker William Scrope's writings, captured*

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*the public imagination and the Highlands became all the rage.'* (Wigan, 1991).

Due to the new convenience of railways and steamships, remote places became more accessible during the 19th century, encouraging newly wealthy land owners and successful businessmen to secure Highland sporting estates for themselves and their friends to enjoy:

*'The extensive tracts of hill-land over which deer roam, and on which they are stalked are termed 'deer-forests', few of which, however, notwithstanding the appellation, can boast of a single tree; and where these 'forests' belong to noblemen and others peculiarly addicted to the sport, deer are strictly preserved, to the almost total exclusion of sheep and cattle.'* (Chambers, 1863).

*'The sporting possibilities of the hill stag were first revealed to the world by Scrope who described them in language which no lover of the wild deer can read today without a thrill of sympathetic emotion.'* (Cameron, 1823)

Scrope colourfully recounted the tale of a hunting expedition to Jura in August 1835:

*'Consisting of six sportsmen, a boat's crew of seven men, with piper, deer-stalker, and two deer-hounds, (who) set out from Colonsay and landed on a beach on the north and precipitous coast of Captain McNeill's property in the island of Jura ... The different picturesque groups, and the deep gloom of the cavern, illuminated only by the fitful blaze of the wood fire, presented a subject worthy of the study of a Rembrandt, while the sullen roar of the waves as they dashed against the rocks below, and were re-echoed in the cave, gave a wildness and grandeur to the scene that was romantic and impressive.'* (Scrope, 1838).

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By this time, red deer had become a rarity across much of the country. The Reverend J. G. Wood described ‘the Stag, or Red Deer’ as:

*‘Indigenous to the British Isles, where it still lingers, though in vastly reduced numbers ... in Scotland, however, the Red Deer are still to be found, as can be testified by many a keen hunter of the present day, who has had his strength, craft and coolness thoroughly tested before he could lay low in the dust the magnificent animal whose head with its forest of horns now graces his residence.*

(Wood, 1893).

Not only strength, craft and coolness came with the keen hunter, but also cash: in 1833, Lord Malmesbury, then the proprietor of Harris, had offered the whole sporting rights of the island, including grouse moor, stalking and fishing for £25; only fifty years later that rental had grown to £2,000. (Wigan, 1991).

Islay, and a good part of Jura, had been acquired by Daniel Campbell of Shawfield in 1723, after financial problems had defeated the previous owner, John Campbell of Cawdor. Shawfield set about modernising the island, promoting the change from a

subsistence to a cash economy based around farm leases and industry. The Jura lands were sold in 1738, though Shawfield saw fit to reserve:

*‘full power and privilege of hunting in and thorow the said Forest of Jura whenever they or their foresaids shall think fit or expedient.’* (in Ramsay, 1991).



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The purchaser, Archibald Campbell of Sandack, was obliged under the deed to deliver

*'four fat Deer out of the Forrest of Jura yearly at their Mansion House in Islay when they shall happen to reside there.'*

Clearly, Jura was the place for red deer and for hunting, not Islay.

The Shawfield Campbells in due course succumbed to financial oblivion and were succeeded as lairds of the Islay Estate in 1852 by merchant millionaires James and Charles Morrison. The particulars for the sale claimed plentiful '*game of every description, four-footed and winged*' but this cornucopia (if such it was) can have been of little interest to them. They visited Islay hardly at all, instead letting Islay House seasonally to shooting tenants. Their purchase had been purely as an investment, the Morrisons being, according to one contemporary source,

*'neither sportsmen nor agriculturalists.'*

It was not until 1890's that Morrison descendants took up the sporting life, though even then stags do not appear to have been all that high on their agenda. In a description of Islay's field sports, Captain Iain Ramsay, (former owner of the neighbouring Kildalton Estate) enthused:

*'It is probable that the Islay House coverts, over which the present proprietor (Hugh Morrison) has taken great pains, are the best woodcock coverts now in any part of Great Britain, and there is no doubt that within recent years Mr. Morrison has reaped the reward of well-thought-out and judicious planting.' (Parker, 1945).*

Then as now, deer would not have been a welcome sight to tree-planting proprietors.

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The southern part of Islay had been acquired from the Morrisons in the 1850's by Iain's father, John Ramsay of Kildalton, a whisky distiller, MP, agricultural improver, antiquarian and philanthropist. Ramsay does not appear to have had unalloyed enthusiasm for deer either, writing to a friend:

*'About the Cottage (Ardimersay) I have drained more extent of moss land and cleared away part of the brushwood to make room for the grass to grow, but the difficulty there is to exclude the deer from the land under improvement.'* He clearly found time for woodcock shooting, however, as his son recorded: *'During the season 1848-58 inclusive, there were killed on the Kildalton shootings, in and around Ardimersay, 5,066 'cock, or an average of 500 'cock in a season.'* (Ramsay & Ramsay, 1870).

It seems that managing deer was at most a secondary consideration to Islay's nineteenth century lairds, who busied themselves with

*'harvests, sales, rents and arrears, construction and ornamentation, as well as the perennial problem of steamer provision.'* (Dakers, 2011).

## Vision

The 20th century brought a greater appreciation as well as greater numbers of deer on Islay. A Guide to Islay noted:

*'diverse shootings, a remarkable combination of moor and pasture, rich cornfields and desolate hillside where red, fallow and roe deer were to be found, together with a variety of other game.'* (McNeill Weir, 1924).

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The core of the Kildalton Estate was sold in 1923 by Iain Ramsay; the new laird was Talbot Clifton, a wealthy traveller and sporting enthusiast from Lancashire. The windfall sale in 1875 of an area of sand dunes on his family's Lytham estates, for the planned new town of St Annes, provided him with ample means to acquire property first in Ireland, then the Western Isles and finally Kildalton. Following his untimely death while on expedition, Talbot's widow Violet vividly described the direction in which deer management on Kildalton had taken under her husband:

*'In the Autumn of the year 1926, Talbot from Africa, and Violet from the south, returned to Islay. Then in him awoke the highlander, and for weeks before the season of stalking Talbot would watch the stags through the spy-glass, for he nursed and cherished the forest. In those long days of watching, of counting the beasts, he decided, the season being come, which creatures should be left as sires, and which should be killed. One might be a 'royal' next year; another was judged to be at its perfection already; the forest would be well rid of this or that head. When the beast was killed, the stalker bleded the man and gralloched the beast ... The antlers are like a book, with the life of the stag that carries them written on the horn. If a stag breaks his right leg the left horn will show the hurt. But surely only this year, the year of the wound? No, next year and always, however often the antlers are shed and grow again. ... He told her too that, even before the time of Christ, stags so attired roamed in Great Britain. The island stags still grow the thick rough horn, which is the particular glory of the stags of Proaig and of Kildalton.'*  
(Clifton, 1933).

At around the same time, Cameron observed in his detailed study of red deer management:

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*'Scottish deer-forests of to-day shine not a little by the reflected radiance of a sporting history which reaches backward to primaeval times. Gaelic place-names, which come softly from the lips of our Highland stalkers, have engraved upon the scenery of the highlands a prehistoric record of the stag; and Gaelic legends, re-told by folk-lore students, have wrapt our mountains in a garment of romance which social and economic changes have no power to dispel. The face of the deer country has changed, the methods of sport have changed, the sportsmen have changed, even the deer have changed; but the fascination of the sport for those who love it remains unchanged and unchangeable. Locomotives may pant heavily through long straths, and motor-cars may hum like giant bees up steep glens on macadamised roads; yet high up in the cloud-swept corrie the mountain wall shuts out the world of man, antlers on the sky-line stir the blood with a paleolithic thrill, imagination slips down the centuries, and the rattle of hoofs in the Hinds' Pass tempts us to believe that we may presently see the big deer in the vision of Ossian.'*  
(Cameron, 1923).

One of those who wholeheartedly enjoyed the allure of the pursuit, Piffa, Bruno Schroder's first wife, pinned down its allure:

*'Modern stalking, as has often been observed, has not changed radically since the earliest days. Even though you may now start off in a Land Rover or a van, and the beasts may be collected off the hill by means of an ATV or a quad bike instead of the traditional pony, yet what Fraser Darling called 'the field-craft and physical stamina to come within 100 yards of a vigilant quarry in open country' remains (despite the 'modern' invention of a telescope sight on the rifle) the primary part and real motivation of a stalk. In 'A Victorian Boyhood', L.E. Jones wrote of 'the*

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*suspense, the alertness of observation, the pitting of wits, the triumph or the failure, which are the ingredients of delight'; and of 'the breathtaking beauty of the high tops ... the solitariness and the silence' which together 'combine to exalt the spirit to the summit of happiness.' In truth, nothing has changed. And at the end of the day, there is still the long walk home, gossiping endlessly, as the hills turn pink in the dusk and the sun sinks like a cantaloupe melon. It is the time of kelpies and the faery world, beloved of Scrope, when ghosts walk abroad.' (Schroder, 2003).*

## Division

Since the Morrisons' acquisition in 1852, the monolithic Islay Estate has been partly dismembered; they sold just under 50,000 acres to John Ramsay, then a succession of smaller estates

and farms. The largest of these was Dunlossit, around 18,000 acres, acquired from Charles Morrison in 1860 by Smith Child, a banker from Stone, Staffordshire.



After the First World War, the Kildalton and Oa estate was broken up by Iain Ramsay, including the famous distilleries of Ardbeg, Lagavulin, Laphroaig and Port Ellen, and the farms around them, to their respective tenants. Talbot Clifton's son and heir, Harry, took the process

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further, selling 14,500 acres to form the Ardtalla Estate. The rump, including the now ruinous Kildalton house, rhododendron-choked gardens and deer park of around 2,000 acres, ended up in the hands of a mail-order businessman, George Middleton. He, and the other successors of the Ramsays and Cliftons, were the inheritors of what was to become an exemplary herd of red deer, shared between them on the open hill.

Beforehand, Islay's hill ground had had a single proprietor; if he had been keen on hunting deer, they would have been permitted to thrive. However, the Shawfield Campbells and Morrisons had been motivated by other considerations and so it was sheep walks that occupied the hill ground. Division of the land, coupled with the desire of new lairds to hunt, created a need for deer management to be approached in a collaborative manner.

Such fragmentation posed a challenge:

*'The number of distinct forests, their multiple ownership and diverse interests, preclude any hope of fruitful co-operation, while the growing prevalence of single season tenancies together with the legitimate expectations of sportsmen who occupy them, place the theory and practice of antler production as wide apart as the poles. Deer-stalking on the single season system becomes an exact inversion of the selective process. It stimulates over-crowding for the sake of numbers, because the proprietor's interest from year to year is to keep his shooting limit as high as possible; it promotes unsparing slaughter of fresh stags, because the lessee has only his one chance, and he does not pay a high rent to shoot babies or wasters; poor heads being bullet-proof, every year contributes in geometrical ratio to the reproduction of rubbish; and the blood strains which contain the creative promise of big antlers are gradually wiped out by a succession of eager tenants. It may not be taken for granted that every tenant of a deer-forest desires to be burdened with a lease, or that every tenant on lease will adopt measures to improve his*

## *Hefted to Islay*

*forest; but it is a fact beyond question that the single season system must ruin any forest in which it becomes habitual.*

*A deer-forest, to be successful, cannot be run like a grouse moor on yearly tenancies at so many guineas per head, and the bold attempt to exploit Scottish deer-stalking on these lines, with merely a numerical limit, has proved, and must ever prove, an experiment in the impossible. For a grouse, from the sportsman's view-point, is always a grouse, irrespective of age or sex, and a young grouse is as good as an old one; but with hill deer it is only stags that count, and only the adult stags (about ten per cent) are of sporting value. Even with adult stags, as Henry Evans wisely said, only a small proportion are born to the purple, and these favoured few constitute, on the one hand, the indispensable sires of future monarchs, and, on the other hand, the keenly coveted trophies which make deer-stalking the sport of kings. Successful deer-forest management must, accordingly, strike a compromise between rival claims in which the deer-stalker is content to take a slice of the cake, although his inclination strongly tempts him to take the whole of it.' (Cameron, 1923)*

The hill boundaries of adjoining estates are known as 'marches':

*'The boundary between Scottish estates, usually designated by something as totally missable as a pile of stones (cairn) and across which the most desirable beasts always vanish mysteriously after any successful stalk. (As in 'Lost him over the -----'; 'Bit uncertain that -----; so we decided it was better to be sure than sorry eh?' This in no way even hints at incompetence and provides a useful excuse for returning home empty-handed. The stalker's*

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*version of the proceedings usually differs). (Schroder, 1990).*



## THREE

### The Walks

#### Stag

He pastures on seaweed.  
On that other island, the winter grass may be sweeter. Four  
miles across the sound, he breaks the pewter to transient  
silver, like a huge oak-trunk.  
He is alive still, in the summerward wheel of the sun, climbing  
through the new heather and bracken; up to the new sun.  
(George Mackay Brown, 1986)

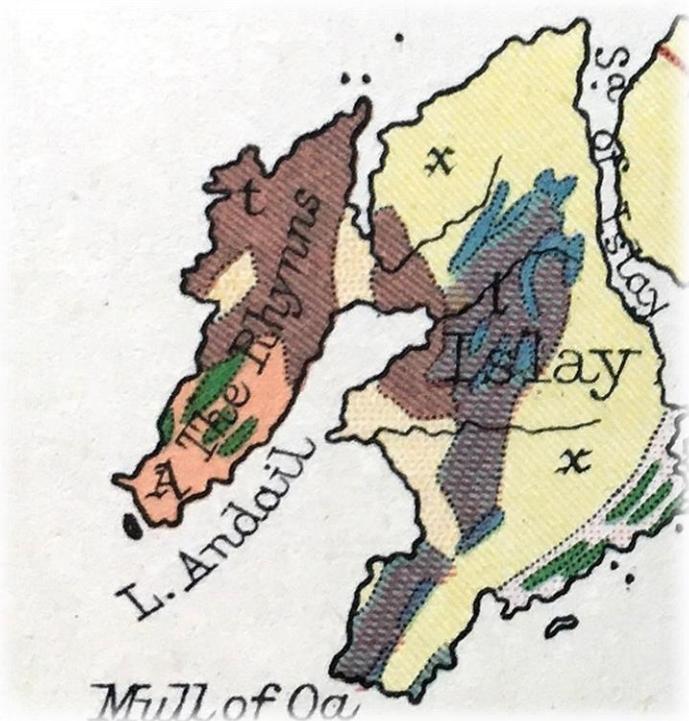
#### Bounds



## Hefted to Islay

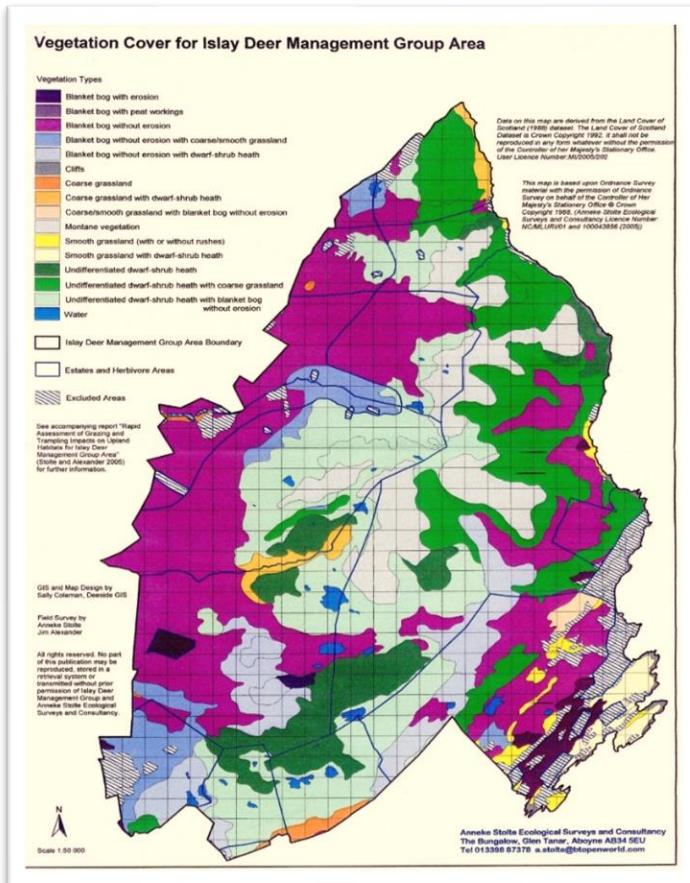
The southern 'range' for this herd of red deer lies across the south eastern uplands shared between Dunlossit, Ardtalla, Laggan, Callumkill, Leorin and Kilbride Estates, collectively known as the southern estates. In the earlier days of the Islay Deer Management Group (IDMG) the range had also included Kildalton Estate; this was withdrawn in 2002 and fenced out, ostensibly to concentrate on the improvement of its habitat.

The range extends to an area of around 13,750 hectares, predominantly open moorland and mountainsides, but with extensive broad-leaved woodland interwoven with pasture land occupying the lower ground to the south and blanket peat moss fringing the western flanks.



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The principal geology of the range is Jura Quartzite, overlain in the south east by Port Ellen Phyllite, within which are intruded parallel swarms of dolerite sills forming characteristic rocky ridges. A relatively infertile mountainous central core, with thin soils scoured by glaciation and weathering, is fringed by better quality soils towards the southern coasts. The highest top is Beinn Bheigier (491 metres); there are eight other named mountains over 300 metres, Sgurr nam Faoileann, Beinn na Caillach, Glas Bheinn, am Mam, Beinn Bhan, Beinn Urraidh and Beinn Sholum.



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A chain of hill lochs flanks the western slopes of the high ground, the larger of which are Loch Allalaidh, Loch Beinn Uraraidh, Loch Dearg an Sgòrra and Loch Uigeadail, while on the south east there is Loch Carn a' Mhaoil. Three small rivers flow eastwards, the largest of which is the Kintour. Most of the westward flowing burns are headwaters of the River Laggan, the largest watercourse on the island and noted for its salmon and sea trout fishing. Many other small burns water the hill.



The southern range is enclosed by deer fencing to landward and the shore of the Sound of Islay to the east. In addition to red deer, (*Cervus elaphus*) there are fallow (*Dama dama*) in the broadleaved woodland, and scattered roe (*Capreolus capreolus*) mainly on the northern margins, but also present in small numbers elsewhere. Deer are found on both sides of the fence and although not deliberate, over the years porosity in a 30 kilometre fence with its two ends on the shore is almost inevitable.

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Land management within the perimeter has been primarily geared towards red deer in recent decades, though on the lower slopes there are forestry plantations and livestock farming. In earlier years there were thousands of sheep on the open hill, but these have been drastically reduced and are now largely confined to low ground pasture. Cattle continue to be grazed on more fertile parts of the hill during the summer.

### **Muir**

Moorland is the dominant habitat within the range, including *Calluna* heath, wet heath, blanket peat, *Molinia* grasslands, *Calluna-Molinia* mosaics, bracken, and localised flushes and marsh. In some areas, particularly around Maol Ardtalla on the east coast, there is significant expansion of willow scrub and birch. Red grouse occur but are relatively uncommon, as are Ring ouzel and golden plover; in recent decades black grouse have disappeared from the island as a breeding species. *The Birds of Islay* records the dotterel as possibly breeding in 1990 on Beinn Bheigier. The nationally-rare marsh fritillary butterfly (*Euphydryas aurinia*) flourishes in grazed old rough pasture along the moorland fringes.

James Fenton (2017) wrote in a report to Ardtalla Estate, on an application to the Scottish Rural Development Programme's Agri-Environment Climate Scheme:

*'Above about 250m the vegetation gives way to prostrate heath: dry Calluna heath kept short by the wind. There are also small areas of high-level blanket peat. Above about 350 m, there are areas of moss heath, dominated by the moss Racomitrium lanuginosum, with the sedge Carex bigelowii (rare on Islay) and the clubmoss Huperzia selago. Dwarf juniper is present but rare. There are also extensive areas of exposed quartzite, including bedrock, fellfield and scree. Golden plover occur on the highest tops and are assumed to be breeding. There are two main types of dry heath: the high altitude prostrate heath and on many hill slopes taller stands of Calluna. There are also extensive areas comprising a mosaic of Calluna and Molinia. Molinia tends to be grazed in spring and early*

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*summer when the shoots are most nutritious. In better drained areas at lower altitudes Molinia is liable to being replaced by bracken of no nutritional value. Muirburn is not carried out because past experience suggests that burning tends to kill the heather, particularly if it is tall and leggy, so encouraging Molinia dominance. There is only minimal grazing of the heather shoots at the end of winter when shoots are most vulnerable to grazing.'*



Professor Rory Putman, in a report on Leorin, Kilbride and Callumkill estates, recorded that:

*'The south and south east facing slopes (around the Solam lochans and to the ridge below Beinn Sholum) are heavily dominated by Molinia and other coarse grasses, and offer ... little by way of forage or shelter. Around the 200m contour... there is a clear transition to a good heather moorland. Heather cover*

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*alternates with acid grasses or deer grass (*Scirpus*) on deeper peat or in hollows (and especially around the lochs themselves) but on emergent knolls or ridges there is extensive cover of *Calluna*. This becomes wind-clipped the higher you go, but grazing pressure is generally light, and in general the heather is in excellent condition. Inclusion of blueberry (*Vaccinium myrtillus*) is also markedly patchy.'*

### Moss

Peat moss is abundant across the range, with peat cutting for Islay's distilleries being carried out commercially near Castlehill on its western slopes. Three main types of bog vegetation occur: *Molinia-Myrica* dominant, with heaths rare; particularly near the coast; *Calluna - Eriophorum vaginatum* dominant; drier, relatively species-poor bogs; wetter species-rich bog with *Calluna*, *Erica tetralix*, *Eriophorum vaginatum*, *Eriophorum angustifolium* and abundant *Sphagnum*, including *Sphagnum magellanicum*; pool systems occur occasionally, such as in the Loch Càrn a'Mhaoil area.

*'There is evidence of peat erosion on some of the high altitude peat bogs, but also of colonisation of the eroded area. In most cases, there is no evidence of this being instigated by animals, but it demonstrates a natural cycle of peat growth and decay common in the hills of Scotland. The low altitude peat appears to be in good condition in that there is no evidence of trampling or grazing damage, however many areas have been affected by moor grips in the past.'* (Fenton, 20 )

A 2019 peatland survey, covering the Laggan hill, found very limited occurrences of bare peat, although there was some active erosion of peat in gullies and hags forming a network in the saddles between peaks and at the outflow of the hill lochs. Peat depth gauging across this part of the range recorded depths up to 3.6 metres around Loch Leathann an Sgorra. Moor-gripping, the

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digging of ditches using a large moor plough and crawler tractor, was not much in evidence across the area, however it did occur in many other places during the 1950s and 1960s, including on Ardtalla and Dunlossit. As well as affecting the hydrology of the moss, it has led to erosion in some areas. The two estates have begun a programme of grip-blocking as a measure to restore the health of their peat bogs.



### **Raingrove**

Lichen-crusted Atlantic oak and hazel woods (raingroves) lie predominantly on the lower south and south east facing slopes and coasts, together with extensive low birch brush. The scattered groves of gnarled and wind-clipped oaks are clustered on the rocky ridges across the south of Ardtalla, extending over the perimeter

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deer fence into Kildalton and the lower part of Callumkill. A mosaic of acid grassland, dry heath, peat moss and willow carr along with the oakwoods forms the Ardmore, Kildalton & Callumkill Woodlands Site of Special Scientific Interest (SSSI), a good proportion of its 1590 hectares lying within the range.

SNH's Management Statement describes this SSSI:

*'The largest example of native woodland in Islay ... representative of the former woodland cover of the Hebrides. Well developed stretches of coastal scrub occur throughout the site on parallel bands of Dalradian schists and slates, with wet willow and alder carr in the hollows. On drier knolls at Ardmore and Callumkill oak is dominant. Elsewhere the woods are mixed with oak, birch and hazel scrub most common together with rowan, sallows and alder. The woods are strongly indicative of a continuity of woodland cover from ancient times.'*

*The high humidity of the coastal location has contributed to the development of a wide range of oceanic ferns - hay-scented buckler fern and filmy fern - and the arboreal lichens are the richest recorded from Islay. The majority of the woods are on the rocky ridges, which run roughly parallel to the coast... with a range of habitats including wet heath, mire, grassland, rock outcrops and freshwater ponds are found in between the wooded ridges. These diverse habitats support an abundance of insect life, particularly butterflies and dragonflies. The medicinal leech is found in some of the small freshwater lakes on the site. The coast is used by good numbers of otters, while the small offshore islands and skerries are notable as a haul out site for common seals and for breeding terns. All of the species named above (medicinal leech, otter, common seal and terns) are recognised by European Directives as being of international importance.'*

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*The site is therefore characterised both by the diversity of habitats and the transition from woodland to coast, oak and sallows merging into wet heath and marsh and then into saltmarsh and intertidal mud ... the scattered nature of the woods produces a mosaic of woodland amongst open habitats of wet-heath, grassland, mires and rock outcrops. This diversity of habitats contributes to the overall interest and importance of the site, as does the transition from woodland to coast.'*



Some of the woodland within the range has been protected from large herbivores by the erection of deer-fenced exclosures, although there remain sizeable areas to which deer retain unhindered access. Laurie (2005) observed, that while grazing is

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thought to be an important factor inhibiting the regeneration of semi-natural vegetation in Britain, reduced grazing within fenced exclosures produces increased mean sward height but a decrease in richness and diversity. She concluded that grazing is essential in maintaining the structure of a woodland and thus fencing for short periods, on a rotational basis with the inclusion of a low grazing pressure, is best able to encourage regeneration without compromising the natural features of the woodland. There has been a vigorous, and yet to be resolved, debate within the conservation world as to whether and how large herbivores should be allowed access to native woodland.

### Outrun

The area of grassland is increasing, as previous and planned bracken control converts bracken to grass. In practice, although unimproved grassland will be the dominant vegetation type, such areas may also contain small-scale mosaics of other habitat types, including marsh, dry heath, woodrush and peat. Lapwing and curlew breed on the grazed grassland while snipe are present throughout the range on marshes on the low ground, and oystercatchers and ringed plovers nest along the shoreline.

*'There are widespread areas of better quality grasslands on lower lying areas of the range, principally on Dunlossit and Ardtalla. These areas are dominated by Festuca and Agrostis rather than Molinia, which otherwise tends to be the dominant grass on Islay. These grasses are highly selected by grazing animals, both deer and livestock, and their fertility and existence depend on continued grazing. Associated species include pignut, primrose, bluebell (wild hyacinth) and celandine. The nationally-rare marsh fritillary butterfly is associated with heathy areas where Succisa (devil's bit scabious) is present.'*

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*The coastal strip, where level, tends to be a mosaic of acid grassland, bracken, woodrush (*Luzula sylvatica*) and rush-dominated marsh. Oystercatchers and ringed plovers breed along the coast, as do otters. In the better-drained sites along burns and on drier, more fertile slopes, areas of species-rich acid grassland occur, although they are liable to colonisation by bracken. These are the areas favoured by red deer and livestock. The marsh fritillary occurs in many areas where the plant *Succisa pratensis* occurs. In the Maol Ardtalla area there is regenerating birch and also expansion of willow scrub (*Salix aurita*).’ (Fenton, 2017).*



*‘The low ground of Leorin is grazed by sheep and cattle, but is continuous with the deer range so that the deer also have access to improved or semi-improved grazings and the shelter offered... it is poorly drained and is very rushy in many areas, especially around Druim Scaraba. Over the winter months the hinds in particular (perhaps accompanied by others pulling in from Laggan) draw down onto the low ground of Leorin. For the rest of the year,*

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*they tend to be broken into small parties across the highest ground of Leorin and dispersed within the undulating plateau ground of the Kilbride hill, with the exception of one relatively large party, which seems to remain on the low ground year round (around the area of Druim Scaraba and the Laggan march – flipping to and fro across the march and into Laggan in certain weathers).’ (Putman, 2005).*

### **Strand**

One of the features that differentiate the Islay Deer Management Group (IDMG)’s range from many other deer management areas is the undeveloped and little disturbed strand.



