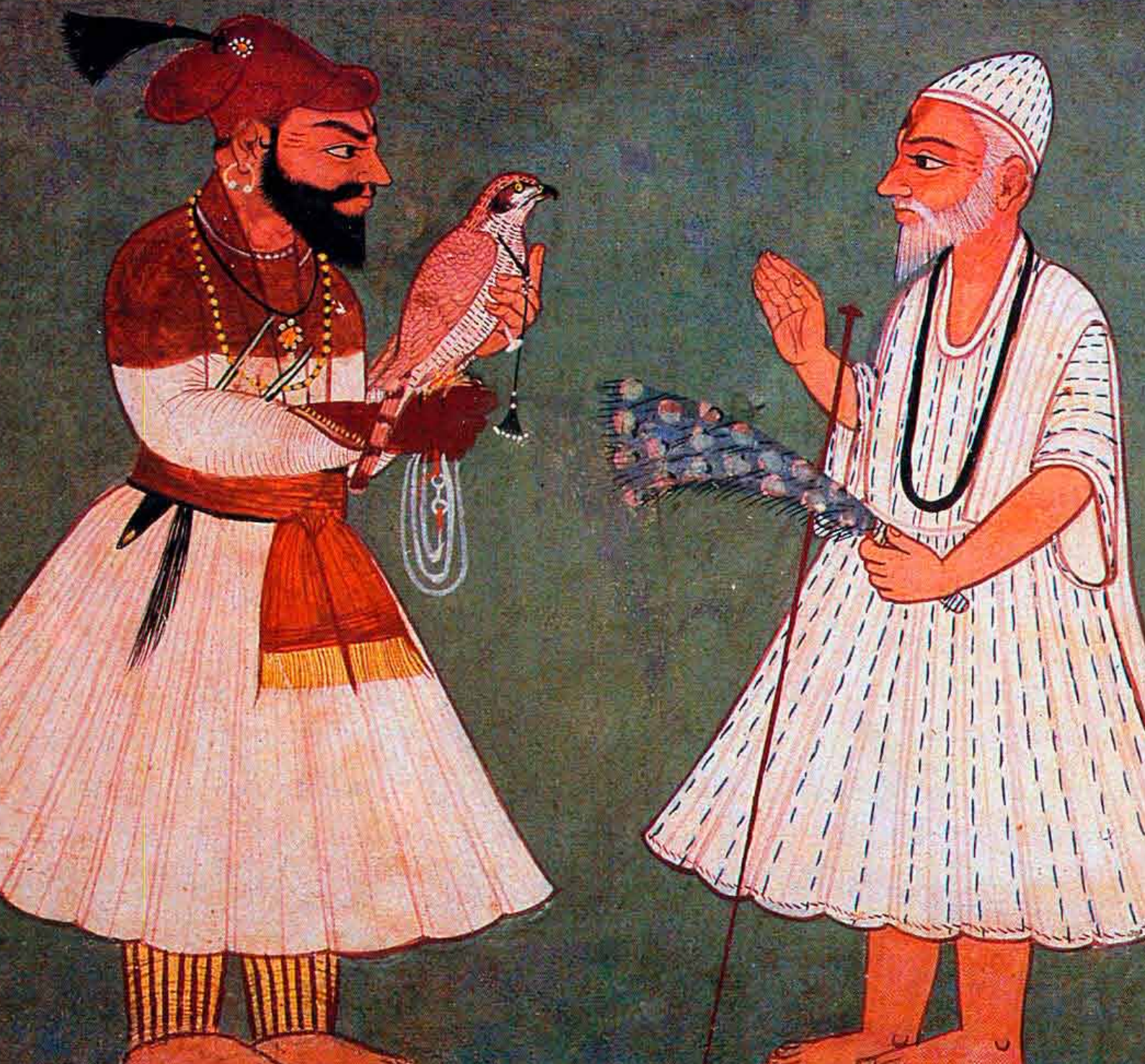




# FALCO

The Newsletter of the Middle East Falcon Research Group  
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## Objectives of the MEFRG ([www.mefrg.org](http://www.mefrg.org)):

**Provide a forum for information exchange on matters relating to falcons and falconry in the Middle East**

**Promote and/or improve the understanding of:**

- The cultural heritage of Arabic falconry
- The utilisation and management of quarry species
- The conservation of wild falcons used in Arabic falconry
- The management of falcons in falconry
- Advances in veterinary and aviculture care of falcons
- International issues impacting on, or arising from, Arabic falconry

**The objectives of the MEFRG will be achieved by**

- Holding regional workshop meetings and international conferences
- Publishing and distributing a paper and electronic Newsletter (**FALCO**) on issues of common interest to the MEFRG
- Coordinating and hosting a website and maintaining an online subscribers database

We welcome the submission of articles for **FALCO**. Please bear in mind that **FALCO** is not a scientific journal and we would like authors to remember that articles should be accessible to a diverse readership comprising falconers, biologists, veterinarians and policy makers. We are interested in authoritative, accurate and informative articles related to the subject areas listed below

### Falconry

articles about the practice of falconry of interest and relevance to Arabic falconers

### Falconry Heritage

articles about Falconry Heritage of interest and relevance to Arabic falconers

### Quarry Management

articles on the conservation and management of quarry species utilised in Arabic Falconry or of interest to Arabic falconers

### Raptor Conservation

articles on the conservation and management of raptors used in Arabic falconry, but also more generally of any raptors in the Middle East

### Avian Health and Management

articles on veterinary and avicultural issues specifically originating from work carried out in the Middle East, but external studies that are relevant to improving the health of raptors in the Middle East will be considered

### Research Biology

articles on biological research of falcons used in Arabic falconry, to cover issues such as migration, taxonomy, genetic research, etc

### International Issues

articles and updates on international policy decisions and discussions relating to falconry, conservation, trade and animal health that is of relevance and interest to Arabic falconry

### Public Awareness and Education

articles on initiatives that can contribute to a better understanding of Arabic falconry and the wider issues surrounding it

### Technical Updates

reviews and updates on new products/equipment etc. that may be useful for biologists, falconers and vets working with raptors

### Photo Section

interesting images of relevance to subjects covered by the MEFRG

### Raptors in the News

summary of recent press releases relating to subjects covered by the MEFRG

### What's New in the Literature

Review of recently published scientific literature relevant to the objectives of the MEFRG

We also accept and publish Book Reviews and Letters. If you are in doubt about whether or not an article fits any of the above categories please contact the editors:

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**Dr. Andrew Dixon** (Email: [falco@falcons.co.uk](mailto:falco@falcons.co.uk))

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In 2007, Abu Dhabi and the United Kingdom government facilitated a meeting at Loch Lomond in Scotland to discuss the possibility of establishing an international instrument for the conservation of migratory birds of prey under the auspices of the Convention of Migratory Species (CMS). The next year, at a follow-up meeting in Abu Dhabi the CMS Migratory Birds of Prey MoU came into being. Now, four years later and with the co-ordination unit based in Abu Dhabi, the first meeting of signatories (MoS1) will take place in December 2012. It is fitting that MoS1 will be held in Abu Dhabi given its important role in establishing and supporting the MoU and the commitment shown by the Environment Agency-Abu Dhabi (EAD) to the conservation of birds of prey both in the UAE and internationally.

In this issue we report on recent developments in the international falcon research and conservation management projects being undertaken on behalf of the Environment Agency-Abu Dhabi (EAD). The initiation of these projects pre-date the CMS Birds of Prey MoU but nevertheless the objectives and activities closely match many of those listed in the Action Plan associated with this MoU.

For example, EAD falcon projects in Mongolia involve field studies and conservation management for Saker Falcons, capacity building for conservation, policy development in relation to the conservation and sustainable use of Sakers together with an international education programme. This work ties in with specific Activities listed in the Birds of Prey MoU e.g., Activity 3: Habitat conservation and sustainable management, Activity 4: Raising awareness of problems faced by birds of prey and the measures needed to conserve them, Activity 5: Monitoring bird of prey populations, undertaking conservation research and implementing appropriate remedial measures.

The Mongolian project is just one of four EAD sponsored initiatives discussed in the article on page 4 of this issue, including a study to assess the potential for the reintroduction of the Saker in Bulgaria (Activity 5.6. Undertake research into the desirability of reintroducing birds of prey to improve their conservation status in the wild, in accord with IUCN guidelines) and a population study of migratory Peregrines in northern Eurasia (Activity 5.3 Assess and then address the impacts

of habitat loss on breeding, passage and wintering populations of birds of prey). Conservation of birds of prey, especially the falconry species, is a key element in the development of sustainable Arabic falconry.

