

Pandas–People Coexistence and Competition

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4.1 Introduction

With the expansion of the human population in the last few centuries, human–wildlife interactions are increasing like never before (Carter et al., 2014, Woodroffe et al., 2005). Nearly all wildlife populations and associated habitats have been altered by humans in a multitude of ways. Examples include poaching, livestock grazing, resource extraction, pollution, and climate change (Pimm and Raven, 2000). Wildlife in turn affect humans in numerous ways, including destruction of crops, killing livestock and people, providing economic income through wildlife tourism, and controlling pests (Carter et al., 2014). Human–wildlife interactions can be framed from many different perspectives, but two of the most common contrasting paradigms are human–wildlife competition and human–wildlife coexistence (Woodroffe et al., 2005). Competition occurs when humans and wildlife engage in antagonistic interactions with one another due to limited available resources (Treves and Karanth, 2003, Woodroffe et al., 2005). Coexistence can be achieved when one or both sides have adapted to the other’s presence so that both can be sustained while sharing the same space (Madden, 2004, Woodroffe et al., 2005). Understanding factors that trigger competition and those that foster coexistence can help guide conservation policy and management planning into the future to promote sustainability of coupled human–wildlife systems.

The giant panda is one endangered species that has been profoundly shaped by human–wildlife interactions. As outlined in Chapter 1, giant pandas and humans have a long and complex history of interacting with one another. The story of human–panda interactions is one that can be told from many different perspectives, and themes of competition and coexistence are interwoven even in the earliest records of ancient China (Chapter 1). The portrayal of pandas as peaceful mountain-dwelling neighbors was juxtaposed against the harvest of pandas by elites for sport and fur (Schaller, 1994). The dominant pattern for centuries has been coexistence, considering that pandas have survived in the face of considerable human development pressures when many other large mammals have not. For example, elephants are almost extinct in China and rhinos, gibbons, and snub-nosed monkeys have nearly disappeared due to the combined effects of hunting and habitat loss (Corlett, 2007). A survey of over 50 reserves in South China found “very few signs of large and medium-sized mammals” (Fellowes et al., 2004, cited in Corlett, 2007). The subspecies of tiger once living in South China has recently been extirpated (Tilson et al., 2004). So have the leopard and gray wolf, with several other species at regional risk (Lau et al., 2010). Pandas are also found to persist at densities higher than many other bears around the world, which highlights differences in their biology (Garshelis, 2004), and a higher capacity to coexist with people (Hull et al.,