

## Book Reviews

### *Mao's Bestiary: Medicinal Animals and Modern China*

LPY Chee (2021). Published by Duke University Press, 905 W Main Street, Durham, NC 27701, USA. 288 pages Paperback (ISBN: 978-1478014041). Price £20.99.

The issue of animals in Chinese medicine, concedes the author of *Mao's Bestiary*, has become increasingly “charged and controversial.” Liz PY Chee’s book comes to us at a critical point in recent history, at which we have been compelled to acknowledge how our interactions with other species have the potential to bring catastrophic consequences to lives and livelihoods everywhere. The role ascribed to the consumption of wild animals in the development of viruses behind SARS and the COVID-19 pandemic seems clear, even though the precise transmission routes between other species and humans are yet to be confirmed.

Through five concise and digestible chapters, Chee’s book explores the development of a distinctive Chinese state pharmaceutical sector, spanning chronologically the four decades following the founding of the People’s Republic in 1949. The first chapter documents the early focus in ‘New China’ on drugs and their manufacture, and the emphasis given to *materia medica* itself as opposed to medical practice. Before the Sino-Soviet split of 1960, China looked to the Soviet Union as a model in many spheres, and Russian influence on Chinese medicine, wild animal farming and the use of animal tissue in drug development is explored in some depth in Chapter 2. The rise of medicinal animal farming which accompanied the Great Leap Forward from 1958 onwards is treated in Chapter 3. Chapter 4 addresses the impact of the years before and up to the Cultural Revolution (1966–1976), characterised by a return to folk remedies and the emergence of novel and somewhat unorthodox animal therapies. The final chapter illustrates how from 1979 the reforms of economic liberalisation led by Deng Xiaoping and the opening up of the country saw the ascendancy of enterprise culture and market capitalism, and their explosive impact on the consumption of animal-derived medicines. The material is clearly expertly researched and includes a thorough Bibliography of works and articles mostly in Chinese which would ordinarily be difficult to access. The Glossary of Chinese terms, including political slogans of the period, is an essential addition. I noted some minor errors in transliteration but they by no means detract from the writing overall.

Although mention is made throughout of a range of species, including marine animals and invertebrates, a more detailed, species-focused case study features for roughly each decade of the period. Deer farming — predominantly for the harvesting of antlers — had its early roots in the 1930s, but only in the 1950s, under Russian influence, did it undergo an industrial-scale expansion. During the mid-1960s therapy involving the injection of chicken blood from live poultry directly into the human body made a brief, bizarre but very widespread appearance, whereas the Deng

era saw the introduction of bear farming from North Korea, initially for the harvesting of bile. I feel that this case-study approach works well, as through each example the author brings out how developments in animal-based medicine reflected, to a great degree, the political and economic priorities of their time. The book also brings in the influences on Chinese medicine of Soviet medicine (eg organotherapy), ‘biomedicine’ — as Chee terms Western medicine — and also twentieth century developments in Japanese medicine.

Who would find *Mao's Bestiary* interesting? Chee’s book will certainly appeal to anyone either formally studying or merely interested in contemporary China, whether from the perspectives of ethnography, political or social science, or of course history of medicine. Although this is clearly not a book about animal welfare, the subject matter will be useful to anyone involved in the fields of conservation or the global wildlife trade. If you are curious about China’s apparent preoccupation with the use of animals in human medicine, and where it comes from, there are some insights here. As a lifelong student of China and more latterly an animal welfare proponent, I thought the book was very engaging. In many places I found myself nodding in recognition of observations that tallied with my own experience and thinking, particularly about how animals are regarded in China. But I learned a lot in the detail, and there were some surprises.

We might be forgiven for thinking that China has a long and rich heritage of using all manner of animals and their parts in medicine, but this is quite an exaggeration. Chee points out that the most authoritative of historical texts, such as the Ming dynasty (16th century) *Bencao Gangmu* (Compendium of Materia Medica) contains reference to a mere 400 animal species, a small fraction compared to the entries on plants. By the 1970s this number had doubled and in the most recent (2013) official list of animal species used in medicine the total exceeds 2,300. Given the increasingly innovative use since the Mao era of animals and animal parts that were wholly absent from the early pharmacopeia, the widely applied blanket term TCM — ‘traditional Chinese medicine’ — is clearly worthy of much more critical scrutiny. The plethora of novel drugs and health supplements that have emerged since the 1950s could scarcely be described as ‘traditional’ in any real sense.

What comes through is China’s successful obfuscation of this rapid, modern expansion in animal use behind a cloak of history and tradition. Although the principles of animal-based remedies in China’s traditional medicine are, as we might expect, rooted in early history, the current extent — the breadth of species and animal parts involved — has much more recent origins. This proliferation can be attributed both to a calculated expansion of wildlife farming since the 1950s, and to the broader impact that has had on stimulating the global trade in wildlife.

