

RALEIGH LECTURE ON HISTORY

The Highlands and the Roots of Green Consciousness, 1750–1990

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I am returned from Scotland, charmed with my expedition: it is of the Highlands I speak: the Lowlands are worth seeing once, but the mountains are ecstatic and ought to be visited in pilgrimage once a year. None but those monstrous creatures of God know how to join so much beauty with so much horror. A fig for your poets, painters, gardeners and clergymen, that have not been among them, their imagination can be made up of nothing but bowling greens, flowering shrubs, horse-ponds, Fleet ditches, shell grottoes and Chinese rails. Then I had so beautiful an autumn. Italy could hardly produce a nobler scene, and this is so sweetly contrasted with that perfection of nastiness and total want of accommodation that only Scotland can supply.¹

THE words are Thomas Gray's, the year 1765, five years after the publication of Macpherson's *Ossian* had begun to form a taste among the educated for the gloomy splendours of the north. Although it was all so different from the pastoral world of the south celebrated in his own polished verses, as far as I know he was the first Englishman to express admiration for Highland scenery. His visit fell between those of others more typical in their opinions: Thomas Burt, the Hanoverian officer, with his hostile comments on the bleak moorlands that turned 'a dirty purple' in

Read at Glasgow 24 October 1990, at London 20 November 1990. © The British Academy 1991.

¹ J. Mitford (ed.), *The Correspondence of Thomas Gray and William Mason* (London, 1853), p. 349.

summer,² and Samuel Johnson, observing the chaos of the hills with an eye of a man more comfortable in a London coffee house: 'matter incapable of form or usefulness: dismissed by nature from her care . . . quickened only with one sullen power of useless vegetation'.³

Gray we may then regard as an early swallow foretelling the summer of the aesthetic appreciation of the Highlands by outsiders, part of a European movement of exploring the sublime and the picturesque that began elsewhere.⁴ It would not be quite true to say that before the 18th century mountains had been entirely without admirers.⁵ Nor would it be true to say that a delight in nature was necessarily unknown before this period, or imported by outsiders. The Scottish Renaissance poets had a sharp ear for birdsong, for example:⁶ and the Gaelic poet Duncan Ban McIntyre, himself a gamekeeper, an exact contemporary of Gray, published in 1768 what some have considered the finest nature poem in any British language. His praise of the hills struck another note from Burt and Johnson:

in flawless green raiment
as bright as the diamond
your blooms in agreement
like elegant music.⁷

It is from roots like these that an indigenous Scottish green consciousness could perhaps be traced.

Nevertheless, the 18th century did most emphatically see an alteration in consciousness among the polite and educated about the relationship between man and the natural world, as Keith Thomas in particular has

² E. Burt, *Letters from the North of Scotland to his Friend in London*, ed. R. Jamieson (Edinburgh, 1876), p. 32.

³ S. Johnson, *A Journey to the Western Islands of Scotland in 1773* (edn London, 1876), p. 32.

⁴ S. H. Monk, *The Sublime: a Study of Critical Theories in XVIII century England* (New York, 1935); T. C. Smout, 'Tours in the Scottish Highlands from the eighteenth to the twentieth centuries', *Northern Scotland*, 5 (1983), 99–121; P. Womack, *Improvement and Romance: Constructing the Myth of the Highlands* (London, 1989).

⁵ Petrarch, for instance, climbed the hills of Provence with delight, but rebuked himself by recalling St Augustine's warning that those who admired mountains, rivers and seas were admiring what was earthly and distracting themselves from the proper contemplation of God. See his letter of 26 April 1336 to Francesco Dionigi, reproduced in E. Cassirer, P. O. Kristeller & J. H. Randall (eds) *The Renaissance Philosophy of Man* (Chicago, 1948), pp. 36–46.

⁶ There is excellent treatment of this problem in J. Veitch, *The Feeling for Nature in Scottish Poetry* (Edinburgh, 1887). For the 15th- and 16th-century poets, see vol. 1, pp. 97–107. See also J. C. Shairp, *On the Poetic Interpretation of Nature* (Edinburgh, 1877).

⁷ D. B. MacIntyre, *Ben Dorain*; translated from the Gaelic by I. C. Smith (Preston, 1969).

eloquently described.⁸ Up to this point their attitude to the Highlands had been entirely utilitarian. Woods were cut and planted, ores were mined, land was farmed, seas were fished with no eye except for profit or subsistence. There then arose an appreciation of the Highlands as a place to visit for recreation—hence a tourist trade—and as a place to value for its own sake—hence restrictions on land use. By 1982 30% (and by 1990 37%) of the local government area Highland Region had been designated as being nationally important for nature and/or landscape conservation; it contained 40% of all the land that was British National Nature Reserve, and 54% of Scottish scenic areas.⁹ It appeared that between a quarter and a third of the entire surface of the Highlands and Islands in the wider geographical sense was by then either designated or under consideration for some form of conservation designation such as NNR, National Park direction area, or SSSI; and the Highlands were declared the only British priority area in the world conservation strategy.¹⁰ So very tense had the situation become between traditional land users, developers of various kinds including those in favour of tourist development, and conservationists, that the Secretary of State for Scotland last year engineered the break-up of the British Nature Conservancy Council, (which was responsible to the Secretary of State for the Environment), and proposed to assume direct command by creating a Scottish environmental agency responsible to himself.

The purpose of this lecture is to examine the context of a movement, late, slow and incomplete though it may have been, to conserve the Highlands from depredation upon its scenery and ecology. The story, I suggest, touches upon more than may appear at first sight. It encapsulates a conflict that in rural areas over much of the western world is becoming critical at the end of the 20th century, between growth—as envisaged in terms of income and employment generated by the traditional land uses of farming, fishing and forestry (the Highlands as private property) and aesthetics—a way of looking at the Highlands as a place for recreation and preservation (the Highlands as heritage, a harmless-sounding word not far from the demon of public property). We are involved at present in a scene

⁸ K. Thomas, *Man and the Natural World: Changing Attitudes in England 1500–1800* (London, 1983).

⁹ Highland Regional Council, *Conference on the Economic Future of the Highlands* (Inverness, 1982), p. 2; Countryside Commission for Scotland, *The Mountain Areas of Scotland: Conservation and Management*, (n.p., n.d., but 1990) p. 15.

¹⁰ J. M. Bryden in *Conference on the Economic Future*, p. 37. The figures have probably not changed much, but 'National Park direction area' is now an obsolete designation, and 'National scenic area' needs to be included.

of very considerable and bitter controversy often of a complex kind, as anyone will know acquainted with the disputes over Duich Moss on Islay and over the Flow Country of Caithness (involving users of peat and potential forest land *versus* conservationists) or over the Northern Corries of Cairngorm (involving ski-developers *versus* conservationists). How did we get from there to here?

The Victorians adored the Highlands but did little or nothing to protect them. Ecologists and ecological historians have still only a shadowy picture of the impact in biological terms of the Highland clearances and the intrusion of outside market demands. Frank Fraser Darling taught in a series of writings between 1938 and 1968 what he believed to be the dire effect on the ancient forests, already damaged by Viking and mediaeval depredations, of the subsequent activities of English iron-masters in the 17th and 18th centuries and the sheep ranching that followed in the 19th century, resulting in the reduction of the Highlands to what he termed, in a vivid phrase, 'a wet desert'.¹¹ We should be cautious about accepting this dramatic picture in quite these terms. For one thing, recent estimates from cartographic evidence would suggest that already by 1600 only 4% of the land surface of Scotland was wooded,¹² as compared to 50–60% in Mesolithic times,¹³ so at least nine-tenths of the ancient forests had already disappeared as a result of, presumably, climatic change and peasant use of wood pasture and tree clearance over millenia. Furthermore, what was left was more likely to have been preserved than damaged as the result of exploitation for charcoal and tanbark, as the iron-masters and the bark peelers had a reason for enclosing and looking after the woods to ensure sustainable resources: oakwoods (such as those of the Argl sea lochs or

¹¹ Fraser Darling refers to disafforestation in many places in his writings, usually with recognition that the process was long drawn out, but often with the implication that most of the serious damage occurred after 1600. See, for instance, *Wild Country: a Highland Naturalist's Notes and Pictures* (Cambridge, 1938), pp. 69ff.; *The Story of Scotland* (London, 1942), p. 36; *Island Farm* (London, 1943), pp. 200–1; *West Highland Survey* (Oxford, 1955), pp. 3–5, 160–71; *Natural History in the Highlands and Islands* (London, 1947), reissued and revised as F. Fraser Darling & J. Morton Boyd, *Highlands and Islands* (London, 1964), pp. 55–62; *Pelican in the Wilderness* (London, 1956), pp. 180, 203; *Wilderness and Plenty, the Reith Lectures, 1969* (London, 1970), pp. 21–3. Much of his picture relies on the portrayal of disafforestation in J. Ritchie, *The Influence of Man on Animal Life in Scotland* (Cambridge, 1920).

