

## Raptor Conservation and Culture in Western China

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**Citation:** MaMing R, Zhao X. M., Xu G. H., Caiwu J., Zhang T., Ding P. and Xu F. (2014). Raptor Conservation and Culture in the West of China. *Ela Journal* 3(1):23-29.

**Date of Publication:**  
01-03-2014

ISSN 2319-4361

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**Referee:** Reuven Yosef and Satish Pande



### INTRODUCTION:

Raptor research and conservation is a hot topic in the world. In China, two orders of raptors (including owls) are listed under the National Key Protected Animal Directory (Zheng and Wang, 1998). Raptors, as the top consumers in any ecosystem, are an integral component of the food-chain and have high ecological and economic value (Xu, 1995; Meyburg et al., 2004). Western China, has the largest density of raptors, with ca. 53 species in Xinjiang (Gao, 2002; Ma, 2011). However, in this region, the largest number of raptors are captured for a range of falconry related activities and trade. Raptors are also killed for use in Chinese medicine.



8<sup>TH</sup> **ARRCN**  
*India* 2014  
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Training of raptors can be traced back 3000 -4000 years (Wang, 1984; Guo et al, 1999). As early as 4000 years ago, local minority ancestors (including the Uygur, Kazak, etc.) practiced falconry in Xinjiang, as evident from rock paintings. We think that the origin of falconry was from Central Asia, and the art spread to other parts of Asia and finally to Europe and Africa in 500 BC. This probably happened with the westward campaigns of Genghis Khan, with his army having tens of thousands of falconers to provide fresh food for the troops. At present, in the mountain pastoral areas of Central Asia and in western China (Qinghai, Gansu, Xinjiang and Inner Mongolia Region) local people have preserved this tradition (Ma and Yang, 1992).

From the perspective of national tradition, culture and history, falconry has received the maximum attention and support in the world. However, there is a conflict between traditional culture and the raptor protection law. In order to encourage tourism, attract global attention and stimulate the economy, falconry activities received “extrajudicial mercy”. Some places were even named as the “hometown of falconry”, and falconers enjoyed a special state benefit. But the revival of the culture of falconry that was previously banned for decades poses a huge challenge for the protection of raptors. In this perspective, with the support of the Chinese Natural Science Foundation and Hong Kong Bird Watching Society, the China Conservation Fund conducted seven falconry distribution surveys in Xinjiang between 2007 - 2013. The summary of these surveys is presented here.

#### Study site and methods:

Our survey area concentrated in the Xinjiang Uygur Autonomous Region (E 73 ° 20 ‘~ 96 ° 10’, N 34 ° 10 ‘~ 49 ° 15’) in western China. The cumulative survey included 16 counties and 26 townships in Xinjiang, and more than 360 people were questioned. The survey methods included market surveys, field research, chips implanted in falcons, and questionnaires. During the field research we visited remote mountains, pastoral areas and rural areas. We combined relevant literature records, visited hunter and falconry households, and watched the local “falconry festivals”. We recorded the survey data, and documented the species and numbers of raptors used. We gathered local information provided by people and focused on bazaars (markets), herbaria, zoos, protected areas authorities and officials from the police and customs departments. We also surveyed raptor prices, usage, number of raptors listed for trade, smuggling channels, hunting locations, capture methods and tools. Further, we researched the history of local falconry, falconry culture, traditions and customs, peoples’ attitude towards fishing eagles and other raptors. From the ethnic structural point of view, our survey included 85% of the minority groups (Uygur, Tajik, Kazakh, Kirghiz, Uzbek) and the remaining 15% were Han or Hui people.

Xinjiang covers an area of 1.66 million km<sup>2</sup>, accounting for 1/6th of the territory of China. Hence, it is difficult to investigate the entire territory due to time and monetary constraints. Representative areas were targeted where raptors were known to breed. We also evaluated raptor and human conflicts during our study.



**Results:**

Eagle 'culture' has resulted in the destruction of wild eagle populations in China. Based on past traditions, we understand that people capture Goshawk (*Accipiter gentilis*) each fall, train it for falconry during the winter, and release it back to the wild in spring in order to allow them to breed. We assume that had the raptors been undisturbed, their populations would have remained stable and not threatened. Now, owing to a sharp decline in prey populations it is harder to capture wild raptors. Hence, the falconers are increasingly reluctant to release their trained raptors because they are not only expensive but also hard to capture in the wild. In addition, the artificial breeding of birds of prey is very difficult; hence even today almost all raptors are caught from the wild, causing additional depletion of the wild populations. Practical experience tells us that artificial breeding of raptors is undesirable, because

they lose wild instincts, have less flight speed, sober temperament and become lazy and hunt inefficiently.

