

Contrastingly, the immense fish taxon is only represented by a single species, the growingly popular zebra fish.

The most noted absentees are goats, cephalopods, and other fish species. Although together these comprise a combined total of less than 8% of the animals used in EU-28, including them in a future edition would definitely be a plus, as they are of particular relevance in certain specific research fields and countries (eg in Norway 93% of all animals used in research belong to the ‘other fish’ category). Another useful addition would have been the spiny mouse (*Acomys* spp), an emerging animal model in regeneration studies that currently presents considerable housing and welfare challenges.

The text is structured consistently for all of the species-specific chapters which not only eases the reading experience but facilitates consultation, ensuring that all the key points are readily available for each group of animals covered in the book. Hence, each chapter contains an introduction on the use and relevance of the given species — or group of species — in research, describing essential aspects of their natural behaviour, as well as their normal and abnormal behaviour in captivity. The book contains a plethora of figures and pictures which, in most chapters, includes well-specified examples of recommended housing for captive animals, following high standards of enrichment. The beautiful front cover art should also be highlighted.

Another welcome feature is the annex containing a selection of ethograms based on or adapted from — duly referenced — key literature, for studying the behaviour of the most commonly used species covered in the book, namely rats, guinea pigs, hamsters, rabbits, ferrets, domestic cats, pigs, horses, zebra finches, zebra fish, marmosets, capuchin monkeys, vervet monkeys, and baboons (plus a dog ethogram embedded in the respective chapter). Readers are also directed to other reliable sources for comprehensive ethograms for mice, and macaques, freely available on-line.

I recommend *Behavioral Biology of Laboratory Animals* for anyone with an interest in studying the behaviour and welfare of laboratory animal species, as well as animal welfare officers, designated veterinarians, and all those responsible for animal care and behavioural management in research laboratories, as well as in parks and zoos hosting these species. Lecturers in animal welfare-related topics will also find an essential science-based reference for both them and their students. This includes those teaching modules EU-3.1, EU-4, and EU-5 in laboratory animal courses following EU-functions.

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Guilty Pigs: The Weird and Wonderful History of Animal Law

K Barnett and J Gans (2022). Published by La Trobe University Press (in conjunction with Black Inc), 22-24 Northumberland Street, Collingwood, VIC 3066, Australia. 368 pages Paperback (ISBN: 9781760641849). Price A\$ 34.99 (ebook:A\$16.99).

If you are not a lawyer and wondering about the relevance of a book about the history of animal law, I can reassure you that this is an interesting and thought-provoking read for both lawyers and non-lawyers alike. The authors have not attempted to write a ‘black letter’ law textbook, tracing judicial precedent and legislation. Rather, the focus is on the story of how legal systems approach non-human animals where their interests come into contact with those of people. The book gives us a historical perspective on the origins of the laws relating to animals, setting in context the current treatment of animals by legal systems.

Another concern that may dissuade those outside the law from reading this book is that it is likely to be of niche interest to lawyers and legal academics practicing or teaching animal-related law, with little relevance or interest to wider society. I would suggest that the converse is actually true for a number of reasons.

Firstly, the book appears to be written with a lay audience in mind, there is no legal jargon and where legal terms are necessarily used, there is a clear explanation of the meaning. The book is also written in an interesting and entertaining matter, notwithstanding the seriousness of the issues touched upon and there is a focus on storytelling, which can be absent from black letter law case reports.

Secondly, instead of accepting the law as it is, the book offers an understanding of why it is so, a vital first step in the critical evaluation of the *status quo*. Without understanding how we reached the position we are in as regards the law’s categorisation and approach to animal interests, it is harder to understand the case for change.

Thirdly, and finally, the book is not about the law *per se*, but wider societal values towards animals. In the words of Mike Radford “The law is the means by which society expresses its collective choice” (Radford 2001; p 11). The book therefore speaks to human relationships with other animals, and it significantly adds to our understanding of this relationship, including how our attitudes have been shaped by ancient philosophy, and religious and cultural and attitudes towards animals, which have evolved over time.