¹² G. J. Walker & K. J. Kirby, *Inventories of Ancient, Long-established and Semi-natural Woodland for Scotland* (Research and Survey in Nature Conservation, No. 22, NCC, 1989), p. 9.

¹³ Ritchie, *Animal Life*, p. 484; F. Fraser Darling, 'Ecology of land use in the Highlands and Islands', in D. S. Thomson & I. Grimble (eds) *The Future of the Highlands* (London, 1968); H. A. Maxwell, 'Coniferous plantations', in Joy Tivy (ed.), *The Organic Resources of Scotland: their Nature and Evaluation* (Edinburgh, 1973), p. 174.

Loch Lomondside) resumed their decline only in the 19th century when coal and chemicals replaced the forest product.¹⁴

The ancient pinewoods were probably already of very limited extent and in extremely poor condition in the 17th and 18th centuries, primarily as a result of overgrazing by increasing numbers of black cattle (not sheep) and a rising density of human population—which reached its maximum in the Highlands and Islands in the census of 1841. The capercaillie, dependent on mature pine, became exterminated as early as the 1770s, and was only introduced again in new maturing forests after a gap of 70 years;¹⁵ the red squirrel, dependent on pine seeds, was almost extinct by the 1840s, and spread again subsequently;¹⁶ the great spotted woodpecker died out at this point, and re-immigrated later.¹⁷

The recovery of these species came with new plantations on a very extensive scale, combined with greater care in regeneration and assisted planting in the traditional pinewoods of the Speyside Valley and elsewhere.¹⁸ Historians have often noted with disapproval the 60,000 trees contracted to be felled by the York Building Company when they purchased an interest in Grant lands in the Abernethy Forest in 1728:¹⁹ if indeed they were all felled, this was a substantial loss of mature trees from the already depleted gene bank of the old forests, though one cannot help but notice that the Abernethy forest is still there. Such figures need to be set against, say, the 31 million saplings planted by Sir Francis Grant on his estates up to 1847, though many of these would die or be thinned long before they could reach the stature of the felled forests.²⁰ Scots pine appears to have been the favourite tree of the Victorian forester, and it was technically impossible to plant the peat hillsides and flows where modern forestry is so intrusive. One could probably summarize the woodland

¹⁴ J. M. Lindsay, 'The Use of Woodland in Argyllshire and Perthshire, 1650–1850', Ph.D. thesis, Edinburgh University, 1974; J. M. Lindsay, 'The history of oak coppice in Scotland', *Scottish Forestry*, 29 (1975), 87–95; R. M. Tittensor, 'History of Loch Lomond oakwoods', *Scottish Forestry*, 24 (1970), 100–118.

¹⁵ J. A. Harvie-Brown, *The Capercaillie in Scotland* (Edinburgh, 1879); Ritchie, *Animal Life*, pp. 269–70.

¹⁶ J. A. Harvie-Brown, *The History of the Squirrel in Great Britain* (Edinburgh, 1881); Ritchie, *Animal Life*, pp. 290–5.

¹⁷ J. A. Harvie-Brown, 'The Great Spotted Woodpecker (*Picus Major*, L.) in Scotland', *Annals of Scottish Natural History*, 1 (1892), 4–17.

¹⁸ David Nairne, 'Notes on Highland woods, ancient and modern', *Transactions of the Gaelic Society of Inverness*, 17 (1891); Lindsay, *thesis*; J. M. Lindsay, 'Forestry and agriculture in the Scottish highlands, 1700–1850: a problem in estate management' *Agricultural History Review*, 25 (1977), 23–36; G. A. Dixon, 'Forestry in Strathspey in the 1760s', *Scottish Forestry*, 30 (1976), 38–60.

¹⁹ E.g. Ritchie, *Animal Life*, p. 321.

²⁰ Nairne, 'Notes on Highland woods', p. 199.

history of 19th-century Scotland as a decline of oak and birch after a century of relative stability ending around 1820, but an increase in pine after a century of further decline ending around 1820: but at the end of the day, there was probably nearly as much covered in woodland in 1900 as in 1600, and that not more than 5% of the total Scottish landsurface.²¹

Fraser Darling further maintained that disafforestation had been followed by the over-exploitation of the land by fire and sheep: the stored nutrients in once wooded ground had been dispersed by the smoke of muirburn designed to 'improve' the grazing, and driven off in the wool, meat and bone of the sheep that took it from the vegetation. In his own words 'two centuries of extractive sheep farming in the Highland hills have reduced a rich natural resource to a state of desolation', and elsewhere he drew analogies with twentieth-century Africa to illustrate the seriousness of what he thought had happened.²² Modern research has not ruled out this effect, but has not confirmed it either. It is beyond doubt that vegetation is modified in different ways by the grazing pressures of sheep and cattle, though it is less easy to prove experimentally that sheep bring about a deterioration of the biological carrying capacity of the ground. There is evidence that the formation of heather moor of the sort that follows forest removal and grazing by cattle can itself also lead to acidification, and that under some circumstances sheep grazing recycles nutrients more rapidly and may actually increase soil fertility, so that grasslands intensively grazed by sheep may be richer in plant species than less intensively grazed grassland.²³ If the sheep are taken off, the heavy mat of coarse grass may replace both the former heather and the close cropped sward, which perhaps happened in many areas when sheep numbers declined in favour of rising deer numbers between the 1880s and the 1930s.

What the Victorians were very keen on protecting, of course, was game. The rise of the sporting estate followed on the imposition of

²¹ *Ibid.*, p. 191.

²² Fraser Darling in Thomson & Grimble, *Highlands*, p. 38; the phrase 'wet desert' was perhaps first used by him in *Pelican in the Wilderness* (1956), p. 180, and others similarly came to refer to the Highlands as 'semi-desert'; W. H. Pearsall, 'Problems of conservation in the Highlands', *Institute of Biology Journal*, 7 (1960), p. 7; W. J. Eggeling in *Natural Resources in Scotland: Symposium at the Royal Society of Edinburgh* (Scottish Council, Development and Industry, 1961), p. 362.

²³ J. Miles, 'The pedogenic effects of different species and vegetation types and the implications of succession', *Journal of Soil Science*, 36 (1985), 571–80, esp. p. 575. See also R. F. Hunter, 'Conservation and Grazing' in 'Land Utilization and Conservation in the Scottish Highlands', *Institute of Biology Journal*, 7 (1960), pp. 20–2.

English-style game laws in the latter part of the 18th century,²⁴ and on the knowledge of the wealth of quarry by the outside world in the 1780s and 1790s.²⁵ By the end of the Napoleonic Wars, the Duke of Gordon was advertising the delights of his shooting leases in the south, and the full-blown sporting estate was on the market before mid-century.²⁶ With the collapse of mutton and wool prices in the years after 1870 the deer forest and the grouse moor became the prime use of much Highland land, and by the early decades of the 20th century it was a matter of hot political contention as to whether deer forests represented the sterilization of a valuable resource for the amusement of the idle and alien rich, or the only practicable use for otherwise almost valueless land. Meanwhile the number of deer increased enormously over what it had been in the 18th century, and, like sheep, themselves came to represent an ecological threat to woodland regeneration. Adam Watson has recently drawn attention to 18th-century clearances for game preservation on several Cairngorm estates, and the subsequent failure after about 1800 of many of the older Scots pinewoods to regenerate naturally due to browsing pressures from the ever-increasing numbers of red deer.²⁷

With the game came gamekeepers, and technology in due course supplied them with deadly weapons against predators, the cartridge-loading shotgun and the steel gin trap.²⁸ Early game books are full of details of the destruction of birds of prey on a scale which has occasionally tested credulity: for example, in five Aberdeenshire parishes clustering around Braemar, 70 eagles and 2520 hawks and kites are said to have been killed between 1776 and 1786,²⁹ on the Sutherland estates of Langwell and

²⁴ A. Watson & E. Allan, 'Papers relating to game poaching on Deeside, 1766-1832', *Northern Scotland*, 7 (1986), 39-45.

²⁵ T. Thornton, *A Sporting Tour through the Northern Parts of England, a Great Part of the Highlands of Scotland* (London, 1804) referred to excursions in the 1780s; R. Heron, *Observations made in a Journey through the Western Counties of Scotland in the autumn of 1792* (Perth, 1793) spoke of the attractions for sportsmen. See S. Nenadic, 'Land, the landed and the relationship with England: literature and perception 1760-1830', paper presented at the Scottish-Irish Historical Conference, St Andrews, 1990.

²⁶ D. Hart-Davis, *Monarchs of the Glen* (London, 1978); Smout, 'Tours in the Scottish Highlands', p. 110-11.

