FALCO

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MEFRG Objectives:

To provide:
A central body for the co-ordination of research activities related to falcons and falconry.
A common forum for the exchange of information and for promoting collaborative research programmes.

To promote:
Research on health and disease in falcons, falcon moulting in the Middle East, falcon nutrition, domestic breeding.
Field studies on falcon migration, taxonomy, morphometrics, reproductive biology and behaviour.
Improved management conditions for captive falcons through educational awareness programmes.
Greater understanding of falconry as a part of Arab cultural heritage.

To hold:
International workshops and conferences on veterinary aspects, falcon biology topics, falconry and conservation issues.

To publish:
Papers on aspects of falcon conservation, falcons and falconry.
A biannual newsletter/journal containing contributions on medical, biological and conservation topics of common interest, new developments
and recent medical advances.

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Membership is open to any veterinary surgeon, biologist, conservationist or falconer working in the Middle East or any other person interested and contributing in the fields of medical, biological and conservation aspects of falcons and falconry worldwide.

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Photographs:

Front Cover: Saker Falcon at an artificial nest in Central Mongolia (Photo: Tomas Kunca)

Inside Cover: Lanner Falcon eggs in an old Raven's nest on a cliff overlooking a freshwater lake in Macedonia (Photo: Andrew Dixon)

Falco is published biannually and contains papers, reports, letters and announcements submitted by Middle East Falcon Research Group Members. Contributions are not refereed, although every effort is made to ensure information contained within FALCO is correct, the editors cannot be held responsible for the accuracy of contributions. Opinions expressed within are those of the individual authors and are not necessarily shared by the editors

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Editorial

With the CITES Conference of Parties at Doha, Qatar in March 2010, it seems an appropriate time to reflect on the trade problems affecting falcons and the conservation challenge this poses for the international community. Arabian falconry creates a significant demand for three falcon species; Saker, Peregrine and Gyrfalcon. These falcons can come from (i) captive breeding centres or (ii) the wild. Nowadays, a significant number of falcons supplied to Arabian falconers are captive bred, especially those used by falconers in the UAE. However, captive-bred falcons are still perceived as inferior to wild falcons by many falconers, who prefer to hunt with wild-sourced birds. There are too few wild falcons caught whilst passing through the Arabian Peninsula to meet the demand for these birds, and one of the desired species, the Gyrfalcon, never travels this far south. This means that most of the wild-caught falcons sold in the souks of the Middle East are imported from abroad. This is international trade.

CITES provides a legislative framework to regulate international trade in falcons, and this should be reflected at a national level by the domestic legislation of the signatory Parties. CITES prohibits international trade in Peregrines and Gyrfalcons (App. I), but does allow trade to exist in Saker Falcons (App. II). However, Saudi Arabia has a reservation for all species of the order Falconiformes, which means it is not bound by the provisions of CITES for any of these species. National law in the UAE prohibits the import of any non-CITES registered falcons, which has significantly reduced the imports of wild-sourced birds, but it is not clear to us how the national legislation of Kuwait and Qatar reflects the CITES regulations. Trade from Central Asia to Arabia has been conducted for millennia and it is likely that this trade has always included falcons. Falcon trade is well-established and prevalent in Syria, Pakistan and Iran for example.

The trapping and export of falcons from most source countries is illegal under national laws. However, in many source countries legislation is unclear, enforcement is lax, punishment weak and once *en route,* the traders have an "open door" into many parts of the Middle East. So what role does CITES have in this issue? Stricter trade regulations are borne mainly by the legal traders of captive-bred birds, making their business more difficult to conduct, whilst the illegal traders, by definition, are unaffected by stricter rules. Parties to CITES agree to be bound by its regulations and a step forward in understanding the problem could be achieved if they demonstrated how their own national legislation is enacted to prevent the smuggling of falcons into their countries.

However, there is no 'overarching', multi-national inspectorate that could compile a report on various types of national legislation that relate to the control of the illegal falcon trade. At *Falco* we continually hear of cases of trappers and smugglers that are caught in Russia, Ukraine, China, and Kazakhstan (amongst others) and punishments range from a fine of a few dollars to death sentences! Who collates this information? Who co-ordinates an international response? There was once a Falcon Enforcement Task Force established under the auspices of CITES but this now seems to be defunct. The piece-meal, national-level approach to the falcon trade demonstrates that the need for such a co-ordinating body hasn't gone away. Such a body could play an important role in advising countries on ways of improving their legislation and enforcement to tackle the problem.

In this issue we describe developments in the Artificial Nest Project in Mongolia, which, it is hoped, will form the basis of a demonstrably sustainable harvest of Saker Falcons from this country. The development of policy and regulations for a harvest based on the Artificial Nest Project is vitally important and an area where CITES can be of great assistance.

We have an article on Lanner Falcons in Macedonia, a country at the edge of the breeding distribution range of this species. Technological advances in satellite transmitters have made them smaller and lighter, so that they can now be used on smaller birds, such as the Eleonora's Falcon. We have a brief summary of the movements of four birds that were tracked from Greece in the eastern Mediterranean.

