

## Harried hen harriers

*Sir* — Further to Robert May's News and Views article<sup>1</sup> on the illegal persecution of hen harriers on grouse moors, figures can be put on the potential economic gains to the grouse-shooting industry of such persecution. They are in fact minimal.

In the same paper that May discussed, Etheridge *et al.*<sup>2</sup> calculate that 55–74 breeding harriers are removed from moors each year. The birds' main prey is usually song birds, small rodents and young hares and rabbits<sup>3,4</sup>; they do take grouse chicks, but healthy breeding adults only rarely.

A hen-harrier nesting territory may encompass several hundred red grouse territories each producing, in a good year, as many as five young grouse. Were the harriers that are being illegally destroyed each year allowed to live, far fewer than 5,000 grouse chicks would escape their predation — a tiny proportion of the million or so young produced by Scotland's 250,000 breeding pairs of red grouse<sup>5</sup>.

Another paper<sup>6</sup> indicates that many more red grouse, most of them breeding birds, are killed against deer fences each year than are taken by the hen harriers. In a survey of 135 km of deer fences, carried out over a year at 27 different sites, there were 188 red grouse collisions — and, more seriously, 37 and 36 of the bigger and rarer black grouse and capercaillie. Almost all collisions would have led to the death of the birds.

These fences are extensive. There are estimates, from the best grouse areas, of 2,000 km of deer fence in woodland and much more in moorland. They are typically 1.8 metres high, and are made partly of mesh and partly of tight horizontal wires. Most grouse that hit them are travelling at great speed as they are used to blasting their way through the twigs of trees.

In many instances the fences have been erected, with public subsidy, by the very landowners implicated in killing hen harriers. Some fences are still needed to protect young forest trees from deer, but many are old and redundant.

Putting deer into the equation, if deer numbers were reduced to a third of current levels (to about six animals to the square kilometre from 15–20), natural regeneration of forest would take off. In most areas there would still be plenty of deer for stalking; and the better cover, produced by removing the surplus of feeding deer, would provide much improved habitat for the coexistence of game birds and hen harriers.

As May points out<sup>1</sup>, the management of moorland for grouse shooting is infinitely preferable to overgrazing by sheep or deer,

or planting conifers. It remains to be seen whether the shooting interests are able to bring themselves to obey the law and stop persecuting hen harriers, and to realize the consequences of their other management activities.

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2. Etheridge, B., Summers, R. W. & Green, R. E. J. *Appl. Ecol.* **34**, 1081–1105 (1997).
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5. Gibbons, D. W., Reid, J. B. & Chapman, R. A. *The New Atlas of Breeding Birds in Britain and Ireland: 1988–1991* (T. & A. D. Poyser, London, 1993).
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## Greenpeace and BP

*Sir* — A recent leading article<sup>1</sup> states that “BP was not only within its rights but well advised to sue Greenpeace UK for sums that might well have extinguished the organization”.

Whereas it was disturbing for BP to take such a Machiavellian approach, it is quite alarming for this approach to be actively supported by *Nature*. It concurs with BP's stated objective at the time — not the recouping of financial damages from Greenpeace's occupation of the Stena Dee oil platform but the prevention of Greenpeace's campaigning efforts, allowing BP to continue oil exploration on the Atlantic frontier.

Your applause for BP fails to recognize BP's contribution to the climate change problem, Greenpeace's campaign or our continuing ‘constructive engagement’ with oil companies and the climate debate.

As you point out, BP has at last to some degree distanced itself from what has, over the past decade, been a marauding pack of oil companies determined to destroy the credibility of climate change science and to attack any scientists who supported efforts to deal with the problem. BP's conversion has, however, so far been limited to a cautious few words, whereas its actions contradict even these first few steps.

BP leads the oil industry in areas including the Atlantic and the Arctic in finding and developing new resources of oil. BP's actions, far from dealing with the climate change problem, seem likely to extend the life of the fossil-fuel age for decades, at a time when we should be deciding to leave fossil fuels in the ground and working towards that end.

In relation to BP's solar business, you

state that BP has “shown strong support for photovoltaic [PV] energy research”. A recent study<sup>2</sup> coordinated by BP Solar found that the building of a £350-million 500-MW factory to produce solar panels would reduce solar costs by 80 per cent, making solar competitive with electricity supplied by fossil fuels.

Commenting on the BP report, Paul Maycock, editor of *PV News*, was quoted in the August 1997 edition as saying that “at these costs solar will be fully economic throughout the world”. And Allen Barnett, president of Astropower, a US solar manufacturer, has indicated that reduction in solar costs to the level shown in the BP study would generate an annual global market of \$100 billion.

It is not research into PVs, therefore, that is now required from BP but rather a commitment to expand an established solar market. In this case the commitment requires about half the investment that the Foinaven oilfield has so far cost BP.

From our attendance at every United Nations climate negotiation to our production of Jeremy Leggett's groundbreaking book on global warming in 1990, as well as our climate impact research trips to the Antarctic and the Arctic this year, Greenpeace has been “constructively engaged” in the climate change debate from the beginning.

So while climate negotiations continue to proceed in fits and starts, part of this engagement for Greenpeace must also be taking direct action to try to prevent the causes of the problem.

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1. *Nature* **388**, 813 (1997).
2. *Multi-megawatt upscaling of silicon and thin film solar cell and module manufacturing* (European Commission, Brussels, APAS RENA CT94 0008).

## Natural selection and the sex ratio

*Sir* — The invariable attribution<sup>1</sup> to R. A. Fisher of the famous argument about how natural selection controls the sex ratio is not correct. Darwin gave it in the first edition of *The Descent of Man*<sup>2</sup> and, although he withdrew it for the second edition (which was the one Fisher owned), it nevertheless found its way into the literature.

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2. Darwin, C. *The Descent of Man and Selection in Relation to Sex* (John Murray, 1871, 1874).