

# Falconry: global community conservation through sustainable use by a minority interest

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**Adrian Reuter, A. Lombard**  
International Association for Falconry  
and Conservation of Birds of Prey, IAF  
IUCN SUME Meeting, Lima Peru,  
October 2017

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- What is falconry? (definition, a bit of history)
- Falconry as a sustainable activity
- Why is it important to value and safeguard falconry (cultural and conservation considerations)
- Examples of conservation projects led by falconers/falconer-led organizations
- Challenges for falconers as conservation actors
- Opportunities

# What is falconry? (definition, history)

Falconry- The art of hunting wild prey with a trained bird of prey

- Extensive knowledge and understanding of raptor biology, ethology and husbandry
- Extensive knowledge of prey habits, distribution and behavior
- Practical skills in the use and manufacture of specialized equipment
- Knowledge on conditioning and positive reinforcement techniques
- Field skills
- Patience, perseverance, tolerance, and a bit of obsessive behavior
- Passion



It is usually estimated that falconry has been around since 2000BC (e.g. records in China) however, recent discoveries of petroglyphs in Iran showing a hunter on horseback with a bird in his hand (possibly a falcon) have been dated 8000BC.

So, all indicates that for at least 10000 years wild raptors have been used for this purpose.



The European middle ages showed a peak of falconry, even the social rank determined which raptor the person could have

- Emperor- eagle
- King- gyrfalcon
- Knight- peregrine falcon
- Lady- merlin
- Nobleman- goshawk
- Servant- male sparrowhawk

During the crucades, christians and sarracens used falcons as peace offers and made breaks in battles to go hunting with their birds.



Even if falconry has been more common at some periods over time and in some parts of the world more present than in others, this activity is part of many countries culture, and even if always practiced by a minority, has managed to survive up till today and is recognized as an Intangible Cultural Heritage of Humanity by UNESCO.

Presently there might be 70,000-100,000 falconers worldwide which means that only 1 person (at the most) practices falconry out of 100,000 individuals.



Legal frameworks for the practice of this activity vary around the world, from total prohibition to well established and regulated sustainable take of wild individuals, to complete lack of falconry related legislation.

There are currently a number of activities using falconry techniques that are mistakenly referred to as falconry, such as bird control, educational programs using raptors, flight shows and exhibitions, speed and pursuit competitions of bagged quarry, etc.

Birds most commonly used are falcons, hawks, buzzards and eagles depending on the type of terrain and prey available.



## Falconry as a sustainable activity

With a small number of practitioners, numbers of wild taken raptors used for falconry have been insignificant to wild populations

- Nestlings, immatures or juveniles (first year birds where most mortality occurs)
- Falconers never capture adult birds which can be part of the reproductive population
- On many occasions birds are captured during migration, kept for the hunting season and released so they can migrate back and breed (sparrowhawks in Turkey, Sakers in Arab countries, merlins and others in MX and the US)





- Birds that would perhaps die during the first year where most mortality occurs due to a lack of hunting/flying/predator evasion experience have a chance to survive after the hunting season once they've acquired hunting skills and condition under more controlled conditions
- Some falconry birds are lost while on hunting trips and reincorporated to the wild (now less with the use of telemetry in some places)
- Given the complexities of falconry, commitment and resources needed, this activity will never grow into large numbers and demand large numbers of birds from the wild, moreso, now that part of the demand for birds is being covered by captive bred birds



Good example of how this activity has been recognized as sustainable and is well managed is the US where falconers and authorities have worked together over many decades to ensure no negative impact to populations exists by falconry and precautionary criteria are considered, while allowing the take of individuals of different species under clear rules, including the experience of the falconer.

**Table 2.** Number of raptors removed from the wild by licensed falconers in the United States in 2003 and 2004 according to United States Fish and Wildlife Service records. Population size estimates are from Rich et al. (2004), which are based on population size estimates derived from Breeding Bird Surveys from the 1990s. Percent harvest estimates use the mean number harvested.