Knowledge of the cultural heritage of falconry is another important aspect of Arabic falconry, as demonstrated by the fact that five of the 11 states that recognize falconry as part of their cultural heritage on the UNESCO Intangible Cultural Heritage List are Arabic falconry states. In this issue we present images that illustrate the falconry heritage of India, a country of great social diversity, which is reflected in the wide diversity of falconry schools.

In relation to veterinary health care we present two articles that illustrate opposite ends of the spectrum: traditional techniques as practiced in Pakistan and the state of the art modern facilities available at a new falcon hospital in Qatar. It is always interesting to visit new facilities in the Middle East and one of the *Falco* editors (Tom Bailey) was fortunate to visit Souk Waqif Falcon Hospital in Qatar for a week in early September. An impressive set up with well-designed and equipped clinical facilities which enable a high throughput of falcons while at the same time allowing Qatari falconers to engage with the veterinary staff and see the procedures being conducted on their falcons. It was particularly interesting to see that Qatar has established a falcon hospital with a major commitment to researching falcon diseases. We look forward to receiving future articles on falcon medical matters from a country where little has been published on traditional falcon medicine and which has not previously had the facilities to conduct scientific investigations.

### **An appeal for contributions**

We would like to see more MEFRC subscribers share their opinions, experience and knowledge through *Falco*. We can accommodate articles written in Arabic and English that fit within the subject areas listed opposite.



# International falcon research conducted on behalf of the Environment Agency – Abu Dhabi in 2012

### Andrew Dixon

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### Research on Peregrine Falcons in Northern Eurasia

*Research Partners and organization: Aleksandr and Vasily Sokolov (Inst. Plant & Animal Ecology, Ural Branch, Russian Academy of Sciences).*

In the fourth year of our five-year field project (2009-13), we fitted satellite transmitters to Peregrines on the Kola Peninsula, Russian Lapland. The participation of Sergey Ganusevich in this endeavour was essential, as it was only through his 36-years of experience that we could hope to achieve our aims. Sergey also worked with Bill Seagar's pioneering team in 1994, when they fitted four satellite transmitters to adult Peregrines in the Ponoj Depression of the Kola Peninsula; these birds were subsequently tracked to western Europe and the Mediterranean (see Ganusevich *et al.* 2004. *Ibis* 146: 291-297). Recoveries of two Peregrines ringed on the Kola Peninsula also came from western Europe, in France and Holland (S. Ganusevich).

In order to build on this existing knowledge we fitted satellite transmitters to seven chicks at four different nests in July/August 2012. We are interested in obtaining information on post-fledging dispersal, juvenile migration and wintering ranges. The survival of juvenile Peregrines is known to be lower than that of adults and furthermore, the attachment of satellite transmitters to the birds is likely to increase mortality rates. Consequently, we used lightweight 12g transmitters on the young birds this year, in preference to the 18g transmitters we have used on adult birds in previous years.

With only seven juveniles tagged it is unlikely that we shall be able to obtain much information on where the young Peregrines hatched in the Ponoj Depression eventually settle to breed (natal dispersal). The extent to which the Peregrines of Northern Eurasia return to breed in the regions where they hatched (natal philopatry) is not known, and this, together with breeding dispersal, is the means by which genetic information passes from one region to another (gene flow). One of the primary objectives of our project is to identify the extent of genetic variation in Peregrines breeding across Northern Eurasia (see also Dixon *et al.* 2012. *Falco* 39; 4-9). In order to address this we plan



Photograph by Pavel Gorbockev





Photograph by Pavel Gorbachev

to utilize the newly sequenced Peregrine genome (see later), by re-sequencing the genomes of 10 individuals from different regions of Northern Eurasia. This year, we collected blood samples for genomic re-sequencing from chicks at five different broods in both the Kola and Yamal Peninsulas.

For the Peregrines fitted with satellite transmitters in 2009 on the Yamal Peninsula our aim was to track the birds for three seasons. Four of the birds originally tagged were still carrying functioning satellite transmitters in 2012 and Aleksandr Sokolov was able to catch and remove the transmitters from three of these birds. In the 2012 breeding season, we were still satellite tracking a further four adults from the Lena Delta (2<sup>nd</sup> year) and nine from the Taimyr (1<sup>st</sup> year). Although average annual survival rates of these birds is not markedly lower than expected it is still likely that the transmitters have had some adverse effects on the birds, thus we hope to be able to remove most of the transmitters after we have collected the migration and wintering data from each study population.

## Saker Falcon research and conservation management in Mongolia

*Research Partners and organization: Batbayar Galtbalt and Nyambayar Batbayar (Wildlife Science and Conservation Center; WSCC).*

In 2012, the second year of the “5000 Artificial Nests Project”, we recorded **380 pairs of Sakers** occupying our artificial nests. However, this is a minimum estimate because nests that had failed prior to our first monitoring visit (between 1<sup>st</sup> and 15<sup>th</sup> May) are not counted; the calculated average laying date was 5<sup>th</sup> April. In 2011, we recorded 200 breeding pairs of Sakers in our artificial nests, and the 90% increase in breeding Sakers in 2012 is a significant step towards meeting our target of 500 breeding pairs by 2015. We further recorded the breeding of 905 pairs of Common Kestrels (*Falco tinnunculus*), 298 pairs of Upland Buzzards (*Buteo hemilasius*) and 269 pairs of Ravens (*Corvus corax*). Again, these are minimum estimates as birds that laid and failed between the first (1<sup>st</sup>-15<sup>th</sup> May) and last monitoring visits (25<sup>th</sup> June to 9<sup>th</sup> July) were not counted.

During 2012, we made five monitoring visits to each Saker Falcon nest in our artificial nests over the period 1<sup>st</sup> May to 9<sup>th</sup> July. Of the 380 recorded nests, 31 were known to have failed, 337 fledged (i.e., chicks were > 30 days old when last visited) and the outcome of 12 nests was not known (i.e., chicks were < 30 days old when last visited). The calculated survival rate of Saker nests from laying to fledging was high at 92%, with an average of 3.7 chicks produced per successful nest. We estimate that the **380 pairs fledged 1,298 chicks** (range 1,246 to 1,319) and we implanted 1,315 chicks with microchips during our nest monitoring.

Breeding density of Sakers varied among grids, ranging from 0.9 to 9.6 breeding pairs/100 km<sup>2</sup> (average 4.1 breeding pairs/100 km<sup>2</sup>). We are funding three MSc studentships at the National University of Mongolia to investigate the underlying causes of this variation. Sarangel Ichinkhorloo is studying how grazing and land use influences vegetation composition and cover, and how this in turn is related to the distribution and abundance of rodents and passerines. Amarkhuu Gunga is studying rodent and passerine availability in relation to Saker breeding density and reproductive success across our 20 grids of artificial nests. Arianzul Lkhagvajav is examining the diet of Sakers at artificial nests using pellets, prey remains and video analysis.

Furthermore, Choikhand Janchivlamdan is currently completing her PhD thesis at the University of Leicester on policies related to the Saker Falcon trade in Mongolia. We hope that the Mongolian authorities will take up

our recommendations to implement a transparent microchipping scheme for the CITES Saker exports and also to establish a system where the age, sex and regional origin of the harvested Sakers is recorded.

This year five foreign field assistants joined our Mongolian field teams, and we wish to thank Berend van der Ark (Netherlands), Valerie Maldiney (France), Rebecca O'Brien (UK), Patricia Owens (Switzerland) and Chris Smith (USA) for their valuable work. Further support and co-ordination for the field programme was provided by Dr. Lutfor Rahman (IWC).

Our 5000 artificial nests are distributed in grids across 20 districts (soums), with 250 nests originally erected in each district. Since they were established, we have lost approximately 15% of the artificial nests, mostly through deliberate removal but also through nests falling over. There are currently (July 2012) 4,276 artificial nests still standing from the 5000 erected in 2010. We are working on increasing awareness and value of the artificial nests project with locals through the "School Links Project" and through meetings and distribution of promotional materials (calendars). We have found that in districts where there is a greater awareness of the project amongst local people, the level of nest losses through deliberate removal is lower.

We set up a pilot "School Links Project" in 2012 between Glyncod Junior School (UK) and Bayan School, Tov aimag. Teaching resources in English, Mongolian and Arabic to support the School Links Project can be found at [www.mefrg.org/slpLessons.asp](http://www.mefrg.org/slpLessons.asp). We now have a further five link schools in the USA and UK that will join the next phase of the "School Links Project" in 2013, with a further 14 schools joining the programme in the next three years. For further information on the Mongolian Artificial Nests "School Links Project" see Dixon & Shijirmaa, 2012: *Falco* 39, Pp. 16-17.