The book is not about the laws that regulate our conduct towards animals. It does not attempt to chart the laws that seek to protect animal welfare. Neither does it critique animal welfare laws, which would have been a vast undertaking. It is not intended as a reference book and written from an international perspective; care should be taken not to rely upon it for legal research purposes, that is not the intention.

The book starts by examining the concept of animals as property and the ownership rights that we have over them. As the authors explain, the legal status of animals as ‘property’ or ‘legal things’ has certain ramifications for their welfare, including the fact that it confers the right to sell, abandon or kill animals who are the subject of property rights (save to the extent that legislation has modified unqualified property rights). In this respect, the authors consider different approaches to the ownership rights a person can have over wild, domesticated and semi-domesticated animals. The parallels with ownership of enslaved people over the course of history is also given thoughtful consideration and the authors bring us up to date with modern attempts to secure judicial recognition of personhood for species of animals in respect of whom the weight of scientific evidence suggests can exercise practical autonomy.

The legal status of animals as property also impacts in a practical way upon the treatment of the animals’ interests when there is a dispute about ownership and the book contains an interesting account of how the courts have approached this in the event of family breakdowns, where there is a conflict between ownership rights and animal welfare. How is the ‘property’ divided when the family dog, for example, is bonded to and can have his or her welfare needs better met by a spouse who did not purchase the dog and is therefore not the legal owner?

Lest it be thought this is a purely academic or theoretical discussion, the legislature in Spain has recently amended the civil and criminal codes to modify the status of animals as property by recognising that they are sentient beings, thus enabling judges to take into account the welfare needs of an animal, where otherwise the only relevant consideration would be legal title (Spain 2022).

The authors cover the treatment of animals in law within a range of contexts and they do not shy away from sensitive topics such as sexual contact with animals. As well as considering the type of sexual contact with animals that attracts criminal liability (in many jurisdictions not all sexual conduct with animals is illegal), the authors explain how the criminal justice system has treated animals who are the subject of such sexual conduct. It may come as a surprise to learn that at some points in history both the person involved in the sexual act and the animal may have faced criminal prosecution and possibly even the death penalty.

A related issue is how the legal systems in ancient and medieval times treated animals such as ox or pigs who killed or injured people, or even insects destroying crops, who could be subject to the full force of the criminal law. While we may look back at animal trials with amusement, the question of how society deals with animals who injure or kill is still relevant today. Most frequently, society has to grapple with this in relation to dog attacks. The question arises, who should be held responsible when a dog attack causes injury to a person: the owner or person in charge of the dog who may bear responsibility for the training and control of the dog in their possession, or the dog? Are concepts such as punishment and retribution legitimate when applied to the behaviour of animals and, if so, is there a difference between the conduct of wild or domesticated animals who cause injury?

Another interesting issue touched upon in the book is how the courts have approached animals as potential witnesses of fact or experts in judicial proceedings. From the inferences that judges have been prepared to draw upon the behaviour of animals, to the role of animals in the detection of crime and law enforcement.

This is not a mere benign trot through history though. The concluding chapter draws upon the various themes in the book to address some important and current issues, not least of which is our evolving understanding of the inner lives of species such as octopus and a variety of other invertebrates in respect of whom there is scientific evidence not only of their sentience (Birch 2021), but also their complex lives and cognitive abilities, as laid bare by documentaries such as *My Octopus Teacher*. An understanding of their complexities and therefore their interests and needs, is the cause for much disquiet regarding the legal permissibility of aquaculture systems being developed to breed and rear octopus in tanks or ‘octopus farms’ for food (see, for example, Jacquet *et al* 2019). It also raises fundamental questions about the lack of legal protection for these species at the time of killing, including protection from being boiled (lobsters) or cooked (octopus) alive, now seen through the compass of social media that makes visible their desperate attempts to escape the painful stimuli they are exposed to. The octopus perhaps serves as the greatest reminder that the origin and development of our law is based upon a pre-Darwinian understanding of animals that historically have been denied even acceptance of their conscious awareness.

As we continue to understand non-human animals better, so we will be challenged to create a fair and just legal system that reflects our understanding of the interests and needs of other species. This book does much to contribute to the understanding of the animal within society’s legal systems and how we arrived here, as well as looking ahead to the many challenges we face to ensure that animal interests are fully protected by law.

References

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