²⁷ A. Watson, 'Eighteenth century deer numbers and pine regeneration near Braemar, Scotland', *Biological Conservation*, 25 (1983), 289-305; A. Watson & E. Allan, 'Depopulation by clearances and non-enforced emigration in the north-east Highlands', *Northern Scotland*, 10 (1990), 31-46. See also D. Nethersole-Thompson & A. Watson, *The Cairngorms* (Perth, 1981), pp. 20-7.

²⁸ David Allen, *The Naturalist in Britain: A Social History* (London, 1976), pp. 141-3.

²⁹ Ritchie, *Animal Life*, pp. 128-36.

Sandside, 295 adult eagles were destroyed between 1819 and 1826;³⁰ on a single estate south of the forests of Gaick and Glen Feshie, well over a thousand kestrels and buzzards, 275 kites, 98 peregrine falcons, 78 merlins, 92 hen harriers, 63 goshawks, 106 owls, 18 ospreys, 42 eagles and sundry other hawks, in only three years, 1837–40.³¹ To take a lowland example, 310 hen harriers were killed on one Ayrshire estate in four years of the 19th century.³² My own view is that there is so much of this evidence from such varied sources that it cannot be disregarded in total, though some details of species identification may be wrong. The destruction of the birds of prey on this scale was itself a major modification of the natural world. Small mammal predators suffered at least as badly. The estate near Glen Feshie reported the destruction of some 650 pine martens, wild cats, polecats, badgers and otters in three years,³³ and James Ritchie provided astonishing details of the skins brought to the Dumfries fur market in the 19th century: for example, 600 polecat skins a year in the 1830s.³⁴ The polecat was extinct in Scotland by the end of the 19th century.

At least as significant as the fact of their destruction is what the former volume of predators reveals about the volume of prey species in the Highlands—voles, mice, hares, small birds and so on.³⁵ They clearly no longer exist at anything like the densities necessary to support such numbers of predators, presumably because of damage done to their habitat by two centuries of modern land use.

Victorian society seems to have paid little attention to the alteration and destruction occurring in the Highlands. It is true that you may, if you search, happen upon a denunciation of the new, closely-planted conifer woods as savage as anything that might be said in the 1980s:

the whole is one enormous, unbroken, unvaried mess of black. . . . it has some of that dreary image, that extinction of form and colour, which Milton felt from blindness . . . the whole wood is a collection of tall, naked poles, with a few ragged boughs near the top . . . below, the soil parched and blasted with the baleful droppings; hardly a plant or a blade of grass; nothing that can give an idea of life or vegetation.

³⁰ *Ibid.*, p. 128.

³¹ Richard Perry, *In the High Grampians* (London, 1947), pp. 54–5.

³² W. H. Pearsall, *Mountains and Moorlands* (London, 1971 edn), p. 236. Some of the predators slain in these Victorian holocausts may have been migrants: others will have been drawn in to meet their fates by gaps in the predator territories created by earlier killings. One should not, for example, conclude that one estate could ever have supported 310 resident hen harriers in a four year period.

³³ Perry, *ibid.*, p. 55.

³⁴ Ritchie, *Animal Life*, pp. 165–7.

³⁵ For enormous 18th-century game bags, see T. Thornton, *A Sporting Tour*.

A man might choose to hang himself there, but would find it hard to discover a side stem to which a rope could be fastened.³⁶

More notably, John Ruskin, that son of Perth, drew attention in 1886 to the desecration of an inlet of Loch Katrine associated with Walter Scott in a passage interesting for its early use of the concept 'inheritance' to describe Scottish natural beauty:

That inlet . . . was in itself an extremely rare thing; I have never myself seen the like of it in lake shores. A winding recess of deep water, without any entering stream to account for it—possible only, I imagine, among rocks of the quite abnormal confusion of the Trossachs, and beside the natural sweetness and wonder of it, made sacred by the most beautiful poem that Scotland ever sang by her stream-sides. And all that the nineteenth century conceived of wise and right to do with this piece of mountain inheritance was to thrust the nose of a steamer into it, plank its blaeberries over with a platform, and drive the populace headlong past it as fast as they can scuffle.³⁷

On the other hand, there were no campaigns in Scotland analogous to the defence of the Lake District in England, which was an element in leading to the foundation of the National Trust in 1894.³⁸ Then there was no attempt for almost 40 years to interest the National Trust in properties in Scotland (though it quickly acquired them in Wales and Ireland), and no immediate effort to create an analogous Scottish body. There was no Scottish nature writer working to raise a green consciousness analogous to Richard Jeffries and W. H. Hudson in England, or, perhaps more remarkably to the great John Muir, born a Scot, in western America. Similarly, there appears to be no analogy within Scotland to the Scottish surgeons and missionaries who even before the middle of the 19th century had provided a precocious and trenchant critique of environmental damage in India and South Africa, as recently studied by Richard Grove.³⁹

Again, when the Royal Society for the Protection of Birds was founded in 1889 it acquired some early Scottish members and in 1893 a Scottish vice-president, but remained firmly rooted in England.⁴⁰ Early bird

³⁶ Quoted in Veitch, *Feeling for Nature*, vol. 2, pp. 152–3.

³⁷ John Ruskin, *Praeterita* (London 1885–6), vol. 1, pp. 411–2.

³⁸ John Sheail, *Nature in Trust: the History of Nature Conservation in Britain* (Glasgow, 1976), p. 59.

³⁹ R. H. Grove, 'Conservation and colonial expansion; a study of the evolution of environmental attitudes and conservation policies on St. Helena, Mauritius and India 1660–1860', unpublished Ph.D. thesis, University of Cambridge, 1988; R. H. Grove, 'Scottish missionaries, evangelical discourses and the origins of conservation thinking in Southern Africa 1820–1900', *Journal of Southern African Studies*, 15 (1989), 163–87.

⁴⁰ Tony Samstag, *For Love of Birds: the Story of the Royal Society for the Protection of Birds 1889–1988* (RSPB, 1988); Sheail, *Nature in Trust*.

protection legislation was not focused on the Highlands even when it had a Scottish application. The first area nominated a bird sanctuary by a Scottish local authority under the 1894 act was in the Lowlands, at Tentsmuir in Fife; the earliest species to attract individual attention in statutes were seabirds and the St Kilda wren.⁴¹ Why this should have been the case is hard to say, but it has been a persistent characteristic that Scotland in general, and the Highlands in particular, have lagged behind the rest of Britain in popular interest in nature and scenic conservation.⁴²

Nevertheless, there were two very significant developments for the future in Scotland before the 19th century drew to a close. One was the rise of a movement to secure public rights of access. The Scottish Rights of Way Society was formed in Edinburgh in 1843 primarily to maintain footpaths near the capital from the encroachment of the landed who wished to close them: the civic leaders observed that it was a cheaper way to maintain the health of the populace than by following the expensive recommendation of Edwin Chadwick on sanitary provision.⁴³ Almost at once they were embroiled, with the support of Perth Town Council and others, in a famous dispute about access down an old drove road through Glen Tilt between an Edinburgh professor leading an excursion of science students and one of Scotland's greatest sporting landlords and friend of the Royal Family, the Duke of Atholl. The upshot, after further incidents, a cartoon hostile to the Duke in *Punch* and a prolonged series of lawsuits, was that such rights of way became firmly established.⁴⁴ The society fought later on many occasions, for example to secure the path through Glen Doll and the Larig Ghru, always in the teeth of lairdly opposition, often with surreptitious support from the local population.⁴⁵ The cause of access, in England and Scotland alike, became a cause of the radical Liberals in their campaign against the wicked privileges of the landed classes, exemplified

⁴¹ J. A. Harvie-Brown, *A Fauna of the Tay Basin and Strathmore* (Edinburgh, 1906), pp.xli-xliiii; J. Morton Boyd, 'Nature conservation', in *Proceedings (Section B) of the Royal Society of Edinburgh*, **84** (1983), p. 296.

⁴² Indications of this include, for example, much lower membership of the RSPB in Scotland than England, the low membership of the Scottish Wildlife Trust compared to English County Naturalist Trusts and its weakness in the Highlands, the low membership of the Ramblers Association in Scotland, the lower vote for the Green Party in the European elections of 1989, and a low uptake of NCC grants for school conservation projects in Scotland compared to England. On the other hand, the 1990 Regional Council Elections produced Scotland's first Green Party councillor (in Nairn) and the party scored unusually well in votes in Highland Region.

⁴³ Scottish Record office: G. D. 335, Records of the Scottish Rights of Way Society.

⁴⁴ T. Stephenson, *Forbidden Land: the Struggle for Access to Mountain and Moorland* (Manchester, 1989), pp. 120-3; S.R.O.: G.D. 335.