For artificial nests to provide a long-term benefit for Saker Falcons in Mongolia they need to generate an income to pay for their maintenance, replacement and for nest monitoring. To achieve this aim we are currently looking at a range of 'ecosystem services' provided by the

artificial nests and developing ways of obtaining a financial income in return.

Proposed future developments in our "5000 Artificial Nests Project", under the 5-year MoU between MNET and the Environment Agency – Abu Dhabi (2010-12), relate to progressing work on the five 'services' listed in Table 1.

In addition to our programme of work based on artificial nests, we have also initiated a project under the existing MNET-EAD MoU to investigate the problem of raptor electrocution in Mongolia. We have engaged in discussion with the Eastern Electricity Company (EEC; one of three electricity supply companies in Mongolia) to examine ways of reducing electrocution of birds of prey on medium-voltage power lines, using the 54 km Monkhhkhaan-Uulbayan line as the model (see Dixon 2010: *Falco* 37, 10-13). Following our initial discussions in March 2012, EEC immediately changed the most dangerous configurations of the anchor poles, switching the jump wires of the 2<sup>nd</sup> and 3<sup>rd</sup> phases from passing over the crossarm to underneath.

In 2013, we shall initiate trials of perch deterrents and insulation materials on these anchor poles and on the suspension poles of the Monkhhkhaan-Uulbayan line. The trial will take place over one year, during which time we will assess the efficacy of insulation *cf.* perch deterrents at reducing raptor electrocution events.



Students from Bayan School learn about artificial nests



SERVICE	POTENTIAL INCOME
<p>1. Provide a managed &amp; monitored supply of Saker Falcons to support a sustainable harvest for the falconry trade</p>	<p>1. Levy on the fees paid by falcon buyers to support the programme of maintenance, replacement and monitoring of artificial nests</p>
<p>2. Potential value in controlling rodent pest species that damage grasslands</p>	<p>2. 'Payment for Ecosystem Services (PES)' from Government at national/regional level or external, international PES funders.</p>
<p>3. Provide a resource for environmental education and research</p>	<p>3. Payment by research teams wishing to use the artificial nests in their studies. Sponsorship of nests by supporters wishing to promote education, conservation and/or falconry</p>
<p>4. Provide a focal point for eco-tourism</p>	<p>4. Charge for guided tours of artificial nests</p>
<p>5. Provide a resource for monitoring heavy metal pollutants at a landscape scale using eggs/feathers. Expansion of mining can increase releases of harmful heavy metals to the terrestrial ecosystem.</p>	<p>5. Payment for monitoring by mining companies and/or national/regional government.</p>

**Table 1.** A range of 'services' provided by the artificial nests in central Mongolia and potential income sources for the provision of these services.



## Reintroduction of the Saker Falcon in Bulgaria

*Research Partners and organizations: Dimitar Ragyov (Institute of Biological and Ecological Research, Bulgarian Academy of Sciences; IBER) and Ivailo Klisurov (Green Balkans).*

In order to assess the potential value of a captive-breeding and release programme to re-establish breeding Sakers in Bulgaria, we developed our project on two fronts in 2012. At the Green Balkans Breeding & Rehabilitation Centre, Stara Zagora, we now have seven pairs of Saker Falcons of central European origin, which were imported from Bojnice Zoo, Slovakia. Shortly after importation one of the newly arrived pairs produced eggs and a single chick was subsequently hatched and reared; to our knowledge this is the first captive-bred Saker Falcon to be produced in Bulgaria. (see [http://www.greenbalkans-wrbc.org/show.php?id=607&language=en\\_EN&cat\\_id=35&](http://www.greenbalkans-wrbc.org/show.php?id=607&language=en_EN&cat_id=35&)).

Staff at the Green Balkans Stara Zagora centre are now developing the capacity and skills required to establish a productive breeding programme, and the Saker project compliments existing reintroduction programmes for Griffon Vulture and Lesser Kestrel that are currently being undertaken by Green Balkans and their partners in Bulgaria.

Learning lessons from the first 'pilot' hack release in 2011 a repeated attempt was made for the experimental release of Sakers in order to monitor their behaviour and movements. Four young Sakers of European origin were imported from a falconry breeding center at the age of *ca.* 33 days old. They were fitted with 22g GPS satellite transmitters and placed in an open hack cage in the Central Balkans National Park under the supervision of staff from the IBER. The birds were fed at the hack cage from 23 May and their feeding behaviour monitored. The first chick 'fledged' from the hack cage on 6<sup>th</sup> June and all four had 'fledged' by the next day.





The young remained in the immediate area for another four weeks, receiving supplementary food whilst they learned to hunt. GPS tracking indicated home ranges of 0.3 to 23.0 km<sup>2</sup> over this period, with the birds mostly remaining in the immediate hack site area (a former Saker Falcon breeding location).

Post-fledging dispersal took place when the chicks were *ca.* 11 weeks old (i.e., *ca.* one month after 'fledging') and all made initial easterly movements to the Black Sea coast, with one bird moving out to sea and eventually taking a lift on a passing ship heading to the Ukrainian port of Odessa, before returning to Stara Zagora (close to the Green Balkans center and about 50 km from the release site) after a four day excursion covering over 1,500 km. Another bird re-orientated to the hack site after an excursion of 500 km in 2 days, indicating that the released Sakers regarded the hack as their 'natal area'.

Currently (September 2012), three released Sakers are known to be alive. These birds, having dispersed from the hack site, established temporary settlement areas near Moscow in Russia, in eastern Ukraine and at Stara Zagora, Bulgaria. The latter exploits an enormous flock of feral pigeons at a local mill, which coincidentally, was the same place utilized by a satellite-tagged Saker from the Slovakian breeding population in 2011. The fourth bird stopped transmitting in Dobrogea, Romania in mid-July. The value of the 'pilot' reintroduction is to refine our methods of release and to enable us to develop our knowledge about the current suitability of Bulgarian habitats for a reintroduced breeding population of Sakers.



## Genetic research on falcons

*Research Partners and organizations: Prof. Mike Bruford & Dr. Xiangjiang Zhan (School of Biological Sciences, Cardiff University, UK).*

This year saw the completion of a major project undertaken in conjunction with BGI-Shenzhen, China, to sequence the genomes of both the Peregrine and Saker Falcon. The principal results of this study are currently under review for publication and this achievement now provides a framework for applications in the fields of conservation, taxonomy, genetics and veterinary research. In an associated study we have also been looking at how genes (DNA) are transcribed to RNA, as this transcription process can also introduce variation. Consequently, not all the variation we see is 'written in the genes', some further variation can be introduced down the line from DNA to RNA, then to amino acids and on to proteins and the way they are folded. Sequencing the genome is a major advance, but it is essentially a 'book of words' and there is still a lot of additional work to be done to understand the 'language' and unravel their meaning.

Our first project plan to utilize the genomic information involves comparing whole genome variation among and between Peregrines breeding in three regions of the Eurasian Arctic. Traditional population genetic approaches can tell how much genetic variation there is between populations, but the advantage of the genomic approach is that we can also identify what this genetic variation is, which allows us to understand differences in adaptation between populations. We can learn not only how genetically distinct the Peregrine populations are from one another but also why they are different.

In parallel with the genome research we have also completed a study to examine genetic variation across the Eurasian breeding range of the Saker Falcon using genetic markers within genes i.e., Single Nucleotide Polymorphisms (SNPs) from coding regions and non-coding regions. The non-coding region markers were not as effective at detecting genetic variation at the population level as the coding region markers, although even the latter were only able to weakly resolve population structure, showing similar west-east variation as previous researchers (Nittinger *et al.*, 2007. *Molecular Ecology* 16; 1497-1517) but also revealing some distinctions within the eastern part of the global distribution range. This work is currently being prepared for publication, but it seems that the way forward for further population analysis of the Saker Falcon is to

adopt a genomics based approach in order to identify what genetic variation currently exists, especially in the former USSR, where the population is in rapid decline and much genetic variation may be lost before it can be identified.

## Recent Publications

Dixon A (2011). Effects of attaching telemetry equipment to free-living birds. *Veterinary Record* 169: 308-309.

