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This is the second edited volume that promotes the use of palaeozoological data sets (derived from the study of faunal remains recovered from archaeological and palaeontological sites and termed here as 'applied zooarchaeology') in interests of the conservation and management of wildlife.

Like Lyman and Cannon's 2004 *Zooarchaeology and Conservation Biology*, the main body of this work consists of case studies of deeper temporal records of animal taxa (work on birds, freshwater mussels, marine shellfish, Pleistocene megafauna, black bears, Pacific rockfish and harvesting of small mammals can be found here) with discussion of the implications for effective conservation of species, habitats and ecosystems. A minor concern is that potential readers may be discouraged by the geographical scope of the volume (limited as it is primarily to North America), which reflects the contributors' areas of expertise. There is no reason to be. A range of taxa are considered and the approaches and arguments that are employed in the case studies are relevant elsewhere. Furthermore, the chapters by the editors that 'book-end' these studies will stimulate discussion and archaeologists and conservation biologists will find much of interest.

The first four case studies consider the past and present geographic ranges of taxa and the implications that a deeper temporal perspective has for effective conservation and management. In Chapter 2, Kristine Bovy considers the past and present distribution of endangered sandhill

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cranes (*Grus canadensis*) in Washington State in the context of the last 1500 years and highlights the range reduction and localized extirpations of this species in the historic period. Bovy makes a case for greater habitat availability to maintain viable and robust breeding populations of these birds.

Studies of endangered freshwater mussel faunas (Mollusca: Unionidae) are considered in Chapters 3 and 4 by Evan Peacock (in Mississippi) and Charles Randklev and Benjamin Lundeen (in Texas), respectively. Peacock discusses the practical implications for conservation efforts informed by palaeozoological data and a case for the best use of limited financial resources and available habitat. Randklev and Lundeen point out discrepancies between historical and palaeozoological records and highlight the role that palaeozoological data can play in informing future sampling of extant populations.

Heather Thakar describes a case study on marine shellfish exploitation in Chapter 5 and considers human impact on Pismo clams (*Tivela stultorum*) on Santa Cruz Island (California) in the context of the last 1800 years. Thakar demonstrates the insights that zooarchaeological data provide on human exploitation of a relatively small, isolated population and long-term population responses to anthropogenic and environmental pressure that these records provide.

Lisa Nagaoka considers Pleistocene megafauna in Chapter 6 and tackles the Overkill Hypothesis: a 'successful', but deeply controversial, case of palaeozoological research entering the sphere of conservation biology. Nagaoka uses empirical evidence to illustrate, from the perspective of behavioural ecology, the inappropriate application of extinction models based on islands (implicit in the Overkill Hypothesis) to continental settings before detailing concerns on its influence in calls for re-wilding of North America using the late Pleistocene as a benchmark and in discussions of the Anthropocene and the Sixth Extinction.

In Chapter 7, Corinne Rosania describes isotopic evidence from late Holocene remains of black bear (*Ursus americanus*) from Lawson's Cave. This study illuminates the diet of an extirpated (by the early twentieth century) population of black bears in Missouri, now 'replaced' by the (unintended) resurgence of translocated populations in Arkansas. Rosania's study is a confirmation of benchmark dietary models and the habitat preferences observed in the extralocal population.

Todd Braje, Torben Rick and Jon Erlandson consider long-term records of Pacific rockfish (genus *Sebastes*) in coastal California in Chapter 8 and highlight the need to integrate modern, historic and palaeozoological data to establish effective and sustainable practices for fisheries. In Chapter 9, Karen Schollmeyer and Jonathan Driver examine long-term records of human harvesting of small mammals (1–20 kg) from the North American Great Basin and Southwest and the Iberian Peninsula. These authors present evidence of long-standing sustainable harvesting practices and thus, with careful management, a potential sustainable supply of protein for small-scale human populations.

Like its predecessor in 2004, these case studies illustrate the pertinence of palaeozoological data in the conservation and management of wildlife. Each case study concludes with a dedicated section on management implications for the taxonomic group and geographical area under discussion. But that is as far as it goes. It is perhaps unsurprising then that, unlike the 2004 volume, there is a sense of frustration that is made explicit from the outset in Steve Wolverton's preface and the introductory chapter by Wolverton and co-editor R. Lee Lyman. Rather than detract from the volume, however, this discussion is fruitful and does not shy away from highlighting the challenges of bringing palaeozoological evidence into the public consciousness and the sphere of policy and practice. The major problem it identifies is one of communication. How can these data effectively cross disciplinary boundaries, engage the public, inform policy and, most critically be put into practice on the ground?

The present lack of effective communication with conservation biologists and wildlife managers is cited as particularly problematic and palaeozoologists are (rightly) encouraged to cross disciplinary boundaries and to publish and present research in appropriate journals and conferences outside of their parent discipline. In Chapter 1, however, Wolverton and Lyman caution that this can be uncomfortable, expensive and potentially damaging to their standing within their parent discipline and future career prospects. This volume also points out the complex interplay of the social, economic and political dimensions (under the collective title of political ecology) within which conservation efforts are situated. While 'applied zooarchaeology' can bring pertinent and valuable lines of evidence to the table, zooarchaeologists will have to accept these difficulties before longer temporal perspectives can be taken forward to influence policy and practice. My concern here (and it is a minor one) is that there is probably more common ground (on both counts) with conservation biologists than the discussion suggests (e.g. Balmford & Cowling 2005). For 'applied zooarchaeology', however, these difficulties seem intimidating and in the final chapter, R. Lee Lyman, a long-time proponent and champion of this area of research, reviews the history of the discipline and the contributions to the volume before considering the challenges with advice for staying the course.

It is a realistic hope then that a future edited volume on applied zooarchaeology will describe case studies of palaeozoogical data that have been incorporated into policy and practice and made a real impact in the conservation of wildlife. My sense is that the contributors to this volume are keen to make this a reality.

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