This is a stretch of indented, islet-studded, shallow littoral that provides shelter, feeding and refuge to deer, extending around the south east of the island. Seaweed is part of the red deer (and cattle) diet and the numerous deer tracks heading down to the shore attest to its attractiveness, particularly when herbage on the

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hill has become sparse in late winter. The southern stretches of shore, both onshore and on the larger islets, include rocky outcrops and salt marsh with scattered pieces of woodland and scrub. The coast stretching up the Sound of Islay north from Ardtalla Farm is straighter and overlooked by steep escarpments, offering little shelter until north of Rubh' an t-Salinn, although deer have access to seaweed.

Some of the larger islets are inhabited year round by stags and hinds, together with common seals, otters and black-backed gulls. The Saltings is an area particularly attractive to deer, which can frequently be seen grazing there.

### Scientific Interest

The 1981 Wildlife and Countryside Act brought about a step-change in the classification and protection of certain valued habitats throughout the UK. It was a process intended to identify areas of land (and water) where there were rare or important species or assemblages of species, or rocks and landforms. The legislation that grew up around it seeks to prevent adverse change from occurring to the 'interest' that has been notified.

Substantial areas were designated on Islay, predominantly in the western part of the island, though two particular cases impacted on the southern estates' range. The first, and most relevant, of these was the designation of the Atlantic oakwood mosaics as the Ardmore, Kildalton & Callumkill Woodlands Site of Special Scientific Interest (SSSI). The citation is for two notified interests, one geological and the other for upland oak woodland. It is relevant to note that the citation includes the following:

*'The scattered nature of the woods produces a mosaic of woodland amongst open habitats of wet-heath, grassland, mires and rock outcrops. This diversity of habitats contributes to the overall interest and importance of the site.'*

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The significance of this is that it is not the woodland on its own that is considered important, but in its setting among open habitats; in the context of deer management the challenge is to manage the site holistically, with an appropriate level of grazing as an essential element.



A second area affected by designation under the Act is the raised bog at Eilean na Muice Duibhe, commonly known as the Duich Moss, on the Laggan Estate; although the moss itself lies outwith the range, its designation triggered a sequence of events that led to the opening of a new peat extraction site on hill land which was part of the range, and caused a ‘stramash’ in the national news. All ended happily enough when the conservationists got their geese roost and the distilleries their peat.

The intervention by the Nature Conservancy Council in the Dutch Moss dispute was only one, among many negotiations, in the course of which Islay’s land owners were obliged to concede a measure of control over their land in the public interest. At the Deer Meeting following the Battle of Duich Moss, David Boyd, the Islay Estate factor, complained of the NCC’s dictatorial approach

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and declared the affair had discredited them, considering them the wrong party to advise the Secretary of State. He accused the NCC of failing to complete reasonable management agreements or pay compensation regarding the burgeoning geese devouring the island's best grass. Lord Margadale of Islay Estate (the former Major Morrison) expressed the hope that *real* countrymen would be included on the NCC committees.

Land designated under the EU Habitat and Bird Directives is an important responsibility for the affected estates and must be taken account of in all deer management planning. An SNH management statement in 2016, for the Ardmore, Kildalton & Callumkill Woodlands SSSI, asserted that a significant proportion of the woodland area had suffered from overgrazing by livestock and deer, which were held to be inhibiting the natural regeneration of tree cover, '*severely so in some places.*' This statement covers an SSSI extending over three separate estates and is based on an inspection carried out over 20 years ago, in October 2001.

Management Agreements were reached with Ardtalla and other estates in the 1980s, resulting in the erection of several deer-fenced enclosures encircling the rocky ridges where the main oak woodland fragments are located. These were intended to prevent browsing and trampling of natural regeneration by deer and farm stock; extensive areas of woodland remained unfenced to provide important shelter and feeding resources within this part of the island. There are mixed views on how such complex woodlands should be managed. James Fenton's guiding principle is that the presence of large herbivores within a wood should be seen as natural; how any culling policy is approached will depend to an extent on the owner's objectives.

The rump of Kildalton Estate around the castle, including the old deer park, changed hands in the later 1970s. The new owner, George Middleton, complained that ancient woodland on the estate, which also formed part of the SSSI, was being damaged by deer. Although much of his woodland was (and still is) severely over-run with *Rhododendron ponticum*, his stated long term

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objective was ‘sustainable’ woodland, with a ‘sustainable’ deer population.

He was delighted when IDMG agreed to cut the deer herd from 2,300 to 1,800 head in 2001, which he felt would lead to a significant reduction in the pressure on his trees. Some 2,500 metres of deer fencing were erected on the Ardimersay peninsula under the SNH Management Agreement, and he said he must shoot a large number of stags annually to keep the population under control. Other members of IDMG expressed concern at the potential for Kildalton to become a vacuum, drawing deer off their adjacent ground to be shot.

IDMG’s deer advisor, Hugh Rose, set out three options:

1. Separating incompatible objectives by fencing the Kildalton Estate as a nature reserve, removing it altogether from the IDMG’s range
2. Finding a way to fence off vulnerable areas of the estate
3. Fencing individual regeneration plots

Middleton argued that he had already created exclusion zones, but that deer continued to make their way round the fence at the coast. He explained that he wanted them to be kept out of the lower half of the estate. In principle, he was prepared to part with those parts of the deer park north of the road which were not being regenerated, or to grant sporting rights over them, as long as the damage to his trees ceased. It was concluded that it would be best for Kildalton to be fenced out, and no longer to take an active part in the collaborative deer management.

## Heather

Heather, *Calluna vulgaris* in particular, is an important component of the hill habitat, providing feeding for deer and other animals; keeping it in good condition is a perennial challenge. In the past, muirburn (the burning of heather in regular patches), was routinely carried out to produce fresh forage for stock and deer.

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Shepherds and gamekeepers burned areas rotationally over the years to encourage fresh young heather to grow for grazing.



The type and frequency of fires vary, depending on the objective (or policy). Extensive burns are favoured to give broad areas of new growth for animals, and prevent excessive concentration of grazing in small areas. The method is also widely practised on grouse moors where

keepers are advocates for a patchwork of small burns to leave areas of long mature heather as nesting habitat and new growth in close proximity for feeding.

Carrying out muirburn, however, brings its challenges: the lack of suitable dry weather with low wind speed and the difficulty of securing adequate competent manpower when burning conditions are suitable. There are nowadays questions nowadays about whether burning surface vegetation has an adverse effect on climate and the purity of the water running off the ground; the practice has recently been discontinued by the National Trust for Scotland, among others.

Muirburn changes the land over both the short term and longer time horizons. Burning results in a loss of a proportion of phosphate from the ground that, in impoverished highland soils, may be difficult to replace. It is argued that ash washed from burnt areas may end up in burns and rivers, potentially adding to cost where the water is to be treated for drinking.

On the other hand, muirburn may help to reduce the likelihood of wildfire from breaking out; controlled burning removes the build up of leaf litter that in dry conditions can catch fire. A hill fire at Margadale was only just prevented from running

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into neighbouring conifer woodland by a concerted effort of the fire service, estate staff and volunteers.

Muirburn and wildfires over the centuries have combined with changing climate and stock grazing patterns in the Islay hills to produce the vegetation pattern that can be seen today.



Where the practice has fallen out of use, heather has been displaced by an increase of between 25 and 50% in the area dominated by purple moor grass (*Molinia caerulea*). It has been surmised that this may be exacerbated by grazing pressure

on those parts of the hill. The IDMG minutes report that, in 1989, Peter Hudson began trials to study how the diversity and quality of the vegetation on Ardtalla and Dunlossit could be improved.

Hudson thought that mechanical cutting might prevent heather reseeding; he favoured burning every fifteen years or so, restricted to areas where good regrowth was possible. Various spraying techniques were also considered for the control of *Molinia* but there were regulatory problems with the herbicides.

Steve Albon, IDMG's deer advisor from 1990 to 1997, recommended the development of a heather management policy to provide better forage for deer as well as improving the habitat for grouse. One factor influencing the quality of the heather was increasing rainfall; observing that heather does not flourish on wet ground, James Morrison, of Islay Estate, pointed out the correlation between its decline and the long term rise in annual rainfall shown by the estate's records. In some eyes, this highlighted the need for hill drainage but Thomas Wilks, Laggan's owner, warned that,

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despite his having drained the lower hill, he had seen no visible improvement to the heather.

It was observable that heather was in poorer condition than it had been in the past. Mary Morrison, Lord Margadale's sister, recalled how much healthier the appearance of the heather on Islay had been in the 1950s, a time when the entire deer population on the Islay Estate was only about 300. By the 1990's there was a very much larger number of deer, but the condition of the hill looked poorer. She wondered if the better appearance of heather on Colonsay might have been because there were no deer and was particularly concerned by Hudson's forecast that Islay would be covered in grass within 25 years.

That prediction, we now know, was wide of the mark; although there was damage by the heather beetle, *Lochmaea suturalis*, in 2020. This beetle is present in the fossil record in the UK and can cause significant damage to ling, *Calluna vulgaris*, with which its distribution is closely correlated. The beetle, and its larvae, eat leaves, stem tips and bark of heather shoots, consumption in outbreak areas even exceeding that of sheep at normal (0.8 per hectare) stocking rates. One reason for the increase in beetle attacks may be the loss of black grouse to Islay in recent decades; a blackcock has been recorded with over 300 adult heather beetles in its crop in one study.

Large areas of heather were reported to be grey-dead in 1992, the loss of cover leading to erosion on steeper slopes, which some attributed to the beetle. Ardtalla's head keeper, Callum Sharp, described the heather on the estate as being grey on west-facing slopes but still brown on the east-facing side, suggesting to him the probability of salt or wind burn damage from the prevailing wind. He identified sheltered areas recovering from scorching in earlier years and doubted if the damage had been caused by heather beetle.

The scorching effect of salt spray is noticeable in exposed faces of Islay's woodland following high winds; these conditions are likely to also affect heather adversely. It is probable that no single factor is to blame for the deterioration, which may be caused to varying degrees by winter grazing, beetle attack, wind burn,

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salinity, waterlogging and airborne pollutants. Heather does not thrive in wet, cold conditions and ecologists concur that, to achieve best results, winter grazing should be reduced to avoid loss of nutrients in the heather tips, particularly in cold, wet seasons.

### Bracken

Bracken, *Pteridium aquilinum*, is a member of the fern family, able to reproduce by means of spores that are dispersed in the wind. Extensive patches grow across the more fertile uncultivated areas on Islay and the need to control it has regularly been discussed. An extremely hardy plant, bracken tolerates a wide range of soil pH, though prefers more acidic conditions and does not thrive in poorly drained soils. In the past it was cut for various uses; in 1772, for example, £100 worth of potash made from burning bracken was exported from Jura; in some areas it was used for thatch and livestock bedding. Its proliferation in the Highlands and Islands has been encouraged by changes in land use:



*'There is no doubt that bracken has spread enormously over the hill pastures in the last one hundred years or so,*

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*particularly in those areas among the foothills where pockets of glacial drift often provide a deeper soil. The spread of bracken has probably been hastened by two things: the general replacement of cattle by sheep on hill grazings and the greater cost of labour. Cattle eat young bracken and, moreover, they break down and trample more than they eat. Thus it normally fails to establish itself in cattle grazings.' (Pearsall, 1950).*

Although it is a native species, bracken is often viewed as an unwelcome invader because it out-competes grasses, cowberry, bilberry and heathers, removing grazing across extensive areas. It is also problematic in that sheep tick, *Ixodes ricinus*, may be harboured on the mature fronds.



Control measures include crushing bracken with a roller two or three times or cutting repeatedly to weaken the plant. Evidence of its expansion demonstrates that it is not palatable to deer. Pigs can be used to grub up and eat the rhizomes, as tried at Dunlossit; but this technique would not be practicable at scale on the open hill and, despite Schroder's enthusiasm (to the extent of

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transporting some Tamworth pigs to Islay in his plane), was eventually abandoned.

*‘The mature bracken plant produces an extensively branched, underground rhizome system, which has the ability to extend rapidly... one rhizome may grow to over 20 metres in length and a single plant can colonise a large area by vegetative spread over several decades. The quantity of rhizomes found under an established bracken stand will often exceed 100 tonnes per hectare.’* (Brown & Robinson, no date).

Dr Roderick Robinson, of Landward Consultancy, said: *‘As a native species bracken cannot be exterminated like an invasive alien: it has a rightful place in the landscape and can have significant benefits for ecology, the environment, and landscape. Selective control makes bracken management complicated and often protracted! Ploughing is the best way to kill or control bracken but is unsuited to most permanent grazing, woodland, forestry, amenity or conservation situations. Mechanical methods of bracken control, in the form of crushing (trampling or rolling) and/or cutting, including combinations thereof, are sometimes also combined with use of Asulox. In all such cases, however, Asulox provides a more effective solution in respect of time and labour.’*

Following a habitat survey carried out in 2005, IDMG was advised that grazing improvements could be achieved by reducing the area of bracken. Grants for spraying were becoming available under the Scottish Rural Development Programme (SRDP) and it was clear that this was a good opportunity to seek funding to improve deer habitat and thereby increase the carrying capacity of the hill. Both Dunlossit and Ardtalla Estates have since carried out multi-year bracken reduction programmes using helicopters to spray the herbicide, *Asulam*.

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Doubts about the wisdom of spraying herbicide as the best means to control bracken on the open hill have not outweighed the perceived benefits; there are no effective alternatives at present. Many bracken areas in the Islay hills and along the coasts are relatively inaccessible for ground vehicles, such that cutting or rolling are not viable or affordable options. Nevertheless, *Asulam* should be used with particular care as it will damage, or kill, other ferns and mosses, some of which could be rare species.



In connection with the regeneration of the oak woodland on Ardtalla, Dr Fenton said:

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*'Spraying a bracken-filled clearing may not be beneficial to tree regeneration: the cleared area attracts herbivores, hence increasing browsing pressure. If unsprayed, then bramble is perhaps more likely to colonise, the presence of which is beneficial long-term to woodland regeneration. The bramble/bracken habitat is one of the commonest for tree regeneration in Argyll. Bramble can also invade grassland without bracken.'*



## FOUR

### THE ISLAY DEER CONTROL (OR NOTHING PARTICULAR)

What of the ox who loves his yoke and sees the elk and deer of the forest stray and vagrant things?  
(Kahlil Gibran)

#### First Meeting

In January 1962, Sir Ian Mactaggart wrote to Major John Morrison of the Islay Estate:

*'It was, as I think you know, proposed some time ago that there should be a meeting of land owners in Islay to consider what should be done by them, together or separately, about the deer in Islay. Our object would plainly be that neither too few nor too many should be shot, and that our policy should be such that those which remain became a vigorous and healthy stock.'*

Part of the impetus for this may have been provided by the passage of the Deer (Scotland) Act of 1959, which brought the Red Deer Commission (RDC) into being. At an inaugural meeting of estate proprietors and factors the following year, representatives from Ardtalla, Dunlossit, Laggan, Callumkill and the Islay Estate sought to identify the most suitable deer management units.

Duncan Fraser, the head keeper on Laggan Estate, proposed what he considered to be the natural management units. He included Dunlossit, Ardtalla, Laggan, Callumkill, etc., as area (a) on the east and south-east; and the Islay Estate (sometimes 'Islay Estates' or 'Islay House'), about 15,000 acres at the north end, comprising Staoisha, Kilinallan and Gortantaooid as area (b).

However, the Islay Estate team saw no advantage in collaborating with the others on management policies, and were

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satisfied that the two deer herds were sufficiently separated by fencing and farmland on which any marauding deer could be culled. The factor, John Cranston, concluded: 'Anything done as regards area (a) need not necessarily be related to any decision regarding area (b) as there was for all practical purposes no 'coming and going' between these two units.'

Thus, from its earliest days, collaborative management was confined to the cluster of southerly estates – Dunlossit, Ardtalla, Laggan, Callumkill, Kilbride and Leorin – that had formed the bulk of the former estate of Kildalton.

The name of the operation was to be the Islay Deer Control and participants resolved to meet at least once a year. If any other proprietors with deer ground were interested in joining, they were to be made welcome. Cranston demurred: '*Some discussion re 'Islay Deer Control' title in Minute of first meeting. Finally agreed that we call it nothing particular, but simply discussion by proprietors of the deer population in the best interest of deer and the Island economy.*'

The objective was the improvement in quality of the deer within the limitations imposed by the agricultural, economic and other interests of the owners and the inhabitants of the island. Each estate undertook to shoot deer broadly according to the recommendations of the RDC; marauding deer that were culled would be considered as part of the quota of the estate concerned. In order to monitor the quality, jaws and antlers were to be retained for analysis; the weights and other details of all deer shot being recorded. In order to effect improvement, the best heads, or heads likely to become good ones, should not be culled until the animal had attained the peak of maturity.

It was agreed that the gamekeepers should carry out an annual census, while the RDC was '*asked to assist with their walkie-talkie apparatus every three/five years to assess trends of stocking, quality etc.*' March or April were reckoned the best months for the count to be held.

There was acknowledgement that farmers on the island might be unhappy if they thought that deer numbers were to be expanded. It was agreed that estates should emphasise that their

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objective was not the expansion of the deer population, but its conservation and improvement, and they should give assurance that all marauding deer would be culled.

The primary challenge was finding the best way of collaborating to ensure that correct and consistent management was applied over ground in different ownerships. The minutes of that first meeting portray a spirit of goodwill:

*'Dr. Macgown instanced that he and his son that morning had seen about 200 deer (half stags, half hinds) on Callumkill hill while, in the Autumn, there were hinds with practically not a single stag. To some extent the Laggan ground was similarly hind ground. Mr Bruno Schroder stated that he and his father realised the complications and were prepared (after they and their guests had done some stalking in the early part of each season) to grant facilities for Laggan and Callumkill to stalk and kill an appropriate number of stags on Dunlossit and to take the carcasses away. This was noted with satisfaction by Dr. Macgown, Callumkill and Mr. Fraser representing Laggan.'*

Summing up his take on the meeting, Cranston foresaw some difficulties for his own estate, noting down drily:

1. *As all the other interested parties are set on having a 'census' made by a competent Field Officer and staff from the Red Deer Commission, it is thought that a similar census should be invited for Islay Estate so that we may not appear to be 'odd man out' and to forestall any complaints by Tenants.*
2. *From my previous Memo dated, 31/12/61 and relative records of deer killed on the Estate, it seems clear (1) that for every stag shot by Major Morrison and his guests during the early part of the season up to the beginning of October,*

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*approximately two stags have had to be killed by keepers to keep the peace with farm tenants suffering damage to crops, and (2) that, by comparison the killing of hinds has been inadequate.*

3. *Unless Major Morrison and his guests are to make fuller use of stalking (involving residence into October until stags 'break out' and can be more readily found) it seems that present requirements could be met by an appreciable curtailment of the present deer stock, which could not fail to lessen competition with sheep stocks for available winter keep on the hills and claims by tenants for deer damage. In addition, keepers could be expected to pay greater attention to game preservation which, at the moment, they cannot do if for considerable periods they are out early and late to deal with marauding deer.*

## **Committee**

The following year, the annual meeting was moved from January to late August, which from then developed into an unbroken annual tradition. The group became 'The Islay Deer Committee' and Major Morrison was invited to chair its meetings.

Herd management policy was debated:

*'There was a long discussion on Bruno Schroder's Thesis especially to the ratio of stags to hinds and the number to be shot. Mr Schroder wished to shoot less stags and more hinds. This was disagreed by most people present and by the keepers. The majority opinion was that we would increase the number of deer to as before the war and that this would not necessarily mean that the condition of the deer would deteriorate by doing so. It was generally agreed that one should shoot rubbishy stags and clear off all the goats possible and so improve the quality of the deer.'*

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A harbinger of the future of collaborative deer management in Islay was that those present agreed, in broad terms, a shooting policy that would be adopted by all of the participating estates. The ‘Ardmore Guide’ was adopted as a means of improving the heads of stags across the range, in terms of which those below three years old were deemed too young to cull. For those aged between four and nine years:

- *Up to a stag's fourth year no six pointers to be shot (unless the head formation is bad)*
- *Up to seven years no stags to be shot with double brows and forked tops*
- *Over seven years old, no stags of ten points or over (except stags which have reached their peak at about 12 years old)*

*It was suggested that Bruno Schroder should also approach Dr. MacGown with regard to the number of stags and hinds for his quota. It was unanimously agreed that if he could be persuaded to take ten stags everyone would be very pleased. The subject of marauding deer was discussed and it was agreed that Dr. MacGown's idea of marauding deer being those that ate his sheep's grass was not a true definition.*

The counting programme was launched, though not without dissensions as to the figures produced. ‘*A general disposition to query*’ dogged the 1965 totals and it was decided to call in the RDC to resolve the matter, pending which allocated culls would not be changed. Unfortunately the RDC had had to decline owing to the pressure of work, a harbinger perhaps of future constraints on the agency; at the time Islay was the only area in Scotland to have asked the RDC for their assistance. Fortunately the next year’s count was agreed to be the best yet:

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*'Sir Ian Mactaggart said that he thought that the 1965 quota of deer shot was as nearly correct as possible, showing that the allowances made were right and that we should do the same this year. Bruno Schroder said that in 1963 the Deer Commission counted on the southern side 1,044 deer; this year there were 1,627 which meant a 60% increase in the deer population in four years and wondered whether with the present sheep population on the southern side 1,600 deer was not too many. Sir Ian Mactaggart thought that the numbers were not too great and that we should hold the population around 1,600. The Chairman commented that the Dunlossit stock had gone up and that Ardtalla had gone down and it might be that Dunlossit had got rather heavy in deer. Dr. MacGown asked the keepers how they thought the deer would fare with the present numbers. Mr. McHardy said that the sheep farmers were fairly pleased.'*

The greatest difficulty in establishing collaborative management of a resource is working out how best to cut the cake. A G Cameron wrote that successful deer-forest management:

*'must strike a compromise between rival claims in which the deer-stalker is content to take a slice of the cake, although his inclination strongly tempts him to take the whole of it' (Cameron 1923),*

He was speaking of the claims of one year's tenant against the next year's, but with no physical barriers to prevent animals crossing between their estates, the perceived need here was to reach agreement on the numbers of stags and hinds to be culled each year and the allocation for each estate necessary to achieve their over all objectives fairly and in accordance with the 'public interest'.

## Weighty Papers



One of the strengths of the Islay Deer Committee, in its various incarnations, was that it strove to obtain the very best advice from top men in the field. Over the years there were four deer advisors, starting almost at the beginning with Wing Commander Andrew de Nahlik, a Polish-born former air ace who had made a considerable name for himself in the world of deer management after the second world war.

On de Nahlik's death in 2008 aged 88, an obituary in the Stalking Directory described him as: '*Well versed in the strict European traditions of deer management ... he brought this to the handful of post-war enthusiasts who were starting to revolutionise deer management in this country, taking a leading part in turning deer from being considered vermin to quarry species deserving humane and enlightened treatment.*'

De Nahlik's seminal book, *Wild Deer*, was published in 1959, clearly an auspicious time in the deer world. Perhaps most importantly for the future of the Islay lairds, there was a chapter subtitled 'What is a Good Antler?' The chapter begins "*there has hardly been a page until now on which deer antlers have not been mentioned, and there will be few pages without further mention of them in the forthcoming text. It may therefore be advisable to explain what a good antler is*", which of course he then went on to do in some detail.

Reviewing a 1992 book by de Nahlik, *Management of Deer and their Habitat*, Brian Staines, writing in *Forestry Journal*, noted: '*His arguments and philosophy follow very much the traditional, continental approach to deer and forest management tempered with his long experience in this country.*' The reviewer observed also that, of its 271 pages, only three were devoted

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specifically to natural habitats or the open hill, the remainder concentrating on forestry.

De Nahlik enjoyed a long career as Islay deer advisor, finally retiring in 1989 after more than 20 years in the post. He was succeeded the following year by Dr Steve Albon, a respected zoologist with the Macaulay Institute, (now the James Hutton Institute) in Aberdeen, who held the post until 1997. Dr Albon is renowned for his involvement in the long-term research on the population ecology of red deer on the Isle of Rum. Publications include '*Red deer in the Highlands*' co-written with Tim Clutton-Brock. Dr Albon's objective was to build up a pattern identifying the age structure and pregnancy rates for each age group in the herd. This could be used to predict recruitment; those predictions could then be compared with what was subsequently observed, taking into account mortality among calves. Ovaries collected by the keepers were sent to Norway for histological examination in order to check whether hinds had ovulated during the autumn and whether they calved the following summer.

Hind jaws were collected and labelled to estimate age from the annuli in the cementum of the first incisors; a special sectioning technique for very accurate ageing was used. He stressed that it was very important not to shoot too many old animals; by analysing the jaws it was possible to assess what was being taken from the population.

After moving on from the Islay post Professor Albon went on to analyse how the red deer population in Scotland has grown in relation to an ameliorating climate and also to look at the likely effects of the reduction in sheep grazing in the uplands.

His place was taken in 1998 by Hugh Rose, a professional deer management consultant who had run the Defence Deer Management Organisation in the 1980s. Rose chose to focus on



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guiding the keepers in their tasks, such as the techniques to age beasts correctly and to assess habitat condition. He was clearly a hardy man, one year even dutifully attending the Islay Deer Meeting despite having both legs in plaster.

Rose's tenure as deer advisor coincided with an increasing degree of dissension over population and cull targets for the herd. This led to the withdrawal on 2002 of Dunlossit's estate manager, Chloe Randall, as secretary of the group. In spring 2004, he wrote to the lairds that he found it difficult to give proper professional advice on the limited and conflicting information that he had: his final report tabled at that year's meeting spelled out what he saw as the three key skills required of the stalkers '*besides the ability to approach deer closely and extract and larder carcasses correctly.*' These were:

- (1) *recognizing the shootable beast – with particular emphasis on aging hinds at a distance and differentiating yeld from milk hinds*
- (2) *aging shot beasts accurately to enable the living population to be reconstructed with confidence*
- (3) *assessing the grazed habitat and the utilisation by deer*

The next IDMG advisor, appointed in 2005, was Professor Rory Putman. The foreword to '*Ungulate Management in Europe: Problems and Practices*' states: '*Putman worked for many years within the Biology Department of the University of Southampton, where he established and led the University's highly regarded Deer Management Research Group. He now works as a freelance environmental consultant and wildlife advisor based in Scotland. He has worked widely in the UK and overseas, with research efforts*



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*focused on the population ecology of ungulates and their interaction with their vegetational environment – always with the explicit focus of helping to develop more sensitive and more effective methods of managing those same ungulate populations and their impacts on agriculture, forestry or conservation interests.'*

Professor Putman explained to the Islay lairds how crucial it was to consider management strategies not just

for the deer but also their environment. The performance, and the welfare, of the animals was dependent upon the quality and sustainable management of their vegetational environment (for food and shelter) as well as the structure of the deer herd itself. In turn, deer were a major (the major?) influence on the dynamics of the vegetation, so that managers must pay close attention to both of these elements.

*'Individual estates, or management groups, often seek to satisfy several different objectives simultaneously: arable agriculture; livestock production (sheep and cattle); commercial forestry; woodland restoration projects; the need to protect notified sites of conservation interest (Sites of Special Scientific Interest or Special Areas of Conservation); other more general conservation objectives (objectives of general habitat stewardship/enhancement) ... as well as integrated management of the deer herd and their own environment. Most estates – and managers – successfully deliver multiple objectives from a single area of land although the balance of priority between them may differ from place to place.'*

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He resigned as IDMG advisor in 2010. The chief of a series of frustrations was the perceived failure of the group to put into effect habitat measures to increase the carrying capacity of their ground. He had put this forward as a way to even up distribution of deer within, and between, estates: '*To eliminate hotspots of impact and encourage colonisation of 'empty quarters' fundamental to any successful and sustainable policy of deer management. Many of the Southern lairds don't actually want an adviser (or his advice); rather, you like the idea of the Group's having an adviser ... and I guess that this doesn't just apply to myself, but would apply to any adviser you were to appoint.*'

The estates soldiered on for the next few years without the services of a deer advisor, employing the cull and population formulae that had been agreed during Professor Putman's tenure.

