The Badger

Proceedings of a seminar held on 6–7 March 1991. Edited by Thomas J Hayden (1993, but only just available). Royal Irish Academy (RIA): Dublin. 211pp. Paperback. Obtainable from RIA, 19 Dawson Street, Dublin, Ireland (ISBN 1 874045 14 3). Price IR£10.

Whilst a somewhat extended period of delayed implantation and lengthy gestation is appropriate for a badger book – badgers having gestations of anything up to 15 months duration – this publication has been some two years in production. This delay, however, in no way detracts from the major importance of this book. And while it is the first major Irish work on the badger, the very wide range of topics covered will ensure its permanent place in the literature. Ireland has one of the worst cattle tuberculosis (TB) problems within the European Community, with some 65,000 cases a year as contrasted with only *c*1500 in Ulster, and less than 1000 in England (see *Animal Welfare 3:* 253). Most of the papers hence relate in one way or another to the badgers and bovine TB issue. Nevertheless, topics covered range from legal protection to such basic biological problems as sett construction, territoriality, behavioural ecology and the implications of such studies for the TB problem. Much of the book re-examines, from the Irish point of view, studies which have been done elsewhere. However, there are several new insights into badger issues.

Of particular interest is the suggestion that badger sociality may be related to sett availability and reproduction, rather than the currently accepted view linking sociality to food resources. After all worms are a superabundant prey and badgers probably take well under 10 per cent of the variably 'available' biomass. The study, however, overlooks the fact that while a main breeding sett is an almost absolute prerequisite to badgers breeding at all, there have been almost a dozen recorded cases of above-ground breeding. Sett construction is beautifully adapted to ensure maximum air flow for this large fossorial mammal, which highlights the absurdity of legal 'protection' that permits stopping up of setts by hunts to prevent foxes going to ground (see *Animal Welfare 3:* 159).

On the badger and tuberculosis issue, much of the book presents studies which amply confirm the badger–cattle link in epidemiology. And yet it is also reaffirmed in the text that it is still, after two decades of investigation, unclear as to how badgers might realistically give cattle a respiratory lung infection under field conditions. Rather astonishingly, the basic assumption that cattle are giving badgers TB has never properly been put to the test, and so Tom Hayden's conclusions are refreshingly unbiased in his concluding review paper (see pp 196–207). He notes that, 'Little attention has been paid to the possibility that TB in badgers . . . is to some extent dependent on the incidence in bovines. The contribution of the badger (to cattle TB) is unknown and could be zero. The risk posed by badgers even when confined together with cattle was low. Quantification of the risk is the major epidemiological blackspot remaining to be solved. Despite misleading comments, the role of the badger in the aetiology of tuberculosis in bovines is still not quantified, . . . [and there is] the lack of even a simple model of the pathways through which *Mycobacterium bovis* circulates through wildlife and domestic livestock.'

Two of the papers in the book are of especial importance in that they shed some light on the question of transmission pathways. Dolan (p 108) notes that in fact all cattle are potentially infectious at any stage of the disease (see *Animal Welfare 4:* 159). The article by Fagan (p 117) is a major contribution in that it differentiates between early badger TB and

late disease lesions. Involvement of head lymph nodes suggests an initial dietary acquisition of TB, such as by eating beetles and worms from contaminated pasture or cow pats direct, and the presence of the lung and the relatively rare kidney lesions is a feature of later pathogenesis. This would suggest that 'Old Brock' may after all be simply catching TB from cattle. Badger 'TB models' which fail to take account of this possible spillover are hence of dubious value. There is strong evidence, as in former Midlands blackspot counties, that TB dies out in badgers when not topped up from cattle. Badger culling is hence pointless, and badger vaccination strategies are probably equally useless, not least because cubs are not accessible for vaccination during their first eight weeks of life anyway.

Demonstrating a cattle to badger transmission of TB should be quick and easy to do, and perhaps rather more useful than much of the long-term research currently based on the still unproven assumption of badger guilt.

References

Hancox M 1994 Badgers: sociobiology and sett protection. *Animal Welfare 3:* 159

Hancox M 1994 Badgers and bovine tuberculosis in the UK: a reappraisal needed. *Animal Welfare 3:* 253-254

Hancox M 1994 The infectiveness of bovine tuberculosis. *Animal Welfare 4:* 159

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Here's the Catch: An Animal Aid Investigation

Produced and published by Animal Aid (1994). Colour VHS video, 14 min. Booklet 14pp. Obtainable from Animal Aid, The Old Chapel, Bradford Street, Tonbridge, Kent TN9 1AW, UK. Video £5, booklet free.

Produced by the animal rights pressure group Animal Aid, this video and accompanying booklet gives a shocking and often brutal account of the UK poultrymeat industry. Undertaken as a 'secret investigation of one of the biggest exploiters of animals' the underlying message of the package is to persuade the public to boycott poultrymeat and, as such, the information paints a picture of a sinister and disturbing trade.

The video takes us inside intensive broiler and turkey units and highlights the problems which can occur when birds are caught and transported prior to slaughter. Filmed undercover, the footage shows birds being kicked and roughly handled with emotive shots of dead birds lying on the floor. The film illustrates how the 'traditional' method of fixed crate transport can cause injury and distress when birds are hurled into high level crates on the lorry. Unfortunately, however, the lack of narration leaves it unclear how the 'state-of-the-art' open-topped modules can reduce bird handling and, with a good catching team, can improve welfare. Instead the images show handlers cramming birds into the crates, trapping wings and heads and the system is portrayed as brutal and inhumane.

The accompanying booklet backs up the video with a collection of quotes from poultry handlers, covering all aspects of production from the catching of birds, artificial insemination, heat stress, culling, to disease and causes of death on-farm. The men interviewed are not connected with the video, but give an explicit and lurid account of the abuse of birds.