⁴⁵ S.R.O.: G.D. 335.

from 1884 by James Bryce's attempts to bring in an Access to the Mountains Bill that would have opened the hills to everyone and hopefully made life hell for the aristocratic deer stalker and the grouse shooter.⁴⁶

Aside from the political aggression, it was a sign of the times that there was a great increase in the recreational use of the mountains by middle-class town dwellers. The first number of the *Scottish Mountaineering Club Journal* appeared in 1890, and the president of the club declared that 'the love of scenery and of the hills is implanted in the heart of every Scot as part of his very birthright', and on the tops 'we seem to breathe something else than air, and . . . look down on every side upon a scene untainted by work of man, just as it came fresh from the Creator's hand'.⁴⁷ This was good mystical greenstuff, reaching back to the world of Wordsworth and forward to the Friends of the Earth. The Scottish Ski Club was founded in the new century, by 14 gentlemen from Edinburgh in 1907. They gave away skis to shepherds and postmen, but the tone of their journal was much more macho: 'I glory in the victory over self and Nature . . . the greatest of all joys of ski-ing is the sense of limitless speed, the unfettered rush through the air at breakneck speed . . . Man is alone, gloriously alone against the inanimate universe . . . He alone is Man, for whose enjoyment and use Nature exists'.⁴⁸ Thus encapsulated are two aesthetic attitudes to the hills, as temple and as obstacle course, which exist to this day and can be seen as opposition and support for the development of the Northern Corries of Cairngorm in 1990.

The other significant development of the turn of the 19th and 20th centuries was the Scottish birth of ecology as a scientific discipline.⁴⁹ I am not trying to say that the Scots invented ecology: it had European origins in the late 19th century. But there was a special Scottish context for the study of ecology. It was associated particularly with the teaching of zoology and botany as 'Vitalistic science' at the University College of Dundee, under Patrick Geddes, Professor of Botany, and D'Arcy Thompson, author of *Growth and Form*, marine biologist, classicist and *savant extraordinaire*.⁵⁰ but it also involved very talented amateur natural historians, of whom

⁴⁶ E. A. Baker, *The highlands with Rope and Rucksack* (London, 1923), p. 22; Sheail, *Nature in Trust*, p. 69; Stephenson, *Forbidden Land*, pp. 131–42.

⁴⁷ *Scottish Mountaineering Club Journal*, 1, no. 1 (Jan. 1890), pp. 1–3.

⁴⁸ *Scottish Ski Club Magazine*, 1, no. 5 (1913), p. 207.

⁴⁹ C. H. Gimingham, D. H. N. Spence & A. Watson, 'Ecology', in *Proceedings (Section B) of the Royal Society of Edinburgh*, 84 (1983), 86–8; John Sheail, *Seventy-five Years in Ecology: the British Ecological Society* (Oxford, 1987).

⁵⁰ Allen, *Naturalist in Britain*, p. 242; Patrick Geddes and D'Arcy Thompson were both better at firing people with ideas than teaching them the nitty-gritty of biology: it was said of D'Arcy Thompson later at St Andrews that he imbued his students with knowledge of 'the beauty of the whole animal kingdom', but omitted to teach them the anatomy of the frog. R. D'Arcy Thompson, *D'Arcy Wentworth Thompson: the Scholar Naturalist* (London, 1958), p. 167.

J. A. Harvie-Brown, the mastermind of the various *Vertebrate Fauna* of Scottish natural regions, was the most remarkable,⁵¹ and John Hood, the metal-turner of Dundee who discovered 65 of the 400 rotifers known to science in his day, is the most forgotten.⁵² It would take a paper in itself to do justice to the figures concerned.⁵³ To two of Geddes' students, Robert Smith, and his brother W. G. Smith, we owe what has been called 'the first attempt at a scientific description of British vegetation', using mapping techniques introduced at Montpellier by Charles Flahault, with whom Geddes himself was in close contact.⁵⁴ Robert's untimely death from appendicitis at the age of 26 in 1900, and his brother's move into agricultural science after 1908 terminated the work, 'and thereafter the subject made virtually no progress for thirty to forty years'.⁵⁵ Another in the same mould was W. E. Collinge, student at St Andrews in the 1880s, founding editor of the *Journal of Economic Biology* by 1906, university assistant lecturer in D'Arcy Thompson's St Andrews by 1917, when he started an organization called the Wild Bird Investigation Society which sounds like an early forerunner of the British Trust for Ornithology. Within five years he had left to become Curator of Yorkshire Museum.⁵⁶ Finally there was James Ritchie, successively at the University of Aberdeen, the Royal Scottish Museum and the University of Edinburgh, and thus one of the few noted zoologists to remain in Scotland through the first half of the 20th century. In 1920 he published an important book, its title demonstrating its originality, *The Influence of Man on Animal Life in Scotland*, at least 40 years ahead of its day in scope and subject matter. It had no immediate imitators on either side of the Border.⁵⁷

It was, I believe, a characteristic of much early Scottish ecology not only that it was very innovative about biological mapping (in which Harvie-Brown with the help of the cartographic firm Bartholomew played a role as

⁵¹ The Harvie-Brown papers, virtually unstudied, are deposited in the Museum of Scotland, Chambers Street, Edinburgh.

⁵² A. D. Peacock, 'John Hood of Dundee: working-man naturalist', *Scots Magazine*, **31** (1939).

⁵³ One additional figure was Norman Kinnear, who did much to encourage the study of natural history and ecology in India, and later followed a distinguished career at the Natural History Museum in South Kensington.

⁵⁴ J. H. Burnet (ed.), *The Vegetation of Scotland* (Edinburgh, 1964), pp. 1–4; Sheail, *British Ecological Society*, pp. 6–10.

⁵⁵ Burnet, *Vegetation*, p. 1.

⁵⁶ He was also involved in the early bird protection movement in Britain and Scotland: W. E. Collinge, 'The necessity of state action for the protection of wild birds', *Avicultural Magazine*, **10** (1919), pp. 123ff.

⁵⁷ Dudley Stamp was to describe it in the 1960s as a work 'in advance of his time: it includes much which is of the highest value today', *Nature Conservation in Britain* (London, 1962).

well as the Smith brothers), but it was remarkable in seeing man himself as a prime actor among other animals, instead of searching for a 'natural' world uninvaded by man, which was more characteristic of ecology in the south of Britain. Patrick Geddes himself was deeply, indeed primarily, interested in man in his environmental setting. Harvie-Brown's publications on the capercaillie, the red squirrel and the great spotted woodpecker were forerunners of the kind of historical ecology we are only now rediscovering.⁵⁸ Collinge's interests in 'economic biology' and 'economic ornithology' made him a pioneer investigator of the impact of animal life on man: his paper on the food of the little owl was a model for other scholars.⁵⁹ Ritchie's interests are self-evident. The predominant search in England, influenced by the circle round the brilliant, disdainful and rigorous A. G. Tansley, was to find an object of ecological study uninterfered with by man, therefore more 'natural', and to pursue it with hard, quantifiable biology.⁶⁰ In the end this made it, until almost too late, an arcane 'pure' science, almost antiquarian and backward looking, unrelated to the social sciences and so irrelevant to society. The Scottish vision was submerged, primarily, I think because Patrick Geddes switched his maverick genius from ecology to town planning for the rest of his life, and because the Scottish universities in the inter-war years offered so few careers for the talented.

The consequent lack of interest by British ecology in general on man's impact in nature has been described by one of the leading figures in Nature Conservancy science in the 1960s and 1970s, Dr Norman Moore, in these terms:

Up to the 1950s, human impacts on habitat and species were deliberately or subconsciously excluded from field studies. I suspect the reasons were complicated—a natural desire by biologists to simplify by excluding what seemed irrelevant, a snobbish distaste for the obvious and the practical by the intellectual, and an increasing loss of day-to-day experience of farming practice among most naturalists and biologists as Britain became more and more industrialised.⁶¹

⁵⁸ He was also the first to attempt a thorough census of a common colonial land bird through co-operative research: by writing to the Caithness landowners to ascertain the status of the rook in 1875; Allen, *Naturalist in Britain*, p. 216.

⁵⁹ Sheail, *Nature in Trust*, p. 51.

⁶⁰ Tansley is said to have been the only man ever to have accepted a chair in Oxford while continuing to live in Granchester. For his intellectual importance see Sheail, *British Ecological Society*.

⁶¹ N. W. Moore, *The Bird of Time: the Science and Politics of Nature Conservation* (Cambridge, 1987), p. 44.

This was a completely English perspective. Only an ecological science that had turned its back on Geddes, Harvie-Brown and Collinge, and never regarded James Ritchie's great book, let alone considered the work of Frank Fraser Darling from the late 1930s onwards, could have fenced itself into such an untenable corner.

