



Hunting strategies employed by bird hunters with economic pursuit in the city of Guiyang, Southwest China



Chuanyin Dai*, Wei Hu

School of Chemistry and Life Sciences, Guizhou Normal College, Guiyang, 550018, China

ARTICLE INFO

Keywords:

Ethno-ornithology
Bird harvest
Hunting technique
Commercial hunting
Conservation response

ABSTRACT

Understanding hunter motivations and strategies is of particular importance in regions fraught with wildlife hunting, due to the critical hunter's role in linking wildlife supply and consumption. However, such information is extremely scarce in China despite the worrisome situation of wildlife hunting. This study documents the techniques, motivations and hunting frequencies of bird hunters who have economic interests in the city of Guiyang, Southwest China, where numerous wild birds have been observed in trade. The data were collected using semi-structured questionnaires given to 50 hunters in a public market between March and July 2015. At least 9 kinds of tools and 10 kinds of techniques have been employed in local bird hunting practices. Up to eight factors have stimulated the collection of wild birds, of which commercial benefit was undoubtedly the most important. Hunting activities were conducted throughout the year, and efficient and low-cost hunting techniques, such as hunting with nets and neck snares were the predominant hunting techniques. The use of bait birds, whistles and bird song recordings was common, with the aim of improving the harvest by finding and attracting target species, highlighting a preference for hunting certain species of birds. The various hunting motivations underscore the complexity of the current hunting issue. Conservation management was discussed by considering the hunting strategies employed and the needs of hunters, as well as the market demand, which highlights the necessity of the combined actions of law enforcement, commercial breeding, social welfare, the development of hunting grounds and environmental education.

1. Introduction

A growing number of studies have noted that wild animals have constituted a critical source of subsistence items to human beings throughout human history (Alves, 2012; Alves & Souto, 2015; Santos-Fita et al., 2012). They have been an important nutritional resource as animal protein in poor regions and have been exploited for fats, traditional medications, ritual items, adornments, decorative accessories and as pets (Alves, Leite, Souto, Bezerra, & Loures-Ribeiro, 2013; Alves, Nogueira, Araujo, & Brooks, 2010; Alves & Rosa, 2006; Alves, Rosa, Neto, & Voeks, 2012; Bezerra, Araújo, Alves, & Alves, 2013; Jepson & Ladle, 2005; Milner-Gulland & Bennett, 2003). Therefore, the hunting of wild animals has been one of the most ancient and preferred activities in a wide variety of human populations around the world (Alves, Mendonça, Confessor, Vieira, & Lopez, 2009).

To a greater or lesser extent, however, wildlife hunting can influence the natural populations of a target species, and excessive exploitation has been regarded as one of the primary explanations for the observed decline of many vertebrate species (Bennett et al., 2007, 2002;

Brashares et al., 2004). This is a particular concern across tropical regions, where the hunting of wild animals is no longer sustainable (Bennett et al., 2002; Harrison, 2011; Milner-Gulland & Bennett, 2003; Redford, 1992). Birds are one of the most often hunted groups of animals in terms of both species diversity and the number of individuals (Alves, Lima, & Araujo, 2013; Bhupathy, Kumar, Thirumalainathan, Paramanandham, & Lemba, 2013; Nijman, 2009; Roldán-Clarà, Lopez-Medellín, Espejel, & Arellano, 2014). As such, hunting has become a principal threat to the global avifauna, and more than 37% of threatened birds (921 out of 2477 species) are pretty much associated with the practice of hunting (IUCN, 2015).

Within this context, China is one of the areas fraught with large amounts of wildlife capture and trade, including that of birds (Li & Jiang, 2014; Li, Gao, Li, Wang, & Jari, 2000; Li & Li, 1998; Zhang, Hua, & Sun, 2008). The birds being traded in the public markets of large cities and the fairs of small downtown locations have often been the focus of local and regional media reports. Surprisingly, scientific studies on bird hunting and the evaluation of its conservation implications are scarce within China despite this severe situation, especially at the local

* Corresponding author at: Gaixin Road 115, Guiyang, Guizhou, 550018, China.
E-mail address: daicy527@163.com (C. Dai).