Dixon A, Batbayar N, Purev-Ochir G & Fox N (2011). Developing a sustainable harvest of Saker Falcons (*Falco cherrug*) for falconry in Mongolia. In RT Watson, TJ Cade, M Fuller, G Hunt, and E. Potapov (eds.) *Gyrfalcons and Ptarmigan in a Changing World*. The Peregrine Fund, Boise, Idaho, USA.

Zhan XJ, Dixon A, Fox NC and Bruford MW (2012). Missense SNP of the MC1R gene is associated with plumage variation in the Gyrfalcon (*Falco rusticolus*). *Animal Genetics* 43, 460–462.







*Peregrine Falcon - Kola Peninsula  
Photograph by Pavel Gorbachev*



### Images of falconry in India from the Falconry Heritage Trust's image collection

#### Jevgeni Shergalin

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We know very little about falconry history in this ancient multinational country with a huge population of over 1 billion people. One of the most famous books on this topic is *"Falconry Notes on the Falconidae used in India in Falconry"* by Lieutenant Colonel E. Delme Radcliffe, first published in 1871 in the UK. Further interesting information can be found in *"Syainika Sastra or a Book on Hawking"* by Raja Rudradeva of Kumaon of the 15<sup>th</sup> or 16<sup>th</sup> Century, originally printed in Sanskrit and subsequently in English, in Calcutta, for the first time in 1910.

A major achievement at covering gaps in our knowledge of Indian falconry came with the publication of journals written by the Craighead brothers, John J. and Frank C. Jr. Their journals, written from 6<sup>th</sup> August 1940 to 11<sup>th</sup> April 1941, were published under the title *"Life with an Indian Prince"* in the Heritage Publication Series Vol.2 by the Archives of American Falconry (now Archives of Falconry) in Boise, Idaho in 2001. There are over 350 illustrations on 277 pages in this wonderful book. Several articles on falconry in India were published in *"The Falconer"*, the journal of the British Falconers' Club after World War II. Some wonderful images are in the book *"Falconry and Art"* written by the President of the French National Association of Falconers and Austringers, Christian de Chameralat and published by Sothebys in London in 1987.



Falconry scene on watercolor painting *"Umar Comes to look for the Corpse of Mihr-Nigar"* (India ca. 1570) on display in Museum of Islamic Art, Doha, Qatar, February 12, 2010.  
From: <http://www.asergeev.com/pictures/archives/compress/2010/830/05x.htm>





(Left) Indian Falconers with Sakers and Peregrine. From a photograph taken in the Punjab, 1891 by Capt. D.C.Phillott.  
 (Centre) Indian falconer returning from the Gazelle hunt by Emile Coriolan Hippolyte Guillemin (French 1841-1907). Lot 244 from Estuary Auctions.  
 (Right) Jehangir, the falconer.<http://www.exoticindiaart.com/product/paintings/jehangir-falconer-MF10/>

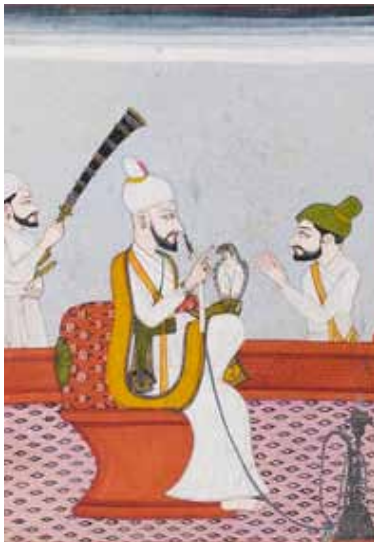
James Edmund Harting (1841-1928) in his famous "*Bibliotheca Accipitraria*" writes the following: "No treatises on Falconry in Hindustani have come to light, although copies of several Persian manuscripts on the subject are well known to falconers in India. As to the origin of Falconry in India, where it is believed to have been introduced by the conquering Mahomedans in the 10<sup>th</sup> Century, see Schlegel, *op. cit.* (No.194), pp.59 and 64; and for details of the sport as practised in that country see "*An Account of the Hunting Excursions of Asoph ul Doulah, Visier of the Mogul Empire and Nabob of Oude*", by William Blane, who attended in these excursions in the years 1785 and 1786, which was printed in Blane's *Cynegetica, or Essays on Sporting*, 8vo, London (Stockdale), 1788, pp.183-201; Johnson, "*Sketches of Indian Field Sports*," 8vo, London, 1922, pp. 46, 47 (the pages relating to Hawking have been extracted by Belany No.64, pp.51-56; Corvin Wierbitzki (No.115), Burton (No.66), and Delme Radcliffe (No.72).

The last-named writer gives a complete list of the hawks now in use in India, with their native names. Reference should also be made to the valuable remarks of Mr. R. Thompson on hawking in India, printed in Hume's "*Rough Notes on Indian Oology and Ornithology*" 8vo, Calcutta, 1869, pp. 57, 69, 74-75, 86, 93, 114-115, and 125."

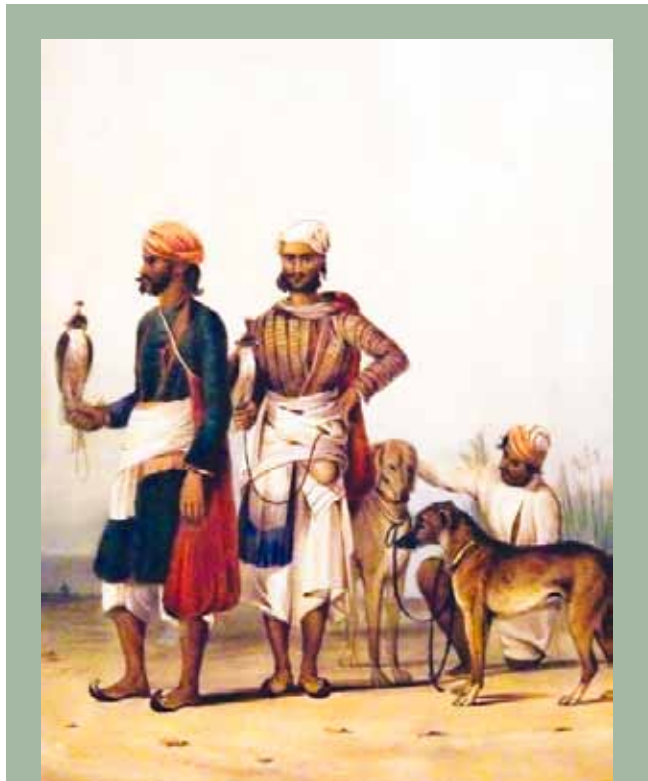
This famous catalogue of books relating to falconry, published in London in 1891 by J. E. Harting is now available for free online. This resource can be accessed by anyone interested in obtaining further information on the history of falconry in India, where they will find precise publication details for the books and journals referred to in the paragraph above. Harting's "*Bibliotheca Accipitraria*" can be found at: <http://archive.org/details/bibliothecaacci00hartgoog>.

The curious modern reader can find some old and difficult to obtain notes and sketches on Indian falconry in two books recently republished by the Eyr Press in London: "*One Thousand Years of Falconry*", a compilation of writings by different authors, which includes references to Indian falconry and "*Observations on Eastern Falconry*" by D. C. Phillott, first published in 1906-10 in the *Journal & Proceedings of the Asiatic Society of Bengal, Calcutta*.

The selection of pictures in this article demonstrates the great diversity of falconry in India.



Raja Surma Sen of Mandi (reg. 1781-88) seated on a throne holding a falcon ca. 1780-90. From private collection of Mughal Scholar Dr. Linda Leach for sale at Bonhams. Source: [http://www.bonhams.com/press\\_release/6474/](http://www.bonhams.com/press_release/6474/)



Hand coloured lithograph of the Nawab of Avadhs hunting dogs and falcons with their caretakers by Emily Eden 1844. Original is in Asian Art Museum in San-Francisco.



(Left) A Falconer. Deccan, Central India, ca. 1680. From Christies Auction.  
(Right) A Portrait of a Falconer, India, 17<sup>th</sup> Century. From Christies Auction.



Photographs of two Indian falconers taken by Robert (Robin) Barber, who was a falconer in the UK prior to World War II. They were taken between October 1936 and April 1939 in the North West Frontier Province of India. Courtesy of Paul Beecroft.





