

economic importance. The only exogenous endocrine manipulation considered is the administration of bovine somatotrophin, a drug that is not permitted in the EU. The discussion of egg production helpfully explores the differences in the physiology of the ovary in the bird, and discusses endocrine manipulation of the laying process — presently a largely experimental procedure. More practically, the process of shell formation and its dependence on dietary and endocrine influences are considered, and ways to influence this are described. Lastly, the chemical control of wool growth and possibilities of chemical shearing (defleecing), including one therapeutically approved compound, are described.

Chapter 5 deals with the hormonal control of reproductive processes in farm animals. The physiology of reproduction from sexual differentiation to puberty to sexual maturity is considered, together with parturition and seasonality. Surprisingly, ageing of the reproductive system is largely ignored, although this can have serious production implications. Manipulation of the ovarian cycle, ovulation, embryo recovery and transfer, and *in vitro* fertilisation are all considered. A small section deals with manipulation of reproductive processes in fish, especially including modulation of sexual differentiation in aquaculture.

The last chapter considers animal behaviour, health and welfare. It begins with a discussion of broodiness in laying poultry as a normal physiological response which interferes with egg laying, the prime consideration of the producer. There follows a useful discussion of pheromones and their control of behavioural responses in farm animals (and insects!), preceding a consideration of the stress responses of animals. The discussion explores to what extent stress response is physiologically beneficial, and emphasises where stress can reduce production and reproduction; means by which it can be countered are described. The health and welfare discussion is concluded by a consideration of endocrine modulators in the environment, and their toxicological influences.

The book sets out to cover an area untouched by most endocrinological texts but, as a result, suffers in its attempt by being too brief in the basic endocrinology. The errors/inaccuracies of the basic science is one of its weakest points. In the second sentence of the first chapter, the originator of the term ‘hormone’ is stated as Sterling rather than Starling. I initially excused this as a typographical error but since there seem to be so few other such errors, I conclude it is probably an author error. Moreover, myoepithelial cells of the mammary gland are described as smooth muscle cells, while the synthesis of thyroid hormones is dealt with, in my view, too briefly in only a few sentences. There is a lack of mention of embryonic oestrogen mediating the recognition of pregnancy in pigs, and the complexity of the ovarian–uterine interplay in bringing about the demise of the corpus luteum in cattle and sheep is glossed over. In the methodologies chapter, there is much use of immunology and molecular biology jargon without explanation, which assumes the reader is already in possession of these terms.

Chapter 3 is the most thorough, perhaps reflecting the author’s own strengths. I found that Chapter 4 had a curious variation in detail, with some discussion plunging deeply while other parts of the chapter are dealt with relatively superficially. In some places, experimental detail is cited without references, which I found annoying, but one should remember that this is an undergraduate text. In Chapter 5, there were some omissions of the species differences, particularly in the induction of parturition.

The book takes a North American perspective, although pointing out European differences where they occur. In some instances, the therapeutic approach differs markedly between Europe and North America, and this is rarely brought out. The welfare issues are often cited, but not explored. Particularly, the whole animal assays described require a consideration, in European terms, of the animal welfare implications. It is a pity that there is not some section addressing the need to balance maximising production against the cost to the animal.

In general, the diagrams are simple and helpful if, at times, unsophisticated. Tables are usefully employed in summarising data, although in one instance, at least, the data are now superseded. The cited references are mostly relevant and reasonably up-to-date reviews of the topic. Each chapter contains a set of basic undergraduate essay topics relating to the preceding content. These are unimaginative and require only recall to answer, not demanding the higher learning skills.

There is much to commend this book. It can be recommended as a reference text for animal science and production, and for veterinary endocrinology and pharmacology. It is aimed at an undergraduate science audience, but there is also much for the postgraduate seeking to extend into the subject area. I would expect that it would become a standard library reference text and, in some instances, a course text, from which it has, indeed, grown.

Paul Watson

*Royal Veterinary College
London, UK*

Handbook of Behavior Problems of the Dog and Cat, 2nd Edition

G Landsberg, W Hunthausen and L Ackerman (2003).
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Dogs and cats can exhibit a wide variety of behaviours that their owners find undesirable. These range from relatively minor problems, such as pulling on the lead and irregular sleeping patterns, to more serious problems including human-directed aggression and destruction. These so-called ‘behaviour problems’ can be a huge source of distress for owners. Nonetheless, many owners are extremely attached to their pets and prepared to exert a considerable amount of effort to keep them healthy and part of the family. This has led to the development of the relatively new discipline of

pet behaviour therapy. This practice draws heavily upon the existing subjects of psychology, animal behaviour and veterinary medicine in a bid to establish the aetiology of, and treatment for, companion animal behaviour problems.

The Handbook of Behavior Problems of the Dog and Cat is a revised version of the authors' original handbook, first published in 1997. The revised edition, aimed largely at veterinary surgeons, aims to guide practitioners through the diagnosis and treatment of many common canine and feline behaviour problems.

The book consists of 21 chapters. Chapters 1–5 provide background information on the practice of behaviour counselling, the terminology associated with the discipline and the development of puppies and kittens. Chapters 6–9 discuss various techniques for treating pet behaviour problems, including drug therapy, alternative therapy (eg aromatherapy, homeopathy), diet-related therapy, pain assessment and management. Chapters 10–20 focus on behaviour problems common to dogs and cats, including stereotypic and compulsive disorders, fears and phobias, behaviour problems in senior pets, unruly behaviours, destruction, house-soiling and aggression. The final chapter highlights the French approach to pet behaviour therapy in a bid to shed light on some of the differences and similarities in the way that behavioural problems are dealt with in different countries. All of the chapters are well written and contain summary tables for quick 'at-a-glance' solutions to the various behaviour problems under consideration. Many of the chapters are accompanied by case histories germane to their topics, highlighting related problems exhibited by, and treated in, individual animals.

A key feature of the new edition is the provision of forms and handouts, all printable from the CD-ROM (compatible with both PCs and Macs) that accompanies the handbook. This may be appealing to practitioners with limited time to design their own questionnaires or fact-sheets. The new

edition also includes useful appendices with information on drug dosages, behaviour therapy products available on the open market and web sites with behavioural information.

Animal welfare, although not explicitly discussed as an issue in its own right, runs central to the handbook. Behaviour practices conducive to promoting an acceptable standard of animal welfare are highlighted throughout. Thus, the authors encourage practitioners to learn more about the natural behaviour of the dog and cat, learning principles, behaviour modification techniques and pet requirements, rather than rely purely on treatments involving punishment and dominance challenges.

One weakness of the book lies in its referencing system. The end of each chapter contains a list of further reading, although few chapters actually cite any specific research. This may exasperate those readers who want to find out more about a certain study or research finding, but cannot determine the authors of the work. The book is also rather sparse on the issue of human psychology, despite the important contributions of human behaviour therapy to pet behaviour therapy. A section on counselling skills would also have been useful, given the necessity in many cases to treat the entire owner(s)–animal relationship, and not just one aspect of the unit, ie dog or cat.

In general, this book is full of information for the practicing behaviour therapist. The book will allow any practitioner to better prevent, diagnose and treat behaviour cases in dogs and cats. Whilst the book is clearly aimed at veterinary surgeons, others involved in the area of pet behaviour therapy, be they psychologists, biologists or ethologists, would benefit from this revised edition.

Deborah Wells

Queen's University Belfast

Belfast, UK