### Islay Deer Management Group

The name, Islay Deer Management Group (IDMG), was first used in the Minutes of the annual Deer Meeting in 1992, in the wake of the setting up of the Association of Deer Management Groups (ADMG) in January that year. That there was already a structure able to step into the DMG role was thanks to the work done in the preceding 30 years of the Islay Deer Control (or Nothing Particular), and its successors. Deer Management Groups were being set up across Scotland, and no other group was managing deer in Islay. But as the deer management world came under greater scrutiny and control, doubts began to be cast on the name; the Islay Estate was a 'semi-detached' member, their herd separate and policy-making independent; other parts of the island have acquired quite a large number of deer, of all three species, but there was little appetite to take responsibility for them. Professor Putman trenchantly expressed the view that the group ought to be more inclusive and extend to include the RSPB and significant farmers.

One reason it did not do so went to the heart of the function (or dysfunction) of Deer Management Groups across the

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country. Islay's DMG comprised estates that had broadly similar outlooks, all with a field sports agenda , and the means to devise and carry out relatively active management through the teams of keepers and estate managers. Many other groups have members with fundamentally more conflicting objectives, often with neither the interest, nor the means, to look after deer. In the South Skye Deer Management Group, for example, minutes of a meeting noted: '*Through the discussion it became clear that there were opposing interests most clearly being those of crofting and sporting estates. The crofter's desire to see no deer on land they need for their animals/crops, versus the Estates need to maintain their sporting interest*'. Such opposing attitudes generate a degree of dissension which can make it difficult to achieve positive deer management objectives. That is not to say that other land owners and occupiers of Islay would do likewise, but their interest in the type of deer management described in this monograph is probably minimal.



## The Good, the Bad and the Ugly

The annual Deer Meeting became a fixture of the Islay calendar for the participating estates, where lairds, factors, keepers and others met to talk about deer and other cognate matters. The event was always held on the Sunday prior to the late August bank holiday and was chaired in turn by the lairds of the Islay Estate and the various southern estates in rotation.

The meetings had a well-established structure, beginning with a display of cleaned heads and jaws of stags shot during the preceding season, each marked with a label showing when and where shot, as well as carcass weight and other information. Among

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the exhibits were stags of different age classes, animals with deformed antlers or those which had become bizarrely ensnared.



The display of heads gave an opportunity to compare the good, the bad and the ugly, all of them painstakingly prepared for the day by the keepers. For Schroder this was a favourite event, an opportunity to study and admire the quality of heads resulting from policies pursued over many years and, where

appropriate, to question why this or that beast had been selected.

The meeting opened with an account of the counts on the southern estates' and Islay Estate hills. In earlier days this was often followed by the Deer Officer from 'the Commission' providing an update on policy and regulation. In the days of the RDC and its immediate successor, Deer Commission Scotland (DCS), the representation and quality of presentation was high and the attitude positive. Latterly, attendance of anyone from the agency with the regulatory brief NatureScot, (then called Scottish Natural Heritage or SNH for short), was at best patchy. It tended to be left to the Secretary of IDMG to liaise with them over the government's framework for deer management groups, centred on the Deer Management Plan process, and to report back to the meeting.

A representative of the ADMG quite often attended to give an overview of the deer sector across Scotland. The various deer advisors employed by IDMG over the years, had the opportunity to hold the floor and explain their proposals for the better management of the deer and their habitat.

The agenda also covered the condition of the deer fence, herd policy, quotas and habitat as well as financial matters. Much of the decision-making over quotas and other such important matters were agreed prior to the day and the meeting closed with time in the bar and a lavish lunch.

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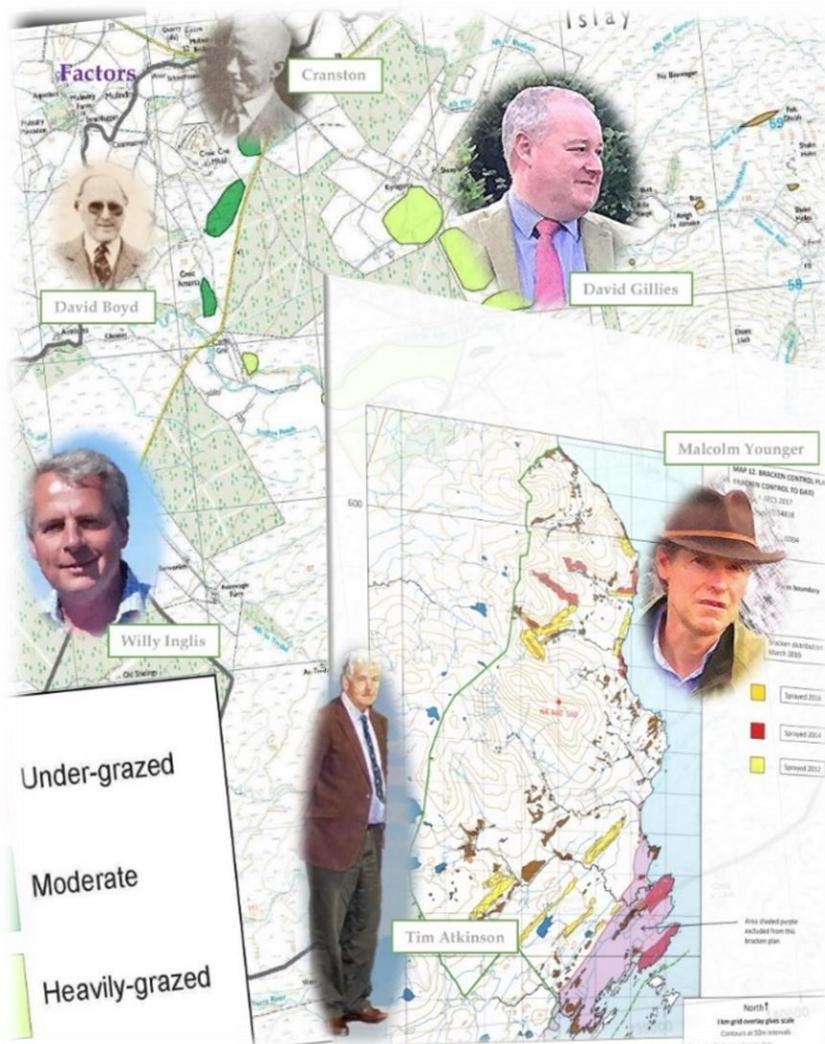
### Factors and Keepers

Consultants and professors are one thing, gamekeepers another, for it is their efforts that ultimately determine success or failure on the hill.



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The Factors do their bit, to a greater or lesser extent, triangulating as best they can between the ambitions of the lairds, the plans of the advisors, the laws and regulations pouring forth from Government and the resources available to them.



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Gamekeepers have the final responsibility for what is culled, and what is not; they carry out the counts, spy the hill for beasts, guide rifles to their target and gralloch and collect carcasses afterwards, carry out the larder work and record the weights and other useful information.

The best deer management takes professional keepers and stalkers with experience built up over decades. Too often when others – the conservation professionals, politicians, forest managers, farmers – speak of ‘deer management’ they mean no more than killing more deer.



## FIVE

### THE WORKS

The woodcock I startled yesterday  
clattered off through the birch trees  
without starting to philosophise  
and write a book about it.

(Norman MacCaig, 1983)

### Assessing Habitats

*'Highland Britain is of surpassing interest because in it there is shown the dependence of organism upon environment on a large scale ... in these marginal habitats we most often see man as a part of a biological system rather than as the lord of his surroundings.'* (Pearsall, 1950)



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That deer, and other grazing animals, can live within the capability of the land to sustain them is of obvious importance; in a dynamic system it cannot easily be determined, at a particular moment, whether the habitat is (or is not) in balance with the animals. The nature of the habitat often depends on the presence of grazing animals to maintain its characteristics; light feeding leads to changes in the floral assemblage as surely as does heavy grazing and trampling. Some constituents of the sward or scrub may be preferentially grazed or browsed, the effects varying with the weather pattern between and within years.



Early on in the life of the IDM, a debate developed on the subject of the ‘carrying capacity’ of the ground. Schroder mentioned that the Nature Conservancy Council (NCC) had been studying carrying capacity and the ground-carrying dynamics between deer and sheep on their Rum reserve. Sir Ian Mactaggart reported that a 1972 NCC report found that Islay was neither over-stocked nor under-stocked, relative to other areas of Scotland. This has frequently been the conclusion of the group’s deer advisors;

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however, when the herd total rises above 2,000 head, they have also stressed the need for habitat improvements to accommodate the extra mouths.

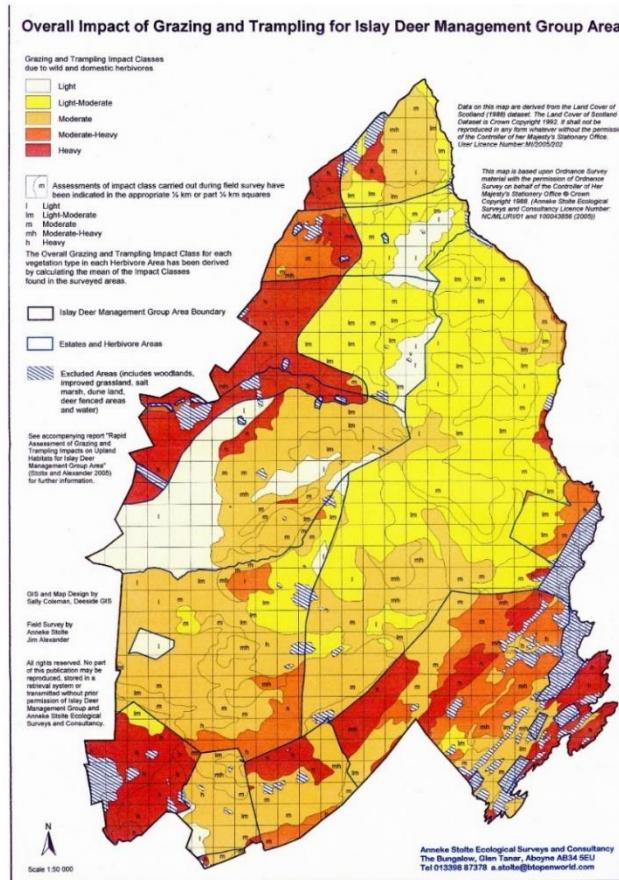
In 1996, a new decision support system, Hilldeer, was introduced by the Macaulay Land Use Research Institute (MLURI) to record the habitat in terms of both the vegetation type and the quality. This tool was designed to produce an assessment of vegetation availability from which carrying capacity, or optimum population density, of the grazing area might be calculated. The use of differing management measures would enable the model to be used to identify the impact on vegetation and deer numbers over various periods. The Hilldeer model incorporated not only deer count statistics but also the vegetation biomass statistics which MLURI endeavoured to record in each of the pilot areas. The model was intended to generate population predictions based on different culling regimes coupled with different levels of grazing by deer, cattle, sheep, rabbits and hares. Other factors to be taken into account were potential disturbance by hill walkers, the effect of supplementary feeding for stags and the van weights of deer that had been culled.

David Balharry, of Deer Commission Scotland (DCS), instructed IDMG in 2002 that, before embarking upon a full habitat survey using the tool, the group should first identify their objectives and the key habitats involved in their delivery. The current state of key habitats should be established together with identifying the essential practices needed to deliver the required characteristics. The conclusion from this preliminary exercise was that a smaller, cheaper survey was sufficient to answer the question of herd size.

In conjunction with Hilldeer, MLURI had begun work on a Rapid Habitat Assessment. However, John Milne of MLURI stressed that whatever scientific data was applied to a deer group, the management situation could not do without the hands-on skills of the stalker. Hugh Rose, of IDMG, also emphasised the importance of developing an in-house ability to monitor changes in grazing impact on the habitat as the deer management strategy developed. He recommended that if a range/grazing assessment

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contract was awarded, the scientists doing it should be asked to demonstrate the techniques involved; the stalkers would soon become practised and confident at them.



A habitat survey of the Islay hill ground, undertaken in 2005 by ecological consultant Anneke Stolte, was intended to increase the understanding of how the effects of grazing in this environment could be categorised.

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Stolte said that she was using a standardised method developed by NatureScot in which indicators, specific to each of the main habitats, were used to classify impacts of grazing and trampling. Light, moderate, and heavy classes were identified for the main vegetation types (dwarf-shrub heath, blanket bog, wind-clipped heath and coarse and smooth grassland).

For instance, heavy impact on dwarf-shrub heath was indicated by more than two thirds of shoots of heather or blaeberry being browsed; widespread grazing induced growth forms like drumstick, topiary or carpet heather; frequent tracks and/or scars and very conspicuous herbivore dung. Light impact class was indicated by less than one third of heather or blaeberry shoots had been grazed and that the occurrence of reduced growth forms, tracks, scars and dung was none or scarce.

Given the size of the southern estates' range, it was not feasible to assess impacts over the whole area, therefore the Rapid Grazing and Trampling Impact Assessment Method (Stolte & Alexander, 2005) was used. This involved surveying the grazing and trampling impacts on a proportion of the area and using the findings to predict the impact on the rest of the area. The most important indicators for predicting grazing and trampling impacts were:

- Vegetation type
- Management – estate or farm
- Which herbivores were present
- Winter feeding

Fifteen vegetation types were sampled within blocks, defined by the combinations of estate management units on the one hand and the types of herbivore that were present on the other. 87% of the highest impacts were in areas with supplementary feeding, and impacts were notably higher on burned areas, near improved grassland, in shelter and where the geology was base-rich (fertile). Stolte's conclusion was that a quarter of the range was enduring unsustainable impacts, whilst the vegetation on a further third was in unfavourable condition. Effects on the landscape that

were deemed deleterious included heather loss, the spread of *Molinia* grass and erosion. Stolte recommended a reduction of livestock numbers on the hill; a more even spread of livestock across the available grazings; no burning on bog land and a reduction in winter feeding to halt the deterioration in the quality of the habitat.

Commenting on Stolte's report Professor Putman counselled that he saw no cause for alarm as there was no good case-history on what may be the long term effects of moderate grazing impacts on community composition (and more particularly on persistence of heather within the sward). This would vary from site to site depending on climate and soil conditions, and even if some heather loss should occur under moderate grazing levels, the actual time scale of such loss under moderate or heavier browsing pressure was not well established. He emphasised that future management must be accompanied by monitoring vegetation trends and assessing responses to changes in management.

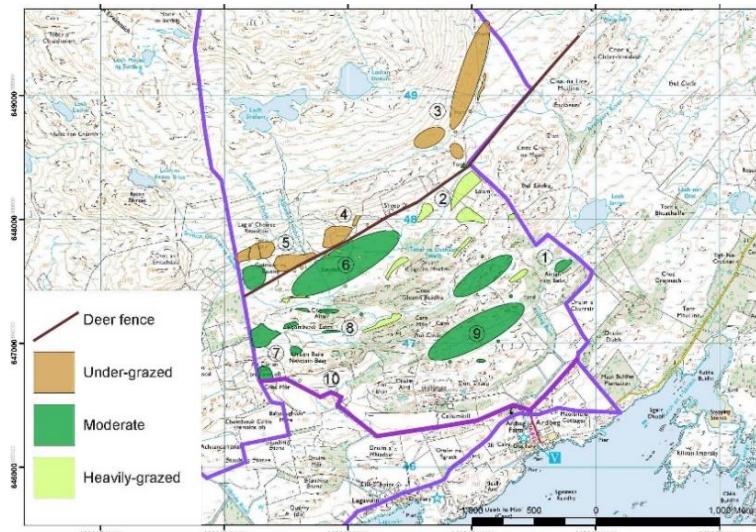
Professor Putman was insistent that an increase in the size of the herd, to achieve an annual yield of 140 stags, would require management of the habitat and improvements should be put in place:

*'Both to cause some redistribution of impacts over the ground (taking pressure off areas currently seen as suffering excessive impact) AND to increase overall the quantity and quality of forage available to sustain a higher population overall (at 2,100).'*

In his resignation letter in 2010 Putman complained that, despite 'repeatedly harping' on about enhancement of the habitat and the resources on which the deer herd depends, very little had actually been achieved. In the wake of, even if not necessarily as a result of, this criticism, there was progress however; Dunlossit and Ardtalla established new native woodland, sprayed large areas of bracken and began blocking hill drains in order to restore peatland.

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A fundamental parameter in efforts to determine an ‘appropriate’ level of grazing for the maintenance of a habitat is whether the objective is or should be to maintain the landscape as it is. Ecosystems and communities of plants and animals are not static, and in longer time scales there is inevitable change from one habitat to another. Succession can be delayed or accelerated. Natural processes beyond the control of man constantly introduce new elements into the dynamics, tipping the balance this way or that.



It is difficult, mistaken even, to attempt to define rigidly what would constitute over-grazing or under-grazing, what population might be construed as having too many deer or even what form sustainable deer management should take. The answers to these questions depend substantially on the objective, but it is clear that management decisions must be taken in the context of climatic conditions, soil conditions, the number and distribution of deer across the area and the presence or absence of other herbivores. The place of the apex carnivores is taken by the rifle; the ultimate limiting factor to the size of ruminant herd animals is the availability of forage, which varies according to the season and

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differs from year to year. A greater number of deer can be supported when the winter is short and mild than when it is long, wet and cold. Fences, too, may affect survival; they can block migration to strategic grazings as well as denying access to woodlands.

It is worth noting that different conclusions can be drawn from the evidence on the ground. For example, Stolte's Rapid Habitat Assessment plan (p.95 above) shows an area of Callumkill, just north of the deer fence, as subject to moderate grazing pressure. However, an assessment of grazing in a 2010 survey of potential marsh fritillary butterfly habitat (p.98), by Dr Neil Ravenscroft, shows that the same area is mostly rated as under-grazed.

Five years separate the two assessments but the deer population had actually increased quite significantly during the same period. There may be other factors in play; it is not known whether, for example, cattle or sheep may have been kept on the ground prior to 2005, but it illustrates how detailed it is necessary to be to understand habitat dynamics.

Understanding a particular habitat demands a good knowledge of what is there, and the establishment of a reliable system to track how it is changing. Professional surveys and reports have their place, but:

*'There is a danger in having over-high expectations from monitoring because upland landscapes are complex and many variables are involved in determining the state of the deer herd or vegetation in any given year ... vegetation change (apart from bracken) is generally slow and not enough is known about its causes: grazing is only one factor amongst many ... a vegetation monitoring programme will need to be carried out for many years if trends in vegetation cover are to be determined.'* (Fenton, 2019).

Milner *et al* (2002) said: '*Overgrazing is a controversial term ... its precise definition is not generally applied to natural ecosystems, even under heavy grazing pressure,*

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*because wild herbivores are regulated by their food supply during the unfavourable season ... for example, there is no evidence of habitat degradation on St Kilda or the North Block of Rum where herbivore populations are naturally regulated.'*

It remains important, however, to study the habitat and be in a position to recognise changes in its condition over a relatively long period. Proposals to improve or protect this or that habitat will otherwise be meaningless.

### Counting Deer

Systematic counting of deer began in Scotland in 1953, an essential part of any deer management planning worthy of the name. The southern estates developed a methodology for their own foot counts commencing in 1963; counts were to be carried out in clear, settled weather, using a team of sufficient size, following the same routes. Members of the team were provided with base maps to record information on deer distribution. The exercise usually involves around 20 people, organised and led by the estate keepers.

According to NatureScot, a deer manager will get more value from a deer census if the data is used together with information such as the condition of the habitats. Concentration on the habitats, although important, should not eclipse the desirability of accurately knowing the size and distribution of the animal populations utilising them. The effects of browsing and trampling by deer may not be distinguishable from those of sheep or other herbivores. Knowledge of how many other animals share the ground at different times isn't always easy to find out, but should be taken into account. Recording with as much precision as possible the number, sex ratio and distribution of deer across the range is key to establishing a sustainable basis for deer management.

There are different views on the optimum time for deer counting to be carried out. One opinion was that it should be held as close as possible to 16 April each year, before the stags cast their

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antlers; calves would be easier to distinguish then, being clearly smaller than the hinds.



Louis Stewart, of RDC, considered that professional gamekeepers on the island would have no difficulty in telling stags that had shed their antlers from hinds, but this might be a problem for some of the helpers and there would be a greater chance of error. If the count were carried out earlier in the year, immediately after the hindstalking season finished in mid-February, the results could be invalidated by high spring mortality should there be a serious lack of food in March or April due to hard weather. The practice has since developed of counting in March with a good forecast, though in some years it has had to be delayed pending better weather.

The counting team must be physically fit as there is a great deal of ground to cover and on some routes it can be steep and uneven; the same team counting the southern estates may also be taking part in the Islay Estate count, with two further days' counting on Jura. Core team members have amassed many years of experience and know the vagaries of the routes that they follow across the hill on deer count days. Dick Youngson, Deer Officer of the Red Deer Commission (RDC), offered fulsome praise for the way the Islay count was planned and carried out, “*plenty of technique*”, as he put it: “*carry on in that mould and it will be splendid*”, he said, “*very professionally done*”.

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### DEER COUNT REPORT 1965

Report on the Deer Count over the following estates:

Dunlossit, Ardtalla, Laggan, Kilbride, Kildalton and the ground known as Port Ellen Parks, Callumkill and Leorin, including a separate report on the Islay House Estate Count

The main count took place on 13<sup>th</sup> April. A meeting was held beforehand to plan the best method of procedure.

The weather conditions were good. The wind was from the north and the day was basically sunny with occasional showers.

The seven teams started at the south and worked towards the north end. The teams and their routes were as follows

1. Jimmy Campbell and Rupert Wright - Ardtalla to Proaig and along the coast to McArthur's Head, then to Glen Choireadail and then just north round Beinn Dubh and over the shoulder of Beinn Bhreac and down to Storakaig.
2. Duncan 2 and Sir Ian Mactaggart - Claggan up to the eastern shoulder of Beinn Bheigeir through the water sheds then between Beinn na Caillich and Beinn Glas, then south round Beinn Dubh, over shoulder of Benn Bhreac and back to Storakaig.
3. Willie McHardy and John Mactaggart - Ardilistry and duns covered by Willie McHardy, and Gartnabroom and Kintour covered by John Mactaggart. Kintour river up the west side of Glen Leora. Along the top of Beinn Bheigeir to the March, along the top of Beinn Glas, round Beinn Dubh and west of Beinn Bhreac and back to Storakaig.

Note: Sir Ian Mactaggart, Rupert Wright and John Mactaggart all turned back to Storakaig from the shoulder of Beinn Bhreac. Jimmy Campbell, Duncan McGregor {XE "McGregor, Duncan \i"} and Willie McHardy continued north to Glen Logan and over beinn Dubh to Dunlossit.

4. Willie Rae and Donald MacCalman - One from Ardilistry to Staoin and the other from Loch Uigeadail east to Staoin. Up the west face of Beinn Uraraidh and by Loch Allalaith., the west shoulder of Beinn Glas and down to Cattadale.

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Though in constant touch with each other Willie Rae and Donald MacCalman worked separately, each counting their own side of the march, i.e. Willie Rae - Dunlossit and Donald MacCalman - Ardtalla.

5. Duncan Fraser and Peter Beaton - Kilbride Farm, Beinn Bhreac and over to Sholum lochs. Beinn Sholum and down to the west side of the Sgorr. Beinn Uraraidh to the west side of the Sgorr. Beinn Uraraidh to the west side of the shoulder of Beinn Bhan and over the lower ground to Kynagarry.
6. Major Clapham, Mrs Clapham, Kildare Clapham and Mr Nicholas Wilkes - Kilbride to the Leorin loch area. The tops of Castle Hill through the Maols and down Torra burn.
7. Ian Fraser and Colin Morrison - The bottom of Leorin, Torra farm to Castle Hill and from the road to castle Hill.

On April 14<sup>th</sup> Ian Fraser, Duncan Fraser and Willie Rae counted the Deer Park.

Owing to the very wet weather on the 14<sup>th</sup> the wooded low ground to the sea side of the road on Ardtalla was left until the 16<sup>th</sup>, when a team of six was sent out from Ardmore, including Sir Ian Mactaggart, Willie McHardy and Donald MacCalman.

Dunlossit      The drop in the number of stags is probably accounted for by the burning on Ardtalla close to the march. The increase in hinds and calves follows the pattern shown on other estates.

Ardtalla      There is a fantastic increase in the number of deer on Ardtalla despite the fact they shot their full quota of stags last year. Ardtalla deliberately accepted a small quota of hinds and shot less as they wished to increase their stock, however, this still does not explain the increase of a total of 502 to 1,061. Clearly, as stated before, the burning has a great deal to do with this and probably last year's weather conditions which produced an inaccurate count. The wind from the north this year would tend to put deer on to Ardtalla from Dunlossit whereas last year with a south-easterly wind the reverse would have taken place. There was a considerable improvement in the calf survival rate over this estate.

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Laggan An enormous increase in the number of stags is noted. The increase otherwise was probably accounted for by better weather conditions and a more accurate count.

Kilbride An unquestionable increase in all types of beasts.

Kildalton The only area where there is a noticeable decrease in beasts. Those who counted in this area stated there were no tracks or droppings of beasts except in one area close to the Ardtalla march where three stags were seen and where there was a gap in the old deer fence.

### Marauders as against sporting

It is possible that as a result of the new fence erected by Dunlossit a number of deer from Islay House have been put over on to the other side of the ground. It is a pity that a number of good stags had to be shot as marauders in the Autumn of last year.

It was agreed that April is definitely a better month than March for the count to take place and as far as possible the job should be done in one day.

The co-operation between the estates and the teams, and the spirit of goodwill displayed by all taking part was very satisfactory.

### Transport arrangements

As last year, this worked very well.

Everybody would like to thank Dunlossit for their hospitality at the end of the count on the 13<sup>th</sup> April, particularly Mr Macrae for organising this and Mrs McGregor for being such a kind and hospitable hostess to everybody when they came in.

### Mapwork

Lady Mactaggart and her secretary, Miss Leader, undertook this and found it very much easier when the count was done in one day. In addition, after last year's experience the problems were considerably less.

### Marches

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We believe that the marches shown on the maps are now considerably less.



For some there were favoured walking routes: the one skirting the west of the Islay Estate hill from Gortantaoid to Rhuvaal lighthouse passes sea caves and sculptural rock formations along the shore. Hoping to be on that part of the line and hearing some of the ‘home team’ discussing going this way themselves ‘DJ’ MacPhee once resorted to a degree of skullduggery to ensure that it would be assigned to him. Wrapping a piece of wood and addressing it to the residents of the lighthouse cottage at Rhuvaal, he mentioned to the Islay Estate head keeper, Jack Adamson, that the postie had asked him to deliver a parcel to the lighthouse...

At the end of a long day’s counting there was a humane tradition of refreshments for those participating that helped



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to encourage the faint hearted. DJ remembers as a young keeper arriving tiredly at the Ardtalla road end just in time to see his head keeper, Donald Stewart, leap into their vehicle and speed off. DJ knew where he'd find Donald. Sure enough, when he'd tramped the (good few) extra miles down to Kintour Farmhouse, where Donald's friend Gourlay the farm manager lived, the drams had already been flowing freely.

One possible reason for anomalies in the counts over the years may be the inevitable breaches in the deer fences surrounding the hill. These have been seen to be notably porous in places, with deer finding slack wires or holes beneath. On occasion, gates may have been left open. Deer in woodland and gullies may have been missed. Deer counting is not an exact science, but the results gathered over the years, in a consistent fashion, allow a degree of confidence in understanding the long term trends in numbers.

Occasional helicopter counts run by NatureScot, and its predecessors, over the years have been a useful check to corroborate the foot counts. The helicopter traversed the ground and spotters on board (some of the estate keepers) noted the numbers. Photographs could be taken for later analysis. Today there is talk of deploying drones or using data from satellites, though these technological solutions have not yet been perfected.

Counting deer in dense woodland is not possible from the air but much of the Islay hill ground is open and would be suitable for this technique. Deer were, however, known to be resident in dense conifer woodland blocks that had been established by the Forestry Commission, where it was not possible to count populations accurately. It was ventured by the Dunlossit keepers that there might be upwards of 120 deer in these plantations. Louis Stewart, of the RDC, thought that the only way to count them was to drive the deer out but even with a good team it was virtually impossible to do that. He considered a 90% accurate count would be a good result.