Guru Gobind Singh (with bird) meets Guru Nanak Dev. An 18th century painting of an imaginary meeting. Artist is unknown. Source -[http://www.sikhiwiki.org/index.php?title=Image:GGSingh\\_meets\\_GNanakDev.jpg](http://www.sikhiwiki.org/index.php?title=Image:GGSingh_meets_GNanakDev.jpg)



Indian. A Falconer and a Gamekeeper, ca. 1600. Opaque watercolour on paper, sheet: 8 11/16 x 7 in. (22.1 x 17.8 cm). Brooklyn Museum, gift of the executors of the estate of Colonel Michael Friedsam.



Picture of falconer from the book "People of India", published in 1910



Sikh falconer of the Khyber Pass, ca. 1935. [www.probertencyclopaedia.com](http://www.probertencyclopaedia.com)

Two interesting photographs of Indian falconers are here: Indian falconers and coursers line up for a portrait with their animals at Edward VII's Coronation Durbar. Delhi, India, circa 1 January 1903 –

<http://www.agefotostock.com/en/Stock-Images/Rights-Managed/UIG-901-11-00010985>

- Indian Falconers, 1912.

<http://www.ingenious.org.uk/See/?target=SeeMedium&ObjectID={7345C9B2-A442-A537-D16A-96227DC6EC53}&s=S1&SearchString=Indian%20falconer&source=Search&viewby=images&cntRead=0&cntDebate=0&cntDCBooks=0&cntDCImages=1&>

## Souq Waqif Falcon Hospital, Qatar

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Souq Waqif Falcon Hospital (SWFH), as the name suggests, is a dedicated falcon hospital established at the Souq Waqif, Doha, in 2008. In late 2011, a new 3-floor hospital building was inaugurated and is steadily approaching full functionality. The basement floor comprises the hospital and quarantine facility which are completely separated from each other in all respects. The ground floor has two examination rooms fully equipped with high-definition endoscopy equipment, a radiography room with a digital X-ray machine, an imping room, and a pharmacy in addition to a small enclosed reception area from where the owners can view their birds being examined or undergoing endoscopy. Wall mounted screens also allow the findings of endoscopy, radiography, faecal and haematological examination to be demonstrated simultaneously to the clients.

The first floor consists of an in-house diagnostic laboratory, two surgical theatres with fluoroscopy equipment, and a library and conference room. The various sections of the laboratory are necropsy (including histopathology), clinical pathology, bacteriology, virology, molecular biology and toxicology. What makes SWFH unique among falcon hospitals in the region is the fact that it is completely self sufficient and, in fact, houses specialized diagnostic equipment that are rare outside a university or commercial laboratory setting (Table1). The laboratory equipment include those for flow cytometry, completely automated bacterial or fungal identification and antibiotic sensitivity, real-time PCR, gene sequencing, and immuno-histochemistry. In addition, the toxicology laboratory is equipped with a highly sensitive Liquid Chromatography Mass Spectrophotometer that is capable of separating and reporting the constituents of any substance.

Needless to say, the justification for the significant investment in the infrastructure at SWFH extends beyond the routine diagnosis and treatment of falcons.





Initiating, as well as contributing to research in different areas of avian medicine and, more specifically, raptor medicine, is the underlying objective for setting up the diagnostic facilities. Broad areas of interest at SWFH currently include

1. Aspergillosis, especially the investigation of a reliable, non-invasive protocol as an alternative to airsac sampling for the early diagnosis of aspergillosis.
2. Parasitology in falcons involving a deeper study into the biology and pathogenesis of common endoparasites in falcons. Examples include the air sac filarial nematode, *Serratospiculum seurati*, trematodes like *Strigea falconis*, and different species of Caryospora.
3. Comparison of different available methods for the diagnosis of viral diseases (Newcastle disease virus, falcon herpesvirus and falcon adenovirus).
4. Toxicology in falcons that involves a more in depth understanding of dose dependent effects of ammonium chloride (Schnather) in falcons and thyroxine in moulting falcons.
5. Development and implementation of educational tools, customized to the local clientele, to promote awareness of conservation, ethical and health issues surrounding falconry in the Middle East.

Still in a nascent stage, the research department at SWFH is open to ideas and collaborations for research projects with other facilities involved primarily in raptor medicine, both regionally and internationally.



**Table 1. Laboratory equipment at Souq Waqif Falcon Hospital, Doha**

Name	Applications
Sebia Minicap®, USA	Serum Protein Electrophoresis
RX Daytona®, Randox, UK	Biochemistry Analyser
BD FACS Calibur®, BDBiosciences, USA	Flow cytometry for cell analysis/sorting
Vitek® 2 Compact, Biomerieux, France	Bacterial/ Fungal ID and Antibiotic Sensitivity
BacT/Alert® 3D, Biomerieux, France	Automated blood culture and ID
Step One® Real Time PCR, Applied Biosystems, USA	Real-time PCR
3500 Genetic Analyser, App. Biosystems, USA	Genetic sequencing
BenchPro®4100, Invitrogen, USA	Western Blotting
Acquity® UPLCand TQD, Waters, USA	Ultra performance Liquid chromatography/Mass spectrophotometry/ Mass spectrophotometry function.
Tissue-Tek VIP®, Accu-Cut®, Sakura, USA	Histopathology tissue processor and microtome

### Traditional Falcon Treatment in Pakistan

#### Babar Bashi

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Falconry is a tradition, a passion and a heritage in Pakistan. It has been kept alive generation after generation. A very small group of people in Pakistan practice this sport and only a few have traditional knowledge about this sport in terms of trapping, handling, training, flying and a proper use of herbs that are used in the treatment of common ailment of birds of prey. The term "Old School" is very much applicable in those rural remote parts of the country where there are no proper veterinary facilities and there are no specially qualified vets.

The Indian sub-continent was ruled by Mughal's for several centuries. It was through their connections with local aristocrats that brought knowledge of

falconry from Persia, Afghanistan and even Arabia. This knowledge was transferred down the generations, and allowed falconers to manage the health of different species of Accipiters and Longwings. Even Gyrfalcons were accommodated in the hotter climate of the Indian Continent by Mughals in 17<sup>th</sup> century. In that era Gyrfalcons were brought down by travellers from Iceland and Scandinavia. Species like Gyrfalcons are prone to Aspergillosis in hotter climates and they were accommodated in specially built naturally cold rooms in the Mughal forts by Kings. A well-known Mughal fort in Lahore has specially incorporated a section of such rooms. Cooler climates in the Northern regions like Kashmir, Gilgit etc were more suitable for the species. The few references suggest that this particular species of falcon was used for just an aura of superiority and as a result some local superstitions developed. One superstition was that it was believed that it was possible to get cured from a fever by just touching a Gyrfalcon. Even today the falconers in summer/moult seasons use room coolers for wild trapped Peregrines and Sparrowhawks.

Due to the lack of breeding facilities in Pakistan most hawks and falcons used in falconry are trapped from the wild for falconry. The wild trapped birds of prey are generally very fit and in a good state of health. First year birds are preferred. Flat flies and mites are the common problems seen in wild trapped birds. The traditional way of getting rid of mites and flies is to mix Coopex powder with the ash remains of fresh cow/buffalo dung (properly dried, burnt and sieved) and sprinkle it well over the feathers. This process is repeated every week depending on the severity of the mites. Cow and buffalo dung is dried in large amounts in the countryside in Pakistan to be used as a fuel source where people do not have electricity or gas. For open wounds and injuries chicken mutes are applied direct to the skin and left to heal. The bird aviaries and housing becomes the prime target of several species of mites and parasites. Before accommodating birds in such facilities the fuming process is introduced. Burning coal is sprinkled with Olibanum and black seeds; the mixture produces smoke with a rich distinctive smell that is toxic to many species of mites as well as microorganisms. Wild Rue or Syrian Rue seeds can be added to the mixture to produce smoke. Some falconers have been observed adding opium in the mixture, but opium is expensive and illegal to trade. Without knowing the appropriate ratio in the mixture this can do more harm than good to birds.



*Falconer with his Sparrowhawk*





*A rescued Eagle brought back to health by author using techniques discussed in this article*

Some falconers believe that the smell of burning smoke of this particular mixture is practically beneficial in killing the mites and flies. Indian Lilac is preferred because of its bitter taste and natural ability to kill germs. Leaves and stems of Indian Lilac are boiled in fresh water and left overnight to settle down with leaves and stems still in boiled water, sieved next morning, ready to be sprayed over the birds with spray bottles. Pox is one of the ailments some falcons and hawks can come across both in wild as well as in captivity. Depending upon the severity of the disease, it is preferred to leave the bird(s) in quarantine and let the disease complete its cycle. Some falconers mix Potash Alum in fresh water and spray the infected areas. Eye infections are mostly treated traditionally with rose water by dripping a few drops into the eyes or by spraying with a saline solution.