In the inter-war years the public view of the Scottish Highlands was dominated by two developments that ultimately turned out to be on a collision course. The first was the idea that forestry and light industry might stem the continuing, and now seemingly catastrophic, decline of the Highland rural economy. Both sheep farming and crofting were at a very low ebb; the herring markets in Eastern Europe had evaporated with the war and the Russian Revolution; industrial depression as well as the decline of employment in fish-gutting knocked the bottom out of the migrant labour market where young Highlanders had participated through the previous century. The result was the most rapid outflow of population ever recorded, despite the Board of Agriculture's laborious and belated attempts to return the land to the people by creating crofts out of former grazing land for anyone who wanted them.⁶² Even the sporting estate suffered, with the declining fortunes of the landed classes, changing hands rapidly and at comparatively low prices.

It still seemed to some, however, especially landowners, that the deer forest continued to offer the best of a bad lot of options for viable land use in the Highlands. To others, especially on the left, this conclusion was defeatist and obscene, bearing in mind how many people the hills and glens had supported less than a century before. There were great hopes of the newly constituted Forestry Commission, set up in 1919 to increase the nation's wood supplies in the event of another war. The first plantations were in by 1921, but its ability to buy land was restricted by financial stringency, and its technical impact was still limited by inability until after the Second World War to plough into the peaty hillsides in order to grow upland forests.⁶³

Others pinned their hopes on light industries powered by hydro-electric schemes. The first schemes, opened by the British Aluminium Company at Foyers in 1896 and Kinlochleven in 1909, were widely recognized as environmental, even social, disasters. Thus David Kirkwood, Labour MP, in a debate reported in *Hansard* in 1941:

⁶² Leah Leneman, *Fit for Heroes? Land Settlement in Scotland after World War I* (Aberdeen, 1989).

⁶³ M. V. Edwards, 'Peat afforestation', in 'Land Utilization and Conservation in the Scottish Highlands', *Institute of Biology Journal*, 7 (1960), 16-19.

See what this dastardly crowd have done to a section of the Highlands of Scotland. Go and see the housing conditions . . . see the wooden shanties two stories high. If you go into the side streets, there are back-to-back houses . . . two great iron chimneys, two great heaps of dross, mud flung all over the place, pipes coming down the beautiful hillside which is all denuded of plants, trees and every kind of vegetation . . . Do you mean to tell me that the individuals behind this thing are more interested in my native land than the people who live there? It is just a lot of nonsense.⁶⁴

The next schemes, by the Grampian Power Company for Rannoch and Tummel were authorized in 1922 and opened in 1930 and 1933 respectively, but were much criticized both for their environmental damage and for their failure to sell power to local industry. The plans of the Caledonian Power Company were to capture the headwaters of east-flowing rivers for the benefit of schemes in the west, and led to civil war between Highland local authorities: it would have had a disastrous impact on Loch Ness and many other glens. No fewer than six Highland hydro schemes were promoted in Parliament between 1929 and 1941, and all were rejected.⁶⁵ Most were overwhelmingly supported by a majority of Scottish MPs, but destroyed by the English majority in Westminster on grounds that ranged from the naked self-interest of landowners defending sporting interests, to genuine passion about the environmental impact. In the debate on the Grampian Electricity Supply Order in 1941 the Secretary of State for Scotland, Tom Johnston, said 'not since the English prayer book issue have I witnessed such division of opinion in various parties of the house'.⁶⁶ Noel Baker, the Labour MP, spoke of the proposals to flood Glen Affric and Glen Cannich as 'not merely a matter for the people of the Highlands. This is a matter for the whole British nation . . . This is not a question of minor or transient aims. The Highlands are the spiritual heritage of the whole people which it is the duty of Parliament to preserve'.⁶⁷ The Conservative member for Twickenham, Keeling, was on the same side:

I know that a great many people do not care for nature at all, and would boil down the last nightingale if they could get a farthing's worth of glue out of his bones. But to those people I will put two practical questions. The first

⁶⁴ *Hansard*, 374 (1940–1), p. 255.

⁶⁵ Peter L. Payne, *The Hydro: a Study of the Development of the Major Hydro-Electric Schemes undertaken by the North of Scotland Hydro-Electric Board* (Aberdeen, 1989); K. J. Lea, 'Hydro-electric power developments and the landscape in the Highlands of Scotland', *Scottish Geographic Magazine*, 84 (1968), 239–55; 'North of Scotland Hydro-electric Board', *Power from the Glens* (Edinburgh, 1976), p. 2; J. Sheail, *Rural Conservation in Inter-war Britain* (Oxford, 1981), pp. 39–46.

⁶⁶ *Hansard*, 374 (1940–1), p. 232.

⁶⁷ *Ibid.*, p. 240.

question is. Do they not realise that beautiful scenery has commercial value, that it attracts an enormous number of tourists, and that tourist traffic is one of the main assets of the Highlands? . . . The second question I put to those who do not care for beauty is this. Do they not realise that there are a vast number of men and women who do care passionately? . . . every time you injure a glen such as Glen Affric you are injuring very many people who depend upon beautiful scenery to restore their nerves and to revive their minds and souls.⁶⁸

These two arguments, the economic one about the tourist trade and the green or Wordsworthian one about spiritual renewal were to be repeated in every serious debate on Highland conservation in the next 50 years. It is noteworthy that nothing at all was said in this or any other of the Parliamentary debates of the time about ecology or wildlife: the 'heritage' is still entirely scenic.

The second development which was to be of the greatest long-term significance to the history of conservation in Scotland was the emergence of a movement to promote national parks on the model of the United States, where the world's first national park had been established at Yellowstone in 1872, and on the model of Canada. The first proposal appeared as early as 1904, when Charles Stewart contributed an essay to *The Nineteenth Century and After* proposing the 'preservation in its wild state of a large tract of country possessing a natural beauty and grandeur in high degree'. He thought Jura or Rhum might be bought by the state, or one or more of the great Highland deer forests, and he saw benefits for public recreation, for science and for the preservation of wildlife. He even foresaw that the creation of a forestry commission of which he heartily approved could create what he called 'an additional and urgent reason for preserving those wild animals whose extinction may be threatened by the substitution of extensive forestry for deer forests and grouse moors'.⁶⁹

All this was visionary; it fell on stone-deaf ears at the time, but in 1928 Lord Bledisloe, Parliamentary Secretary to the Ministry of Agriculture, returned from a private visit to Canada and the USA fired with enthusiasm for what he had seen and anxious to see the creation of British National Parks in the Conservative Party election manifesto.⁷⁰ At almost exactly the same time, in the autumn of 1928, the *Scots Magazine* began to orchestrate

⁶⁸ *Ibid.*, p. 207.

⁶⁹ Charles Stewart, *In the Evening* (London, 1909), pp. 51–64.

⁷⁰ John Sheail, 'The concept of national parks in Great Britain, 1900–1950', *Transactions of the Institute of British Geographers*, 65 (1975), 41–56; Sheail, *Rural Conservation*, p. 115.

a campaign for the purchase of the Cairngorms as a national park.⁷¹ The idea owed a great deal to J. W. Gregory, Professor of Geology at Glasgow and past-president of the Scottish Ski Club: it had the backing of rambling interests, and of the recently formed Association for the Preservation of Rural Scotland, and claimed wide political support, from Tories like Walter Elliot and John Buchan, from Labour members like Tom Johnston ('the Park must be for all the people, and not for a few plutocrats only': no Gleneagles prices), from Edwin Scrymgeour the temperance reformer and Erskine of Marr the Nationalist ('this Caledonian forest should be a National Sanctuary—a sort of serpentless Eden').⁷² Ramsay Macdonald gave his 'whole-hearted support to the idea . . . the flora and fauna must be considered in any proposed plan. This is a point of the very highest importance': he had reservations about the development of winter sports that might leave 'the Cairngorms spotted with miscellaneous erections'.⁷³

It was of course Ramsay Macdonald who subsequently in 1929 appointed the Addison Committee to investigate the possibility of British national parks. This proved a false start amid the crises and distractions of the following decade but was at least a forerunner to the Dower Report and other government commissions and committees that led to the establishment in 1948 of the Nature Conservancy and in 1949 of the National Parks Commission, the latter with powers in England and Wales alone. This is a story well told by John Sheail and others, and need not be repeated here.⁷⁴ But in Scotland the immediate impact of the *Scots Magazine* campaign was very different. It was at once clear that the Government was not going to buy Cairngorm for the nation. Would private interests do so? The National Trust in the south was approached, a fact which appears to have acted as an immediate catalyst for the formation of a National Trust for Scotland in 1931; presumably the reproach was too

⁷¹ *Scots Magazine*, 10 (1928–9)—especially E. A. Baker, 'The Cairngorms as a National Park'; A. Graeme, 'Hills of Home'; J. W. Gregory, 'The claim for a National Park'; A. I. McConnochie, 'The national nature of the Cairngorms'. *The Cairngorm Club Journal* (Jan. 1930) confirmed that the credit for launching the idea of the Cairngorms as a National Park rested with the *Scots Magazine*, leading to enthusiasm in other papers, especially the *Glasgow Herald*. In June 1929 the Association for the Preservation of Rural Scotland called a conference of outdoor organizations, and a committee styled the Scottish Forest Reserve Committee was set up to promote the idea nationally.