From 2019, policy developments and funding constraints have precluded helicopter counts, but the long established Islay foot

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counts have proved sufficient for the purpose, despite the occasional anomalous result.

Analysis of the data must take into account the conditions on the day, and attempts made to explain unexpected changes. Occasionally the count has failed altogether due to the weather and in 2020 the Coronavirus lockdown prevented it from taking place at all.

One year, when the deer count had been called off due to poor weather, Bruno Schroder asked de Nahlik to calculate the deer numbers using mathematical regression analysis. Such arcana were not universally appreciated: Sir Ian Mactaggart proposed that the theoretical marginal increase thus calculated should be ignored and that for the purpose of arriving at the quota, the previous year's count figures should be used. His scepticism won the day. The following year, Schroder asked whether the count figures cross-checked with the theoretical figures calculated by de Nahlik, who replied archly that the numbers were, indeed, **very** similar.

In 2010, Professor Putman carried out population projections using counts of hinds, stags and calves from 2006 to 2009 to check whether the reported count of 932 stags, 904 hinds and 324 calves for 2010 was accurate; this was an apparently high count of hinds and rather low one for stags. He thought that this might be explained by misclassification of a significant number of knobbers (young stags) as hinds. He warned that population projections are '*necessarily somewhat theoretical and should be interpreted with some*



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*caution.*' In making the projections, the assumption was made that the general Islay calving rate is 40.7 *per 100* hinds. He concluded from this exercise that, taking account of the mis-classification: '*the 2010 count was exactly what we should anticipate.*'

### **Mending Wall**

*'My apple trees will never get across  
And eat the cones under his pines, I tell him.  
He only says, 'good fences make good neighbors.'* (Frost,  
1914)

Friedrich Vorreyer (1960), of whom more anon, spoke of the need to:

*'Mark off an area in such a way that hunting decisions on conservation taken in this connection should be upset as little as possible by neighbours who are less understanding or who do not wish to join in a programme of this type. It would, therefore, be necessary for this reason, to try to establish a relatively large "Bloc" with a minimum of from 20,000 to 25,000 acres. Only with such an area will it be possible to maintain sufficient control over a herd, provided of course that permanent deer reservations are maintained on it.' If that was not possible due to: 'Local or personal difficulties, and if there was a danger of some neighbours exercising a harmful influence, it would be necessary to study the possibility of achieving independence by building an enclosure.'*

Such an enclosure would be beneficial where the aim was simply to propagate trophy stags but there were also some disadvantages; he cautioned that such enclosures should be considered to be a temporary measure. In the late 1970s, Sir Ian Mactaggart proposed a formal policy of erecting deer fencing around the entire landward perimeter of the deer range, asking that

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plans be prepared to show the exact position; the idea was accepted by the other lairds. In general the line chosen for the boundary of the hill was located at what might be termed the 'hill dyke' above which there were no physical barriers between estates; their sheep flocks, if present, were separated only by active shepherding and the animals' own 'hefting' instincts, which bound them to a particular area of land. The deer fence would thus enclose largely high ground and hill, except where the ends fall towards the shore.



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The plan above shows the line of the southern estates deer fence (blue) and the unfenced hill boundaries between the estates (mauve). Above the hill dyke, deer are an asset to be managed and below it they are (to some) unwelcome marauders. The difference, by and large, is a hole in the wall or fence, or a snow drift allowing free passage over the top (less likely in Islay).

Arguments were marshalled for and against deer fencing. In their favour:

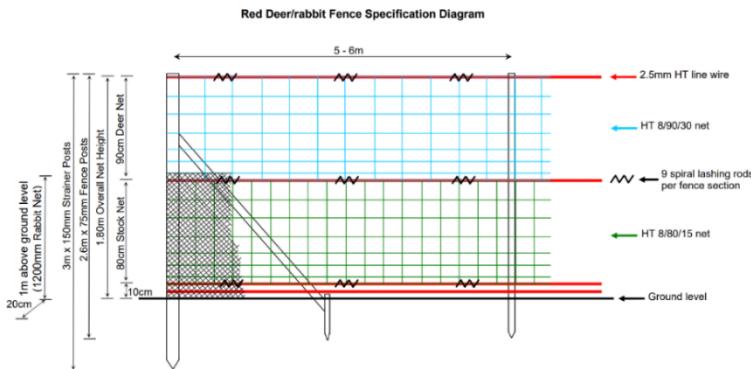
- they concentrate deer in the area where they are to be managed, allowing a greater degree of control over the numbers and ratios within the range enclosed
- they enable deer to be deterred from grazing and trampling vulnerable land
- they visibly demonstrate the estate owners' commitment to preventing marauding in areas where deer are not welcomed
- they reduce the risk of drawing the wider community into debates over deer management strategy
- they simplify the collection and interpretation of deer statistics.

Counterbalancing those benefits:

- they are very costly both to put up and to take down
- they are visually intrusive
- they reduce ease of access for people using the hill for any purpose
- they can disrupt natural behaviours and prevent access by deer to important shelter or feeding areas when conditions are inclement

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- they can impoverish the gene pool by preventing mixing of neighbouring herds
- they can present a fatal barrier to some birds – grouse are especially vulnerable to flying into them – though the top wires can be tagged to reduce bird strikes
- they are ultimately partially or wholly ineffective in achieving management aims due to their chronic porosity through damage (whether accidental or malicious), decay or simple carelessness in leaving gates open.



Modern deer fences are usually of post and wire carrying netting with a finished height of 1.8 metres, as illustrated above; older deer fences were a combination of plain wires set above a dry stone dyke, or wire netting below plain wires; sometimes there was a line or two of barb at the top. Where it was practical to do so, pre-existing fences around hay parks or woodland were linked with new sections. The Forestry Commission helpfully renewed about 4,000 metres of Rylock netting along the Dunlossit march from the

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Torra Burn to Avonvogie in a (vain) attempt to exclude the large numbers of deer using the forest for shelter.

Electric fencing was at one time popular as a lower cost alternative to netting. A high tensile electric stock fence erected on the hill by a farm tenant was reported to be effective and, in spite of erecting special deer jumps to allow deer across, none had ventured over.

Lord Margadale cast doubt on the worth of electric fencing saying that a similar fence on his own hill had proved ineffective; - deer were able to crash straight through, apparently at will. Others described stock fences in the Highlands with electric wires about three feet high aligned as a second parallel fence along the front, which they thought might work well. De Nahlik explained that the purpose of the additional wires was to discourage the deer from taking off. Rose noted that in his experience red deer were very good at the high jump, but not so good at the long jump, and his preference was for offset electric fencing.

Deer are ingenious when it comes to getting where they want to go; during the rut, stags are not easily deterred from heading to where the hinds are; hinds are adept at wriggling under or through quite narrow gaps such as a broken water gate. By the mid 1980s it had been conceded that the southern estates deer fence could be classed as a deterrent only, although it remained an objective to seal the gaps. Having run the length of the fence one year, DJ produced a map showing sections where there was porosity; he recorded breaches, broken gates, electric fences that were not working and sections of poor design or needing maintenance.

Leorin had a particular marauding problem because part of its deer fence consisted of plain wires strung above a dry stone dyke. Heavy cattle rubbing against the wall regularly created breaches that might not always be speedily plugged. Ten marauding stags were shot there in one year, representing more than the estate's yearly cull quota. The adequacy of marauder figures was regularly questioned; it was agreed in 2001 that those taken outside the fence

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on Kildalton and Balaclava should be included in the cull total, as they had almost certainly ‘leaked’ through the fence.



Deer jumps could prove useful to help get deer back to the correct side of the fence. Local knowledge is important when siting a deer jump. A standardised design may incorporate six metre ramps running close to and parallel to the fence; deer are reluctant to be driven and a 50 metre section of fence, with the top taken down, is more attractive to them when they are looking for a place to cross. It is unwise to try to force deer through a narrow gap as they tend to break away.

One year, 30 marauders were culled on Dunlossit low ground, but it could not be determined whether they had come north from inside the deer fence, west from Jura, or south from the Islay Estate. Given that there was known leakage through a water gate, Schroder felt it was reasonable to consider half of them to be classed as ‘leakage’ from the hill. Most proprietors felt that it was, on balance, reasonable to count marauders as part of an estate’s allocation.

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Professor Putman offered his opinion:

*'If I am cynical it would appear that some estates are still trying to 'increase' their overall 'take' through the back door by shooting some 'marauders'. The Group as a whole still needs to address this wider issue of marauders and actually remove the additional numbers shot in this category from individual or combined quotas allocated for the following season. This needs to be addressed as a matter of importance if harvests are truly to be sustainable for the future at the level of 140 mature stags in total.'*

How far precise herd modelling can be pursued in the absence of secure, deer-proof boundaries is a moot point. The calculation of annual culls to maintain a particular population level is rendered uncertain when animals can migrate in or out of the range unchecked. Close control of numbers is undermined when deer venturing outside the range may be culled as marauders, by group members or third parties, on the low ground farms; they may also take up permanent residence in other locales, without allowance made in the allocation.

There were keen, even heated discussions on how the cost of fencing upkeep should be divided. Some said the deer group as a whole should have responsibility for maintaining and repairing the fence since the deer herd was a common resource. The difficulty was in agreeing how to reconcile the respective lengths to be repaired or replaced with the allocations of stags, the acreages of each estate and the depth of the owner's pockets. Those with short lengths of fence might baulk at paying even a small share of renewing the longer expanses and there would always be scope for argument. Eventually it was agreed that there was no obvious alternative to leaving each estate to take responsibility for repairing or renewing their own section of fence.

The western boundary of the Castlehill peat moss (owned by NatureScot), skirting various owner-occupied crofts, and the march between Ardtalla and Kildalton had been re-fenced early in

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the 2000s; Dunlossit completed the renewal of their section of deer fence by the end of 2013. Debate on the defective sections running through Leorin and Kilbride continued as an adjoining landowner was unwilling to share the cost of replacing the aging and insecure fence.



Keeping a deer fence that extends to over 30 kilometres in good condition is an expensive undertaking. Andy Wiggins, a local fencer, was for several successive years tasked with inspecting it; walking its length taking him two days. He provided a report to the Deer Meeting on its condition and any essential work required to maintain it.

Despite the protracted debate on the state of the boundaries, and promises to fix them, the ‘marauder’ seems to be forever present. Farmers whose land borders the hill may feel compelled to take measures into their own hands to reduce the loss of valued forage, either by shooting deer themselves, or

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complaining to the authorities. Keeping the hill boundaries deer-proof is therefore important.

### **Stocking**

The high ground carried quite large numbers of farm livestock at one time, as well as deer, although the balance between the two has altered over the years. During the 1950s there were relatively few deer on Islay's hills but many thousands of sheep were hefted to them, with shepherds to tend them; many cattle, too, were summered in various locations inside the range. Farmers were encouraged by the government to mole the high pastures, lowering the water table by means of moorland grips. These narrow open drains were intended to assist in improving the fertility of the land for the benefit of the stock, and also its trafficability; the ditching would make surface firmer and less likely to become poached or waterlogged.

The condition of the hill was an evergreen subject of debate within the IDMG, including the impact of grazing and trampling. From the earliest days, it was stressed that the health of its habitats was key to the welfare of both deer and farm stock kept there.



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Sheep are accused by some of being the chief threat to the hill habitat:

*'Deer and cattle between them would not prevent a fair amount of regeneration. The reason rests not on appetite but on number of mouths. One cattle beast represents five sheep ... the biomass represented by five sheep in place of one cow means five grazing tracks and five times the destructiveness of a cattle stock. Furthermore, the cattle beast tears several square inches of herbage at a time, and the hill plants being well rooted lose only their tops. The sheep pokes its muzzle further down and pulls. The crowns of plants are much more affected by sheep grazing. The grazing habits of deer approximate to those of young cattle'. (Fraser Darling 1947)*



Vorreyer (1968) calculated that three sheep were equivalent to one deer in the effect of their grazing on the sward. Dr Albon explained that both sheep and hinds preferentially seek better grazing areas and confirmed that sheep to deer equivalence is approximately two sheep to the hind and three to the stag; he considered 2.5 ewes *per* hectare an acceptable stocking level.

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Advisory Council records from 1964 show that there were then over 11,000 cattle and 54,000 sheep on Islay. By the end of the 1960s, there were thought to be around 13,000 head of cattle: Lord Margadale thought this must be the highest number to have been kept on Islay, although sheep numbers had been greater before the war. Figures from the 1970s show that there were more than 800 cattle and 6,000 sheep on the southern estates' hill ground. At that time there was thought to be little point in limiting the relatively small population of deer as it would make no appreciable difference to grazing pressure on the hill, given the high stocking of sheep.

The changing economics of hill farming have since exerted their effect; both cattle and sheep numbers are in long-term decline. The place of sheep removed from the hills has been filled by deer and there has been an increasing in focus on the carrying capacity of the habitat for all its large herbivores.

Cattle grazing has on the whole been considered as beneficial to the hill; Patrick Gordon-Duff Pennington, head of the RDC during the 1990s, suggested that their removal from the hills had not aided hill pasture conservation and advocated that they should be put back. Thomas Wilks, Laggan's owner until 1999, agreed that his hill had been in better condition when cattle were grazed there. 85% of grass growth is in the six weeks of summer and it is therefore important to time hill grazing accordingly. On acquiring Laggan, Shamus Jennings declared firmly that he intended to exclude all farm stock from the hill, which was to be reserved for deer, grouse and other wildlife.

John Phillips, of the Heather Trust, held that summering of cattle on the hill was also beneficial for grouse. Ardtalla's cattle continue to be grazed at Proaig during part of the year, although most of the hill ground on the estate otherwise carried no farm livestock. Both stock and deer benefit from Ardtalla's extensive woodland shelter where access is not prevented by fencing.

Leorin had an area of improved in-bye grassland which fell within the tenanted farm as well as being, until a recent fence realignment, accessible to deer. Nicholas Spelthan thought there

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might be 130 cows as well as 5–600 sheep using the fertile low ground, which was always a major attraction for deer.

Dunlossit has used habitat enhancement schemes to improve the quality of grazing. In 1970 Schroder brought in the West of Scotland Agricultural College to devise a scheme to improve grassland near the Kilennan Burn and to plant a small new forest.

During the 1980s, MLURI had been called in to investigate the condition of Dunlossit's hill grazings, which were seen to be in poor condition in certain areas; the report ascribed the decline to 'overgrazing' by deer combined with inadequate shepherding and poorly located mineral licks. MLURI recommended a reduction in the number of deer and/or sheep on the hill. One keeper worried that, if deer were removed, the tenant farmers might be tempted to replace them with sheep. Others expressed concern that in the event that stock was reduced, undergrazing could also change the type of vegetation and increase undesirable habitat. De Nahlik supported MLURI's recommendations, insisting that if overgrazing was allowed to continue, the hill would support fewer and fewer beasts.



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In the early 2000s, a policy of removing sheep and cattle for nine months of the year was introduced, grazing the hill intensively during the three summer months. Two years later, livestock numbers were reduced further, the sheep flock by 50% and cattle by as much as 70%.

Whilst it is not possible to give a definitive answer to the question of whether either cattle or sheep are compatible with deer grazing within the range, some useful strands can be drawn from the debate. Most agreed that cattle grazing on hill pasture during the summer was beneficial; the extent would, of course, vary depending on the quality of the pasture and the number of cows. In woodland, heavy cattle grazing even in winter can be productive by scarifying dense swards to allow tree seeds to become established. An understanding of the processes at work combined with flexibility of approach is most likely to produce the best outcome for native woodland habitats.

Laurie (2005) cited key studies on the effects of sheep grazing (Pigott, 1983; Kuiters & Slim, 2002) which found:

*‘Rapid regeneration occurred after removal of grazing pressure and then slowed due to competition from ground vegetation. This was particularly detrimental to species which require light on germination, e.g. birch. There was also found to be an increase in field species such as bramble and woodrush which are normally constrained by grazing. This (was) clearly seen in the deer fenced Ardtalla plots ... a mosaic of habitat types rather than continuous forest is an important conservation aim and large herbivores are therefore indispensable. Temporal or spatial fluctuations in ungulate pressure are recommended to regenerate palatable broadleaves. This emphasises the long time scale on which woodlands operate and, provided grazing is not excessively intense, intervention may be unnecessary.’*

## Feeding

Feeding wild deer, when natural food is scarce, could be seen as a justifiable policy on welfare grounds; the counter argument is that it keeps more animals alive and may result in unsustainable grazing pressure on the habitat as regulation through natural mortality is reduced. This can lead to herbivore numbers rising above the natural carrying capacity of the habitat. In those circumstances, there is a greater risk of damage occurring in winter as the animals are forced to browse whatever palatable vegetation they can find.

Nutrition is an important factor in antler growth; good antlers are a key element in the allure of the stalk. Balancing the maintenance of habitat quality and productivity with the desirability of bringing stags to the best condition for antler development is therefore key in deciding what supplementary feeding, if any, should be provided. De Nahlik insisted that the potential for antler development in any area was related primarily to its geomorphology: he contended that Ardtalla's more sheltered ground and marginally better herbage gave it an inbuilt advantage for better development of antlers over Dunlossit and the other southern estates; no amount of selective shooting or feeding could make up for this geographical deficiency.

The limiting factor, not only for antler growth but for the population size, is thus the quality and quantity of plant matter available to the herd, which for red deer in the Highlands is particularly critical in late winter. In the absence of supplementary feeding, the weaker or sicker animals will



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be less likely to survive; in some years this will lead to high mortality rates.

In the 1960s, the provision of supplementary food was seen as desirable for the better health and development of the deer. Schroder announced that he would plant turnips and other crops for this purpose on parts of the Dunlossit hill ground. Sir Ian Mactaggart declined to follow suit, saying only that he would watch the experiment with interest: his keeper mentioned the practical necessity of fencing the crops as they would otherwise be eaten prematurely before the autumn.

Schroder drew the other lairds' attention to a report on winter feeding by the Rowett Institute (now part of the University of Aberdeen) emphasising its importance, particularly in April, in boosting antler growth. The practical difficulty was that most of his hill was roadless and there was a question over where it was possible to set up feeding stances. At the time, the wisdom of feeding the deer beside a road was questioned mainly on the grounds that it might provide temptation to poachers, although today the risk of vehicles colliding with the animals gathered there might be of greater concern. De Nahlik suggested that gradually feeding further away from the roadside might be a beneficial approach, but the practical problem of carrying and hauling the feed should not be underestimated. The one advantage of the roadside feed stances was that visits could be arranged for schoolchildren to educate them that deer were not fed there merely for the convenience of shooting in an easy place!

Twenty years after the turnip crop trial, Dunlossit was feeding 24 stags between October and May with a mixture of whole maize and hill cow cobs. In the mid 1990s, twelve Dunlossit stags were receiving about a tonne and a half of maize each year. Ardtalla was feeding a larger number of stags around two tonnes of maize and one and a half tonnes of beet pulp. Limited supplementary feeding of beet pulp and minerals to improve nutrition continued on the two estates.

Deer living on the coarse vegetation of the Scottish hills must adapt to thrive on such poor quality fare. Their digestive

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efficiency in converting such low nutritious food was investigated fifty years ago; Islay and Jura estates took part in a research project to compare the weight gain of red deer under captive conditions with those on the open hill. Additional weight increment for an animal's age was thought to be greater than in any comparable species, wild or domestic, where each is fed the same amount. The Islay keepers collected wild deer calves from various locations for transfer to the Rowett Institute and Glensaugh Research Farm.

The Rowett Institute now concentrates on diet in human health, but its role at that time was to carry out research in animal nutrition, focussing on the importance of vitamins and minerals in the diet of farm animals and the mineral content of pastures. Glensaugh had been set up in 1930 with the aim of improving the productivity of Scottish agriculture, originally under the auspices of MLURI, but subsequently as part of the James Hutton Institute.

On arrival at Glensaugh, the Islay calves were weighed and samples of blood, urine and skin taken for analysis. Donald McGregor, a Dunlossit keeper, accompanied them. As a hill man, he was dismayed to find that his charges were kept all day inside a pen, eight by ten feet; he felt sad to see them pacing up and down. When they were eventually let out, he described them as behaving as though they were still incarcerated. The poor beasts appeared to have no stomachs at all and looked like skeletons compared with their luckier herd-mates living on the hill. In his view, deer kept in conditions such as that at the Rowett couldn't be compared with wild deer, although he thought it would be possible to learn from the ones kept in more natural conditions at Glensaugh.

Stag calves taken to the Rowett weighed between seven and nine kilograms and hind calves between five and ten. At nine months, the heaviest stag calf weighed 61 kilograms and the heaviest hind calf 50 kilograms. By August 1973, as a yearling, the heaviest stag weighed 100 kilograms. It was reported that Islay calves improved quicker than mainland calves.

A further year on, de Nahlik visited the Rowett to discover that the average weights of the first batch of stag calves, now two years old, was 71 kilograms, while the hinds weighed an average of

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61 kilograms. The best of the Islay stags was already a ten-pointer and there were also some eight-pointers. Two stags fed on an unspecified 'special' diet weighed 135 kilograms and 114 kilograms respectively, but due to being kept in a confined space and knocking against the wire, their antlers had not developed properly. Their food conversion ratio was more efficient than that of cattle and sheep. This was a useful proof of the unmatched ability of red deer to make productive use of low fertility hill land.

One incidental finding was that by treating the animals against warble-flies, the insects were prevented from hatching out. Many deer developed abscesses on their backs; the flies had evidently come up to the skin before dying. It was thought that the beasts must have picked up the flies within a week of being born, as they had all had been caught within that time. One of the calves was also found to have been infested with ticks within that first week.

Lord Margadale, who paid a visit to the Rowett, was informed that deer were recorded as suffering from only seven diseases whereas blackface sheep were known to be stricken by some 34. Many of the younger deer were found to have deformed faces, perhaps caused by having to live in a confined area; 39 deer were stocked in 75 acres.

## **Ground Pressure**

The term 'deer management', much bandied about these days by politicians and pundits, is understood to mean '*more deer must be culled*'. In many places across the country, there is no 'management' in place (using the term advisedly) beyond vague plans being written, meetings being held and largely uncontrolled shooting by contractors. If deer are in a place where a shot can be safely taken and it is not the close season, there is nothing to stop the person holding the rifle from squeezing the trigger, (although they must have the permission of the land owner or occupier). There are calls to reduce the 'Close Season' for stags and hinds, with adverse welfare implications for both.

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Boosted by the pronouncements of some politicians and conservation campaigners, a widespread public perception is that sporting estates want only to make more money by maximising deer numbers so that they have more stags to shoot, caring nothing for the environment. In reality there are many competent, conscientious deer managers, who calculate the target deer population to meet defined objectives, controlling the population size and its use of the habitat by careful cull allocation and selection.



The Scottish Government's Deer Working Group (DWG), reporting in 2019, recommended *inter alia* that:

*'Scottish Natural Heritage should adopt ten red deer per square kilometre as an upper limit for acceptable densities of red deer over large areas of open range in the Highlands, and review that figure from time to time in the light of developments in public policies, including climate change measures.'*

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Proponents of more drastic deer reduction often call in aid Frank Fraser Darling's fulminations over so-called '*wet desert*', but they cannot be all that familiar with his work for he was by no means anti-deer, having spent a great deal of his time studying them in the wild in the west Highlands. He wrote, tellingly, that: '*the most important point in their life history is that red deer are social animals; their herds are more than mere aggregations.*'



A knowledge of herd dynamics might suggest that older stags and hinds play a role in the herd and that below a certain density it becomes less likely that experienced older animals will be present. That may not be obvious at first sight, but the careful selection of animals to be culled from a herd is critically important to the future of its age structure and sex ratios. Simplistic limits such as those recommended by the DWG take no account of the local attributes of the habitat or the herd that depends on it.

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It is right that the public interest should be respected alongside private objectives, whether these are to provide stalking for business or pleasure, to increase woodland cover, to safeguard the welfare of the deer themselves, to protect vulnerable plant species or a local ecosystem, or a combination of these. Collaboration will ensure that one land manager's objectives are, as far as possible, not stymied by those of their neighbours, provided that there is goodwill and sufficient resources.

In cases where deer stalking as a sport or business is not a priority, the prescription might be to maintain the herd at the very lowest size where the rate of regeneration of trees is enhanced. It is a challenge where neighbouring owners have divergent objectives; one may want to have a higher deer density, whether or not to provide stalking opportunities, while another may prefer to protect crops or trees, without going to the expense and intrusion of erecting fences.

How are objectives set by deer managers? Knowing that Islay has populations of red deer, (and fallow and roe) gives rise to some fundamental questions. How many deer are there? How many should there be? How much suitable habitat is there and what populations of deer and other herbivores can it support? How should the herds structure and size be changed from where they are to where the estates might want them to be? Who will make the decisions, who will give the instructions and who will carry them out? How will success be measured, monitored and maintained and finally, how will any work be paid for?

The deer range is divided between different owners and managers, each of whom has their own objectives and differing resources available to implement them. Deer move from one estate to another at will. To achieve a particular outcome, the various parties may be obliged to work together. Failing to do so can lead to aggravation and the failure to achieve objectives; there must be people on the ground with the skills, tools and instructions to work towards the objectives set.

In an effort to achieve the different estate owners' targets for their herds the culls of stags and hinds were allocated between

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the different estates as fairly and realistically as possible given the uneven distribution of deer across the range.

In practical terms, that meant decisions being taken on how many stags an estate could cull each year, and of what ages. This in turn begs the question of what number of deer would form the minimum herd necessary to provide that harvest, and how many of those animals must be hinds, in order to sustain the population at the desired level. The next chapter describes how that was approached in collaboration.



## SIX

### LE GRAND BLOC

A stalker on a very large forest told me that he had tried to bring down the stock of hinds to a ratio of about twenty hinds to one stag and hopes still further to reduce it. This in most forests would be regarded as reasonable. On the continent, where conditions, I admit, are very different, it would be regarded as ludicrous.

(Frank Wallace, quoted in Parker, 1938)

### Pyramids



The deer herd management model accepted by the Islay Deer Committee in the 1960s was one propounded by Friedrich Vorreyer, a German hunting connoisseur. His paper, *Le Grand Bloc de Chasse*, held that to produce the largest number of mature stags from a defined range it is necessary for the area to be securely enclosed. It was important to be very exacting about what animals are culled each year, not just the relative proportions of stags and hinds, but also the age groups of the animals selected for culling, the recruitment and natural mortality.

It is clear that a high quality deer herd will take much time and skill to develop. The formula involves precise cull planning to keep the population at equal numbers of males and females,

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requiring a relatively high number of young hinds to be removed each year.

At the start, the optimisation of antler quality was a principal objective: the estate lairds undertook not to shoot the best heads, or heads likely to become good ones, until the animals had passed their peak of maturity. Vorreyer's illustrations were circulated by Bruno Schroder as a guide (Vorreyer, 1960).

SUMMER POPULATION	
Stags	Age Years
x	2
x	3
x	4
x	4
x	5
x	5
x	6
x	6
x	7
x	7
x	8
x	8
x	9
x	10
x	11
x	12
x	12
x	16
x	22
x	100
	Head

**Table 1: Hoffman Pyramid**

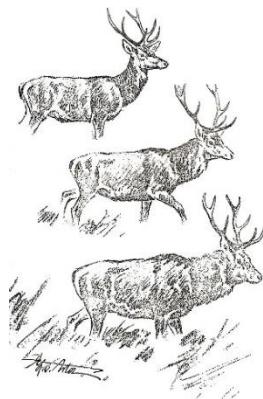
*We distinguish between the following age groups:*

1. *Calves*
11. *Young Brockets (First-head brockets)*
111. *Young stags (Stags aged from two to five years)*
- IV. *Middle-aged stags (Stags of from six to nine years)*
- V. *Old Stags (Stags aged ten and over)*

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*The number of animals killed* X *must compensate for the number or births, i.e. it must be 22.*

Large well-formed antlers have probably always been appreciated in hunting circles, and it was emphasised that deer bearing the best heads should be taken only once the animal had passed its prime. A 19th century contributor to Chambers



Encyclopaedia wrote of '*the finest of stags*' being usually the aim of the '*true stalker*' but today forbearance is necessary if the impressive 'master' stags are to be allowed the opportunity to pass on their genes before they are shot. Outside well-run sporting estates, it is unlikely that such 'master' stags will survive for long.