Veterinary articles in this issue describe the medical problems for falcons that can arise as a result of smoke inhalation, a treatment for poxvirus, the development of veterinary care for falconry birds in Arabia and the need for good biosecurity measures in the husbandry and treatment of falcons. Quarry species can potentially transmit disease to hunting falcons, as described in an article by Volker Schmidt and co-workers, whilst the Adrian Lombard examines the conflicts that arise when new quarry species and hunting areas are sought by Arab falconers.

Artificial Nests for Saker Falcons I: their role in CITES trade and conservation in Mongolia.

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Saker Falcon trade and CITES in Mongolia

The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) is an international treaty that regulates trade and ensures sustainable use of wild species. Currently there are 175 states that are signatories to CITES. Mongolia acceded to CITES on 4th April 1996. The Saker Falcon *Falco cherrug* is listed under Appendix II of CITES, which means it's a species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival. Since 1993 the government of Mongolia has sold licences to allow the trapping of wild Saker Falcons in Mongolia and their export to other countries for the falconry market, mainly in the Arabian Peninsula (Badam, 2001). From 1997-2008, Mongolia exported a total of 2612 Saker Falcons under licence, ranging from 25 to 400 birds per annum (source: CITES Trade Database, UNEP-WCMC). However, there appears to be some discrepancies in the published figures for the numbers of Saker Falcons exported and it is not known how many falcons are illegally trapped in Mongolia each year (Zahler et al., 2004).

The ambiguity surrounding the data on Saker Falcons that are trapped and exported from Mongolia casts doubt that the Mongolian government can meet its obligations under CITES to ensure that trade does not have a detrimental impact on the survival of the species. Furthermore, there is little information on the age and sex ratio of the Sakers trapped, or where and when they were trapped. After a CITES Significant Trade Review (initiated in 2003 and completed in 2006), Mongolia was one of nine range states categorized by the CITES Secretariat as being of 'urgent concern' because recent data on legal and illegal trade indicate serious problems with the implementation of Article IV of CITES (which regulates trade in Appendix II species). Saker Falcon trade was suspended but despite this Mongolia continued to harvest and trade in the species. Consequently, in February 2009, as a result of this non-compliance, the CITES Secretariat issued a notice to all Parties to suspend trade in Saker Falcons with Mongolia. Subsequently, following meetings and discussions with CITES about the development of a sustainable use programme, Mongolia has been given leave to harvest up to 300 falcons per year until a review of the development of the artificial nest programme is undertaken by the CITES Animals Committee in 2011 (see SC58 Doc. 21.1 and SC58 Sum. 2 (Rev. 1) available at the CITES website www.cites.org).

Photo 1. Saker in 'Closed Box' design artificial nest (D. Ragyov)

Artificial nests for Saker Falcons in Mongolia

We have established grids of artificial nests in two areas of central Mongolia where there are very few alternative nesting sites available for Saker Falcons. We have monitored the productivity and the post-fledging survival of young from these artificial nests.

The first grid of 100 nests, spaced 2 km apart over an area of 324 km^{2,} was established in autumn 2005 at Darhan district, Khentiy province. We experimented with four different designs of nesting boxes in order to determine if Saker Falcon occupancy and/or breeding success was influenced by nest box design. Occupancy rates increased annually from 3 pairs in 2006, 10 in 2007, 12 in 2008 to 17 in 2009 despite the fact that small mammal densities were low in the area throughout this period. In our study, Sakers showed a marked preference for the Closed Box design of artificial nest site (Photo 1).

The second area selected for placement of artificial nests was at Bayan district, Tov province. This area was chosen after satellite telemetry revealed juvenile Sakers settled here after dispersing from their nests in 2006. An autumn visit confirmed very high densities of Brandt's Vole *Microtus brandti* across the region. In November 2006, we established four 16 km^2 grids, each with 25 artificial nests placed 1 km apart. A further 50 artificial nests were erected across two 16 km^2 grids in March 2008 using the Closed Box design of artificial nest. In Bayan, the occupancy rates increased from 5 pairs in 2007, 9 pairs in 2008 to 11 in 2009 in four

artificial nesting grids, whilst in two further grids established in March 2008 the initial occupancy level was 2 pairs, which increased to 5 pairs in 2009 (a total of 16 pairs in all six grids).

In 2009, the breeding density of Saker Falcons at the Darhan artificial nesting grid area was 5.2 bp/100 km^2, compared with a much higher breeding density of 16.7 bp/100 km^2 in the Bayan area. This higher breeding density at Bayan can be at least partly explained by the greater abundance of mammalian prey available here. The Sakers occupying artificial nests are drawn from the non-breeding population and thus represent an increase in the local breeding population. Artificial nests in nest site limited areas can be used to create new, substantial breeding populations of Saker Falcons in Mongolia.