⁷² *Scots Magazine*, 10 (1928–9), 'Scottish MPs and the National Park', Feb. 1929, p. 337, 'The claim for a National Park', p. 416–9.

⁷³ *Ibid.*, J. R. Macdonald, 'Why I support the Cairngorm National Park Scheme', pp. 251–2.

⁷⁴ Sheail, *Nature in Trust*; Gordon Cherry, *National Parks and Recreation in the Countryside*, Environmental Planning 1939–1969, vol. 2 (HMSO, 1975).

much to bear.⁷⁵ Cairngorm was not on the market, but before the Second World War the NTS had secured large areas in Glencoe and Ross-shire for public preservation and enjoyment. Their role as a conservation body for the countryside, as opposed to historic houses, was relatively more prominent than it is today.⁷⁶ The other body enthusiastically to enter the ring was the Forestry Commission, which offered the unplatable parts of their Glenmore holdings in Cairngorm for public access, and then more decisively launched the first National Park at Ardgarten in Argyll in 1936, though the Treasury strongly objected to ‘converting the Commission appointed to re-afforest Great Britain into an agency for promoting “hiking”’.⁷⁷

Indeed almost all the emphasis in the Scottish national parks movement and its allies at this stage was on opening up the countryside for public recreation. Little need was seen for specific wildlife conservation, since it was assumed that there would be little or no conflict between the nature reserve and the national park idea. With the foundation of the Scottish Youth Hostel Association in 1931 there was a very large increase in rambling in the Highlands: its founders saw it as patriotic, helping to ‘build up a stronger and more generally useful generation for the service of the state’ and mixing together ‘young people of very diverse station and calling in life in the common companionship of tired limbs round the hostel fire in the evening’.⁷⁸ There was no comparable explosion of popular interest at this stage in bird watching or natural history. Ecological science in the Scottish universities was similarly going through a lean patch. The most imaginative effort in these years came from Dudley Stamp in England, proposing a Land Utilization Survey, very much in the Patrick Geddes tradition. The Department of Agriculture for Scotland was no friend to surveys, and the exercise became more limited than it would otherwise have been.⁷⁹

It was to this scene that there arrived in the 1930s a young English biologist with an early training in agriculture and a doctorate in genetics of the Blackfaced sheep from Edinburgh University, Frank Fraser Darling, a

⁷⁵ *Scots Magazine*, 13 (1929), S. E. Hamer, ‘The National Trust in England’; 14 (1930–1), Alan Graeme, ‘The National Trust’; Sheail, *Nature in Trust*, p. 60.

⁷⁶ Yet as late as 1969 Fraser Darling declared ‘I would say the Scottish Trust now leads the world in the wholeness of its approach to environmental management’: *Wilderness and Plenty*, p. 67. See also Morton Boyd, ‘Nature conservation’, p. 297.

⁷⁷ Sheail, *Rural Conservation*, pp. 172–86; *Scots Magazine*, 23 (1935), ‘Scotland month by month’.

⁷⁸ *Scots Magazine*, 17 (1932), Alexander Gray, ‘The Scottish Youth Hostels Movement’, 81–6.

⁷⁹ Sheail, *Rural Conservation*, p. 163.

man of compulsive inner drive, considerable literary gifts, and visionary outlook on man and nature, that blended science and the romantic tradition. For him, 'science and art are not far from one another'.⁸⁰ He was also a man of charisma and little tact. From 1935, when he took up a Leverhulme Fellowship studying red deer in Dundonnell, until 1959 when he left Scotland to become for 13 years Vice President of the Conservation Foundation in Washington DC, he was the most compelling personality in conservation in Scotland. The vision which he had was that man was inescapably part of the natural eco-system, and that the whole of nature was in every way, and all the time, exposed to man. Such ideas were not exactly original to Fraser Darling: he owed a considerable debt to American writers such as Aldo Leopold and William Vogt, but he was certainly the first to translate them to a Scottish context.⁸¹ It is a measure of how far we have, at least superficially, come since mid-century that such thoughts may seem to us almost banal today: but they were shared by few others in any position of influence in Britain in the 1940s and 1950s. The common sense view at that time was still that there was 'man', on the one hand, and 'the natural world' on the other. The two might impinge on one another, mainly in the 20th century by man invading the natural world, and it was therefore proper for man to lay aside certain small pieces of the earth as reserves to allow the natural world to proceed unhindered within them. It was the business of ecological science to study the natural world in such reserves, and the business of such reserves to provide the materials for science. Hence the terminology, still with us, of National Nature Reserves and Sites of Special Scientific Interest. For Fraser Darling, it was as though the whole globe was a Site of Special Scientific Interest, and the main business of ecology should be to arouse humanity to appreciate its precarious and responsible position upon it.

It is important to appreciate that in many ways Fraser Darling did not enjoy the respect of his scientific peers in the universities and in the British Ecological Society to the degree that might have been expected. Though he spent years of his life in remote places—the Summer Isles, North Rona, Dundonnell—living in the close proximity of the sea birds, seals and deer that he was studying, in a way then most unusual in Britain though commonplace now, his science was regarded as good at the intuitive level, but also as soft, non-quantitative, on too large a canvas, not wholly free from the fatal taint of anthropomorphism.⁸² Books like *A Herd of Red*

⁸⁰ Fraser Darling, *Island Farm*, p. 12. An excellent biography for the Scottish parts of his career is J. Morton Boyd, *Fraser Darling's Islands* (Edinburgh, 1986).

⁸¹ See Fraser Darling, *Pelican in the Wilderness*, p. 21.

⁸² Morton Boyd, *Fraser Darling's Islands*, pp. 103–9.

Deer (1937) and *A Naturalist on Rona* (1939) were published when the study of animal ecology was emerging as a distinctive branch of the subject (plants had dominated in Britain before the 1930s):⁸³ but they were also alive with descriptive passages about the scenic context that the scientific world of Tansley and his colleagues found out of place.

His most original work, *West Highland Survey: an Essay in Human Ecology*, emerged from a proposal he made to Tom Johnston in 1943 to study the underlying causes of depopulation and economic decline in the West Highlands in an ecological context; its message was that there could be no cure unless the misuse of the land over the two previous centuries was reversed by modified ratio of sheep to cattle (fewer sheep, more cattle) and by reafforestation (he did not give his blessing, it is worth noting, to blanket coniferization). The Department of Agriculture for Scotland, beginning to operate in a world of subsidies that looked too good to refuse merely on ecological grounds, did not like it and publication was delayed until 1955.⁸⁴ Scientific ecologists in Britain ignored it because it was about man, not an animal they studied. And what was probably his most popular book, *The Highlands and Islands* for the New Naturalist Series, was comprehensively panned in review in 1948 by Wynne-Edwards, the newly appointed Regius Professor of Natural History at Aberdeen, for its 'surprising number of half-truths and errors'.⁸⁵ Fraser Darling found much more recognition for his work overseas, in the United States, where *West Highland Survey* had been read and admired, and where he eventually attained to the highest professional honours, and in Africa where the dependency between man and the environment was so much more obvious than in Scotland. In the very different climate of Britain in 1969 he was invited to give a memorable series of Reith Lectures on the environment,⁸⁶ and in 1970 he was knighted for his services to conservation.

It is, however, the argument of this lecture that recognition came 20 years too late—recognition both for Fraser Darling as a person, and much more importantly for the attitude towards man-in-nature that Fraser Darling held. Scotland in 1950 did not have a very highly developed sense of environmental consciousness. It was left out of the National Parks legislation, mainly because of the anxiety of the Scottish Office and of Tom Johnston not to allow anything that might obstruct the development of the glens by the new Hydro Board, but also because of the implacable

⁸³ Sheail, *British Ecological Society*, p. 83.

⁸⁴ Morton Boyd, *Fraser Darling's Islands*, pp. 202–9.

⁸⁵ *Ibid.*, pp. 223–4.