Species	North American population size <sup>a</sup>	Estimated % juveniles <sup>b</sup>	No. juveniles <sup>b</sup>	No. harvested			% juveniles harvested	Recommended max. harvest rate
				2003	2004	Mean		
Sharp-shinned hawk	201,500	0.50	145,750	15	15	15	0.0102	1.0%
Cooper's hawk	276,450	0.50	138,225	67	72	69.5	0.0503	1.0%
Northern goshawk	120,050	0.30	36,015	52	40	49	0.1361	5.0%
Harris's hawk	19,500	0.25	4,875	50	32	41	0.8410	5.0%
Ferruginous hawk	11,500	0.30	3,450	7	6	6.5	0.1884	1.0%
Red-shouldered hawk	410,850	0.30	123,255	3	3	3	0.0024	1.0%
Red-tailed hawk	979,000	0.30	293,700	527	645	586	0.1995	4.5%
American kestrel	2,175,000	0.60	1,305,000	100	101	100.5	0.0077	1.5%
Merlin	325,000	0.60	195,000	48	52	50	0.0256	1.0%
Gyrfalcon	27,500	0.30	8,250	8	19	13.5	0.1636	1.0%
Peregrine falcon	9,870 <sup>c</sup>	0.30	2,961	1 <sup>c</sup>	18	18	0.6079	5.0%
Prairie falcon	17,280	0.50	8,640	31	42	36.5	0.4225	1.0%
Eastern screech-owl	369,600	0.60	221,760	1	0	0.5	0.0002	1.0%
Western screech-owl	270,100	0.60	162,060	0	3	1.5	0.0009	1.0%
Great horned owl	1,139,500	0.30	391,850	6	7	6.5	0.0020	1.0%
Snowy owl	72,500	0.30	21,750	1	1	1	0.0046	1.0%
Total				917	1,062	998		

## Why is it important to value and safeguard falconry (cultural and conservation considerations)



- As an integral part of the culture and traditions of many countries and regions, falconry provides people with a sense of identity and continuity that transcends language, religion, ethnicity or political differences. Knowledge is largely transmitted from generation to generation, and its safeguarding promotes and develops cultural diversity while keeping practical skills alive.

- Those who practice falconry or have experienced it from close get a better understanding of nature, predator and prey species and the role each element plays in an ecosystem.



- However, species used in falconry, both raptors and prey species, face diverse threats, exacerbated by those caused by humans, such as habitat modification, electrocution by powerlines, hunting, direct poisoning, illegal trade or pesticides.



- Interestingly, along history those most interested in raptor research, conservation and sustainable management have been this minority group of people who share the passion for falconry and raptors.

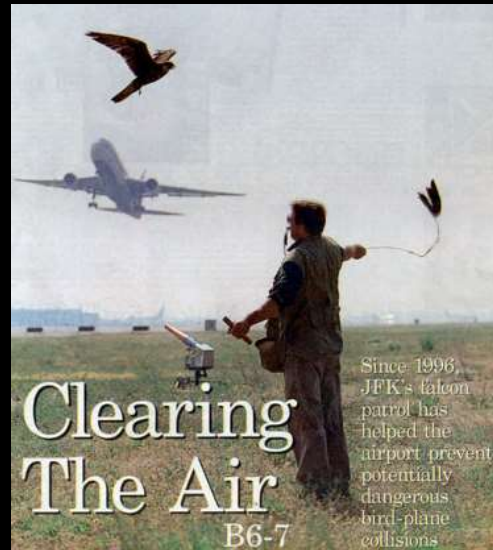
- This is not new at all, an historical example is Emperor Friedrich the 2nd of Hohenstaufen to whose treatise *El arte venandi cum avibus* written in 1247 with a main focus on falconry is believed to be the first zoological work written in the spirit of modern science, thus is he considered the “father of ornithology”.
- Through the use of the scientific method, this falconer described for the first time many aspects of bird migration, reproduction, morphology and ethology of different raptor and non raptorial species, also detailing husbandry issues, dietary requirements and feeding, medicinal treatments, and equipment required.



- Over 2000 years ago, falconry catalyzed the creation of the first laws for the protection of birds of prey and their nesting sites.
- Even though the key principles used for the training of raptors are shared, variations do exist and have evolved over thousands of years around the world, reaching incredible levels of refinement and detail.



