

Part Two contains many reports of maltreatment adduced as evidence for the banning of the transport of livestock from Great Britain to other Member States of the European Union and between other Member States. Sadly not all of these can be denied.

Finally, Part Three deals with 'The Way Forward'. Chapters 15 and 16 are of particular interest. They contain a number of useful suggestions for the improvement of the transport of livestock generally. Those in Chapter 15 under the headings 'Need for Tougher Rules' and 'Enforcement' are very relevant indeed. So too the suggestion to change the status of animals within the Treaty of Rome is worthy of serious consideration by the responsible authorities, both in the European Commission and in the governments of all Member States.

Unfortunately, although there are quotes from scientific papers and the proceedings of the Scientific Committee of the European Commission, they are selective to further the general argument and add nothing to our overall knowledge.

The book may appeal to the interested layman and welfarist. In doing so it may influence others to support the campaign to ban the transport of fattening and slaughter animals from Great Britain to other Member States of the European Union. The book is of very little, if any, use to the scientist except as a summary of the history of the trade and of the arguments of one side of the debate.

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### **Hedgehogs**

Nigel Reeve (1994). T & A D Posyer: London. 313pp. Hardback. Obtainable from the publishers, 24-28 Oval Road, London NW1 7DX, UK (ISBN 0 05661 081 X) Price £20. This simply titled book does, as it would suggest, cover almost everything about hedgehogs. While it is a comprehensive and fully referenced text book, the narrative is in an easy to read style and Reeve does not miss an opportunity to note the funny and peculiar. Scientific terms are explained so that all can grasp the author's meaning.

The book is divided into ten chapters. The first chapter deals with the evolution and taxonomy of the Family Erinaceidae and, for the European reader, importantly places the European species (*Erinaceus europaeus*) into context with other spiny and hairy hedgehogs. There follows a description of the distribution and distinctive features of each genus and the species within that genus. Chapter Two details the remarkable features of hedgehogs which separates this family from others. For example, the structure of the spines is described and depicted showing how valuable they are as shock absorbers. Hedgehogs have apparently little fear of falling from heights and merely roll up to allow their spines to cushion the impact.

The diet of hedgehogs and their feeding behaviour is covered in depth in Chapter Three, including methods used to study their diet and food selection, and feeding folklore. The literature of dietary studies is covered comprehensively and considerable attention is paid to the diversity of the hedgehogs diet. While it is well known that hedgehogs prey on invertebrates, the author may surprise the reader new to hedgehogs that they will feed on amphibians, lizards, snakes, ground nesting birds, carrion and have even been found feeding

on the udder of a live sheep while she was caught by her wool in briars.

In Chapter Four, Reeve's attention is cast on home range, territoriality and social behaviour. Nest construction and use, and the variations between genus and species are described and beautifully illustrated in Chapter Five. Hedgehogs are adaptable in the siting of their nests and have been known to use disused coal cellars and a thatched roof.

An informative discussion of hibernation and energies is entered in Chapter Six, while in Chapter Seven those aspects of behaviour not dealt with in context are considered. These include nocturnal activity rhythms and time budgets, but also two bizarre activities which are unexplained: so called self-anointing and running in circles.

The reproductive anatomy and physiology of male and female hedgehogs, followed by courtship and mating behaviour, pregnancy and birth, and development and growth of young are the subject of Chapter Eight. In another large chapter entitled 'Demography, disease and death' Reeve discusses demographic studies and 'Malentities and misfortune'. The latter actually lists agents of infectious and non-infectious disease. The final chapter, 'Hedgehogs and humans', is primarily concerned with folklore and is followed by three appendices which cover veterinary treatment, names for hedgehogs in various languages and useful contact addresses in Britain.

'Hedgehogs' is well illustrated with numerous tables, graphs and line drawings, the last of which are particularly clear and help to explain the text. The colour plates are unfortunately confined to the centre of the book which is inconvenient for the reader.

From the point of view of the welfare of hedgehogs the book is frustrating because, although it has an appendix dedicated to veterinary treatment, the author does not tackle several thorny issues concerned with man's interactions with hedgehogs. For example, when should we intervene if apparently sick hedgehogs are found; how should we best cater for their welfare needs in captivity and their fate upon release after rehabilitation.

It is not clear for whom the appendix on veterinary treatment is written nor why it is included in a book largely on ecology and behaviour. The terminology used could be understood by the lay person but the procedures described such as treatment and anaesthesia could only be undertaken by veterinarians. Veterinarians should use the information with caution because there are several errors, for example, the dose rate for medetomidine is given as 100ml kg<sup>-1</sup> body weight. The correct dose should be 100µg kg<sup>-1</sup>.

While noting these reservations, the author has otherwise produced an instructive book which provides both the detail required by a serious researcher and the interest to engross the amateur naturalist.

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