wholly deplorable: they may themselves be an incentive to further thought and study. And though his scholarship and his arguments are faulty, some of the author's personal intuitions about the value of animals' lives may be correct.

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The Domestic Duck

C and M Ashton (2001). Published by The Crowood Press Ltd, The Stable Block, Crowood Lane, Ramsbury, Marlborough, Wilts, UK. E-mail: enquiries@crowood.com. 192 pp. Hardback (ISBN 1 86126 402 X). Price £19.95.

The Domestic Duck is divided into three parts. The first part covers the breeds of ducks, their history and their characteristics. The second part covers the behaviour and management of adult ducks and includes chapters on the physiology and behaviour of the mallard and the management of adult ducks. The third part of the book covers the breeding of ducks and the rearing of ducklings. The book ends with an appendix of health problems in ducks and practical solutions to their prevention and treatment, useful addresses in the waterfowl management industry, and a bibliography of popular and scientific books on duck breeds and their management.

Throughout the book, the primary focus is the breeding of ducks, as the target market is clearly duck breeders and exhibitioners. This theme is taken up from the start, as the book traces the history of the domestication of the duck, and the characteristics of the classic breeds and their various uses by man. The early chapters include sections on egg layers, such as India Runner ducks; table or meat birds, such as the Aylesbury from Britain, the Rouen from France and the Pekin from China; and Call ducks, which were used as decoys by wild-fowlers and duck hunters. It then proceeds to cover the development of 'designer' breeds in the 20th century, when breeds from around the world were crossed to select for the best features from each, such as the prolific egg-laying Khaki Cambell, the dual purpose Orpington or the decorative Magpie duck. In addition to many black and white illustrations, the two chapters are well supported by eight pages of colour pictures of the various breeds and cover in great detail the genetics of the breed characteristics.

The book goes on to describe the selection and management of adult stock and the breeding and rearing of ducklings. First is a description of the behaviour and physiology of the mallard (*Anas platyrhncos*) and related dabbling ducks, which are the ancestors of all types of domestic duck except the Muscovy duck. This is followed by chapters providing practical advice on the selection of stock and the care and management of adult ducks in small flocks. The final chapters cover the selection of breeding stock, the incubation of eggs and the rearing of ducklings in small-scale systems. No single section of the book specifically deals with the welfare of the domestic duck; instead, welfare issues are dealt with through advice on the management of duck flocks throughout the book. The sections of the book that are most relevant to welfare are: the chapter on physiology and behaviour of mallards, which covers the fundamental physical requirements of dabbling ducks; the chapter on the management of adult ducks, which covers provision of food, water and shelter as well as protection from disease, adverse weather conditions and predators; and the chapter on the rearing of ducklings. In addition to covering care, health and welfare of young ducks, this chapter includes recommendations on the humane slaughter of ducklings. Finally, the

appendix on health problems of domestic ducks is a very useful summary of common ailments and their prevention and treatment.

The only disappointment for those concerned with the welfare of ducks is that the book contains little reference to the management of large commercial flocks of ducks, where factors such as high stocking-density and limited access to water may compromise duck welfare. Early in the book, it is claimed that, at the start of the 20th century, domestic ducks had as great a potential as domestic hens for food production. As this potential is now being realised, particularly in table bird production, it would have been interesting for the authors to extend their advice to management of larger flocks of ducks. In particular, the authors note that certain breeds of duck, such as India Runners, appear to have little need for open water and they do not consider it obligatory to provide ducks at pasture with constant access to swimming water. These recommendations are relevant to commercial production, as large-scale producers face a compromise between unrestricted access to open water and health and hygiene in large flocks when designing drinkers.

In conclusion, *The Domestic Duck* is firmly aimed at the small-scale duck farmer, small-holder, breeder or duck fancier. The authors adopt a practical approach to duck management and welfare instead of blinding the reader with the fundamentals of welfare science as they apply to the duck. It is not aimed at large-scale intensive duck producers or welfare scientists, though both would gain from the sound practical advice and the wealth of knowledge that the two authors bring to the book.

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Animal Welfare

C Spedding (2000). Published by Earthscan Publications Ltd, 120 Pentonville Road, London N1 9JN, UK. E-mail: earthinfo@earthscan.co.uk. 188 pp. Paperback (ISBN 185383 672 9). Price £12.95.

In recent years, the literature on animal welfare has grown to such an extent that anyone coming fresh to the subject can easily feel overwhelmed with the numerous books, reviews and reports on original work which might (or might not, of course) be relevant to their immediate needs. It may be difficult for newcomers to see the overall picture and thus be in a position to select and wisely use the available printed material. Experienced workers can sometimes also become lost in the animal welfare jungle. They can be so engrossed in the details (and detailed literature) of their current task that they may be in danger of not appreciating its place in the general animal welfare scene. This new book could help both these groups.

The author, Sir Colin Spedding, is well known, amongst other things, for his pioneering work on the ecological systems approach to the management of agricultural enterprises and for his Chairmanship of the UK Government's Farm Animal Welfare Council. He is thus well acquainted with the interaction of the various biological, social, ethical and economic factors that underlie most animal welfare problems and their possible solutions. This broad approach is the one he adopts in the book. He believes that one should understand as much as possible about the background to a welfare situation before one rushes in to set all to right!

This is an animal welfare book; in other words, it is mainly concerned with improving the health and well-being of the animals that man uses. It is not an animal rights treatise. Rights