According to the survey, falconry households existed in 80 - 90 percent of the counties. In the local ethnic tradition, the practices of falconry are different. For example, the local Uighur liked to train the goshawk, Kazak and Kirgiz prefer the larger Golden Eagle (*Aquila chrysaetos*), others prefer the smaller Sparrowhawk (*A. nisus*), while some Europeans and Arabs prefer the Saker Falcon (*Falco cherrug*) and Peregrine Falcon (*F. peregrinus*). Xinjiang falconry activities are concentrated in areas such as Taxkorgan Tajik Autonomous County (Kashi), Yutian County (Hotan), Akqi County (Kezilesu), Zhaosu (Ili Kazak Autonomous Prefecture), Qinghe County and Burjin County (Altai). The number of raptors used for falconry was from 1800 - 2200 in Xinjiang (Table 1).



**Table 1:** The distribution and quantity statistics of falconry in Xinjiang

Area	City and county	Trained species	Density (birds / village)	Number
Kashgar Area	Kashgar City	Goshawk	1	7-10
	Shule County	Goshawk	1	10-30
	Yengisar County	Goshawk	1	<10
	Yarkant County	Goshawk	1	36-40
	Kargilik County	Goshawk	4	60-80
	Maralbexi County	Goshawk, Golden eagle	2	24-30
	Peyziwat County	Goshawk	2	20-40
	Makit County	Goshawk	1	10-20
	Taxkorgan County	Goshawk, used eagles & vultures	9	120-140
Hotan Area	Pishan County	Goshawk	5	50-70
	Hotan City	Goshawk	1	7-10
	Hotan County	Goshawk	6	50-70
	Karakax County	Goshawk	4	70-90
	Lop County	Goshawk	3	40-60
	Qira County	Goshawk, Golden Eagle	4	40-50
	Yutian County	Goshawk	7	110-120
	Minfeng County	Goshawk, Golden Eagle	4	40-60
Bayingolen Mongolian Autonomous Prefecture	Luntai County	Goshawk, Sparrowhawk	4	40-70
	Korla City and so on	Goshawk, Hen harrier	3	40-60
Aksu District	Kuqa County	Goshawk	2	60-100
Kizilsu Kirghiz Autonomous Prefecture	Akqi County & Wuqa County	Golden Eagle, Goshawk, Saker Falcon, Barbary Falcon	18	280-320
Ili Kazak Autonomous Prefecture	Zhaosu County	Golden Eagle, Goshawk	11	130-170
Altay Area	Qinggil County	Golden Eagle, Goshawk	17	120-150
	Burqin County	Golden Eagle, Goshawk	15	110-140
Hami Area	Yiwu County & Barkol Kazakh Autonomous County	Golden Eagle, Goshawk	3	40-50
Other area		Goshawk, Golden Eagle		>390
Total	80-90% counties	About 10 species		1800-2200





Within the survey area, approximately 40.6% of people have either witnessed or were involved in falconry activities; while 74.5% of the people were aware that to capture, tame, transport or sell a raptor is in violation of the China Wildlife Conservation Law (1989). However, due to cultural, regional, ethnic traditional and other reasons, approximately 64.5% of the people accept or are involved in falconry. For the past 10 years, the price of the three major raptors - Goshawk, Golden Eagle, Sparrowhawk - has increased tenfold. The price of a Golden Eagle in the market surged from 1000 - 3000 Yuan to 8000 - 15000 Yuan (one U.S. dollar = 6.1 Yuan). Such increases are due to the huge market demand. Excluding the price of the raptor, falconry can fetch an annual income of 6000 - 7000 Yuan RMB. The average income of farmers and herdsman is ca. 2640 ~ 3150 Yuan (RMB/year) and the huge economic gain from falconry becomes self-evident. The conflict between animal protection and traditional culture is a major problem, and since economic considerations

drive demands, these will impose newer challenges on the protection of rare species.

In addition to falconry related activities, Tajiks and Tibetan people like to use the bones of vulture wings to make "Eagle Flutes" for playing music. This is becoming another "World Cultural Heritage". The price of a pair of vulture flutes soared from 150-300 Yuan to 3000-7500 Yuan. Some Chinese herbal shops sell raptor corpses, bones, feathers and offal for medical treatment. Some superstitious people that hate owls, because of 'ominous' sounds, drive them away or kill them. In contrast, in other regions people are fond of owls and a large collection of Eagle Owl (*Bubo bubo*) feathers are considered essential for household decorations. Trading raptors for museums, schools, research institutes, individual collectors and for the market fetches large profits. In a large region of the western prairie, baiting with poisoned mice, results in mass-killings of raptor. Electrocutation from high-voltage power lines results in accidental raptor mortality. Thus, other than cultural aspects, other factors like social and political considerations, religious thought, biological causes, economic interests, changing philosophy of development, pose threats to the raptor populations of western China.