Vorreyer stated that his model set out how to preserve the deer species and improve its quality, while paying particular attention to the need to maintain a balance between the animals

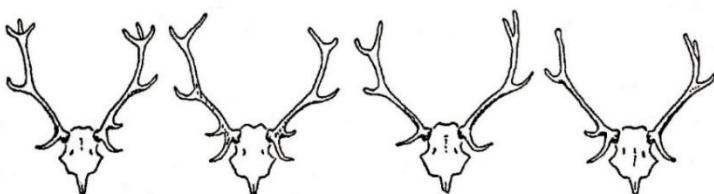
and their habitat. He considered that habitat to be forest, with full tree cover, rather than the open range 'deer forest' of Scottish tradition.

The nature of *Le Grand Bloc* is different in many respects to Islay, but at that time its main tenets were thought to be applicable:

- Operations over a large area, a minimum of 20,000 to 25,000 acres to secure space and tranquillity
- All stalkers concerned with the area in question should follow the same plan and rules of conduct
- Selective shooting of both stags and hinds according to age and sex
- Fencing may be needed if there is danger of indiscriminate and uncontrolled shooting by

neighbours, though this may have drawbacks and should be considered as a temporary measure only

On Islay it has not been feasible to implement Vorreyer's recommendation that the close season be reduced on the basis of an accurate advance break-down of the shots to be made, as this is subject to statutory control. His methods were perhaps honoured more in the breach than in the observance; circumstances were markedly different to the ideal that he advocated, not least with boundaries that have not always been effective in preventing passage to deer.



The more detailed proposals of Vorreyer's paper concerned the condition of the 'forest' or open range and the density of the deer that occupy it. They not only live in it, they also live on it, and the stalking ultimately depends on its condition. Intensification of its exploitation beyond what he termed 'perfect equilibrium' may lead to its deterioration. Achieving this equilibrium is easier when the objective is quality rather than quantity, because it is delivered by a lower density of deer. This in turn places less demand on the habitat and benefits the health and disease resistance of the animals.

In order to determine what density equated with perfect equilibrium in a particular location, Vorreyer's criteria were:

**Numbers:** The deer should be counted as accurately as possible, and the results discussed '*in a spirit of absolute frankness and mutual trust.*' Information regarding the movements of deer, particularly stags, during the year was

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useful. A uniform system using maps and topographical data was of great value.

Table 2: Demonstration of Effect of Sex Ratio

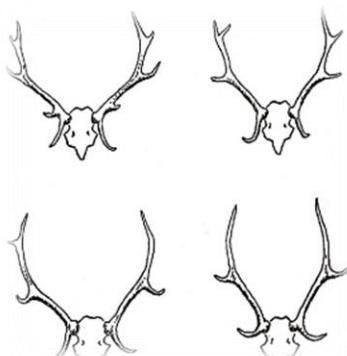
Sex Ratio	1:1	1:2	1:3
Population at the beginning of the year			
Male deer	78	49	36
Female deer	78	97	105
Total	156	146	141
New births	44	54	59
Population in summer			
Male deer	100	76	66
Female deer	100	124	134
Total	200	200	200
Shooting programme new births	44	54	59
Males	22	27	30
Females	22	27	29

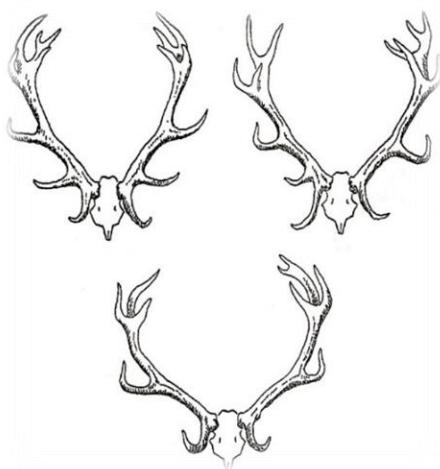
Sex ratio: As the objective is to have a high proportion of large, old stags to shoot, it was necessary to allow for relatively large numbers of male deer within the herd. The natural male/female ratio when calves are born is 1:1 and the herd plan should not depart very far from this. Vorreyer explained:

*'At first sight this situation, (where the sex ratio is 1:3), may appear to be favourable, since the numbers of males to be shot increases. In fact, the contrary is true. Whereas in the case of a sex ratio of 1:1, 22 of the 100 males present have to be shot, for a sex ratio of 1:3, 30 of the 66 males present would have to be shot, signifying that nearly half of the male herd would have to be killed every year in order to keep the density and sex ratio unchanged. It is easy to realise that such a policy prevents selection and how far the large trophy becomes problematical in these circumstances.'*

Age distribution:

*'To obtain the maximum number of old stags it is a statistical necessity that for each 12 year-old stag to be shot per year there must be 12 stags aged from 1 to 12; every year one calf will be added and the oldest stag killed. On the basis of this principle a pyramid of age groups can be constructed, which follows statistical rules to factor in the number of stags in each age group that will be necessary to continue producing 12 year-olds for shooting. The picture is more easily understood using diagrams, but in essence a very much larger number of animals is needed to maintain a given number of 12 year olds when the sex ratio of stags to hinds is 1:3 than it does where it is 1:1. Looked at another way, for a population of a given size, there will be a greater number of older stags when the sexes are in a 1:1 ratio than in a 1:3 ratio: for every extra hind there must be one stag fewer.'*





Cull policy: Vorreyer demanded precision from the outset, bearing in mind the target size for the overall herd and allowing for natural mortality. If the herd size was to be reduced during a particular period, the cull must exceed the number of calves born, taking into account mortality. Where the herd size was to be maintained, stalkers must

accurately distinguish between the age groups, and cull a set percentage of each: calves (28%), knobbers/brockets [two year old male] (18%), young stags, aged from two to five years (28%), middle-aged stags, from six to nine years, (9%), cold stags, ten and over (18%).

Only by adopting this model would the age and sex distribution of the herd be able to remain stable from year to year. With any other formula, there will be a progressive reduction of the 'old stag' category, which tends to disappear. The choice of target must also be subject to rigorous selection, so that only promising stags reach the most advanced age groups. By 'promising' Vorreyer means conformity to an idealised antler conformation with good forks and well-placed trey tines.

*Le Grand Bloc* says little about the number or condition of hinds beyond the inference that every year the number to be culled, plus those dying naturally, must be equal to the number born. It is generally the case that three year-olds bear young, while only about 50% of the two year-olds do so. The percentage should be verified in the light of local conditions.

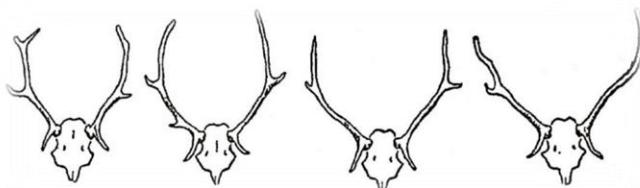
### Candelabra?

*'It would never be safe to say what antlers are for,' wrote Fraser Darling, but their quality is all-important to many rifles going onto the hill, the ideal being to bag a stag with good, well-grown antlers with many points.*



Vorreyer decried:

*'The insignificant trophies of unfortunate young animals ... Are not these distressing heads and antlers, which have no marked formation and to which no 'glory' is attached, sufficient in themselves to justify the vigorous but ultimately profitable effort which any sportsman who has any ideals should agree to make in order to embellish his collections with large, mature 'first class stags'?*



The stag's age is not the only determinant.

*'A 'Royal' stag generally refers to one carrying twelve points (tines) – six points on each antler – while an 'Imperial' will have seven or more points on each antler. But neither the number of points, nor the sequence of their development relate directly to age. After the fifth year, the*

*ultimate form of the antlers is determined entirely by the genetics of the individual and the nature of the habitat, i.e. phenotypically.'*  
(Lowe, 2014).



Studies on Rum found that it was generally the nine-year olds which had the greatest number of antler points.

The antlers of Scottish hill deer are modest compared with the largest continental forest stags. Among a selection of heads dating from the 15<sup>th</sup> to the 17<sup>th</sup> century, displayed in a hunting schloss in Germany, are some with '*antlers measuring up to 127 cm in length, a spread up to 188 cm, a circumference round the smallest part of the beam of 25.4 cm and between 24 and 50 points.*' (Lowe, 2014).

Deprived of his forest environment the Scottish hill stag is to some eyes an unnaturally stunted beast. Of course red deer live quite contentedly on our open hills, but the dimensions and quality of their antlers are limited by the (un)productivity of this often harsh environment.

Charles Darwin explained how natural selection leads to the survival of the fittest; in an environment where cold, wet weather and poor quality forage are the norm, smaller deer may be the ones more likely to thrive through the bad years, as well as the good. The fate of large framed park deer taken to Rum by Sir John Bullough is a case in point, failing to pass on their genes while their west Highland herd mates carried on. Islay is not the same as Rum, and its deer and their antlers are large by Scottish hill standards, but it remains the case that if culls could be selected according to

Vorreyer's tenets there would be a greater likelihood of large antlers being seen.

On better run estates, the stalker's target are Vorreyer's '*distressing heads and antlers*' such as those with 'switches' and deformed formations, leaving behind those master stags which can pass on the best genes.

De Nahlik propounded a theory of how the value of deer should be calculated. He showed there were certain phases in their development when culling would yield the optimal economic yield. The asset value was at its maximum when the body weight was highest; the best value was in the antlers (for sporting and letting purposes). To obtain the optimum return from stalking, the highest number of animals should be takeable from the age of six years onwards.

*'We count. On the basis of that, we decide jointly what we are going to shoot. We then divide that up between the estates, and it becomes a conservation objective. In other words, you have to shoot what you agree to – no more and no less. Then we have to show what we have shot to our neighbours and to a consultant, who not only recommends what we should shoot the following year but who judges how well or badly the stags have been shot. There's usually a quality survey in Scotland as well, and I know that out of the dozen top heads each year, often as many as half are Islay's stags, but that does not come by accident. It's hard work and it's very, very careful shooting. We don't make a premium otherwise you translate the quality of the stag into cash, and that makes it a temptation to shoot for cash rather than playing by the rules. The privileged get the chance to come to Islay and they behave themselves; they're told what to shoot and they don't argue, because they're paying no more than anyone else in Scotland. Their privilege is to see lovely heads – and leave them. You might march for a day about the place and see one good stag after another and go back empty. Not that you couldn't have shot them, but they are too good to shoot. If you complain you don't get given the opportunity of coming to Islay again. Quite firmly. The ratio of stags to hinds is at or near one to one, which is more or less how they are born. Where else in Scotland do you find a one-to-one sex ratio except on the*

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*southern part of Islay? Nowhere. Elsewhere there are many more hinds, which is why the deer are running riot. If you've got the hinds you've got the girls – and they will produce.'*  
(Bruno Schroder, quoted in Jefford (2004)

### **Herd**

One of the key features of the IDMG was that it was keen to receive the best advice on how to achieve its deer objectives. The size of the herd and the ratio between stags and hinds were frequently the subject of vigorous debates. Vorreyer's thesis was the theoretical model chosen at the start that to an extent underpinned the subsequent planning, supported by advice from the various deer experts. At the 1964 meeting of the group, a protracted discussion took place, especially over the correct ratio of stags to hinds. Schroder had always argued for the adoption of Vorreyer's model, shooting relatively fewer stags and more hinds than before to achieve a 1:1 ratio between the sexes. This was, of course, intended to open the way to having as large a number as possible of mature older stags for a given number of deer on the hill.

Not everyone was willing to accept Vorreyer's model – some favoured simply allowing the number of deer to increase to the level it had been '*before the war*', arguing that this need not necessarily mean that the condition of the deer would deteriorate.

The only policies to be agreed unanimously were that '*rubbishy*' stags should '*all be shot*' and feral goats '*cleared off*'. The latter policy must have been successfully executed as goats are no longer to be found anywhere on the southern estates range, though they remain locally common in other parts of the island. Substandard stags are regularly targeted by stalkers, but attesting to the fact that



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conformation is phenotypical, there continue to be beasts in the category.

For a 2,000 head herd of deer, 1,000 stags under a 1:1 ratio of stags:hinds was clearly more valuable than a herd of the same number with a larger proportion of hinds, as Vorreyer's diagrams demonstrated. Furthermore, when the population was increased beyond a certain level to sustain a particular stag cull, the higher density would result in poorer yearlings and increased mortality. The ratio of 1:3, reported for Kilbride/Leorin in 1995, was acknowledged to be too high, although it would be necessary to look at the ratio across the whole range to work out what action might be necessary; ground such as this is naturally hind ground, while other areas are more favourable to stags. It was accepted that the overall target of a 1:1 ratio across the range should be the aim.

Peter Kirk, of Deer Commission Scotland (DCS), went as far as to congratulate the Islay lairds on their relatively stag-heavy herd, which he said was considered to be at the leading edge of deer management and unique amongst deer management groups in Scotland. It showed what was scientifically possible, and the progress of the herd was being watched with great interest by DCS. He added that Islay was seen as a shining example of deer management in Scotland.

In addition to the ratio question, a linked decision was to determine the minimum size the herd would need to be in order to have the desired yield of 'shootable' stags, while not overburdening their environment; this must also take into account the presence of other herbivores on the ground.

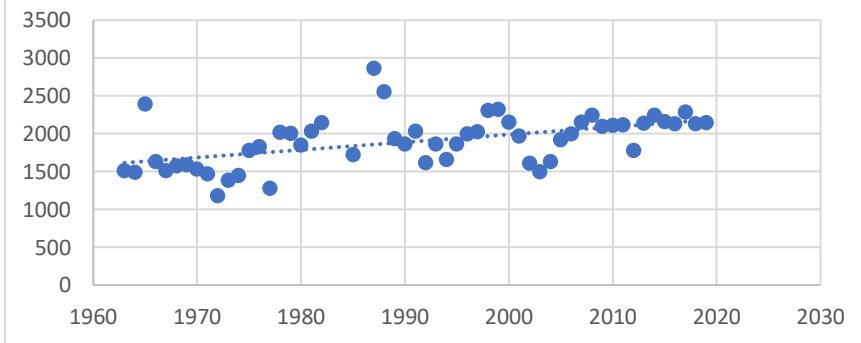
In the early 1960s, deer counting by the estates showed that the total herd amounted to around 1,500 red deer and the trend line has shown a long term increase of a little under 50%, with periodic fluctuations, with a recorded peak in 1987 not far short of 3,000.

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In the earlier days de Nahlik's analysis of the count and cull figures pointed to a total cull of between 250 and 300 deer if the population was to be kept level; by 1985, the number of stags had increased by 47% to 651, while hinds had increased even more, gaining over 63% to 1,072. That led to a resolution to cap total deer numbers at 2,000, excluding the year's crop of calves. On that basis, the ratio of hinds to be culled each year should be 2 for every 11 on the hill, and the year's cull would be 117 stags and 202 hinds.

The count each year is but a snapshot; there is always potential for fluctuations through chance or error, although these should tend to cancel one another out over the longer term. The other factor to be allowed for, particularly in the earlier years, was the leaky or even non-existent boundary fence, which might result in deer that were not on the range at the time of the count returning at some other part of the year.

Table 3:  
Southern Range Deer Counts  
1963 to 2019

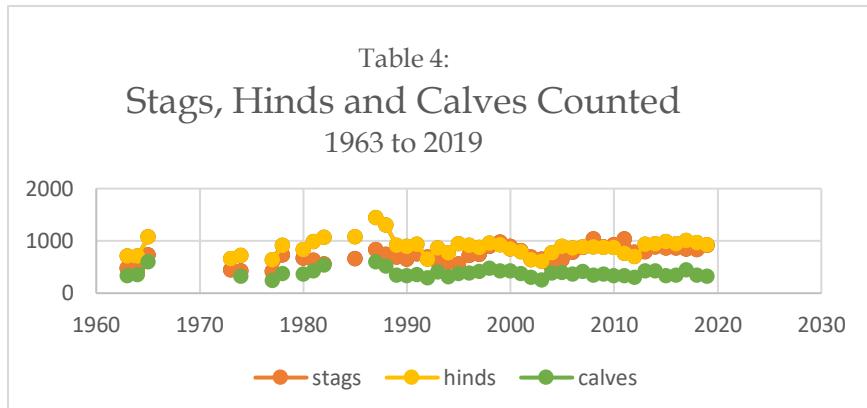


The deer counts do not include animals outwith the perimeter fence, but their numbers have increased substantially over recent years in areas of Islay like the Oa and the Rinnns. Some deer

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must have originated in leakage from the main southern estates and Islay Estate herds.

Turning to the relative proportion of stags against hinds, it is interesting to note from the (incomplete) data series for stags, hinds and calves in Table 4 below, the substantial spike in numbers in the 1980s, and the relative position of the stags against hinds, and the hinds against calves.



Dunlossit worked out carrying capacity by looking at what might be a standard acreage using livestock units (LU), which compare the nutritional needs of different grazing animals; a cow is one LU, and the units are important in calculating stocking rates and densities in agriculture. A provisional figure of 48 acres *per* LU was suggested for the range, though this contrasted starkly with the 15–25 acres *per* LU seen as appropriate in the eastern Highlands. Dr Albon thought that a more useful comparison would be with similar areas on the western seaboard.

An adult farmed stag is considered to be 0.4 LU, hinds 0.3 and calves over six months in age and yearlings 0.2. A Scottish Agricultural College study (Chapman, 2007), suggests that red deer have the rather lower LU value of 0.25, which may be more appropriate for wild red deer as opposed to the larger farmed animals. In that case, using Dunlossit's 48 acre figure, 12 acres should be allowed *per* deer; a herd of 2,100 deer

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would thus require 25,200 acres, well catered for by the 33,975 acres of the range. However, allowance must also be made for other herbivores.

In a report for IDMG in 2010, Peter Ord, a retired factor of the Balmoral Estate on Deeside, offered a variety of elements to be considered in arriving at the herbivore density target. At the time Dunlossit had 112 cows, 75 calves and 600 sheep within the deer fence, for around a third of the year. He equated these livestock to 200 ‘deer equivalents’, with the effect of pushing up the stocking rate, including deer, for the whole range. Ord’s calculations had not included

Ardtalla’s cattle, which are grazed on the hill at Proaig for a period in the summer each year, nor the tenants’ cattle and sheep on Leorin and Kilbride hill ground. The livestock density on the hill, taking into account only Dunlossit’s cattle and sheep, is calculated as 20 ‘deer equivalents’ *per* 100 hectares.

Increases in deer numbers in the early 1980s, and again in the early 1990s, were followed by measures to achieve herd reductions. On appointment in 1990, Dr Albon had explained three broad strategies that he could develop:

- working on head quality geared to the value of the trophy
- maximising venison production based on the offtake of beasts from the hill
- concentrating on the habitat required to increase grouse numbers



He offered to devise policies that would enable estates to achieve their desired objectives within five to ten years. He recognised that proprietors would each have their own aspirations and asked them to specify what they wanted; he left it to them to decide on the ratio they preferred. During the middle and later part of the 1990s, the deer population was permitted to rise, eventually reaching over 2,300 in 1999.

Hugh Rose, on taking over as advisor in 1998, had warned that deer were putting too much pressure on the low ground, and their density must be reduced. His initial recommendations for the management of the herd over the ensuing three year period were:

- reduce the herd size further to 1,800
- maintain a deliberate imbalance in favour of stags
- reduce the number of hinds to 650 by selective shooting
- minimise the number of calves shot without good reason

Calculating that these policies would lead to a herd capable of providing a sustainable annual cull of 163 stags, Rose resurrected Hoffman's pyramid (Table 1 above) to show how the herd must be engineered to conform to the 'ideal' model. Removing more stags and fewer hinds would be possible, but taking more mature stags now would mean there would be fewer to shoot later.

When it came to what proved to be his final report in 2004, Rose reflected that it would be a pity to abandon the objective of a stag-heavy herd structure and the management principles which had been followed until a year or two beforehand. He thought there was an opportunity to build up a high quality stock of mature hinds and was concerned that the Commission would not tolerate the hind cull remaining below increment for much longer.

## Hefted to Islay

In his opinion, the key to good deer management was to shoot sufficient hinds of selected age classes; the majority should be taken from one year old animals, which were easy to distinguish and rarely breed, so use the available grazing unproductively. If these maiden hinds could be identified and successfully culled, a high calving rate could be maintained without holding an over-large number of hinds or putting unnecessary pressure on the habitat. Doing so would leave space to retain more stags until they grow the high quality trophy antlers of which they were all proud.

When culling calves there is a 50% chance of killing a future stag; it is very difficult to tell a male from a female at that age. Rose recommended that the cull should include a fair percentage of poorer young stags to retain a balanced age structure; mature stags currently made up about 30% of the total and must not be over-exploited.

It had, by and large, been agreed that a herd size of 1,800 was acceptable, though the losses attributable to the shooting of marauders needed to be addressed. Rose subsequently sought to reduce the target size to 1,600, the same level that de Nahlik had favoured. To his credit, the cull policy he designed had successfully culminated in a model stag-heavy herd, as can be seen from Table 4. But some of the proprietors were extremely concerned over what they perceived as an arbitrary decision to reduce the herd.

The keepers were asked for their opinion of the policy. DJ MacPhee diplomatically noted that the herd was looking well and there was a good crop of calves; he took the view that numbers on the hill could be increased. Callum Sharp concurred, explaining that the way to do this was to reduce the cull. Stephen Stubbs said that the cull should be reduced, complaining that Laggan lacked mature stags and had few hinds on the hill. They agreed that a survey would help to determine whether or not grazing pressure on the hill was impacting the habitat negatively.

Rose accepted the suggestion that a survey would indicate, in a scientific manner, what pressure was being exerted on the habitat by deer and farm livestock and would help to identify where such pressure was occurring. The deer herd had been reduced and

## Hefted to Islay

domestic stock taken off Dunlossit making it an appropriate opportunity to carry out such a survey. The survey would provide a baseline on which to construct a formal Deer Management Plan such as was now being promoted by government agencies.

His parting advice for 2005 boiled down to the following components:

**Stags:** The proposed stag cull of 100 was feasible. It would be undesirable to leave a herd composed of little but very young stags; 30% of the allocated cull should therefore come from the weaker one and two year olds.

**Hinds:** The cull should be increased slightly to 100 because it was undesirable to leave an excessive number of hinds in a given annual cohort that could give rise to a bulge in the age profile of the herd. Stalkers should take their time and make every effort to shoot from the non-productive yearling age group, unless there was a very good reason to do otherwise. Calves should not be shot unless they were very poor specimens. Targeting young hinds in this way would demonstrate the proficiency of the stalkers and prove to the DCS that a careful policy was being effectively carried out.

Rose said that he had made these same recommendations every year since he began his task on Islay, explaining that they were the key to achieving the estates' deer management aims. He maintained that stalkers' ability to recognise which stags were shootable was key, if promising animals were to be permitted to reach their full potential and older and weaker animals weeded out. He thought it was not too difficult to classify the stags using their antlers and stalkers could therefore quite easily meet the selection criteria if they wished. The greater skill lay in being able to assess hinds accurately; it was possible to identify yearling hinds reliably by their lighter frame and shorter jaw. The ability to identify milk

## Hefted to Islay

from yeld hinds was more difficult, though of importance when older hinds were being culled.

As to assessing grazing pressure and utilisation of habitat, Rose considered that, although it might look a complicated process, it was actually not difficult: the stalkers themselves should be able to monitor the effect of grazing on heather. Deer density could also be assessed by counting dung pellets in sample plots regularly and methodically, recording results and comparing them over time. He thought proprietors could reasonably expect their stalkers to acquire and use these skills: once they were shown the simple techniques involved they could become practised and confident.

Professor Putman, Rose's successor, set out a new approach working towards an increase in the population to achieve a larger harvest of stags to be shared out between the estates. From the outset, he assured the southern lairds that achieving their desired stag culls would not necessarily require them to reduce total deer numbers or density; local impact reductions might equally be achieved by redistribution of animals across the ground, thus evening up grazing impacts overall. This redistribution of grazing pressures between, and within, estates was something he felt desirable and capable of realisation with longer term planning.

By 2011, Putman was able to report that the population was at a level the lairds had said they wanted to achieve, around 1,000 stags and 750–800 hinds, and culls might now be aimed for maintenance. A steady population of 1,000 stags could permit an annual harvest of around 140 mature stags, as originally targeted; a population of between 750 and 800 hinds, at a recruitment rate he assumed at 40%, would require an annual maintenance cull of between 150 and 160 adult hinds. It is notable that, following the initial hind-led increase seen in Table 4, the counts for both stags and hinds have been relatively stable, though hind numbers are largely marginally in excess of stags.

Preliminary impressions suggested that the range as a whole supported too few stags to sustain the target quota of 140 *per year* and supported rather too many hinds. It was also apparent that hinds were very unevenly distributed between, and within, estates.

## Hefted to Islay

Some differences were to be expected (due to variations in the nature of ground preferred by hinds and stags). Even making allowances for this, it was clear to Putman that their distribution was still somewhat skewed.



In order to move from the current population structure to that required at stability, it was necessary to build up the population of stags and reduce the number of hinds. This would be achieved in a transitional period of five years to allow greater potential for necessary adjustment along the way.

The number of calves born each year is a function of the numbers of hinds there; not all hinds will have a calf every year. The calving rate used by Putman in his population projections was 40.7%, which was assessed as being the general Islay average.

Modelling demands some caution, warned the ecologist Victor Clements, in putting forward the projections shown in Table 5 below, though observing that the variances in the figures for stags and for hinds almost cancelled one another out. He concluded that IDMG seemed to have a very stable herd in 2019, adding that his recommendation was to maintain current practices and cull levels.

## Hefted to Islay

**Table 5: Population Modelling of Deer and Cull Count Data for Southern Estates group**

		Stags	Hinds	Calves	Total	Density
2010	Count	919	866	326	2111	15.4
	Summer Population	1082	1029	453	2564	18.8
	Autumn/Winter Cull	132	169	0	301	
	Mortality	22	21	27	70	
	Reconciliation	-102	83	96	77	
2011	Count	1030	756	330	2116	15.4
	Summer Population	1195	938	403	2536	18.4
	Autumn/Winter Cull	136	147	11	294	
	Mortality	24	19	24	67	
	Reconciliation	256	73	67	396	
2012	Count	779	699	301	1779	12.9
	Summer Population	930	865	389	2184	15.9
	Autumn/Winter Cull	146	119	14	279	
	Mortality	19	17	23	59	
	Reconciliation	-26	-201	-67	-294	
2013	Count	791	929	419	2139	15.6
	Summer Population	1001	1139	512	2652	19.3
	Autumn/Winter Cull	141	143	21	305	
	Mortality	20	23	31	74	
	Reconciliation	-38	32	40	34	
2014	Count	877	941	421	2239	16.3
	Summer Population	1088	1151	380	2619	19
	Autumn/Winter Cull	141	236	47	424	
	Mortality	22	23	23	68	
	Reconciliation	70	-86	-13	-29	
2015	Count	855	978	323	2156	15.7
	Summer Population	1017	1140	410	2567	18.7
	Autumn/Winter Cull	141	236	47	424	
	Mortality	20	23	25	68	
	Reconciliation	-2	-58	5	-55	
2016	Count	857	939	334	2130	15.5
	Summer Population	1024	1106	398	2528	18.4
	Autumn/Winter Cull	141	250	37	428	
	Mortality	20	22	24	66	
	Reconciliation	8	-144	14	-122	
2017	Count	855	978	323	2156	15.7
	Summer Population	1016	1139	490	2645	19.2
	Autumn/Winter Cull	142	229	27	398	
	Mortality	20	23	29	72	
	Reconciliation	-3	-52	99	44	
2018	Count	857	939	334	2130	15.5

(Clements, 2019)

## Hefted to Islay

One factor that may account for skewing of modelling results would be leaky hill fences. The boundary fences around the hill have been more or less porous over many years and there has been out-migration accounting for the now substantial numbers of deer living on the Oa and other parts of the island.