Bumble foot is another issue falconers come across. Early stages of bumble foot are treated by cutting off the affected area with sterile blade. Surgical spirit is used to clean off the wound then filling it with polyfax ointment. A bandage is applied for a few days and then removed. Diluted dettol is also used to clean off minor injuries.

(Please note the methods mentioned above are just used traditionally by a small group of local falconers to cure minor ailments and cannot be considered as an alternative to proper vet medicines and surgical treatments)

## Product Update

### Pluka

The Pluka is designed and built by Dixi Product Design, a Leeds-based design company. The original idea was dreamed up by managing director, Andrew Kennedy.

In his previous incarnation as managing director of Solway Feeders Ltd, Andrew fielded enquiries on an almost daily basis from poultry keepers and gamekeepers who were looking for an effective, low-cost plucking machine.

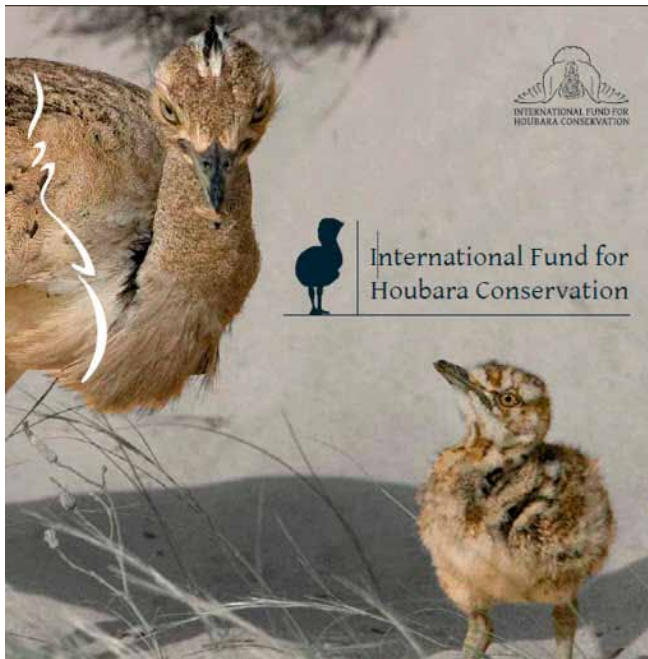
Andrew found that the products available on the market at this time were expensive and under-performing, and realised that there was a niche in the market for something better.

The Pluka was designed to meet demanding specifications that would essentially allow anybody to pluck any bird safely – from elderly users with reduced joint mobility through to less experienced pluckers looking to avoid damage to their birds – without breaking the bank.

The P71 Pluka is a twin motor dry process feather plucker. It can remove feathers from freshly slaughtered, hung or even unfrozen birds, including feathers from ducks, geese, turkeys, chickens, pheasants, quail, pigeon, partridge, grouse. The feathers are sucked into 7 rotating dishes by a vacuum once they are plucked they get stored in a plastic bag. The vacuum is fitted with a 3 stage filter (0.5 microns) so no dust escapes into the working environment making it the cleanest and cheapest dry plucking machine in the world. New machines, spare parts and servicing are available from Dixi Product Design Ltd. Give them a call on 0113 2161357 or visit [www.pluka.co.uk](http://www.pluka.co.uk) for more information.



### New website makes the voice of the Houbara stronger



The International Fund for Houbara Conservation (IFHC) announces the launch of its new website in Arabic, English and Russian with a French version to follow in the future. It is the first website to reflect the global presence of this threatened bird. The launch comes as part of IFHC's strategy in stepping up Abu Dhabi Government's efforts to conserve the Houbara Bustard all over the world.

Mohammed Saleh Al Baidani, Director General IFHC, said: "As one of the major conservation projects in the world, this is an important step forward to meet our long-term global goal to preserve this precious bird, not only in the UAE but all over the globe. Our aim is to make the Houbara voice stronger and to present IFHC's history of work in ensuring that sustainable populations of the Houbara species continue to exist in our world for future generations to enjoy."

The website [www.houbarafund.org](http://www.houbarafund.org) will feature information about the Houbara Bustard from across IFHC's different projects and centres. Information such as up-to-date facts, figures, research papers, photos and the latest news will be available when navigating through the site. The website will also be featuring registration forms for falconers to ask questions and feedback information and anyone can register to receive the IFHC's regular newsletter. There is also an educational section – Kids' Corner - featuring games and other interactive features.

"Celebrating the official launch of our website is a very exciting time for us as it shows IFHC's commitment to achieving H.H. Sheikh Khalifa Bin Zayed Al Nahyan's global strategy to protect the Houbara Bustard from extinction by breeding and releasing Houbara into the wild across the Houbara range countries, as a continuation of the efforts of the Late Sheikh Zayed's to establish a captive-breeding and conservation programme," added Mr. Al Baidani. The website also contains a dedicated media centre with a press release archive, images and a form for making media requests.

[www.houbarafund.org](http://www.houbarafund.org)

### The Rijksmuseum exhibits prints in celebration of UNESCO recognition

UNESCO recently recognised falconry as intangible cultural heritage. In celebration, the Rijksmuseum, Amsterdam (Netherlands) will present around thirty 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> century prints depicting the prestigious activity of falconry from its collection. The prints, including scenes by the Master of the Amsterdam Cabinet, Lucas van Leyden, Hendrick Goltzius and Hans Burgkmair the elder, demonstrate just how rich the tradition of falconry is, as well as the ability of falconers to capture the imagination. In the prints, the falconers are often depicted as courtly lovers, noble saints or vain libertines. The prints will be displayed among several historical artefacts relating to falconry from the private collections of falconers.

'The lure of falconry' will be on display from 7 August to 19 November 2012 in the Philips Wing of the Rijksmuseum. [www.rijksmuseum.nl](http://www.rijksmuseum.nl)



Leaving for the Hunt Master of the Amsterdam Cabinet, dry-point, c.1485-1490.

Falconry was often employed as a metaphor for a lover's conquest of his beloved.



### Timing of breeding and offspring number covary with plumage colour among Gyrfalcons *Falco rusticolus*

J.A. Johnson and K. K. Burnham

2012. *Ibis*. Early view article published online DOI: 10.1111/j.1474-919X.2012.01276.x



Plumage colour variation exists among Gyrfalcons throughout their Arctic and sub-Arctic circumpolar distribution, ranging from white through silver and grey to almost black. Although different colour variants coexist within many populations, a few geographical regions, such as northern Greenland, possess a single variant, suggesting that local environments may influence plumage colour variation. In central-west Greenland (66.5–67.5°N), where multiple colour variants exist, white male Gyrfalcons fathered significantly earlier clutches than grey males. No significant association was observed between female colour and lay date. However, significantly more offspring were produced by both male and female white Gyrfalcons than by grey variants when controlling for lay date, and silver Gyrfalcons produced an intermediate number of offspring for both sexes. This pattern was further supported by breeding plumage colour pairings. Grey females paired with grey males nested significantly later in the season and produced fewer offspring than those paired with white males, whereas no difference in lay date or offspring number was found between white males paired with white or with grey females. The difference in the number of offspring produced at each nest-site was also inversely correlated with the distance to the nearest neighbouring nest, and grey males nested in closer proximity to other nests compared with white and silver colour variants. These results suggest that factors associated with territory occupancy and timing of breeding may regulate reproductive success differently between colour variants, with directional selection favouring light-coloured Gyrfalcons and resulting in earlier lay date and a high frequency of white plumage

colour variants in this population. Although gene flow exists between our study population and those further north (>75°N), white Gyrfalcons prevail where the breeding season duration is even shorter, suggesting that nesting chronology in combination with genetic drift may play an important role in influencing plumage colour polymorphism among Gyrfalcon populations.

<http://www.higharctic.org>

### Serologic evidence of exposure of raptors to influenza A virus

P.T. Redig and S.M. Goyal

2012. *Avian Diseases* 56: 411–413.

Serum or plasma samples from raptors that prey or scavenge upon aquatic birds were tested by a commercially available blocking enzyme-linked immunosorbent assay for the evidence of antibodies to influenza A virus. Samples were taken from birds ( $n = 616$ ) admitted to two rehabilitation centers in the United States. In addition, samples from 472 migrating peregrine falcons (*Falco peregrinus*) trapped on autumnal and vernal migrations for banding purposes were also tested. Only bald eagles were notably seropositive (22/406). One each of peregrine falcon, great horned owl (*Bubo virginianus*), and Cooper's hawk (*Accipiter cooperi*) from a total of 472, 81, and 100, respectively, were also positive. None of the turkey vultures ( $n = 21$ ) or black vultures ( $n = 8$ ) was positive. No clinical signs referable to avian influenza were seen in any bird at the time of capture. These data indicate that, among raptors, bald eagles do have exposure to influenza A viruses.