#### Discussion:

Eagles feature as a national emblem on the flag of many a country. The eagle is commonly deified and hence respected. In response to our questionnaire about the knowledge of legal status of capture, handle, transport of raptors, 74.5% of local people said it was illegal, 16% as legal, and 9.5% did not know. Although majority knew that it was illegal, capture and trade continues, trade information was easily obtained from Kashi and Hotan. We visited hundreds of households that kept eagles in Kashgar, Yarkand, Karghalik, Pishan, Hotan, Keriya, Niya oasis, etc. The analysis of our information revealed that most falconers learned their skills from their father or grandfather. Falconers were between 20 to 80 years old, and most were 40-50 years old.

However, unrealistic reports and promotion of falconry by media, based on minority customs, cultures and religions, cause confusion and conflicts between eagle hunting and protection. Falconry continues to receive significant media coverage and stunning



Vulture or eagle bones are used to make flutes

performances by falconers shown by the media continue to encourage and guide people's minds. This not only encourages the practice of falconry by recognition and public support, but also greatly weakens the legal protection and management. At present raptor trading receives acquiescence by the government in most areas of Xinjiang.

In recent years, loss of wildlife habitat, large-scale grassland poisoning, use of veterinary drugs and pesticides, chemical fertilizers, heavy metal poisoning, infectious diseases, network of power grids, transport facilities, wind power, tall buildings on the migration routes of the birds, as well as environmental pollution, human population pressure and other factors such as direct human disturbance from infrastructure development are seen in the western region. They not only deplete wildlife resources, but also directly affect reproduction capabilities and their subsequent distribution (Oaks et al., 2004; Li, 2004; Mei et al., 2008; Ma et al., 2010). Amongst these factors, we think that the threat from eagle hunting is severely underestimated. If habitat destruction renders the raptor homeless, then subsequent capture, poaching and trade undoubtedly wipe out the "homeless"! Sadly most people do not realize the harm inflicted by the culture of eagle trapping.

Based on our field survey, conducted between 2004 - 2013, the breeding density of Golden Eagles in the Karamay of Xinjiang has decreased from 1.67 nests/1000 km<sup>2</sup> to 0.37 nests/1000 km<sup>2</sup> (Ma, 2013). Many nest sites are abandoned because nests are disturbed and eggs or chicks are repeatedly stolen. The national and regional policy of unchecked rapid-development and promotion of economy are harmful to the raptors in western China and the status of the raptors

of Xinjiang is of great concern and needs immediate attention to implement protection measures.

#### Recommendations:

The rapid development of western China in recent decades has led to the destruction of raptor habitats within a very short time which has resulted in the drastic decline of raptor populations. It is also matter of great urgency that the local people, government, and the international community recognize the additional magnitude of disaster brought on by falconry and hunting activities. Our suggestions are:

- (1) The traditional culture of falconry should be scientifically preserved, controlled professional, and not commonly promoted. Unrestricted falconry, to satisfy personal pleasures and ego, leads to animal suffering and disturbance to the ecosystem. Historically, falconry was used to attain food and was rationally and judiciously used as a recreation measure by some of the nomadic minorities. In today's world, falconry has lost its original connotation, and most raptor populations have suffered and some even become endangered. Enhancing traditional culture by irresponsibly endorsing falconry, especially since it cannot meet the economic interest of these ethnic groups, is inappropriate.
- (2) Strengthen law enforcement and implementation to ensure that falconry will not degenerate into unchecked economic gains by uncaring people. Falcon prices have soared in recent years, and the profit from annual falconry activities, and their products such as eagle flute, specimens, medicines, etc., has benefitted locals but harmed raptor populations. The heritage perspective and purpose of protecting traditional cultural skills such as falconry is used by criminals to negatively take advantage of wild raptors.
- (3) Unified and common registration and access system should be strictly imposed on falconers for the entire Xinjiang province. Fragmentation of data in any form, type, size and quantity of raptors used in falconry should not be allowed; and a ban imposed on all illegally acquired raptors and domesticated raptors. Pressure from government offices or law enforcement officers should not become an excuse for promoting un-authorized falconry under the pretext of traditional culture, economic development or promotion of tourism development.
- (4) Poverty and general interest are the root causes of



widespread falconry activities, and when falconers experience the economic rewards, falconry is impossible to control. Possession of existing legal domesticated raptors should be subject to taxation. People who voluntarily give up falconry should be awarded with economic incentives.

#### Acknowledgements:

This project is supported by the National Natural Science Foundation of China (31272291, 30970340) and the Hong Kong Bird Watching Society - China Conservation Fund (201202). For field surveys we thank the following for access to information and help: Yang X. M., Shan J., Xu J., Wang Y. T., Liu Z. Q., E. Potapov (Russia), A. Dixon (England), D. Ragyov (Bulgaria), Nicholas C. Fox (UAE), I. Balazs (Hungary), I. Angelov, Elvira G. Nikolenko, Igor V. Karyakin.

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