In his 2014 report, Putman had noted:

*'If we assume that the recruitment rate of nearer 45% is maintained, then the stable population of hinds required to sustain a quota of 150 mature stags is ... only 750. If we reduce the total quota to current (rather than future) aspirations, of 140 stags, the required hind population is lower still at only 700.'*

Although his policy recommendations had been accepted, Putman was not impressed by the efforts made to carry out habitat monitoring and improvement works, eventually resigning in some disgruntlement. He had constantly emphasised that if the population was to be held at a maximum of around 2,100 deer it was imperative that every estate embarked on some habitat improvement. This would not only deliver an increase in the overall carrying capacity of the hill, but also ensure that there were no unacceptable impacts on environmental quality as a result of localised heavy grazing or trampling. Such a programme of habitat manipulation was essential in the interests of redistributing deer populations more evenly across the ground.

*'I have nagged repeatedly about the need for active habitat management as well as management of deer populations (the two go hand in hand). Total population size now (at an estimated 2,250) is higher than it has been in the past (yet negative impacts were already being noted in the past, even at lower densities). If the population is to be maintained at these levels it is imperative that ALL estates embark on some programme of habitat improvement, required not only to deliver an increase in*

*overall carrying capacity of the limited range, but also to ensure that there is no increase in negative impacts on environmental quality as a result of excessive (localised) grazing or trampling. Some programme of habitat manipulation is also advisable in the interests of redistributing deer populations more evenly across the ground within and between the various estates. My personal recommendation however would be to revert to the planned population agreed in 2005 of no more than 1,000 stags and between 700 and 750 hinds.'*

The Deer Working Group (DWG), reporting to the Scottish Government in 2019, recommended: '*Scottish Natural Heritage should adopt ten red deer per square kilometre as an upper limit for acceptable densities of red deer over large areas of open range in the Highlands.*' At this density the southern estates range would contain a total red deer population of no more than 1,376 head, fewer than at any time since the 1960s.

In responding to the DWG recommendation on density, ADMG found it:

*'most surprising being at odds with the general thrust of the DWG recommendations that environmental impacts, not deer numbers or densities, should be the yardstick for effective deer management ... Sustainable deer densities in any area will vary widely, reflecting the quality of the land, the availability of food and shelter, as well as other land uses sharing the same land area, eg sheep farming. It is not helpful to have an across-the-board maximum deer density. One size does not fit all when it comes to deer management!'*

The DWG recommendation were however welcomed by the Scottish Government, which intends to take them forward. This will have a significant impact on deer management policy once the resulting legislation comes into effect.

## Cake



Deciding on the number of stags and hinds to be culled to reach a desired herd size and composition is one thing; determining what each estate would be entitled (stags), or obliged (hinds), to cull each year, another. Every proprietor has the incentive to maximise their own stag quota that it will secure more opportunity for them to enjoy sport, or to sell stalking commercially. Stags enjoy a substantial premium. On traditional valuation methodology the capital value of their estate would be bolstered through the achievement of a robust five or ten year average; but if the cull is not sustainable from deer hefted to the ground it can only be continued in the longer term if stags are drawn in from surrounding land. Successful management must strike a compromise, as Cameron (1923) insisted, between rival claims in which the laird, or the deer-stalker, is content with '*a slice of the cake, although his inclination strongly tempts him to have it all.*'

## Hefted to Islay

The southern estates sought a ‘rational and equitable basis’ on which to allocate the culls, both stags and hinds, on a civilised footing. Their deer advisors’ most delicate job was to get agreement on the number of hinds and stags to be allocated to each estate based on the overall figures for stags and hinds within the range. Different ideas have emerged on how quotas should be calculated, from the simple basis of each estate’s total acreage to complicated formulae on numbers counted, deemed carrying capacity and so on. An illustration of how difficult it is to reach consensus on the allocation question is that when Albon asked proprietors if they were happy with their allocations he received an affirmative response from only one.

**Table 6: Deriving Stag Cull Allocations from Deer Count data**

Peter Ord 2010	Area Ha	At present		Assumed	
Estate Name		Sporting Stag cull	Total no. of Deer	Sporting Stag cull	Total no. of Deer
Ardtalla	5900	47	722	46	762
Dunlossit	4500	35	719	35	580
Laggan	1800	28	233	14	232
Callumkill	458	9	257	4	66
Kilbride/Leorin	900	13	186	7	116
TOTAL	13558	132	2117	106	1756

Schroder had put forward a three-stage prescription which he thought necessary to derive the best allocations for stag quotas:

1. Decide on the overall number of stags to be culled (the cake)
2. Allocate culls between the estates based on a formula that is transparent and scientifically sound (sharing the cake)
3. Rationalise the allocation into an acceptable compromise between the parties (adjusting the shares to a perception of fairness)

## Hefted to Islay

In a report to the southern lairds Peter Ord had asked how many sporting stags would satisfy aspirations?

*'For example, using traditional culls, staffing, guest members, and available days per season, Dunlossit would hope to shoot and might have been satisfied with 35 sporting stags from within the IDMG fence. This excludes marauders and those living outside the deer fence. To shoot 35 sporting stags requires a population of about 580 made up of 210 stags, 273 hinds and 95 calves ... If we could get an indication of the number of sporting stags which each estate owner would reasonably like to take off their estate, we could calculate the desired population of red deer on the whole area and compare this with the density of deer found and/or 'desired' within the area.'*

Ord's thinking was based on the Red Deer Commission (RDC)'s formula that a cull of 30 sporting stags *per season* would require a total population of 180 stags, 234 hinds and 82 calves. This calculation was based on there being six stags on the hill for each one culled, 1.3 hinds for each stag on the hill and a 35% average annual calving rate.

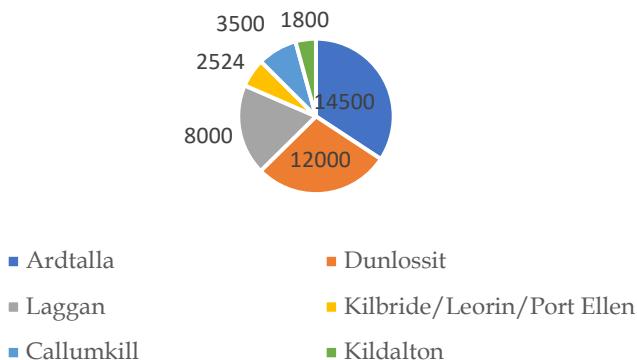
The problems with such an approach were firstly, it envisaged a considerable reduction in the deer population and stag harvest; secondly, Islay's long term average calving rate was at least 40%, in Sharp's estimation perhaps sometimes closer to 50%; lastly, it did not match the numbers desired by the estates. It did, on the other hand take a rational approach to what the deer numbers that were counted on the estate could support in the way of culls.

One solution that has been looked at is to award stag quota based primarily on each estate's proportion of the overall acreage. Adjusting this for other factors inevitably gives rise to greater scope for disagreement as an element of subjectivity creeps in. Unfortunately, for many years the hectarages/acreages used were somewhat erroneous, perhaps because the boundaries were not well defined.

## Hefted to Islay

The gross area of the deer range is now accepted to be 13,760 hectares, (33,975 acres), which is the figure used in current calculations; this is only 80% of the area allowed for by de Nahlik, which was 17,141 hectares (42,324 acres) in his calculations and reports (see Table 7 below).

Table 7  
Estate Acreages within Deer Range  
1977



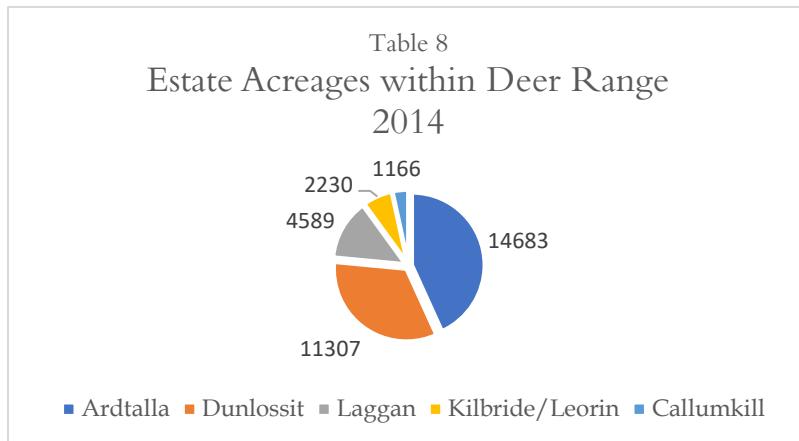
The average of the counts, including calves, over the past ten years is 2,122 head, giving a density of 15.4 head *per* 100 hectares.

In 1977, Kildalton remained unfenced and hence its 1,800 acre hill was included. The 8,000 acre figure for Laggan seems more out of kilter with the current range boundaries, but may have included lower ground outwith the range but accessible at a time when the boundary fence was broken and porous to deer. The deer fence on the west side of SNH's Castlehill peat moss today presents a properly deer-proof barrier, though no doubt weak spots will remain in older fences. Laggan's 2014 figure of 4,589 acres includes Castlehill, where the sporting rights are held on long lease from

## Hefted to Islay

NatureScot. Callumkill's acreage would have included low ground below the current deer fence.

Better and more comprehensive deer fencing along the boundaries and more accurate calculation of acreages have resulted in a definitive and up-to-date picture of the relative proportions of the range owned by the different estates (see Table 8 below).



This could be further refined to take account of fenced exclosures for native woodland protection and tree planting on Ardtalla and Dunlossit, as well as the recent realignment of march fencing at Leorin. Unusable ground, such as hill lochs, bare rock surfaces/scree and the extensive peat cutting areas at Castlehill, could also be excluded as they do not contribute to the support of deer, although this would require a more complicated exercise.

In a bid to reach a long term '*transparent and scientifically sound*' formula for quota allocation, the Secretary produced a model in April 2001, incorporating area, habitat type and assessment of grazing pressure. Even this did not meet with universal approval. One laird expressed a preference for the traditional percentages, as he did not feel that the new model properly reflected the pattern of deer movement on his estate; another favoured a stable cull figure as it was problematic for his estate to adapt to dramatic changes in the

## Hefted to Islay

allocations; a third had not accepted the traditional percentages due to concern that they did not properly take into account acreage changes following the erection of new fencing, though he saw merit in the proposed new formula.

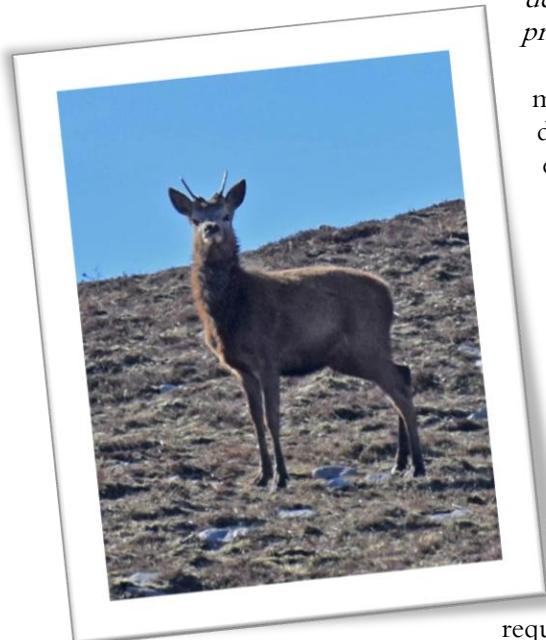
Reluctance to adopt the new model, and disagreements over the policy, tested relations within the group. Unable to choose between the options before them, a qualified consultant, Dr Philip Ratcliffe, was appointed to be the independent assessor. Whilst not wishing to detract from the methodology worked out by the Secretary, he drew attention to the additional influence of exposure and shelter. The Secretary's proposed formula was seen as original and important, forming an objective basis for cull allocations, however she herself resigned in 2002, citing what she called a

*'degenerative lack of progress.'*

In a bid to mollify the discontented, Putman canvassed proprietors as to what allocation of stag quota each would be comfortable with (in the short to medium term) in order that he could calculate what would be the size and structure of the overall population

required to support such

a quota sustainably: *'Any decision represents a balance, even at times a tension, between (i) the level of impact you*



## Hefted to Islay

*are prepared to accept upon the vegetation and (ii) the sporting quota you wish to sustain on each estate.'*

He presented various scenarios to the proprietors, who opted for an overall cull of 140 stags *per annum*, requiring a population of about 2,000 head. This gave a 'starting point' in relation to which the population size and structure would be altered towards what might be required to achieve a steady-state during the following five years.

Ord observed that:

*'In all the debates I have seen little recognition of the possible carrying capacity of the land and its vegetation. The land we are talking about is carrying red deer, roe deer, cattle, sheep and some fallow deer... I do not know how many (other herbivores) graze within the deer range on the other estates. The implication is that the total red deer herd should be lower than 2,000 deer in order to properly manage the vegetation and the habitat and that estates should try to hold no more than 16 deer equivalent mouths per sq. km. on a year round basis, from which they should expect to be able to take their annual cull of stags and hinds.'*

With no agreement on the methodology, a compendium of possible allocation formulae was circulated (Table 9 below), which included the secretary's 2002 formula.

**Table 9: Southern Estates Stag Allocation Options 2010**

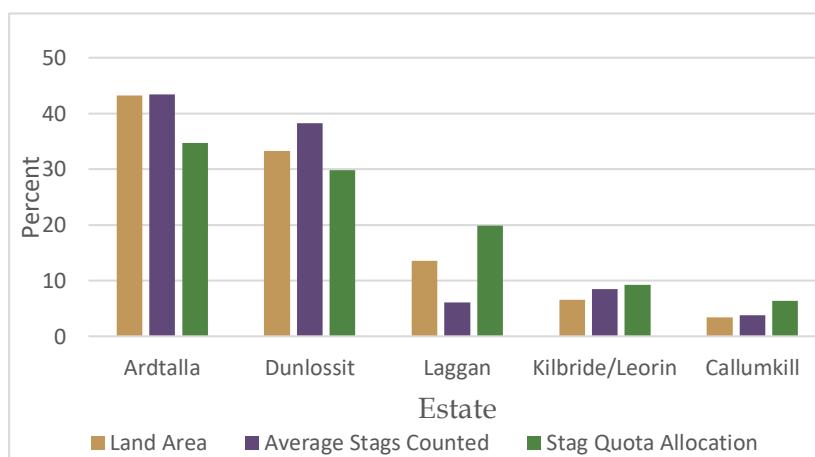
Estate	Previous	Randall	Ratcliffe	JAM 1	JAM 2
Ardtalla	38	55	48	50	49
Dunlossit	33	45	58	42	42
Laggan	24	25	20	26	28
Callumkill	8	5	4	9	9
Kilbride/Leorin	12	10	10	13	13
TOTAL	115	140	140	140	141

## Hefted to Islay

In order to reach agreement a stag was relinquished from Ardtalla's quota and another stag added to Laggan's total, following which this final allocation was adopted as a five year plan. In 2014, when the matter came up for review, there was little enthusiasm to revisit the discussion and the same stag allocations were therefore carried forward for a further five years to 2019. The whole model was abandoned thereafter and estates enjoined to cull such numbers as they saw fit.

The abandoned allocation model had achieved stage one of Schroder's three stage prescription, the determination of the size of the cake. However, the formula for sharing it out could not have been described as either '*transparent or scientifically sound*' and it was hard, too, to show that the quotas had been adjusted '*to a perception of fairness.*' (see Table 10). The difficulty in fulfilling Schroder's three stages in a manner that all parties could be happy with was of course not unique to this deer management group, but it resulted in the eventual disbandment and replacement of the DMG in 2021 by a more informal forum, where information would be exchanged, but collaboratively agreed cull quotas abandoned.

**Table 10: Southern Estates Stag Cull Quota Analysis 2010 – 2019**



## Hefted to Islay

Professor Putman had criticized the group harshly:

*'Despite the fact that IDMG prides itself on being an effective and collaborative deer group, I have to say that I do not find it so. Indeed it is one of the more dysfunctional groups of my experience ... The Southern Lairds group does not really operate as a cooperative group dedicated to the management and welfare of the shared herd. While this ideal is promoted, in effect the group remains a loose confederation of individual estates largely defending, or fighting for, their own self-interest and comparatively rarely doing things altruistically for the greater good of the Group itself (or the deer). This is not a criticism, but it does make an adviser's job (any adviser's job) difficult.'*

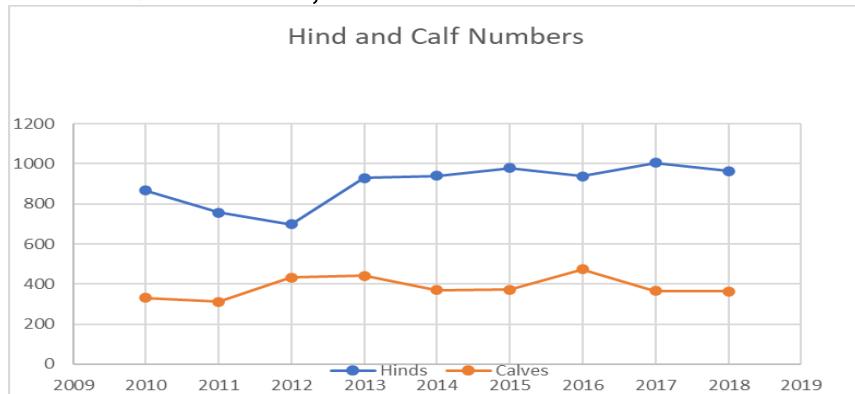


### Hinds

The correct selection of hinds, and the control of hind numbers, is an essential duty of deer management. Understanding hind productivity underpins the modelling of the population and cull planning derived from that.

The calving ratio (*calves per hind*) is an important element in working out what should be culled in order to keep numbers stable, or to increase or decrease the size of the herd. The calving percentage is derived from the count data; the calves counted in one year are those born the summer before to the hinds recorded in the previous year's count.

Table 11: Calf Production, 2010 – 2018



When the density of deer is reduced, there will generally be a resulting rise in fecundity, resulting in an increased calving percentage in the following year and *vice versa*. Table 11 illustrates that the hinds are those counted in the year (*per X – axis*) while the calves are those counted the following year, together with those recorded as having been culled with their mothers in the intervening year. Calves lost to natural mortality, as well as those that migrate outside the range through leaky fence lines, have been excluded. The graph shows that the timing of rising hind numbers is loosely correlated with a fall in calves born, while the falls in hinds are matched to an increasing number of calves.

The average number of calves counted relative to the number of hinds is 42.7%, using both the (incomplete) series of counts from 1963, and those of the ten years to 2019. The latter adds the number of calves that were reported culled in the year to the calves counted the following spring, on the assumption that these had been culled with their mothers and thus lost from the following spring count. The rate would be higher if allowance was made for net migration, the extent of which is unknown.

It is best if the number of hinds can be kept at the minimum level to produce the target number of stags, eliminating surplus mouths to be fed from the herbage available. Every hind

## Hefted to Islay

over that number will displace a stag on the basis that the overall number of animals is kept constant.



The bulk of the task of culling hinds often falls to the estate keepers who decide which hinds they need to cull and which would be better left to breed. Until comparatively recently, it was unusual for hind stalking to be let to sporting guests. Shooting takes place in the depths of winter when the days are short and quite likely to be wet and cold; sportsmen have less interest in it and there are no trophy antlers.

In contrast to the stag that is sometimes rather

preoccupied, when '*the delicate summons of the hind*' is uppermost in his mind, the hind is always alert, ready to flee from the hint of a human intruder. A guest wrote in the Dunlossit gamebook that '*hind stalking is getting more difficult than stags*', which Rose thought was exactly how it should be; stags were the easy, glamorous end of the business, but it was essential to keep control of the hinds.

Hinds are generally hefted to a particular part of the hill, and it is necessary to ensure that all the hefts are covered when they are culled. In the closely studied herd on Rum it was reported:

*'Dispersal to other parts of the island seldom occurred; only one hind of all those marked as calves during the first decade was found to have subsequently moved to an adjacent heft.'*

## Hefted to Islay

Louis Stewart, of the RDC, explained that topography plays a significant role in the amount of travelling hinds will do, shelter and/or feeding being better in some areas than others. The influence of weather patterns could be important too, with hinds more likely to move from their heft when poor weather limits the availability of feeding.

Table 12 below shows that the great majority of the hinds culled were from Ardtalla and Dunlossit. The Laggan cull has for a long time been small relative to the amount of land, unlike their stag quota. In 1974, they had sought to stop hind shooting altogether on the grounds that there were no hinds left on the heft. But, acknowledging that his estate should do more, Thomas Wilks eventually accepted an increased hind quota, although he was anxious that any change in culling rate should be gradual. In 1995 he was persuaded, on the basis of count evidence, that Laggan had a predominance of hinds and accepted a relatively large quota of 35. As a result a heavy hind cull was taken from the estate.

**Table 12: Southern Estates Hind Cull Quota Analysis 2014 – 2019**





In the event this proved to be extremely damaging to the hefting. After a few years of relatively high culls, hind numbers struggled to recover on much of the hill. Wilks lamented that all of the Laggan hind quota could be taken from below the fence but this, he added, was not enjoyable stalking.

In latter years Laggan's official hind cull allocation settled

at 15, though the keeper, Neil Park, was hard pressed to find that number to cull as he strove to protect the one good herd still subsisting on the hill. That numbers have failed to recover elsewhere may be interpreted as demonstration of the reluctance of animals to move to a different heft. The hill is not grazed by stock and vegetation on much of it is quite coarse and not very attractive to deer. Hind numbers on Dunlossit too, fell below quota in the late 1990s, though they eventually recovered to the required figure.

The southern estates' total hind cull for 2010 was set at 200; a year later there was concern over low count numbers, and the number was reduced to 150; in 2012 and 2013 it was further reduced to 135. With the recovery of the population in 2014 it was increased again to 255, which level was maintained for the following five years. Cull allocations were to have been reviewed in 2019-20, but the dissolution of the deer management group led to the end of quota allocation.

## Hefted to Islay

One difficulty with allocation was ensuring that the right number of hinds were culled in the right place to achieve the desired age and sex profile within each herd. In Putman's 2005 report on Leorin, Kilbride and Callumkill, he thought it was possible that hind culls taken were somewhat lower than might be required for maintenance of a steady state. He said:

*'On Brian Wiles' estimate of perhaps 100 hinds year round, with a recruitment rate greater than 40%, we might suggest a cull of the order of between 35 and 40 hinds per year to maintain steady state. But it is i) accepted that the stalker's estimates are a) qualitative only and b) differ significantly from estimates returned by the more formal Group counts and ii) that very difference in estimates (and it is a sizeable discrepancy!) makes it hard to decide which figure we should actually be using to calculate rates of recruitment within the Estate; there is no real justification for accepting either figure as accurate, nor knowing what 'middle' figure to work with.'*

*Further, we should in any case note that any 'underculling' of hinds which may be currently going on on Leorin and Kilbride by adherence to these low targets, should in any case be viewed within the context of a desire by Laggan to see an increase in the number of hinds on their hill ground; in such context a slight 'underculling' on neighbouring Leorin (whether deliberate or not) is not in practice inappropriate. Such uncertainty over true numbers on Leorin/Kilbride however does underscore the need for closer census in the future, by helicopter and foot counts, and the advantage of varying the direction of ground counts so that the ground is not always covered in the same way. There will always however remain a problem of accurate census on areas of land which are relatively small in comparison to the effective home range size of the resident deer population.'*

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The choice of which hind to shoot is a fine judgement. Should it be old or young? Are yeld (non-breeding) hinds to be preferentially culled? Should a calf be killed with its mother and, if so, which of the animals should be shot first? In 1976, Schroder enquired whether shooting the lead hind was recommended in view of the small size of Islay herds; de Nahlik's response was that the average herd was 20 to 25 beasts and lead hinds should not be shot except where a larger group had been found.



Twenty years later, the question was whether lean rather than lead hinds should be targeted. Rose's view was that a lean hind is not necessarily a bad one, provided she was doing her calf well; the condition of the latter should be the criterion in deciding whether or not to shoot them both.

Dick Youngson, of

Deer Commission Scotland, acknowledged the merit of sparing milk hinds because some of the calves would turn out to be good stock. He thought it appropriate to take out the good yeld hinds and yearling hinds in order to compensate, so that the hind numbers could better be kept under control.

Rose emphasised that the overall aim should be to produce a much flatter age structure to the hind population. Hinds could breed up to twelve or thirteen years: quite often the last calf was the best that that hind had ever produced. The over-riding principle behind the hind cull was to reduce the number of non-breeding hinds, which were unproductive mouths on the hill.

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During the 2002/03 season Dunlossit and Callumkill found it difficult to find the right hinds to shoot and undershot their targets. Rose highlighted the difficulty that some estates might have in finding a specific age class of animal when they had a smaller area or fewer animals. He expressed concern that older stock hinds had been taken instead of the planned non-breeding yearlings, forecasting that this would depress the reproduction rate and thus lead to more hinds on the hill than necessary. Based on the 294 calves counted in 2002, there were estimated to be around 150 yearling hinds in the herd that year, but patience and skill would be required if they were to be identified and culled.

Yeld hinds are mature females (over 4 years old) that have either failed to breed or have lost their calf within a few weeks of birth (Clutton-Brock & Albon, 1989). In the winter/early spring a yeld hind can be pregnant, yeld in this case referring to the previous breeding year. Callum Sharp's records from Ardtalla showed that mature yeld hinds that had been culled were generally pregnant; if yeld hinds were selected for culling, future calves would be lost. Rose said that he did not recall that this was borne out in the data gathered: even if it were, a yeld hind had not achieved breeding weight in the current year and was therefore less desirable as a herd member than one which managed to breed every year. Sharp rejoindered that the majority of milk hinds culled were not pregnant. Rose considered that if the size of the herd was correct, and the condition of the habitat was reasonable, one yearling hind ought to be as good as another.

A humane cull policy demands that the welfare of calves is taken into account. In the earliest days of the Islay Deer Committee, it had been agreed that up to a quarter of the calves should be shot, together with their mothers, and accurate weights recorded. Some keepers had demurred, worrying that it was going to be a nuisance to keep a complete record, as they were in the habit of leaving carcasses of smaller calves on the hill. Sir Ian Mactaggart countered that anything worth shooting was worth bringing home. If not, a set of scales could be carried in a pocket or, failing that, a calf's weight could be guessed pretty accurately;

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others too felt that leaving carcasses on the hill was not good practice.

Vorreyer had counselled that late and weak calves should be shot along with their mothers and that this would greatly improve the quality of the remaining stock; it was particularly important that the calf should be shot before the mother as she would normally return to the spot a few minutes later.

Rose reiterated his advice to shoot substandard calves (along with their mothers) and also to shoot substandard hinds (along with their calves). In his opinion, the over-riding objective in all other cases must be to avoid shooting calves until one could be sure what sex they were. If shooting was delayed until the calves were yearlings, females could be more readily identified and culled. The objective was to leave good calves with good hinds and concentrate on shooting non-breeding hinds which were, non-productively, grazing the hill. Kirk cautioned that fine-tuning of the cull allocations and results should not become too obsessive, as small adjustments of two to three animals between categories could be easily redressed.

Putman observed that:

*'Maintenance of hind populations in excess of requirement for recruitment is counterproductive for a whole suite of reasons, including:*

- (a) *Competition between the hinds for food means reduced intake per capita and leads to the production of poorer quality calves, which get a less good start in life than they might;*
- (b) *There is good evidence to show that hinds at high density produce a preponderance of female calves, and that sex ratio at birth may skew as far as 40 stags: 60 hinds (in better condition they tend to produce more stag calves);*

- (c) *Where hinds are present in high number they may displace stags from the favoured feeding areas and ultimately from the entire population range. Being smaller-bodied and with fine muzzles hinds can crop the sward far closer than stags, reducing forage height below that at which stags can graze effectively.'*

He found that the 2014 count of 941 hinds would support an offtake of no more than 115 to 120 stags each year over the following seven years. With a stag harvest set at the higher level (140+), the hill would run short of mature stags in about five years. He advised reducing hind numbers very substantially, and fairly urgently, and said that the group has consistently 'failed to grasp this nettle.' Hind numbers for the five following years, to 2019, averaged just under 961; the herd profile had not changed for the better.