Mongolian Falconry - Past and Present



**Falconers with Golden Eagles**

Modern day falconry in Mongolia is mainly restricted to ethnic Kazakhs in the west of the country. They hunt hares for food and foxes for fur using Golden Eagles which they call berkut. Photographs taken at the 2010 Western Mongolian Eagle Festival by Otgonsaikhan Dorjsuren, vice-president of the Mongolian Falconry Association. (Image of photographer - top right)





***Falconer with Goshawk***

*The photograph was taken sometime from 1926-30 in the Barga steppes of Western Manchuria (now north-east Inner Mongolia, China). The picture is interesting because there are very few images of Buryat or Mongol falconers that are not of Kazakh origin.*

*Image from the Anatoly S. Lukashkin (1901-88) Papers, courtesy of the Museum of Russian Culture (San Francisco).*



### مستشفى سوق واقف للصقور، قطر

أمريتا ديب ومحمد علي وإقدام الكرخي

مستشفى سوق واقف للصقور هو مستشفى جديد للصقور أنشئ في الدوحة، قطر، في عام 2011. يضم المستشفى مختبرا داخليا للتشخيص بمرافق للصفة التشريحية، والباثولوجيا السريرية، والفيروسولوجيا، والبيولوجيا الجزيئية، والسموميات. وقد تم تجهيز المختبر بمعدات لقياس الجريان الخلوي، وللتحديد الأوتوماتيكي بالكامل للجراثيم والفطريات وللحساسية للمضادات الحيوية، وللقياس الفوري لتفاعل البليمرز التتابعي PCR، وللتسلسل الجيني، وللكيمياء النسيجية المناعية. وقد جُهِّز مختبر السموميات بمطيف كتلة عالي الحساسية للإستشراب السائل قادر على فصل مكونات أي مادة والإبلاغ عنها. إلا أن الاستثمار الكبير في البنية التحتية في المستشفى يمتد إلى أبعد من التشخيص الروتيني وعلاج الصقور، فالهدف الأساسي لإقامة مثل هذه المرافق عالية التجهيز للتشخيص هو إطلاق، فضلا عن المساهمة في، البحوث في مجالات مختلفة من طب الطيور الجارحة.

### صور للصيد بالصقور في الهند من مجموعة صور صندوق تراث الصقارة

جافيني شيرجالين

لا يوجد سوى دراسات قليلة نسبيا تصف تراث الصيد بالصقور في الهند. أقدم في هذه المقالة وصفا موجزا لما نشر (باللغة الإنجليزية) عن تاريخ الصقارة في الهند. استُقيت المعلومات عن الصقارة الهندية من مجموعة متنوعة من المصادر المتفرقة أفضلها كتاب "حياة مع أمير هندي" الذي كتبه الاخوة كريجهيد و "فهرس كتب الصقارة" من إعداد جيمس ادموند هارتغ والتي نشرت في عام 1891 ولكنها أصبحت الآن متوفرة أيضا على الإنترنت. تضم مقالتي صورا تعرض التنوع الكبير في مدارس الصيد بالصقور في هذا البلد المتعدد العروق والتي يبلغ عدد سكانه أكثر من مليار نسمة.



أندرو ديكسون

تمول هيئة البيئة - أبوظبي (EAD) مشاريع دولية للبحوث في صون وإدارة صقر الشاهين والصقر الحر (الغزال). توضح هذه المقالة التقدم الذي في هذه المشاريع التي تمولها هيئة البيئة - أبوظبي أحرز في عام 2012 ، بما في ذلك (أ) البحوث المتعلقة بصقور الشاهين في أوراسيا الشمالية و (ب) إدارة البحوث وصون الصقر الحر في منغوليا و (ت) إعادة صقر الشاهين إلى البرية في بلغاريا و (ث) أبحاث الجينوم والوراثة في الصقور. تم في عام 2012 تثبيت سبعة أجهزة إرسال فضائي على صقور شاهين صغيرة في شبه جزيرة كولا لتتبع هجرتها. في منغوليا تكاثر 380 زوجا من الصقر الحر في أعشاش اصطناعية وتنتج عن ذلك ما يقدر بـ 1298 فرخا. شهد برنامجنا في منغوليا تقدما في مشروع روابط المدارس وإعداد دراسة جديدة عن تعرض الطيور الجارحة للتعق بالكهرباء. في بلغاريا أطلق سراح أربعة صقور حديثة ولدت في الأسر تحمل رسائل التعقب بالأقمار الصناعية لتتبع تحركاتها ومعرفة كيفية استخدام الطيور للبيئة المحلية. أتمنا الآن تحديد كامل تسلسل الجينوم لكل من صقر الشاهين والصقر الحر الأمر الذي سيوفر لنا أداة مفيدة لاتخاذ قرارات الصون في المستقبل من خلال تمكيننا من تحديد الاختلافات الجينية لكافة الأنواع البرية.

### الرعاية الصحية التقليدية للصقور في باكستان

بابار باشي

تعتبر الصقارة تقليدا وشغفا وتراثا في باكستان. تصف هذه المقالة بعضا من الأساليب التقليدية المستخدمة من قبل الصقارين الباكستانيين في رعاية صحة طيورهم. تقوم مجموعة صغيرة جدا من الناس في باكستان بممارسة هذه الرياضة، ولكن لا يتمتع إلا القليل منهم بمعرفة الاستعمال الصحيح للأعشاب التي تستخدم في علاج الأمراض الشائعة في الطيور الجارحة. توضح هذه المقالة معارف الصقارة التقليدية المتعلقة بالرعاية الصحية. لقد أتيت لي فرصة لتطبيق هذه التقنيات في إعادة تأهيل أحد نسور السهوب الذي تعافى بشكل مفاجئ في وقت قصير جدا.



توفير منتدى لتبادل المعلومات بشأن الأمور المتعلقة بالصقور والصقارة في الشرق الأوسط.

**تعزيز و/أو تحسين فهم:**

التراث الثقافي لرياضة الصقارة العربية  
استخدام وإدارة أنواع الطرائد  
المحافظة على الصقور البرية المستخدمة في الصقارة العربية  
إدارة الصقور في الصقارة  
التقدم في مجالات الرعاية الطبية والتربية للصقور  
القضايا الدولية التي تؤثر في الصقارة العربية أو تنجم عنها.

**ستتحقق أهداف المجموعة من خلال**

عقد لقاءات لورش العمل الإقليمية والمؤتمرات الدولية  
نشر وتوزيع النسخ الورقية والإلكترونية لنشرة **فالكو** التي تعالج القضايا ذات الاهتمام المشترك للجمعية  
تنسيق واستضافة موقع ويب يتميز بالفاعلية وإنشاء وصيانة قاعدة بيانات المشتركين

نرحب باستقبال المقالات المقدمة إلى فالكو. يرجى مراعاة أن **فالكو** ليست مجلة علمية، ونرجو من كاتبها المقالات تذكر أن تلك المواد يجب أن تكون في متناول قراننا من مختلف الخلفيات كالصقارين وعلماء الأحياء والأطباء البيطريين وصناع السياسات. يهمننا تلقي مقالات موثوقة ودقيقة وغنية بالمعلومات تتعلق بالمواضيع المدرجة أدناه

**الصقارة:** مقالات عن ممارسة رياضة الصيد بالصقور ذات فائدة وأهمية للصقارين العرب

**تراث الصقارة:** مقالات عن الإرث الثقافي للصقارة ذات فائدة وأهمية للصقارين العرب

**إدارة الطرائد:** مقالات عن صون وإدارة أنواع الطرائد المستخدمة في الصقارة العربية أو التي تهتم بالصقارين العرب

**صون الطيور الجارحة:** مقالات عن صون وإدارة الطيور الجارحة المستخدمة في الصقارة العربية، وكذلك بشكل أكثر عمومية تلك المتعلقة بأي طيور جارحة في الشرق الأوسط

**العناية الصحية بالطيور وإدارتها:** مقالات عن القضايا البيطرية للطيور وتربيتها وبالذات ما نبع منها من العمل في الشرق الأوسط، ولكننا سننظر أيضا في الدراسات الخارجية ذات الصلة بتحسين صحة الجوارح في الشرق الأوسط