The business of expanding and developing animal use in medicine very much followed directions framed by succes-

sive Five-Year Plans. During the Great Leap Forward, for example, the emphasis on innovation and experimentation, the search for new products and processes, stimulated the marked surge in the farming of wildlife. The book also highlights the importance of the Chinese diaspora as a vital market for medicinal exports, particularly in this early period when the country's economy was underdeveloped and opportunities to bring in foreign exchange were eagerly sought.

Large-scale farming of wild animals in close confinement is of course apt to be accompanied by increasingly compromised animal welfare. The author makes reference to suffering mainly in the latter chapters, particularly in addressing the emergence and growth of perhaps the most internationally notorious of practices, the farming in narrow cages of bears for their bile, and especially the painful extraction techniques involved. Indeed, it is her experience of witnessing bear farming that inspired Chee to pursue the subject of animals in medicine.

Throughout the book we detect a strong utilitarian theme, with wild animals in China seen very much as a mere resource. The Wildlife Protection Law — first passed in 1988 with the most recent revision in 2018 — reflects this view: if animals are to be protected it is so that they can be 'rationally used.' And while the current leadership has embodied the protection of the environment, habitats and biodiversity in China in the concept of 'ecological civilisation', in practice this phrase does little to diminish the underlying imperative of 'rational use.'

What we find with the 1980s industrialisation of wild animal farming is the realisation of their value in their entirety as 'economic animals.' Deer farmed originally for their antlers later became the source of a range of products processed from other body parts, blood, sinew etc. New learning arose around captive breeding, nutrition and rearing of tigers, musk deer, civet cats, as well as various reptiles and amphibians.

It is difficult to escape the conclusion that the explosion in farmed wild animal numbers simply led to a growing supply without a corresponding demand. As stockpiles of animal material grew, new products were developed and marketed. In the drive to maximise profit, these animals began to be put to uses that were almost always far removed from any historical or traditional medical application. In most cases animal ingredients were processed, synthesised and packaged into modern methods of delivery — powders, pills, capsules, lotions and injections — which in the minds of most Chinese put them on a par with biomedical drugs. More recently, the designation of many animal-based innovations as health supplements, as opposed to medicinals, enabled enterprising manufacturers to circumvent state regulation around drugs. A host of novel health tonics, wine, medicinal foods, snacks, even personal care products (bear bile shampoo?) followed, intended to utilise the whole animal, nose to tail. Claims of efficacy for these products do not have to be explicit. My own impression is that, for many Chinese, vague association with tradition will suffice, along with the apparent belief on the part of most consumers that none of these products is likely to be harmful.

An enduring feature of Chinese medicine which has only become more exaggerated in recent years is the belief that 'like cures like', that is that ingesting preparations made from particular organs from an animal will have a therapeutic effect on the corresponding part of the human patient's body. Sexual organs of the tiger, deer and other species are therefore famously thought to be suitable as treatment for sexual dysfunction, or simply to boost male potency or libido.

Historically, the use of animal parts in Chinese medicine has almost always been very precise and narrow — particular organs from certain species, prepared according to exact methods and prescribed for a range of specific ailments. The efficacy of those drugs which genuinely have historical pedigree is taken as given, to the extent that practitioners and patients, consumers and retailers alike do not even need to discuss with each other what a particular drug is good for. Their effectiveness is sanctioned by generations of ancestral knowledge and practice.

Chee also refers to efforts to manufacture substitutes for products derived from threatened species. This was done in some cases by isolating active ingredients in the raw material, for example ursodeoxycholic acid (UDCA) in bear bile, which was later commercially synthesised from chickens and pigs. Many Chinese medicine practitioners, however, reject this approach on the grounds that drugs produced from bear bile consist of much more than a single active ingredient, and that their complexity works on the human body along a multitude of pathways. This position leads to the imperative that bears continue to be farmed for their bile — there is, in the minds of many, no substitute for the original substance.

Why did China turn to large-scale farming of wildlife during the modern era? The drivers were in the main economic and included the encouragement of wildlife farming in rural areas as a poverty alleviation measure. Another factor is that hunting animals in the wild is difficult, inefficient and has driven many species towards extinction, and the argument that captive breeding or farming of, say, deer, tigers, black bears etc, benefits the conservation of populations in the wild. There is plenty of evidence that the contrary is true — that the existence of a farmed product creates added cachet for its original, more 'authentic', wild counterpart, and therefore increases pressure on animals in the wild. The high value of many wildlife products, whether obtained legally or not, also cements their significance as luxury gifts.

*Mao's Bestiary* shines a useful spotlight on a hitherto rarely explored area and in doing so gives us access to some obscure source material. The book is a modest attempt to cover a truly vast topic. It left me with a much clearer understanding of just how the seeds of modern China's use of animals in medicine were sown in the early years and made me curious to pursue the subject further.

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