⁸⁶ Published the following year as *Wilderness and Plenty*.

opposition of many landowners and because the National Trust for Scotland and the Forestry Commission believed they unaided could meet the need for scenic conservation and public access.⁸⁷

On the other hand, the Nature Conservancy was extended to Scotland in the post-war legislation. The question arose as to whether there should be separate bodies for England and Scotland, and the balance was tipped by a strongly-worded memorandum from Fraser Darling in favour of one national agency with equal representation for England and Scotland: 'there is no good biological reason for splitting Great Britain into two parts for the purposes of conservation of wild life and research . . . wild life does not observe political frontiers'. His prime objection to separation was perhaps a fear that a Scottish wildlife commission would become a prisoner of the Department of Agriculture for Scotland.⁸⁸

There is little doubt that Fraser Darling expected to be asked to head the Scottish division of a British Nature Conservancy. In the event, the Secretary of State for Scotland chose another brilliant man, John Berry, biologist, law graduate, ex-intelligence officer and environmental adviser to the Hydro Board, creating the position of Director of Nature Conservation in Scotland: when the Nature Conservancy was set up shortly afterwards he headed the Edinburgh office with distinction for the next 18 years. Tom Johnston told Berry he had been chosen because the Secretary of State could keep an eye on him, but that Fraser Darling was too wayward a man to handle.⁸⁹ The truth was probably more complex. Fraser Darling was in most respects (in terms of intellectual and practical experience) the obvious choice. He was, however, utterly out of tune with influential people in St Andrew's House, and had the handicap in Scotland of being an Englishman and an outspoken critic of Scottish landowners and their gamekeepers. Berry, on the other hand, in the official eye, had shown his paces for this particular job as wartime press censor where he had combined tact with independence and a certain firmness in standing up to authority, including on occasion that of Tom Johnston himself: it was also an advantage that he happened to be a member of the Scottish Landowners Federation.

⁸⁷ Cherry, *National Parks*, pp. 70–80, pp. 141–52; Sheail, *Nature in Trust*, pp. 205 ff.; J. Berry, personal communication. The attitude of the Forestry Commission to National Parks is clear from Scottish Record Office: F.C. 9/1. 'Commission meeting 19 January 1944 to discuss the Dower Report', when J. Bannerman, the Scottish representative, said that the effect of the recommendations would be 'to sterilise large sections of the countryside'; he was in due course appointed to the Scottish National Parks Commission. For the attitude of the National Trust for Scotland, see successive *Newsletters*, e.g. no. 2 (1949), no. 14 (1956), no. 18 (1958).

⁸⁸ Scottish Record Office: F.C. 9/3. 'Scottish Wild Life Conservation Committee: Reservation by Dr. Darling, 1 March 1947'.

⁸⁹ Dr Berry, personal communication.

Meanwhile in London the position of Director General fell to Cyril Diver, an accepted amateur ecologist and the civil servant previously responsible for drafting the legislation that set up the Nature Conservancy. He had limited knowledge of or sympathy towards Scottish peculiarities. Under Berry in Scotland, a policy nevertheless emerged of securing much larger National Nature Reserves than in England, beginning with the purchase of a whole mountain, Beinn Eighe, in 1951, and continuing by management agreement as well as by purchase, perhaps most notably in the establishment of the Cairngorm NNR of 64,000 acres in 1954.⁹⁰ Secretaries of State for Scotland, both Labour and Conservative, came to support this policy, despite political criticism.

The emphasis on reserves, dictated as it was by Act of Parliament, was entirely informed by the conventional English philosophy that man and development have one sphere (of course by far the biggest), nature and conservation another (a haven, perhaps, for sportsmen and scientists). There was little place in the legislation for the kind of comprehensive rural planning, the delicate consideration of man's place in the environment and appropriate overall strategies for land use, that a Nature Conservancy would undoubtedly have edged towards had Fraser Darling's views prevailed. 'Wild-life conservation would extend over the whole country, and not only over Parks areas or those additional areas to be scheduled as Nature Reserves' he had said in his memorandum of 1947.⁹¹ Berry saw as clearly as Fraser Darling the need to educate the public in the wider issues of nature conservation, but, for his use of the press, was criticized by Diver as a 'vulgar publicist'.⁹² When Max Nicholson took over as Director General in 1952 he was vastly more supportive of Berry, and of his deputy and successor Joe Eggeling, but all were heavily constrained by the legislation and what had become the traditional expectations of the Conservancy's correct sphere of operations.

In the 1960s the extent of global pollution by pesticides was revealed to the public by Rachael Carson's *Silent Spring* in America, and in Britain scientifically confirmed by Nature Conservancy work on the peregrine

⁹⁰ D. Stamp, *Nature Conservation*, pp. 169–78; E. M. Nicholson, *Britain's Nature Reserves* (London, 1957), pp. 121–35. The Ritchie Committee (of which Fraser Darling was an important member) had envisaged nature reserves of varying scale, but the way policy developed in Scotland and England showed interesting contrasts. Scotland before 1968 had a much greater interest in creating large national nature reserves but neglected (relatively speaking) the creation of SSSIs: in England, national nature reserves were small but SSSIs were numerous.

⁹¹ Scottish Record Office: F.C. 9/3. 'Reservation by Dr Darling'.

⁹² Dr Berry, personal communication.

falcon and golden eagle.⁹³ Only at this point did an appreciation of the mutual dependence of man and nature even begin to be felt in the corridors of power, and progress since then has, in the judgement of many, been too little and too late.⁹⁴ Patrick Geddes as long ago as 1899 had been instrumental in adding 'nature study' to the curriculum of government schools in Scotland (England followed in 1900),⁹⁵ but weaknesses in environmental education were identified as the Achilles Heel in any programme for conservation half a century later. Fraser Darling said in 1946 'the first thing—the important thing . . . is largely the teaching of an attitude of mind to wild life', but neither the Nature Conservancy nor the Scottish Education Department ever subsequently made it a priority. The kind of complaints that were heard then—'natural history is on the curriculum in every school but I frankly admit it is not stressed . . . there is a lack of enthusiasm and interest in nature study amongst teachers'—can again be repeated with only minor changes of emphasis and language 40 years later.⁹⁶

In my concluding section I would like to draw some threads together. It is possible to classify attitudes towards land use in many different ways. Perhaps six main types of attitude have dominated Scottish experience in the last 250 years, and they fall into two broad categories. There are three types that I would group together as traditional, and three I would group together as post-romantic. Of the traditional types, the first is to regard the land as a resource from which to make a living by farming, forestry and commercial fishing; and the second to regard the land as resource for the private, aristocratic pursuits of hunting, shooting and sport fishing. These two attitudes have existed since time immemorial: they were the only attitudes known before the 18th century, and completely dominated land use, law and public policy in the Highlands throughout the 18th and 19th centuries, though in varying proportions and with very

⁹³ Moore, *Bird of Time*, especially chap. 16; John Sheail, *Pesticides and Nature Conservation: the British Experience 1950–1975* (Oxford, 1975). Carson's book was more polemical than scientific, and Fraser Darling said of it 'although I would not have liked to write the book myself, I was very glad it had been written': *Wilderness and Plenty*, p. 45.

⁹⁴ The latest statement of Government intentions in Scotland declares a wish: '(1) To maintain essential ecological processes and life-support systems. (2) To preserve genetic diversity. (3) To ensure the sustainable utilisation of species and ecosystems': *Scotland's Natural Heritage: the Way Ahead* (Scottish Development Department, August 1990), p. 3. It remains to be seen how far political constraints will allow these new ideals to be put into practice.

⁹⁵ Allen, *Naturalist in Britain*, p. 203.

⁹⁶ Scottish Record Office: F.C. 9/3. 'Note of a discussion held in St. Andrew's House on Wednesday 29 May 1946 with representatives of the SED'.

varying consequences for those who lived there, depending on precisely what was involved. Small-scale crofting, associated with potato husbandry and kelping on the islands, which dominated 1750–1820 was also associated with a population explosion and had very different social effects from the sheep farming and deer forests that dominated the next century and were associated with clearance and the maintenance of land as empty space. This contrast bred a bitter antipathy of crofter and small farmer towards large farmer and landowner without in the least rocking the secure foundations of landed power. Crofter, farmer, forester, laird, who farm by land and sea, plant trees and shoot, survive today as the social, economic and political backbone of Highland life, perhaps more reconciled towards one another in the second half of the 20th century than for 200 years, and this by the pressure of mutual dependence on various forms of agricultural subsidy and mutual antipathy towards non-traditional forms of land use.

The third attitude is to regard land as a resource for industry, which I also classify as traditional as it has fascinated entrepreneurs and planners, mainly outsiders, since Sir George Hay's ironworks in Wester Ross in the 17th century. By and large it has been a sad disappointment; the 18th century was littered with failed ironworks, mines and textile undertakings, and the 20th century with pulp mills, aluminium smelters and rig yards. Even hydro power and the nuclear industry never realized the immense hopes vested in them by Tom Johnston and the post-war Secretaries of State, as agencies for reviving the Highlands by providing power for light industry. The main importance of those hopes for the Hydro Board historically lie in explaining why Scotland, almost alone of advanced industrial countries, has no land designated as national parks.