**أبحاث علم الأحياء:** مقالات عن البحوث البيولوجية في الصقور المستخدمة في الصقارة العربية والتي تغطي قضايا مثل الهجرة والتصنيف والبيئات الجينية الخ

**قضايا عالمية:** مقالات وتحديثات عن قرارات ونقاشات السياسة الدولية المتعلقة بالصقارة والصون والاتجار وصحة الحيوان ذات الأهمية والعلاقة بالصقارة العربية

**التوعية العامة والتنقيف:** مقالات عن المبادرات التي يمكن أن تسهم في تعزيز وعي أفضل بالصقارة العربية والقضايا الأوسع المحيطة بها

**التحديثات التقنية:** مراجعات وتحديثات عن المنتجات والمعدات الجديدة الخ، التي قد تكون ذات فائدة لعلماء الأحياء والصقارين وأطباء البيطرة العاملين مع الجوارح

**قسم الصور:** صور مثيرة للاهتمام ذات الصلة بالمواضيع التي تعنى الجمعية بها

**الطيور الجارحة في الأخبار:** ملخصات للبيانات الصحفية الصادرة حديثا والمتعلقة بالمواضيع التي تعنى الجمعية بها

**ما هو الجديد في المطبوعات والمنشورات:** مراجعات المؤلفات العلمية التي نشرت حديثا ذات العلاقة بالمواضيع التي تعنى الجمعية بها

نحن أيضا نقبل وننشر مراجعات الكتب والرسائل. إن كنت في شك حول ما إذا كانت مقالة ما تدرج تحت أحد الفئات المذكورة أعلاه فيرجى الاتصال بالمحررين:

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تأثيرات فقدان الموائل على تكاثر وعبور الطيور الجارحة وأعدادها المهاجرة شتاء). إن صون الطيور الجارحة، وبخاصة تلك الأنواع المستخدمة في الصقارة، هو عنصر أساسي في تطوير التنمية المستدامة للصقارة العربية.

إن معرفة التراث الثقافي للصقارة هي جانب هام آخر للصقارة العربية، كما يتضح من حقيقة أن خمس من الدول الـ ١١ التي تعترف بالصقارة كجزء من تراثها الثقافي غير المادي في قائمة اليونسكو للتراث الثقافي هي من الدول العربية. تقدم في هذا العدد صوراً ورسوماً توضح تراث الصقارة في الهند، البلد ذو التنوع الاجتماعي الكبير، وهو ما ينعكس في تنوع واسع لمدارس الصقارة هناك.

أما فيما يتعلق بالرعاية الصحية البيطرية فنقدم مادتين توضحان طرفي نقيض من أطرافها: فهناك من ناحية التقنيات التقليدية التي تمارس في الباكستان لعلاج الصقور ومن ناحية أخرى تلك المرافق الحديثة التي أنشأت على أعلى المستويات العالمية في مستشفى جديد للصقور في قطر. إن زيارة مرافق جديدة في منطقة الشرق الأوسط هو دائماً أمر مثير للاهتمام وقد حظي أحد محرري فالكو (توم بيلي) بزيارة لمستشفى سوق واقف للصقور في قطر لمدة أسبوع في أوائل سبتمبر، وهذا المستشفى هو مؤسسة أنشأت بشكل مثير للإعجاب ومصممة تصميمًا جيدًا ومجهزة بالمرافق السريرية التي تتيح التعامل مع أعداد كبيرة من الصقور وتتيح في الوقت نفسه للصقارين القطريين التواصل مع الموظفين البيطريين ومتابعة الإجراءات التي تجري على صقورهم. كان لافتاً بشكل خاص أن نرى أن قطر قد أنشأت مستشفى للصقور يلتزم بشكل كبير لأبحاث أمراض الصقور. إننا نتطلع قدماً إلى تلقي مقالات أخرى في المستقبل عن الشؤون الطبية للصقور من بلد لم ينشر إلا القليل عن الطب التقليدي للصقور فيه والذي لا يتمتع بمرافق لإجراء الأبحاث العلمية.

#### دعوة لتلقي المساهمات

في عام ٢٠٠٧، قامت أبوظبي وحكومة المملكة المتحدة بترتيب لقاء في منطقة بحيرة لوخ لوموند في اسكتلندا لمناقشة إمكانية إنشاء ميثاق دولي لحفظ الطيور المهاجرة الجارحة تحت رعاية اتفاقية الأنواع المهاجرة CMS. في العام التالي، وفي اجتماع للمتابعة في أبو ظبي ظهرت مذكرة التفاهم للطيور الجارحة المهاجرة CMS إلى الوجود. الآن وبعد أربع سنوات، ومع تأسيس مقر وحدة التنسيق في أبو ظبي، سيجري الاجتماع الأول للموقعين على الميثاق في ديسمبر ٢٠١٢. لقد كان مناسباً أن يعقد هذا الاجتماع في أبو ظبي نظراً لدورها المهم في إنشاء ودعم مذكرة التفاهم والالتزام الذي تبديه هيئة البيئة - أبوظبي لحفظ الطيور الجارحة في الإمارات العربية المتحدة وعلى المستوى العالمي.

نقدم في هذا العدد تقريراً عن التطورات الأخيرة في المشاريع الدولية لإدارة أبحاث وصون أبحاث الصقور التي اضطلعنا بها بالنيابة عن هيئة البيئة - أبوظبي. كان الشروع في هذه المشاريع قد سبق بداية مذكرة تفاهم اتفاقية الأنواع المهاجرة إلا أن أهدافها وأنشطتها تتطابق بشكل وثيق مع العديد من تلك المدرجة في خطة العمل المرتبطة بمذكرة التفاهم هذه.

على سبيل المثال، تشمل مشاريع الصقور لهيئة البيئة - أبوظبي في منغوليا الدراسات الميدانية وإدارة صون الصقر الحر (الغزال)، وبناء القدرات من أجل الصون وتطوير السياسات المتعلقة بالصون والاستعمال المستدام للصقر الحر جنباً إلى جنب مع برنامج التعليم الدولي. يرتبط هذا العمل مع أنشطة محددة أدرجت في مذكرة تفاهم الطيور الجارحة، منها النشاط ٣: حفظ الموائل والإدارة المستدامة، والنشاط ٤: التوعية بالمشاكل التي تواجهها الطيور الجارحة والتدابير اللازمة للحفاظ عليها، والنشاط ٥: رصد أعداد الطيور الجارحة وإجراء بحوث الصون وتنفيذ التدابير العلاجية المناسبة.

إن المشروع المنغولي هو مجرد أحد المبادرات الأربع التي ترعاها هيئة البيئة - أبوظبي والمبينة في الصفحة ٤ من هذا العدد، والتي تضم دراسة لتقييم إمكانية إعادة إطلاق الصقر الحر (الغزال) في بلغاريا (النشاط ٥.٦: إجراء بحوث على الرغبة في إعادة إطلاق الطيور الجارحة لتحسين وضع صونها في البرية، بما يتوافق مع المبادئ التوجيهية للاتحاد العالمي للحفاظ على الطبيعة ومواردها (IUCN)، ودراسة لأعداد صقور الشاهين المهاجرة في منطقة أوراسيا الشمالية (النشاط ٥.٣: تقييم ثم معالجة نود أن نرى المزيد من المشتركين في مجموعة الشرق الأوسط لأبحاث الصقور MEFRG يشاطروننا آرائهم وخبراتهم ومعارفهم من خلال فالكو. يسعدنا تلقي المقالات المكتوبة باللغتين العربية والإنجليزية التي تتعلق بالمواضيع المدرجة في الصفحة المقابلة.



Photograph by Andres Lopez Sanchez

## Editorial

### Research Biology

International falcon research conducted on behalf of the Environment Agency – Abu Dhabi in 2012 ..... 4

### Falconry Heritage

Images of falconry in India from the Falconry Heritage Trust's image collection ..... 12

### Avian Health and Management

Souq Waqif Falcon Hospital, Qatar ..... 16

Traditional Falcon Treatment in Pakistan ..... 18

### Raptors in the News

New website makes the voice of the Houbara stronger ..... 20

The Rijksmuseum exhibits prints in celebration of UNESCO recognition ..... 20

### Whats New in Literature

Timing of breeding and offspring number covary with plumage colour among Gyrfalcons *Falco rusticolus* ..... 21

Serologic evidence of exposure of raptors to influenza A virus ..... 21

### Photo section

Mongolian Falconry - Past and Present ..... 28



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