- Many of these techniques are currently used for the reintroduction of wildlife to natural environments, scientific research, clinical management, rehabilitation, environmental education, pest controls in vineyards, historical buildings, and infrastructure, or airport safety.



## Examples of conservation projects led by falconers/falconer- led organizations

- Over the past century no doubt, the most relevant raptor research and conservation organizations, institutions and initiatives around the world have been established and led by falconers, who might also be biologists or conservationists.
- In the Americas, a few examples are: The Peregrine Fund, Hawk Mountain Sanctuary, The Raptor Research Foundation, along with many local research, education, rehab and recovery operations in Latin America such as Guira Oga led by Jorge Anfuso in Argentina, El Castillo de las Aguilas led by Ernesto Gamiz in Mexico, El Huayco led by Jose Antonio Otero in Peru, or CRARSI led by Alex Ospina in Colombia, all of them falconers.





- Falconry clubs and associations have become important actors in the monitoring of raptor and prey populations in the wild and also act as expert in raptor husbandry, handling and welfare.
- Given their identification skills and time spent in the field they are also the first ones to notice any changes, trends or threats affecting raptors, prey species or ecosystems frequented.
- In some countries, authorities, wildlife managers and scientific institutions have taken advantage of this considering them as partners and collaborators on different fronts.



Some examples in Latin America:



## The Peregrine Fund

American kestrel- population decrease to almost half in the last 45 years, reason still unknown. The PF created the Kestrel Partnership uniting efforts by scientists and professional researchers with the civil society to gather info on movements, nesting, etc. to better understand pop. dynamics,. A life cycle model considering potential population growth limiting factors is being develop with Boise Univ. A migration map based on DNA samples taken along the route is being developed so as to identify wintering areas for most affected populations and identify the cause of population decline.



California Condor- collaboration with authorities in Arizona and Utah on outreach efforts regarding threats caused by use of lead ammunition (main cause of condor poisonings) and existing alternatives. Captive breeding, release and satellite tracking of Condors. Monitoring of lead levels in wild Condors. These activities complementary to those by Mexico and San Diego Zoo in Baja California Mexico, whose lead field coordinator Juan Vargas is also a falconer btw.

Harpy Eagle (Panama)- focus on outreach and education of communities in harpy eagle areas in Darien and their engagement in conservation activities. Surveys on harpy eagle movement patterns, home range and vulnerability factors.



Orange breasted falcon- Yearly monitoring of wild population in Belize and Guatemala, search for new OBF territories, establishment of a captive breeding population and provision of artificial vulture safe nesting cavities in the wild along with outreach and education to local communities.

# International Association for Falconry and Conservation of Birds of Prey, IAF



Electrocution- development of an International Database of Electrocutions of falconers' birds of prey with aim to convince the electricity companies to improve the pylons and avoid dangerous constructions in future (2012), which evolved into continued efforts up to the recent Motion for a Recommendation, at the IUCN World Congress in Hawai'i calling on funders and governments to ensure that infrastructure is correctly built to avoid hazard to birds. This was supported by other major conservation NGOs including BirdLife International and the recommendation was accepted.



Black and Chestnut hawk Eagle- provision of satellite telemetry equipment as contribution to a Project in Colombia aimed at the conservation of the species.



Pallid peregrine falcons- Support in a wildlife trafficking case where 4 eggs were seized in Brazil taken from nesting sites in Chile. Eggs had to be repatriated, artificially incubated and the only survivor put back in his nest in Patagonia as a nestling.