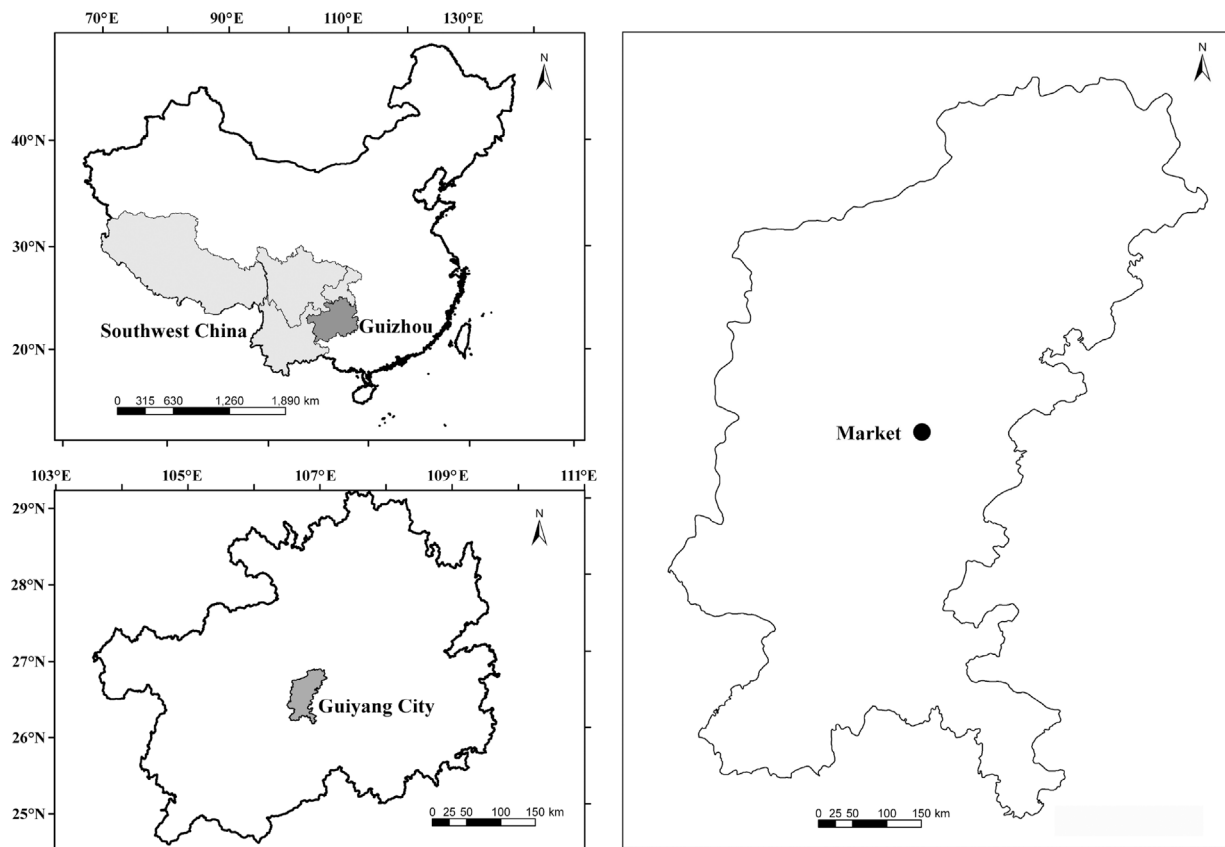


Fig. 1. Study location of the market in Guiyang city, Guizhou Province, Southwest China.