## Jaws



While much information on health can be gleaned by an examination of a stag's antlers, jaw bones are invaluable to obtain a fuller picture. Hinds, of course, do not possess antlers and in order to age them accurately the most reliable guide is by inspection of the jaw. The group's advisors have stressed the importance of keeping both heads and jaws, (or good photographs of them), and all information that might help in aging the animals.

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If boiling-out jaws is not possible, burying them in wet sea sand or allowing crabs to pick them clean in an old lobster pot or wire cage are alternative methods of rendering them wholesome. It is possible to age red deer with absolute accuracy, up to the age of four, using adult tooth eruption; after that, being a year or two out is not critical.

*'Noting the degree of eruption and wear on the teeth, and then assessing the age by eye, is still the most widely used method and still appears generally to be the most accurate ... it is much more difficult in older age classes once the full set of permanent teeth has erupted. Although the teeth then start to become worn through attrition, the rate of wear is obviously likely to vary with variation in genetics, nutrition during development and food plants.'*  
(Lowe, 2014).



Youngson was complimentary about the Islay keepers' proficiency in aging animals, saying that they were generally 'spot on' (although with a slight tendency to over-age stags). Sharp made the very salient point that you cannot age a beast by its jaw before you shoot it!

However, Rose felt that some keepers were finding it difficult to age beasts accurately, though he was prepared to admit that good efforts had been made to meet the targets. What gave him particular cause for concern was over-shooting of three to six year-old stags, which, if repeated, would result in a shortage of shootable stags within a few years. He was a little worried by some

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of the heads he saw on display at the Deer Meeting, which he thought should only have been taken ‘in *extremis*.’

He listed his main concerns as:

- overshooting of two year-old stags (not very important)
- undershooting of young hinds (resulting in a higher number of non-breeding hinds grazing on the hill)
- overshooting of hinds in the middle age ranges (where they could be breeding).

Estate stalkers (both amateur and professional) could be expected to acquire, and use, aging and sexing skills, he thought.

## Deid

All deer die, sooner or later, but this can be either by a bullet from the stalker or naturally, from disease, exposure or starvation. Managers must take into account natural mortality of deer when calculating cull targets. Animals that die before the annual count has taken place will not, of course, be included in the numbers, but after a difficult winter casualties may continue to occur well into the spring.



The number of natural mortalities vary depending on the state of the vegetation, the condition of the deer going into winter, and the weather conditions in the ensuing spring and summer. The presence of sheep on the grazings may also affect survival, as deer tend to avoid areas where they are concentrated.

The coldest night on record for Scotland, minus 27.2 °C, was recorded in December 1995, at Altnaharra in Sutherland. A

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Deer Mortality census showed that casualties on the west coast were not as high as might have been expected, though in Wester Ross and central Scotland the freezing temperatures had had catastrophic effects, especially for the calves: the calving rate there declined to as low as 10%. Average mortalities for the Highlands and uplands were of the order of 3.9% for stags, 4.1% for hinds and 23% for calves. Albon reported that mortality on the Isle of Rum was especially high among calves and older animals; the spring-counted calving rate of 19% was the lowest they had on record, their professional stalkers believing they had found only 50% of the carcasses.

After heavy snow across southern Scotland in February 2001, there was a worry that the harsh conditions would lead to high mortality in the Islay herd. Rose explained that if a spring count revealed high mortality, the following cull could be adapted to allow for it. Having talked to the keepers and read the past papers, he did not believe that the high routine mortality (5%), allowed for by de Nahlik in his herd modelling, was likely to arise. This was, in fact, a perfect demonstration of how the collection of data to project the size of the herd could be used to safeguard the welfare of the animals. In the event, the deer count did not take place that year and it was therefore not possible to assess whether there had been excess mortality due to the conditions. A population estimate was produced by Rose, imputing a reduction of around 8% over all. The subsequent count recorded a substantial reduction of 18% from the previous year's estimated total, with only one mortality seen on the hill, thus there was no evidence to demonstrate the effect of winter mortality.

The 2017-18 winter was also notably wet and cold with a late and prolonged blast of ice and snow from the 'Beast from the East.' That was followed by a long dry period, when vegetation stunted by the late spring failed to make normal growth yields. While some casualties were seen on the hill when the counts were held, the lack of growth through much of the year affected the herds more widely; many animals went into winter 2018 in poor condition and mortalities were inevitable, as well as a poor calving the following spring. Cancellation of the spring 2020 count due to

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the Coronavirus lockdown meant that immediate evidence of this calving was lacking, but Sharp reported that the 2019 calving rate was probably down to 25% due to the poor condition of the hinds the previous year.



The death of significant numbers of wild deer in a harsh winter is deemed by some to be evidence that there are too many for the ‘carrying capacity’ of the ground; higher culls are proposed in order to prevent such deaths. Although it is understandable that no one likes to see beasts starving, it is one of nature’s population controls. The population size of wild herbivore populations across the world is controlled largely by the quantity of forage available relative to the condition of the animals. The numbers of gnu, saiga antelope or bison are not controlled by lions, leopards or wolves, but by shortfalls in food caused by bad weather, drought or disease. When ecologist Frans Vera sought to reproduce natural conditions

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at Oostvaardersplassen in the Netherlands, including allowing weaker deer and Konik ponies to die when the forage became scarce, the government stepped in to force the park authorities to cull a large proportion of the population.

Among the recommendations of the DWG is that:

*‘The Scottish Government should make clear that the ongoing levels of annual winter mortality amongst red deer on open hill range in the Highlands are unacceptable and need to be reduced ... access to suitable woodland cover during winter should become a basic management standard for the welfare of open hill red deer in Scotland. While the current levels of winter mortality are continuing against the backdrop of the trend towards milder winters and reduced snow cover, the wind and rain during Scottish winters are also more challenging to the welfare of open hill red deer that do not have access to suitable woodland cover.’*

However, the Association of Deer Management Groups (ADMG) responded:

*‘ADMG wishes to quote the remarks here of our Scientific adviser, a senior staff member at JHI: “This section seems to have been written by someone without any idea about animal population dynamics. The fate of every wild animal is to die, and this will always peak when resources are in short supply and it is the very young and the old that make up most of this mortality. Animals die every winter because (a) they are not immortal and (b) because breeding condition is driven by summer grass growth. As Scotland is strongly seasonal in terms of vegetation growth, then herbivores will always die in the winter when resources are minimal and weather is poor”. Analysis of the annual mortality figures over nine years in the DWG report indicates a rate of 1.4%. Accepting that*

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*this is likely to be a low estimate due to undiscovered carcasses, even at twice that figure this rate of mortality in a wild species compares favourably with the mortalities of farmed hill sheep kept in the same open range environment. According to the Farm Management Handbook, the average mortality rate of Blackface breeding ewes is 10%. It is quite incorrect to suggest that this level of natural mortality of open hill red deer is excessive or an indication of poor management or of insufficient levels of culling. (Data in the DWG report) also show significant losses of sika deer, a relatively robust woodland species with the benefit of access to better feeding and shelter. It should also be noted that the winter conditions in 2017/18 were exceptional and the losses exceptionally high due to the Beast from the East.'*

Opposing views on natural mortality are among the various points of disagreement between the traditional sporting sector, with boots on the ground and livings to make, and the urban-based politicians and campaigners seeking to clip their wings.

## SEVEN

### Public Interest

I wish to designate your land, she said

Why? I said

Because she said,

You don't know how to use it!

For whom? I said.

For the nation she said.

(Patrick Gordon-Duff Pennington, 1998)

### Regulators Approach



## Hefted to Islay

The practices of deer management in Scotland have been governed for centuries, at least to an extent, by law. The killing of deer in time of snow was forbidden in 1474 by an Act of the Scots Parliament. An Act of 1551, the first dealing with firearms, aimed to prevent wounding, by decreeing that

*‘nane of ane soveraine ladye’s leiges, of quhatsoever degree he be of, takes upon hande to schutte at deare, rae or other wild beasts with half hagbut, culvering or pistolet in time to come, under the paine of death and confiscation of all their guides for their contemption.’* (Scott Robinson, 1990).

Early statutes were intended to ensure that the hunting rights of owners of land were not infringed. The 1621 Act provided that: *‘no man shall hunt or haulk at any time hereafter who hath not a plough of land (c. 100 hectares) in heritage’*, thus emphasising the ownership qualification of sporting rights. The animals themselves were classed as ‘*res nullius*’ that is, they belonged to no one and could, in theory, be *‘appropriated by any person who can capture them’*. The land qualification, however, restricted the privilege of hunting them to the owners of the land or to others with their permission.

Sir Michael Wigan, the fields sports author and historian, observed:

*‘the hostility of the Highlanders to sheep farming (in the late eighteenth century) was partly because it interfered with their informal right ... to take their own venison.’* (Wigan, 1991).

Agricultural law reforms introduced in the twentieth century permitted the control of deer, under licence, to prevent damage to crops in a particular locality. Only in 1948 were farmers given the legal right to kill marauders on enclosed land. (Warren, 2002).

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There not many statutes that focus on a single species of wild animals, but behind the genesis of the Deer (Scotland) Act 1959 was a wish to regulate what was a long, close and sometimes vexed relationship between people and deer. A clear signal was being given for land owners to engage with the new Red Deer Commission (RDC) in order to collaborate in improving the management of deer. Section 1 of Part 1 of the Act heralded the new role for the State:

*‘There shall be constituted a commission to be called the Red Deer Commission (hereinafter in this Act referred to as the Commission) which shall have the general functions of furthering the conservation and control of red deer and of keeping under review all matters relating to red deer, and such other functions as are conferred on them by or under this Act.’*

The 1959 Act’s application was broad, providing for close seasons for hunting, protection from poaching and the prohibition of inappropriate types of weapon. It identified deer as, in certain circumstances, an agent of damage to economic interests. The Act provided for *‘control schemes for the extermination or reduction in number of red deer, where they have caused damage to agriculture or forestry in a particular locality.’* (Scott Robinson, 1990). The word ‘extermination’ connotes a lack of respect and was a harbinger for the fraught relationship between officialdom and our largest native quadruped that we have observed over the years.

Strategic forestry considerations were important in shaping regulation policy in the deer management sector. The Forestry Commission had been set up in 1919, following the end of the First World War, in order to secure greater self-sufficiency in timber supply. Although afforestation was the main objective of its foundation, the Forestry Commission came to assume a dual role as regulator of the private forestry sector as well as manager of its own extensive plantations; in the latter role it was responsible for acquiring, and fencing off, vast tracts of land for tree planting on

behalf of the state. Management of deer, and of the natural heritage more generally, thus became '*an ecological necessity because of the extent to which humans have altered the environment*' (Budiansky, 1995); afforestation is one of the larger alterations to the landscape in the last century.

The preservation of classified habitats and the mitigation of climate change have provided further pretexts for tightening regulations. Private landowners have acknowledged that they must uphold the standards expected of them in how their land is managed. Many have recognised that it is often better to join in the debate positively and work to influence policy-makers; patient engagement is often the best means to exert influence. This is not always easy when politicians and their civil servants know little about the workings of private estates and field sports, and quite often have little sympathy for either.

From modest beginnings the role of the state in deer management steadily expanded. Set up as facilitator and regulator to work alongside landowners to encourage them to improve their deer management, the Red Deer Commission (RDC) in due course was restructured to become Deer Commission Scotland (DCS) with a new, more proactive remit. That organisation was annexed in 2010 by Scottish Natural Heritage (SNH), whose mission statement stated: '*SNH is the leading organisation in Scotland that seeks to inspire, enthuse and influence others to manage our natural resources sustainably.*' In 2020 they in turn were rebranded, to become known as NatureScot, who today are expected to address all the services that nature provides to mankind:

*'Scotland's nature and landscapes are among our greatest assets. Nature gives us food and drinking water, energy and timber. It contributes to a clean and healthy environment. And it improves our well-being and quality of life.'*

*Yet the overuse of natural resources since the 1950s – especially for certain types of farming, forestry and*

## Hefted to Islay

*fisheries – has resulted in less space for nature and its associated benefits’.*

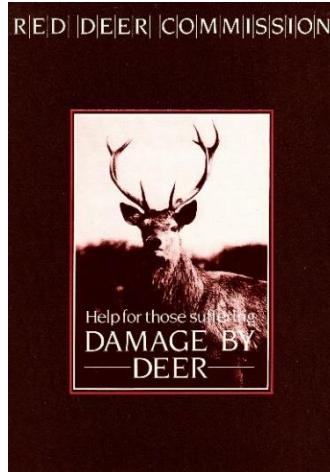
### The Red Deer Commission

For some time after the RDC’s inception in 1959, its role in private estates remained limited. It supported the best estimation of deer numbers and gave advice on herd policy. Islay’s estate proprietors welcomed this assistance and cooperated in mutually advantageous garnering and dissemination of data, deer management theory and practical techniques. Although Sir Ian Mactaggart was initially cautious about the RDC being called in, he came to recognise the benefits from their involvement.

Lessons were being learned from the Nature Conservancy Council (NCC) on its Isle of Rum estate, acquired by the agency in the late 1950s. It had been found necessary to change the shooting policy when the anticipated revenue had not materialised. In 1988, NCC had recommended a ‘no cull’ regime on Rum, but this was not supported by the RDC.

The RDC mounted periodic deer counts on Islay, a useful corroboration for the estates’ own annual foot counts. Commission officers attended the Islay Deer Meetings most years in order to relay news affecting the sector.

From 1992, when SNH succeeded NCC, there was constant change: the RDC’s powers were amended to allow control of deer in the context of ‘Natural Habitat.’ Louis Stewart, of RDC, expressed his worry that this could lead to conflict between RDC and SNH. As the NCC’s successor, SNH had been given responsibility for not only natural and genetic diversity but



also landscape quality, which would obviously include all natural habitats.

The relatively *laissez faire* approach to deer was being overtaken by a more statist agenda, driven partly by European legislators, and partly by conservation lobbyists and land reformers. Policies emanating from Government, both Westminster and, after 1999, Holyrood, sought to define and protect ‘public interests’ where they were deemed to be threatened by deer.

In 1993 Andy Rinning of the RDC briefed the Islay group on five areas of interest for the parliamentary working committee drafting legislation for the Deer (Amendment) (Scotland) Bill:

- a) Relationships strengthening between Deer Management Groups and the Commission
- b) A focus on the damage to natural heritage by deer
- c) Examination of out of season/night shooting
- d) Deer and agriculture – control authorisation
- e) Damage to woodland: agreement between the Commission and proprietors

Estates managing deer on Islay began to be formalised as a Deer Management Group (DMG) with attendant responsibilities. What had commenced in the early 1960s as an informal grouping of landowners, managers and gamekeepers ‘*to consider what should be done by them, together or separately, about the deer in Islay*’ was now being encased in an edifice of statutes and regulations.

Since the UK’s accession to the EEC in 1973, the overarching flow of Directives from Europe had become a primary driver of regulation, notably in the provisions of the Wildlife and Countryside Act 1981. This obliged the nature conservation agencies of member states to define those areas of countryside, species and habitats that were special and must be protected, and to set out a methodology and system of regulatory checks on the process. This was the policy landscape in which the Islay Deer Management Group (IDMG) found itself, with a responsibility to take account of the condition of classified sites within the range.

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In national and international contexts respectively, Sites of Special Scientific Interest (SSSI), Special Protection Areas for birds (SPA), and Special Areas of Conservation for habitats (SAC), form a classification framework. The principal such site in the southern estates' deer Range is the Ardmore, Kildalton & Callumkill Woodlands SSSI. The management prescriptions for this site includes protection from damage by grazing and trampling of deer.

Patrick Gordon-Duff Pennington, chairman of the RDC, defined the perceived problem:

*'Tourists enjoyed seeing dense herds of red deer, Britain's largest mammal, unseen anywhere else in the world on an open hill. The problem remained that they were destroying their food supply and much of the flora for which everybody had found such sudden enthusiasm.'*

(Gordon-Duff Pennington, 2004).

Scottish Natural Heritage (SNH), had been formed in 1992 from the amalgamation of the Nature Conservancy Council for Scotland and the Countryside Commission for Scotland to '*secure the conservation and enhancement of, and to foster understanding and facilitate the enjoyment of the natural heritage of Scotland.*' When the organisation began to seek representation on deer management groups, it was seen by some landowners as unwelcome, an additional factor to be taken into account when deciding their culls. On the positive side, there was the promise of new funding for improvements made to the natural heritage and an opportunity to build bridges between different interest groups. Islay's new DMG cautiously welcomed the idea of inviting SNH to its meetings. Quoted in the minutes of the 1996 IDMGS Deer Meeting, Gordon-Duff Pennington had spoken, enticingly, of an annual budget for SNH of £40m compared with the £600,000 at the command of its predecessor the NCC.

A 1994 statement by SNH declared that wild deer were greatly enjoyed by visitors and stalkers alike; however, by contributing to the decline of native woodlands, these same animals

were promoting the loss of an important part of the upland landscapes from which considerable pleasure and economic benefit were gained.

In the run up to the consolidating Deer (Scotland) Act 1996, promises were made by the RDC that the new laws would create more ‘flexibility’ although traditional sporting interests might read the runes and quail; the subtext was much of ‘damage’ by deer to habitats, to agriculture, to forestry, while their stocks were ‘too high’. Complaints by other interests about damage caused by deer could be made to SNH who would be required to vet them, while the RDC would be empowered to decide on their validity or otherwise.

## Deer Commission Scotland

The Deer (Scotland) Act 1996 was the most important statute for deer managers since the formation of the RDC in 1959. Praising the speed and smoothness of the bill’s progress under Lord Lindsay, the Under-Secretary of State for Scotland with responsibility for agriculture, fisheries and environment, Dick Youngson, of RDC, explained that it tied up a lot of loose ends, with coverage now including further areas relating to national heritage and habitat. The Deer Commission Scotland (DCS) succeeded the RDC in 1996.

Reporting on DCS activities, Youngson introduced Peter Kirk, the DCS’s new Liaison Officer, to the Islay group. Youngson admitted that there had been no increase in staff numbers from the days of the RDC. A small counting team was being retained and contract staff could be used when required. He explained that Kirk’s responsibilities would concentrate on integrating regulation of woodlands and open hill habitats within ranges. A new remit was to cover other species of deer, in addition to red deer.

Youngson expressed himself pleased that the DCS was to comprise a body of people who knew and understood about deer. He summarised its new powers and responsibilities:

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- Authorisation of night shooting of deer
- Working with Deer Management Groups to count deer populations on a seven year cycle (reduced from a ten year cycle now that they were ‘catching up’); counting would be carried out using observers in a helicopter; summer counts were to be performed as checks
- Control of deer in forest areas to permit restocking, advising on culls for deer controllers in private woodlands
- Assistance with setting up voluntary control agreements, co-ordinating work between and within deer management groups, estates, and parts of estates, setting up population and cull targets Working on habitat assessment methods with research bodies from SNH and Macaulay Land Use Research Institute (MLURI)
- Working with MLURI on the Hill Deer model, aiming at a simple, practical tool to help deer management groups. This model was already at the testing stage and IDMG was to be one of the pilot studies.

The old RDC might, broadly speaking, be said to have had sporting interests at its heart but more divergent views were now represented in the new directorate. Its new boss, Nick Reiter, was an administrator from the Highlands whose previous appointment had been as chief executive of Shetland Council; he was not an old style deer man like Gordon-Duff Pennington and the organisation was notably more conservation-oriented than its predecessor.

Stephen Gibbs, representing the Association of Deer Management Groups (ADMG), described how deer management plans should be produced. His own estate, Dougarie on Arran, had been the pilot study area; ADMG intended to assist groups with differing terrains, objectives and deer densities to formulate their plans. These included Gairloch, a conservation-oriented group in Wester Ross; the Angus Glens, whose deer numbers over a largely moorland range were considered too high and Cowal in Argyll, where the forest habitat held numbers of deer that were deemed to be ‘surplus’ by the forestry owners. Gibbs advised keeping plans

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confidential, referring specifically to the potential for interference from inimical organisations such as the Ramblers Association. The purpose of a deer management plan was to identify the ‘ideal’ population density of deer in forests by assessing the habitat impact; that information would be used to predict what the carrying capacity of the forest would be in the future. Youngson emphasised the DCS’s strong desire to work alongside deer management groups in developing their plans.

In its initial strategic review (1999), it set out the following objectives:

- to carry out a review of public policy relating to deer in Scotland
- to undertake an initial investigation and review of the economic, social and environmental costs and benefits of wild deer in Scotland
- to conduct a review of the Commission’s public information provision
- to review the impact on deer management of non-domestic rate relief
- to clarify the range and nature of public assistance to deer management
- to consider how deer management might be integrated into the delivery of socioeconomic and environmental benefits for which public finance might become available
- to make use of Section 8 (compulsory measures) where the Commission believes that this is necessary
- to work with a range of interests to agree definitions, interpretations and procedures in relation to deer legislation
- to publish guidelines for DMGs on their management
- to identify priority areas for new local deer management planning mechanisms

- to publish guidelines for the development of deer management plans and achieve greater coverage of DMGs working to such plans
- to produce a series of advisory leaflets on good practice in deer management

Gibbs warned that the DCS would be less ‘avuncular’ than in the past, although four of the new commissioners still represented broadly sporting interests. All DMGs could expect to be required to produce a plan, and there would be growing pressure towards ‘inclusivity.’ Reporting on the ADMG conference in Inverness, Gibbs highlighted the now prevailing belief that there had been ‘explosions’ of the deer population in some areas, with a 100% increase in seven years; ambitious targets for hind culls were to be set. Fortunately, Islay was to be spared the axe (or bullet) of such ambitions on the grounds that *‘a good job was being done.’*

Just as its mission expanded, budgetary constraints were increasingly affecting the DCS, imposing restrictions on the numbers of deer counts that it was able to undertake: this was unfortunate. There was no verifiable information on how many deer there actually were:

*‘Deer numbers are notoriously difficult to estimate and there is some disagreement over the current Scottish population ... according to the Commission’s estimates, the population doubled from c. 150,000 in the early 1960s to c. 300,000 by the late 1980s. The population is still rising. A 2003 WWF/RSPB report estimated that the current population is at record levels at over 400,000 deer and possibly significantly higher.’* (Carol Inskip 2005).

Another study in the journal Nature, (Clutton-Brock, Coulson & Milner, 2004), queried the claim that deer numbers were increasing so rapidly, noting that:

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*'a large part of the apparent increase is due to the apparent tripling of the estimated number of deer living in woodland, where they cannot be counted reliably.'*

The director of DCS sought to explain:

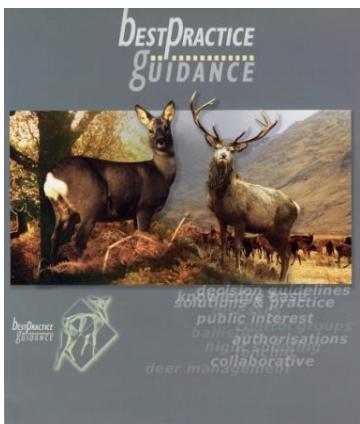
*'nobody really knows how many there are and we don't particularly need to. What we do need to do is to look at impacts on the land, and that does have to take into account all grazing pressures. Sheep do need to be taken into account ...'*

The DCS published a consultation paper, *Wild Deer in Scotland*, which put great emphasis on the importance of DMGs reducing their deer numbers. Additional initiatives were launched:

- A steering group to promote best practice in deer management
- Development of a fencing policy in terms of which all aspects of fencing would be examined; these would include landscape impact, access, deer welfare and public safety
- Research projects including: supplementary feeding; review of sika policy; the socio-economics of deer and deer management; determining the true extent and distribution of deer accidents through the UK

Peter Kirk, of DCS, felt it necessary to allay concerns over adverse publicity given to '*priority damage sites*' as it seemed that there was a general assumption that sites reported as damaged were automatically recorded as such. He reassured the Islay group that his organisation made its own assessment of any sites reported. It was announced that, although advice and support would continue to be

available, DCS was no longer going to issue cull targets to DMGs (not that this had previously been a contentious issue for Islay).



The first in a new series of *Best Practice Guides for Deer Management* was launched under the auspices of SNH in 2003. Unfortunately a crucial part of their message - '*aspiring to follow Best Practice guidance owners, occupiers/ managers and deer managers should be concerned about how their actions impact on the physical and mental well-being of deer*' - may have been lost on elements within the DCS itself, who in February 2004,

ordered in 'contract stalkers' by helicopter to the Glenfeshie Estate in the Cairngorms. *The Herald* newspaper reported: '*An emergency cull as spiralling numbers of deer threatened protected nature reserves ... more than 500 deer were killed in all*'.

An inquiry into the slaughter concluded that the marksmen employed were acting legally, despite claims that deer welfare was compromised. Speaking at the IDMG meeting that year, Kirk would admit only that best practice had **not** been followed, remarking that deer fencing had an important role to play in the management of wild herds. The Glenfeshie killing illustrated how politics were clouding the recognition of red deer, effectively treating them as vermin to be 'exterminated' at will.

Following its Glenfeshie fiasco, the DCS sought lower profile means of arresting what it continued to view as a burgeoning threat to the nation's vegetation. How could the culling of more deer be encouraged?

A consultation into close seasons was launched by the government, a subject that had not been reviewed since 1959. The conclusion was that there should be no change, but DCS was concerned that the current close seasons did not safeguard deer

welfare. Owners or occupiers who had deer on improved ground, or ground enclosed by a stock-proof barrier, could shoot them in the close seasons at will, without the need for any authorisation; nor was there any requirement on those carrying out the culling to demonstrate that they were fit and competent to do so. The DCS was anxious to ensure that anyone authorised to cull deer was registered with it.

It was hoped that joint working between government agencies would produce the mechanisms to '*enhance by use of targeted incentives*'; or if necessary, '*halt deterioration by regulatory action*'. In order to secure effective management incentives and regulation by DCS (and the three other rural agencies of the day, Forestry Commission Scotland, Scottish Executive Environment & Rural Affairs Department and SNH, all of them since rebranded) were to be co-ordinated for sites where there were detrimental impacts by deer, or deer and other herbivores. It was hoped this would:

- Convey a single public sector message and approach
- Set out clear mutual objectives
- Identify criteria for those sites where impacts are important
- Clarify the role of partner bodies
- Work with local interests and identify local solutions
- Prioritise action in the public interest
- Achieve action on a site by site basis within a consistent overall framework
- Ensure progress within a reasonable timescale

To alleviate grazing and trampling pressures on classified sites, estates were to be offered a comprehensive funding package that might combine, in one contract, measures for both deer and sheep reduction. Assistance was also offered in the form of advice and grant payments for continued management in the interests of

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habitat enhancement and woodland regeneration. It was believed that these would produce effective action on those sites most in need of attention.

The UK had committed itself to challenging targets for European requirements for biodiversity. These targets required 95% of features on designated sites to be in 'favourable' condition by March 2010. That did not mean recovery must be instant, but that there must be a clear plan of action in place leading to the designated site regaining favourable condition.

Prior to this, agencies had been dealing with the deterioration of habitat using a site-by-site approach and a three-stage process where concerns about a site were raised, the site was assessed and, where appropriate, became a priority for action. Whilst this process would be retained, it was felt that more effective solutions could be devised by considering and collaborating across the wider natural deer range and the relevant land ownerships. Clustering of designated sites into clearly defined management units was intended to have three main advantages:

- Plural issues in an area could be addressed at the same time
- There would be greater flexibility in planning work priorities for different habitats and features
- Any habitat change would be more likely to be sustained because all relevant owners and managers would be involved in the plan preparation

Solutions would be possible over the full deer range which might, or might not, coincide with designated site boundaries. Agencies would contact relevant owners and managers to explain this process further and to engage them in working out the most appropriate management units for the new approach.