# International examples:

Mongolia saker project- 5,000 artificial nests erected in Mongolia sponsored by the Abu Dhabi Falconers Club

South Africa Falconers Association

Taita falcon- breeding and scientific studies

Lanner falcon populations monitoring

Vulture threats by traditional medicine studies

Kenya faconers, Club Fridericus Rex in Malta- undertaking all raptor rehab work in absence of a governmental raptor facility



## Challenges for falconers as conservation actors

*Even though contributions by falconers have been very big, the falconry community remains very small*

- Falconers are few and commonly widespread
- Falconry is often demonized and criminalized
- Legal frameworks rarely have specific regulations for falconry
- Legal, viable and science based alternatives to illegal practices so as to access birds from the wild for the practice of falconry are mostly unexistant
- Lack of interest to do research on birds of prey, thus insufficient information on population status, trends, and potential sustainable use is generated
- Scarce recognition among various sectors (i.e. academic, governmental, scientific) of skills and knowledge on raptor related topics by the falconry community
- Lots of good work being done in isolation by falconers generally with limited impact

# Opportunities

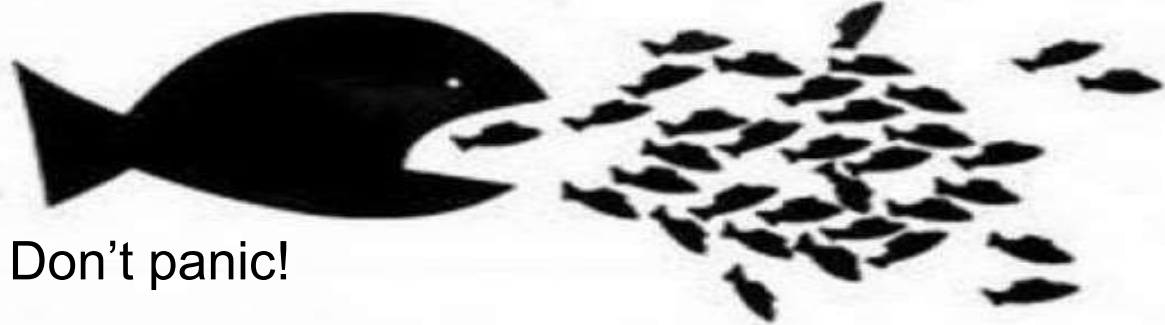
- Develop information sharing/communication platforms to learn from other falconers involved in some type of conservation/education work (explore SYCL)
- Promote responsible falconry and adoption of best practices among practitioners and raise the profile of contributions by falconers to conservation of raptors and beyond
- Work with governments to develop falconry regulations that allow for the practice of this activity and consider sustainability criteria
- Liaise with relevant actors in need of raptor related expertise in the academic, scientific and wildlife management sectors and offer support that can translate into win win partnerships
- Develop coordinated approaches towards conservation/education with shared goals and objectives even if activities take place in different places so as to potentiate efforts and increase impacts
- Join already established falconry organizations involved in conservation issues considered as reliable, objective, responsible and serious in their work to support their activities, be supported by them and refer to when required, particularly when working with governments and other actors on policies or frameworks where other international experiences could be useful

Some types of knowledge can be kept in books, or digital files; others -such as the art of falconry- are better kept alive.

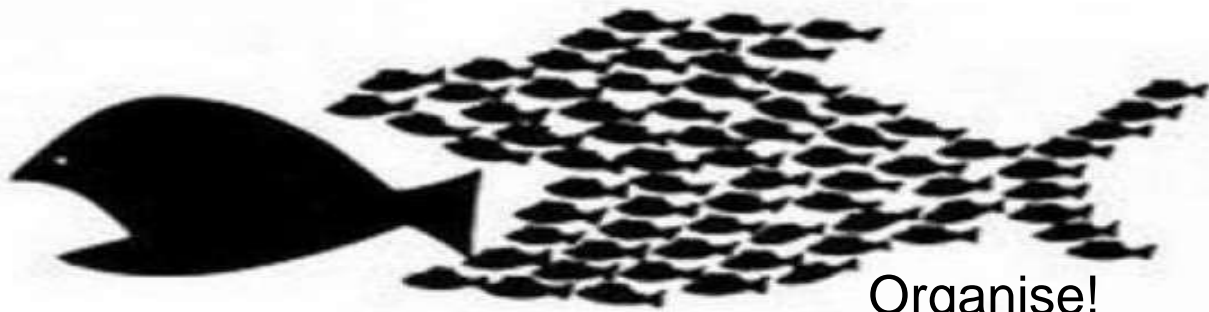
This is a challenge for a small minority  
...SO....







Don't panic!



Organise!