All three of these traditional attitudes to land usage, (and the first two, related to agriculture and private sport, are much the most important) leave out of account any interest the outsider might have in using the Highlands, or any scenic or scientific value the land might have. They are fundamentally informed by an ancient way of seeing nature as resilient and there to be exploited and the land as providing a way of making a living or pursuing a private pleasure.

The next three attitudes I have classed as post-romantic, as none of them would have been thinkable before the age of Ossian. Number four in my list is an attitude that regards the land as an invigorating obstacle course, if mountains, then as something to climb up, ski down, ramble along, or if water, taken to swim in or sail upon—a location for mass, popular and public sports, originating in the outdoor sporting movements of around the 1880s, growing with the rambling and youth movements of the first half of the 20th century, but only really taking off in the age of

mass leisure and popular access to the car from the 1960s to the present day. Sporting recreational use by outside visitors is clearly one of the main pressures on the Highlands now, bringing new calls for free access and countervailing protests from, for example, the Scottish Landowners Federation.

The fifth attitude is a century older, and follows Thomas Gray and Wordsworth in seeing unspoiled landscape as refreshment to the spirit, so something to be maintained in its entirety and contemplated in its tranquillity. There was much emphasis on this throughout the 19th century, but only on the part of intellectual romantics with no influence on public policy: in the first half of the 20th century they allied very effectively with those who held the fourth view (of land as an arena for public recreation) to put pressure on government to declare national parks. If they failed there, they succeeded in the creation of the National Trust for Scotland in 1931 with a membership that grew from only 1000 as late as 1946 to 21,000 in 1961 and 180,000 by 1989;⁹⁷ and succeeded further in political lobbying for creation of a Countryside Commission for Scotland which came about in 1968 with power to designate National Scenic Areas with a certain degree of protection for some of the most beautiful parts of Scotland.

The sixth and last attitude is to regard land not only as a recreational and scenic resource for man, but also as a refuge for plants, birds and animals seen as interesting and worth preserving for their own sake. This attitude had, as we have seen, very little public emphasis in Britain, and particularly little in the Scottish Highlands, until after the Second World War. Then it grew dramatically. This can be demonstrated by the transformation of the RSPB from a rather inward-looking and elitist organization into a great popular body. In 1954, when it still had fewer than 7000 members in Britain, the decision was taken to open a regional office in Scotland: in 1958, under RSPB care, a pair of ospreys returned to Speyside after an absence of half a century, and the following year over 14,000 people visited the hide overlooking their nest; 10 years later, 37,500 visited the same site during the summer season. By 1987 the UK membership of the RSPB was 440,000, of whom 24,000 (or 5.4% of the total) were Scottish.⁹⁸ This nevertheless compared with 160,000 members

⁹⁷ Figures kindly provided by the National Trust for Scotland.

⁹⁸ Samstag, *For Love of Birds*: figures on p. 149. Scottish Tourist Board, *Tourism in Scotland* (Edinburgh, 1969). Other details kindly provided by the Royal Society for the Protection of Birds.

of the NTS, indicating the extent to which Scottish support for scenic and historic conservation was still much deeper than support for nature conservation alone.

The three attitudes towards the Highlands that I have called post-romantic were all held predominantly by outsiders to the Highlands, and thus became the main reason for the tourist trade servicing sport, scenery admirers and nature lovers, which flourished exceedingly in the age of mass leisure and car ownership, 1960–90.⁹⁹ ‘Gentlemen, the Tourist’ was the title of a biting attack by Neil Gunn in 1937¹⁰⁰ and ever since there have been those who have expressed doubts about tourism, often on the grounds that it is, in some way, an inappropriate means of earning a living compared to fishing or agriculture; the fact that so many incomers (the ‘white settlers’ of the popular contemporary Highland phrase) cater to tourism while so many whose families have lived immemorably in the Highlands restrict themselves to traditional forms of land use increases the tension and the ambivalence. The fact remains that in areas like Arran and Speyside tourism has become in the last 30 years the main economic mainstay of life, and is everywhere likely to become more important as subsidized farming declines.

Highland society, in fact, has come to accord a differential scale of respect to the three post-romantic attitudes. Mass sport and recreation may be unacceptable to some landowners and farmers because of what they regard as trespass, but it is seen to provide jobs and does not interfere with traditional land use in other ways. Scenic appreciation is less welcome if it gives rise to criticism of forestry policies and fish farming, or limits development in National Scenic Areas. Nature appreciation seems to have been the least welcome of all, at least since the 1981 Wildlife and Countryside Act gave teeth to the Nature Conservancy Council to interfere substantially with the rights of landowners, forestry companies and farmers to do what they liked with their property, by declaring SSSIs. It is of course quite likely that a single person will combine many attitudes in one; a visitor who climbs a mountain, admires the view and identifies with pleasure a peregrine falcon on the crags has all three of the post-romantic

⁹⁹ But of course the expansion was well under way before 1960. In 1951, 215,000 overseas visitors came to Scotland, rising to 470,000 by 1959. By 1960, 5 million visitors a year, British and foreign, were using Scottish tourist facilities: *Natural Resources in Scotland*, pp. 702, 714.

¹⁰⁰ *Scots Magazine*, 26 (1936–7), 410–5. See also the *Newsletter of the National Trust for Scotland*, no. 2 (April 1949), pp. 7–8, where the spokesman expressed himself ‘not convinced that the future of the Highlands lies in a vastly increased tourist trade. I doubt the Highlanders desire or have the ability to be the manager of a big hotel, a first-rate restaurateur, golf-course attendant or AA Scout’.

attitudes. It is also quite likely that some will conflict, for example sport and nature conservation in the Cairngorms since the 1950s, most recently and most dramatically in the dispute over the Northern Corries. In this case, traditional land use attitudes gather round the sports interests to present a common 'insider' highland front. 'People in the Highlands and Islands do not want or need to be told what developments can, or cannot, take place on their land by those often many miles removed from the physical reality', said Sir Robert Cowan, chairman of the Highlands and Islands Development Board in a Cambridge University Union debate in April, 1990.¹⁰¹ 'Any developments which threaten such a landscape are of international interest: we can hardly ask the Third World to stop felling their rainforests if we cannot look after our own heritage . . .' responded the leader writer of *Country Life*, sympathetic to the Save the Cairngorms Campaign.¹⁰² These quotations (and their origins) neatly encapsulate the insider *versus* outsider conflict, the traditional *versus* the post-romantic. And that conflict has become, in the last 20 years, a severe, endemic and destructive element in modern Highland history.

So where does this leave us? This lecture has, I hope, demonstrated how all our attitudes towards the land and nature have a history, indeed, how they have come to be twisted and directed by history. But a last and more important point might be made. The situation at the moment is a potential disaster because too many on the development side cannot see either that the Highlands belong to a wider British society than seems to be visible from Inverness, or that man is an animal along with other animals on this fragile planet; and on the other side, too many see economic change only in simple and emotional terms of man's encroachment on nature's kingdom. One might well consider that the only possible way forward is to bring to our aid a holistic ecology concerned with developing overall land use strategies according to the strains the land can bear, treating man as an animal who fits in with the natural world instead of trying to smash through it. There are certainly no magic formulae or simple solutions, but a return to the spirit of Patrick Geddes in the 1890s, or of Frank Fraser Darling in the 1940s, would be to recover a Scottish tradition that was eclipsed and lost in its day, but which is needed now as never before in our history.

Thank you.

Note. I have incurred many debts in writing this lecture. The hospitality of All Souls College, Oxford, where I was a visiting research fellow in the Hilary Term of 1990,

¹⁰¹ As reported in a leading article *Country Life*, 24 May 1990.

¹⁰² *Ibid.*

gave me the space to read for it. Comments from Dr John Berry and Dr Morton Boyd, formerly in command of nature conservation in Scotland, were invaluable. To Dr John Sheail of the Institute of Terrestrial Ecology, Monks Wood, I owe a great deal of encouragement and much additional information I would hardly have found unaided. Professor David Jenkins of the University of Aberdeen put me in touch with a series of ecologists whose comments greatly enlightened me: Dr Adam Watson, Professor Charles Gimingham, Dr John Miles, Dr Robin Callander, Dr George Peterken, Dr G. J. Walker and Dr K. J. Kirby all gave me advice, not all of which I was able to incorporate in this paper but hope to use elsewhere. Colleagues at St Andrew's, Professor Peter Branscombe and Dr John Haldane, gave me references. My wife Anne-Marie read through all the drafts and cheered me up in those despondent moments when I thought this was no topic for the Raleigh Lecture. No one, however, is responsible for the interpretations offered but myself: in some cases, this acknowledgement may come as an understandable relief, but my thanks to all are very sincere.