The term 'Natural Heritage Site Audit' was coined to formalise the insufficiently precise 'expressions of concern'. The ways and argot of officialdom were sweeping all before them. The future looked brighter for those who understood the language, who

had the computer hardware, the time and the patience to master the pronouncements of an alien officialdom; backwoodsmen might be tempted to retreat to the hills.

The condition of designated sites was to be monitored on a six year cycle to provide an overview of those impacted by deer and livestock. Site Condition Monitoring results were to be compiled into an Audit List which would be recorded for each site:

- Whether features were unfavourable because of grazing
- What types of grazers were present
- Whether deer were a contributor to unfavourable condition

Sites identified as vulnerable, in terms of these criteria, were then to be prioritised using '*the best information available*' as to their importance in terms of the international designations (no doubt with a look over the shoulder at potential European Commission penalties), the significance of the impacts and the urgency which might be accorded to any mitigation. Actions to redress the 'impacts' should take account of the cost effectiveness of early action and any positive opportunity afforded. The objective was to target the sites most in need of attention, always keeping value for money in sight.

A joint agency vision and strategy were being (inexorably) developed with its own steering group and ministerial approval. The DCS funded a project, jointly with SNH, to assess deer 'impacts' on the rate of erosion of vegetation in blanket bogs. It was looking at the physiological and physical 'impacts' of different culling methods to assess stress in deer and was developing proposals for developing principles for interpreting data on 'damage' in relation to woodland size, integrity and extent.

Scotland's legislators had developed a land reform agenda and deer were on it. The need was felt for a further statute, which was to be enacted in due course as the Wildlife & Natural Environment (Scotland) Act 2011. The intention behind the

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legislation, as far as deer were concerned, was purported to be the encouragement of greater responsibility at the local level for decision-making and implementation of sustainable deer management practice. There was increasing impatience with the pace of change among deer managers over what the politicians had deemed were ‘public interest’ objectives.

Professor Putman, as deer advisor to IDMGT at the time, put it as succinctly as he could:

*‘It is intended that all those involved in management or culling of deer (effectively all significant land-owners) should be **required** to be part of a functional Deer Management Group and that such groups will provide a proper forum for discussion of management issues, and agreeing on future management strategies. It will not be acceptable to Government for landowners in an area to choose to “go it alone” without taking part in some form of local DMG.*

*It is urged in addition that DMGs should, in general, become more inclusive and undertake wider consultation with other local interest groups (such as local farmers, Community Councils, Ramblers’ Association, NGOs such as RSPB, JMT etc), so that management measures adopted shall, so far as is possible, be selected in trying to accommodate these other, public interests, as well as landowners’ own objectives.*

*Greater responsibilities would be placed on landowners and DMGs for management and for ensuring both sustainability and welfare of deer populations within their remit. While these responsibilities could not be defined by law since deer are classed as ‘res nullius’ (belonging to no one), it is proposed there shall be some statutory Guidance, or Advisory note outlining what these responsibilities might be.*

*DMGs are expected to meet, share information and agree on cull levels and other management actions to try to*

*ensure collaboration in management and to avoid conflicts of objective and management practice which might otherwise arise. There will be no formal requirement to produce a written management plan (although this would be seen as desirable). However, where DMGs fail to reach agreement on policy or practice, or where for other reasons individual DMGs fail to ‘deliver’, Government will have the right to intervene.*

*This right of intervention is an extension of current powers to intervene ‘in the public interest’ in that it appears likely that it will not be restricted to situations in which deer are causing damage to agriculture, forestry, natural heritage interests or the public safety but may be extended to any action which compromises ‘sustainable deer management’ (however that may be defined).*

*In practice it appears that Government intends to intervene in situations where some form of integrated deer management is prevented by conflicts between neighbours and lack of ability to reach agreement within a DMG.*

*The new legislation proposes that, in such situations (and **only** in such situations of potential conflict), Government shall be empowered to require preparation of, and adherence to, a formal deer management plan. Where agreement on a Plan cannot be reached Government may appoint an independent arbitrator/facilitator to help broker some acceptable agreed Plan, and will retain powers of enforcement if that plan is subsequently not carried through.’*

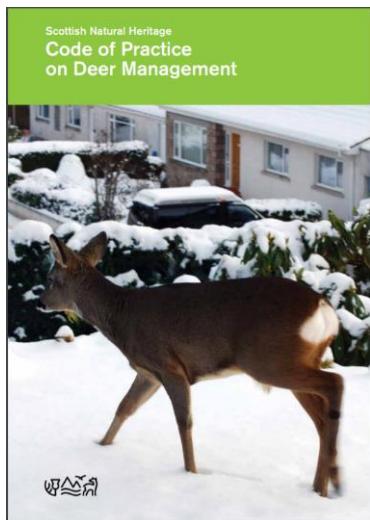
The spotlight also fell on the competence of those taking part in culls, particularly where they were unsupervised. Exemption from the need to apply for authorisation to take deer out of season was to be withdrawn, with the requirement that all out-of-season and night shooting would require authorisation by DCS.

Putman noted that the proposed changes, in particular in relation to devolution of increasing responsibility to local DMGs,

should be recognised as government effectively issuing a challenge to the voluntary system, offering sufficient rope for hanging themselves; if DMGs failed to rise to the challenge, ministers would be provided with a reason to demand greater state intervention throughout.

### Scottish Natural Heritage

On 1 August 2010 DCS was merged with SNH. The amalgamation of the two bodies, under the Public Services Reform (Scotland) Act 2010, was described as part of a wider programme to make the public sector '*simpler and more responsive*' and to provide better '*customer-focused services*'. It was advised that, with additional deer management responsibilities, SNH would carry on the work of the DCS to deliver '*sustainable deer management*' in Scotland and high quality '*deer services*'.



In 2012 SNH published the Code of Practice on Deer Management, which commenced with the encouraging statement that '*wild deer are important to Scotland's nature, culture and economy.*' The Code set out types of 'damage' that may occur to defined 'public interests', as a result of negative deer 'impacts' reaching what it termed a 'tipping point'; it urged the setting up of DMGs covering those parts of the deer range where they are not already in existence. Its premise was that DMGs should be better

able to achieve public interest objectives working collaboratively with SNH guidance. There were (and continue to be) mixed views on its success.

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In 2016 SNH called for Islay to complete a formal Deer Management Plan (DMP), using the benchmark template prepared by ADMG. A DMP covering the southern estates was compiled by David Gillies, the secretary of IDMGS and estate manager of Dunlossit. It was updated in 2019 by Victor Clements, an independent ecologist and deer advisor, drawing on information provided by each of the member estates.

The ‘Assessment’ column, against which a DMG should measure its own progress, asks for compliance against various measures such as:

*ACTIONS to develop mechanisms to manage deer; produce and publish a forward-looking, effective deer management plan which includes the public interest elements relevant to local circumstances. The plan should contain an action plan which sets out agreed actions and monitors delivery; and ACTIONS for the delivery of designated features into Favourable Condition; identify and agree actions to manage herbivore impacts affecting the favourable condition of designated features.*

In 2019 SNH produced a report, Assessing Progress in Deer Management, evaluating the progress made by DMGs. It stated:

*‘We note the good progress made against many of the priority criteria established for the 2019 DMG assessments, but that not all targets have been fully met across the range of DMGs. Lower thresholds were set for the natural heritage criteria that were recognised as more challenging. This included; actions for the delivery of Protected Area feature condition, actions to maintain and improve native woodland cover and condition and actions to monitor and manage deer impacts in the wider countryside. Some of these targets were met in so much as no plans were assessed as ‘red’; however, the natural*

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*heritage criteria are still those with the greatest potential for further improvement. For example, fewer than 60% of DMGs were rated green on priority criteria relating to: carrying out HIAs, identifying appropriate grazing levels and the delivery of DMG woodland management objectives.*

*To tackle climate change and biodiversity loss we have indicated the urgent need for a collective re-think of how land use can best deliver for nature and build resilience at the same time as reducing emissions. The current appearance of our uplands is shaped by their management history including grazing by deer and sheep. The question of what we want from our uplands is very topical with initial work carried out to scope how we might develop a strategic vision and the development of regional land use plans included in the Programme for Government.*

*The 2019 DMG assessments and our work in lowland deer areas indicate that the sector is well positioned to respond, but the changing context emphasises the need to maintain the momentum. Future challenges remain to ensure delivery of sustainable deer management in Scotland.*

*The sector is making progress, but momentum needs to be maintained if we are to meet the emerging priorities associated with climate change and biodiversity loss and realise the benefits of effective deer management on the ground. This report illustrates that the deer sector is now in a better position to respond to these emerging challenges.’*

The deemed public interest in the natural heritage rests on fashionable, but ultimately subjective, interpretations of scientific thinking. James Fenton encapsulated the ruling paradigm:

*‘The current landscape consists of degraded ecosystems, largely through past and present human action.*

## *Hefted to Islay*

*Hence habitat restoration is a key activity ... there is a lot invested in the current paradigm.'*

The particular ‘public interest’ objective in this iteration is habitat restoration, the halting or reversal of a perceived ‘unfavourable condition’ judged in these terms. However, he took a radically different personal viewpoint:

*'The landscape of northern and western Scotland contains one of the most natural vegetative patterns in Europe with, for example, the current rarity of woodland in many localities being a key biodiversity feature. Hence the concept of 'habitat restoration' loses its meaning.' (Fenton 2011).*

Alarmist reports in the media stoke the public perception that deer are out of control:

*'It is in the Highlands where the country's deer problem can be seen clearly: they gorge themselves upon gardens and crops and vegetable patches, they run blindly into the road as speeding cars approach. The true scale of the problem is hard to gauge, but our best guess is that there might now be as many as 1.5m deer in the UK, at least half of them in Scotland; more than at any time since the last ice age. They roam bare hills in vast herds – in the Cairngorms they have been seen in herds a thousand animals strong, steam rising from their massed ranks. They swarm over the fells like a plague, covering the land like a cloak, picking it clean, moving off as fast as they arrived ... the red deer eat and eat, overwhelming a delicate moorland ecosystem, trampling the ground, shearing the hillside of vegetation and stripping the bark from the trees.' (Flynn, 2018).*

A perception of out-of-control deer, promoted by some non-governmental organisations for their own ends, has led to calls

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for more, and stricter, regulation. The Deer Working Group, set up by the Scottish Government to report on deer management in 2019, came up with 99 recommendations, in some respects at odds with SNH's own recent assessment. The thrust of their approach adopted the prevailing negative stereotyping of deer, predictably calling for increased state powers of intervention. The exchange shown at the end of the section on natural mortality in the last chapter is typical; ADMG's statement hits the nail accurately on the head: '*... seems to have been written by someone without any idea about animal population dynamics.*'

The obverse of the coin is that land owners or managers who wish to radically reduce, or even exterminate their local deer population, have little to prevent them doing so, bar any practical difficulty in implementation.

The challenge for deer managers is to explain the work some of them are engaged in to ensure that the habitat supports the deer without unacceptable deterioration. Despite all the rhetoric, the message that was always given to Islay's deer managers by DCS was that IDMG was a very proactive organisation that had nothing to fear from new legislation. The reason for such a favourable judgement lay in the commitment and vigour shown by many in the group since it was set up, in a serious commitment to get deer management right. The southern estates' deer herd was built up under the guidance of experienced and respected deer advisors. Deer officers had the opportunity annually to meet the estate owners, managers and keepers at the annual deer meeting, and to see the statistics produced on counts and culls.

## **NatureScot**

The change of name from Scottish Natural Heritage to the neologism 'NatureScot' was accomplished against a backdrop of global pandemic. At the time of writing the agency has been set a panoply of tasks by the Scottish Government in its response to the Deer Working Group, most of whose 99 recommendations it has accepted. To be brief:

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*'The Working Group endorses Scottish Natural Heritage's identification of the need for significant changes in deer management as an important issue in climate change mitigation measures, and recommends that Scottish Natural Heritage treats this as a high priority'.*

What next...

*'NatureScot will develop a sectoral specific statement on how wild deer will be managed to meet climate and nature commitments, with particular consideration of woodland creation and condition targets'.*

Grabbing the stag by its horns,

*'NatureScot will adopt (an upper limit of ten deer per square kilometre) as a broad target across large areas of open range in the Highlands and will continue to work with stakeholders to bring down deer densities where deer damage is impacting on delivery of climate mitigation measures and alongside other recommendations taken forward, will continue to assess the impact of wild deer.'*

The Scottish Government has decided that -

*'for all properties, adequate cull levels to either prevent or manage damage to acceptable levels must be maintained. Where there are unacceptable levels of damage or a likelihood of unacceptable levels of damage, NatureScot must use their full range of powers.*

## EIGHT

### Devotion

It is doubtful whether the rabid anti-deer-forest section of society realises how little Highland ground is devoted absolutely and exclusively to deer or how little of it could be better used than it is.

(Frank Fraser Darling, 1947)

### Pride (and Prejudice)



Islay's deer managers may not always have succeeded in what they set out to do, but their intention to improve the welfare and quality of their herds has been consistent and much progress has been made. Achieving more holistic management of the habitat is a challenge that remains, both in gaining a better understanding of its dynamics and working out the optimum long term stewardship

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model. One need only to look at moorland grips, ploughed across hillsides in the 1960s, and now the subject of measures to repair damage to peatland, to understand how thinking can be turned on its head in a comparatively brief period of time.

The debate over the future of deer management can be framed within the context of the wider countryside. Scotland's Historiographer Royal, Chris Smout, put it this way:

*'The quarrel over the countryside is an argument over the limits and rights of property, beginning in the nineteenth century about access and widening in the twentieth to encompass also landscape protection and nature conservation – what does it mean to own and use land?'*



The steadily increasing encroachment of external influences into the deer manager's sphere of operations was outlined in the previous chapter; in particular through regulations seeking to

## Hefted to Islay

protect trees and crops and to retard deer-induced change to selected habitats.



The most recent controversy centres on the threat from disruption of the planet's climate due to increasing concentration in the atmosphere of carbon dioxide, and other gases, as a result of human activity. This has led some commentators to demonise large herbivores in their suppression of the natural regeneration of native woodland, a carbon sink, and also their (unproven) contribution, as ruminants, to methane in the lower atmosphere. This is a further driver for policy in deer management deliberations.

A 2020 Walkhighlands blog piece, by David Lintern, illustrates the latest policy direction:

*'The government has announced a climate emergency, so there's a growing policy focus on woodland cover and in mitigating the effects of global heating. Tree*

*planting targets are increasing year on year, playing ‘a pivotal role in tackling the climate emergency and steering us towards becoming a low-carbon economy’ says Rural Economies Secretary Fergus Ewing. Peatland is in the spotlight too, it’s carbon released under cloven hooves. It’s taking a while, but everything is beginning to be viewed through these new climate change goggles. Should deer be managed for the national, even the global good – or should they continue to be managed for private interests, including sport?’*

Can wild habitats be said to be ‘damaged’ by deer?

*‘When do ungulate impacts on vegetation become damage? Not every twig or leaf browsed is damage to a plant; not every plant damaged is damage to a vegetation stand. The concept of ‘damage’ and ‘benefit’ depends on resource targets set by different interest groups. Thus the core of the problem is not ‘conflict’ between vegetation and wildlife, but between differing human interests.*

*(Putman et al, 2011).’*

Discussion about how Scotland’s hill ground should look has become increasingly fractious. In one corner the traditional land users such as livestock farmers and hunters, and in another the conservationists who themselves are divided between those seeking to protect chosen ecosystems or vulnerable sites and those who espouse ‘rewilding’. Among the latter are those who, broadly, would like to change the appearance of the landscape to what they imagine it to have been at some unspecified earlier time by widespread tree planting and introduction of ‘apex’ predators.

The indications, from the study of pollen records, are that there was greater woodland cover across Islay at an earlier stage of the current inter-glacial period, but how much of the island was wooded can only be conjectured. How should the ecological back history of the present landscape be interpreted? James Fenton

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ascribes a major role to grazing animals in the distribution of woodland:

*‘In terms of woodland conservation ... if the current distribution of native woodland is the result of a continuing natural process of decline, then, looked at objectively, stopping this decline is preventing natural processes ... the sheer abundance of open moorland across all of Scotland suggests it is the most resilient to the ever-changing ecological parameters over the millennia, and that ecological successional trends are pushing away from woodland towards moorland.’* (Fenton, 2015)

A commonly held view is that, in the absence of humans, most of the country would be tree-covered:

*‘I often try to imagine what the island looked like before the advent of man. I suspect that apart from the coastal fringe and mountain tops, the island would have been covered with a dense wind-pruned forest of Sessile Oak, Common Birch, Hazel, Willow and Alder. The more exposed headlands would have grown thickets of Gorse and wetter areas – clumps of Eared Willow (*Salix reticulata*). Bird life would have centred on woodland species and one rather suspects that the Lapwing, Curlew, Chough and Barnacle Goose would have suffered from postglacial blues until agricultural men came into the scene to open up the forest. The unspoilt wilderness of yesteryear would have appealed to the eye of the aesthetic naturalist but I doubt if this wilderness would have been as rich in birdlife as contemporary Islay with its diversity of man-created habitats. Perhaps man is not always a walking disaster on this planet.’* (Dawson, 2004).

It is legitimate to ask how those grassland-dependent birds had survived if everywhere was, indeed, so densely wooded. Some

## Hefted to Islay

researchers hold that the presence from the start of large herbivores, like red deer, resulted in a savannah-like landscape of broken woods and open grassland, much like Ardtalla today. Such a landscape needs to have the input of sufficient herbivores to maintain its character, but not so many that tree cover is lost nor so few that its ecology is fundamentally altered.

So much for the past; what of the future? In its Management Statement for the Ardmore, Kildalton & Callumkill Woodlands Site of Special Scientific Interest, NatureScot (SNH) recognises the difficulty of balancing the maintenance of different habitats within its perimeter:

*‘Whilst grazing by deer, livestock and rabbits is inhibiting a great deal of natural regeneration, grazing does have a beneficial effect in parts of the site, especially on the non-woodland habitats. Low levels of grazing can create and maintain small scale habitat variation (glades, bare patches, dung for insects etc.) and help to inhibit the spread of bracken and other aggressive plants. Where feasible, grazing patterns should be modified accordingly.’*

Many estates are reluctant to reduce deer to the very low density, less than two *per square kilometre*, that conservationists would like to permit woodland regeneration. Nor is there any consensus on how such a level should be determined, as the average density of deer in an area is not directly correlated to the regeneration of woodland; other variables affecting tree survival include the seasonal movements of the deer, the presence of other herbivores, soil type/fertility, exposure and altitude:

*‘The effects on vegetation of altering red deer densities by culling and exclosure treatments and subsequent impact on plant species composition, structure and flowering of plant communities have been studied on the Isle of Rum. In this study, effects were compared between different densities and also between productive*

## Hefted to Islay

*and unproductive vegetation types. While the impact of the culling and enclosure treatments was pronounced on more productive grasslands, with lower deer densities leading to a decline in species richness and loss of rosette-forming low-growing species such as *Carex flacca*, *Hypochaeris radicata*, *Pilosella officinarum* and *Plantago lanceolata*, the impact on unproductive grasslands was negligible. Despite some limitations of this observational study, with potential confounding factors of soil, microclimate and herbivore assemblage (cattle, ponies and goats were also present), it appears that, particularly in productive plant communities, exclusion or reduction of deer densities can lead to a decrease of plant species richness and dominance of only a few species.'*

(Putman *et al.* 2011)



## Hefted to Islay

Finding the best way forward for deer management on Islay's estates, and the individual proprietors with responsibility for the stewardship of the land, is not going to be straightforward; there are no 'right' answers. But there are steps that can be taken that accord with the thrust of the advice received over the years - without jeopardising healthy herds of both indigenous red deer and naturalised fallow that have been cared for over many decades. Not every estate has the freedom, or the resources, to instigate significant improvements to the habitat. However, those with the will and the means to do so can press on to mutual benefit. Some reduction of the herd size is inevitable.

### Grasping the Nettle

There has been a clear consensus among advisors over the years that the optimum breeding herd for the southern estates, all else being equal, should number no more than 1,600, comprising 700 to 750 hinds and 850 to 900 stags.

Professor Putman wrote in 2014 that:

*'If we assume that the higher recruitment rate of nearer 45% is maintained, then the stable population of hinds required to sustain a quota of 150 mature stags is lower, at only 750. Likewise if we reduce the total quota to current (rather than future) aspirations, of 140 stags, required hind populations are lower still at only 700.'*

The target herd projected by Putman is some 20% fewer in number than the current herd, assuming figures are still in similar proportions to the most recent count. The annual hind cull is aimed for gradual reduction of numbers on the two largest estates. These estates accounted for over 72% of the hinds counted over the last few years, and these estates are responsible for most of the hinds culled each year.

As a result of divergent objectives for deer numbers collaboration between neighbouring estates has become somewhat

stressed. When the cake gets bigger it is easier to negotiate, as it is necessary only to share out the gains. But when the cake gets smaller, some estates may be unwilling to accept the changes. If each estate looks out for themselves, then there is the potential for the carefully nurtured herd structure to be jeopardised by targeting of mature beasts that would be better left on the hill as breeding stock. '*Transparent and scientifically sound with a perception of fairness*', was Bruno Schroder's formula for allocating stag culls but now a more holistic management of the habitat must take precedence.

The augmentation of native woodland and restoration of peatland are particularly valuable for their contributions to limiting greenhouse gas in the atmosphere, but summer grazing by cattle and control of bracken are also considered to be beneficial to the ecology of the hill. Although not all of Islay's estates have been able to progress these kinds of initiatives, there must be scope for them to do so in the future, in conjunction with their agricultural tenants and neighbours where appropriate.

### Vermin D'oh!

There is no necessity to have a deliberate policy to eradicate deer; it is enough that every theorist who sees them as a hindrance to their own vision can in practice have them shot out without compunction; Victor Clements questioned a particularly heavy culling of deer by the John Muir Trust in 2015:

*'While we already have mechanisms for compelling landowners to shoot more deer where under-culling is the issue, we do not have a recognised mechanism for preventing over-culling if the wider public interest in an area might be damaged from that.'*

The comparatively sophisticated type of deer management practised on Islay could be replaced by a free-for-all with deer moving into places where they are not wanted and a dearth of stags

## *Hefted to Islay*

over six years old. In 1923 Cameron warned against a lowering of deer management standards, which he foresaw would bring on

*‘unsparing slaughter of not just fresh stags, but any beast that found itself in the sights of the contract marksman or forestry ranger or local deer club member; the blood strains which contain the creative promise of big antlers are ... wiped out ...’*



Legislation ‘on the hoof’ is another risk, as not only much of the public, but also many legislators are unaware of the herd dynamics of red deer, imagining that they can be thinned out or removed without ill effect on the animals that might remain. The word ‘vermin’ might not be deployed often, but it is what Fraser Darling’s *‘rabid anti-deer-forest section of society’* actually means with respect to deer.

## Hefted to Islay

Red kites were once declared as vermin in the UK, which contributed to the birds' near-extinction. We are some way from that with red deer, but a change in the terms of the discussion is needed, not only to accord them the respect they deserve, but to acknowledge that they are a herd animal with a social structure. They need to be intelligently managed, not characterised as pests, to be exterminated at will.

### **Sunlit Uplands**



February 2019 saw the passing of the last of the founding members of the Islay Deer Committee, Bruno Schroder of Dunlossit. As he, Sir Ian Mactaggart and the other Islay lairds began to think about how to improve the management of their herd in the immediate aftermath of the Deer (Scotland) Act 1959, they could not have imagined how radically this field would change environmentally, technologically and politically over the ensuing six decades.

Their successors have an important responsibility to demonstrate best practice for the stewardship of wild red deer and their habitat in the face of the many pressures facing them. That is going to involve acceptance that, while their deer herd continues to be accorded a respected place as part of the ecosystem, there is a need to understand better what is best practice for the stewardship of their habitat. Positive action must also be taken to address climate change.

## Nothing Particular

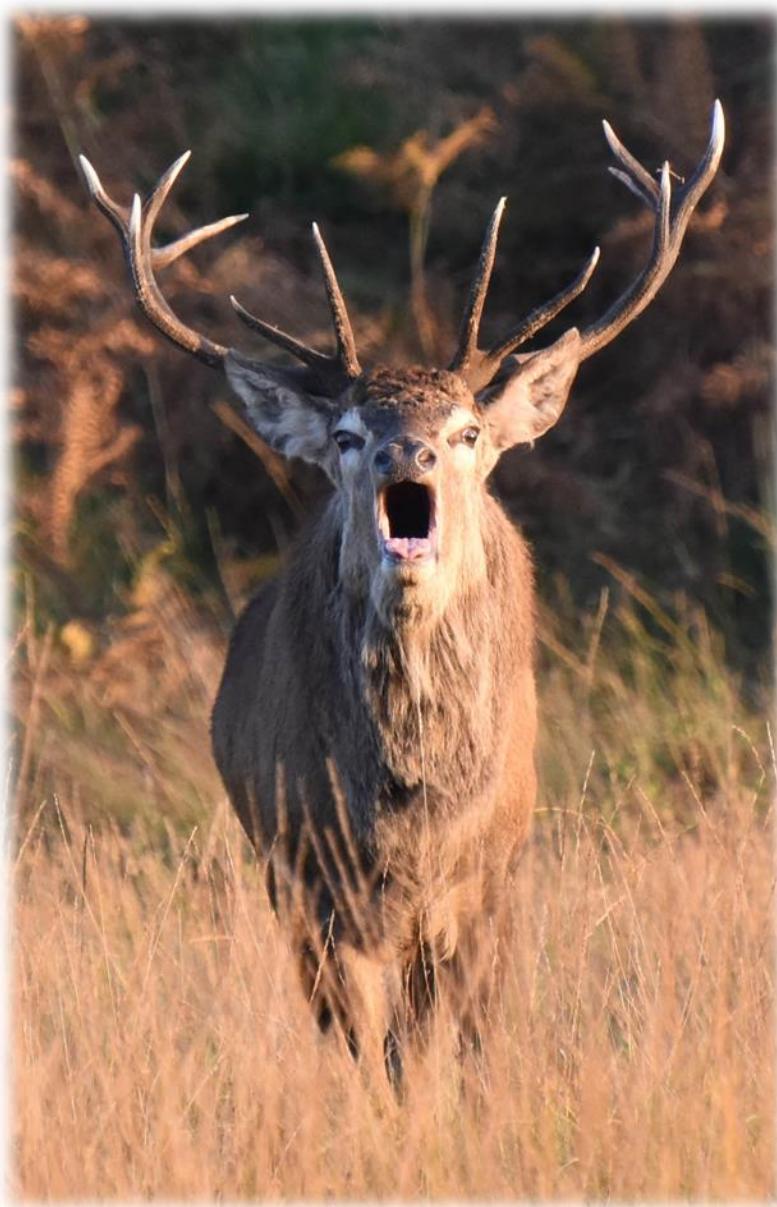
2020, the year of the pandemic, a most difficult year for ordinary human life, with a country-wide lockdown lasting many weeks and continuing restrictions on the movement of people thereafter. The 2020 Deer Islay Meeting, the swansong of the IDMG, was held using a digital platform, with a maximum of two participants from each of the estates. Ardtalla and Dunlossit would withdraw from the Southern Estates group, and the Islay Deer Management Group would be discontinued in its current form. Members agreed to set up a Deer Forum representing deer managers.

It was agreed that the practical co-operation in carrying out the annual deer counts would continue, but estates would be free to determine their own cull plans. Each estate would take responsibility for its own Deer Management Plan and join ADMG (or not) as its owners might see fit. The annual lunch was no more.

In some ways this outcome is an ironic twist on the story set out in these pages, following the original drive to collaborate in the management of a common resource. But then again, back in 1963 Mr Cranston might have had it right:

*Some discussion re 'Islay Deer Control' title in Minute of first meeting. Finally agreed that we call it nothing particular, but simply discussion by proprietors of the deer population in the best interest of deer and the Island economy'.*

Hefted to Islay



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A strong sense of possession joyed him; his eyes rested thankfully on the hills that were his. Never before had he possessed hill country; his eyes swept gratefully over the sea coast, his own – over the islands and the Skerries.  
(Violet Talbot – The Book of Talbot)