and regional levels. To date, only a few cities have surveyed the bird diversity and number of specimens being traded in their street markets (Bi & He, 2005; Huo, Wan, Cao, Gao, & Ji, 2009; Wu, Zhang, & Zhang, 2005; Xu, Zhang, & Zhang, 2002; Zhang, Liang, Nie, Liu, & Ji, 2002), and only a rural Miao community on Hainan Island has undertaken a preliminary evaluation of the hunting levels of its local bird community (Liang, Cai, & Yang, 2011). Although studies on this subject are scarce, limited studies have noted that bird capture and trade has affected the avifauna significantly. For instance, among the 183 threatened bird species in China, 18.6% and 30.6% of them were considered to be principally or at least partly threatened as a result of hunting activity, respectively (Zheng & Wang, 1998), and the illegal hunting occurring in this area has almost pushed the yellow-breasted bunting (*Emberiza aureola*), historically a superabundant species, to the edge of extinction (Kamp et al., 2015).

The challenge in linking wildlife hunting and biodiversity conservation is that efficient and effective management must consider both the needs of local human populations and the protection of wild species (Challender and MacMillan, 2014). In this view, uncovering the social, economic and cultural drivers of hunting is of practical significance, given that such drivers are relevant to the development of conservation strategies and projects (Alves, Leite et al., 2013; Alves, Lima et al., 2013; Fernandes-Ferreira, Mendonça, Albano, Ferreira, & Alves, 2012; Souza & Alves, 2014). Along the same lines, it is fundamental to have a full understanding of the patterns and strategies involved when the natural fauna is exploited by local populations, as they can provide insights on sustainability (Aiyadurai, Singh, & Milner-Gulland, 2010; Alves, Leite et al., 2013; Alves, Lima et al., 2013; Bennett et al., 2002; Kümpel, Rowcliffe, Cowlshaw, & Milner-Gulland, 2009; Rao, Myint, Zaw, & Htun, 2005). This relevant information can be thoroughly obtained through an ethnozoological approach. Many ethno-ornithological studies carried out in tropical areas have had substantial contributions to the development of conservation and management plans

for local avifauna (Bezerra, de Araujo, & Alves, 2012; Bonta, 2010; Licario et al., 2013; Tidemann & Gosler, 2010). Unfortunately, these topics have so far received little attention in China.

The city of Guiyang, located in the center of Guizhou Province, Southwest China, represents one of the rich tribal areas of China. A large number of caged birds can be encountered on the tree-lined streets, in public parks and residential buildings of urban areas and in homes in rural regions, especially in the rural Miao communities. Accordingly, monitoring in one of its public markets has recorded 114 local bird species having been captured and traded during one breeding season (A total of 140 local species in a year), some of them represented by an extremely high number of specimens (Dai & Zhang, 2017, 2015). In addition, bird hunting activities and abandoned hunting tools can be frequently encountered in the suburbs or rural villages throughout the year (Dai, 2016).

Understanding hunter motivations and strategies is important due to the critical hunter's role in linking the supply and demand sides of wildlife (Cowlshaw & Rowcliffe, 2005; Kümpel et al., 2009). This study provides information concerning the techniques used, the motivations for bird hunting by hunters with some kind of economic interests and an assessment of their implications for avian conservation in the city of Guiyang, Southwest China, given that commercial hunting has been frequently regarded as having higher risks for wildlife populations than subsistence hunting (Fa & Peres, 2001). In general, hunting because of the necessity to maintain the livelihood of the hunter, their family or sometimes the whole community is defined as subsistence hunting, whereas it is considered commercial hunting when its main purpose is to exchange the captured animals for economic benefits (Jorgenson, 1995; Santos-Fita et al., 2012). Following this definition, local hunters in the markets should be the ideal sample to provide such relevant information.

Specifically, the purposes of this study were threefold: 1) to document the hunting methods used by local hunters; 2) to explain the

Download English Version:

<https://daneshyari.com/en/article/5744790>

Download Persian Version:

<https://daneshyari.com/article/5744790>

[Daneshyari.com](https://daneshyari.com)