Policies and practicalities of developing a sustainable falcon trade in Mongolia

We have produced proposals for the development of a programme to compensate the number of falcons removed by legal trapping by increasing breeding productivity using artificial nests. The principle is simple: for every juvenile Saker Falcon removed from the autumn population there must be at least one similar sex bird recruited into the population from the artificial nest scheme. However, compensation can only be effective if there is also a concomitant tightening of the regulations surrounding the legal harvest of Saker Falcons i.e., there must be a specified trapping season, there must be an approved trapping method, only juvenile birds should be retained for export and there must be a procedure in place to enable verification of the trapping procedure and identity, age and sex of birds licensed for export.

The creation of new breeding clusters of Sakers at artificial nest sites in Central Mongolia is a fairly simple, if logistically challenging, exercise. The establishment of a regulatory framework for a Saker Falcon harvest in Mongolia is more difficult. We are working with the Ministry of Nature, Environment and Tourism in Mongolia to assist in this process. Guidance will be required from CITES in this process, together with input from various stakeholders including Mongolian and international NGOs, the Arabian falconers who are the end users (primarily in Kuwait and Saudi Arabia), the trappers (primarily from Syria and Kuwait) and the sponsors of the artificial nest project in Abu Dhabi.

Funding is required in order to maintain and monitor the artificial nests, which is essential if they are going to have a long-term benefit for the Saker Falcon population in Mongolia. It is envisaged that funding will come from the harvesting of falcons through 'conservation' a levy paid by falcon trappers.

Photo: Gankhuyag Purev-Ochir

Conservation benefits of sustainable, CITES regulated trade

The conservation value of a CITES regulated sustainable trade hinges on a critical issue; does a legal trade encourage more illegal trade or does it reduce market demand for illegal trade? This is a familiar argument in relation to the ivory trade, though the two trade issues are not directly comparable. We believe there are conservation benefits in maintaining a CITES regulated, sustainable harvest of Saker Falcons.

Firstly, there is an existing market demand specifically for wild-sourced falcons in Arabic falconry that cannot be met by commercial captive-breeding. Despite the fact that the use of captive-bred falcons has been widely adopted in the UAE, this is not true for all other Arabic falconry states. In some countries, especially Saudi Arabia and Kuwait the use of wild-sourced falcons for falconry is deeply engrained and forms an integral part of the cultural heritage of the Arab people (Ceballos, 2009). Conservationists need to recognise this reality and develop their conservation policies accordingly. This demand can be met through unregulated illegal trade or CITES regulated legal trade. Currently, there is no existing possibility for the legal trade of wild sourced Gyrfalcons and Peregrines (both CITES Appendix I species), yet illegal trade in these species continues. Clearly, banning legal trade does not stop illegal trade.

There is no evidence to suggest that the legal trade increases the extent of illegal trade in falcons. Illegal trade of Sakers from Mongolia occurs, but there is no evidence that it occurs at a greater level than in adjacent countries of China and Russia, where there

is currently no CITES trade in wild Saker specimens (Anon, undated; Wyatt, 2009). We argue that revenues accrued at national and local levels from a legal CITES harvest provide an incentive to enforce controls on any illegal harvest that does not have any wider economic benefits above the profits made by the trappers/traders themselves.

It is our opinion that a truly demonstrable sustainable harvest developed in Mongolia can have conservation benefits for the Saker Falcon globally by encouraging falcon dealers in the Middle East and Arabia to only deal in birds from CITES regulated sources. Furthermore, the establishment of this sustainable trade system can be used as a tool to strengthen understanding, regulation and implementation of CITES in Mongolia and Middle Eastern countries.

In Mongolia the conservation benefits are clearer. The harvest should never exceed 30% of productivity at artificial nests (accounting for sex of the birds). Thus, at least 70% of the young male and female Saker Falcons fledged from the artificial nests will fly free to contribute to the future of the Mongolian breeding population. The use of artificial nests to increase the breeding populations of birds of prey is a well established conservation management practice.

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Artificial Nests for Saker Falcons II: Progress and plans

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Background

In 2009 Abu Dhabi initiated a program to create a new breeding population of Saker Falcons in nest limited areas in the central Mongolian steppe. The project involves erecting 5000 artificial nests across twenty districts.

Photos: T. Kunca (above) and D. Ragyov (below)

Nest design

The artificial nests are made from recycled steel drums purchased from fruit juice companies in Ulaanbaatar. We have bought 750 barrels so far, another 1750 are needed. The lid of the nest box is made from 3mm sheet metal which is cut to size and attached to the top. A 5 x 28cm hole is cut and the rough edges are knocked flat to prevent wing damage on entry to the nest. Three strips of metal are riveted to the top of the nests to create

a crown. This is because Upland Buzzards prefer to nest on the top of the artificial nests rather than inside and these crowns help to prevent the nest material from blowing away.

A 30 x 30cm metal plate is welded onto a 3 m metal pole; the nest box and the pole are bolted together just before they are erected. A total of 1.5 km of metal pole is required along with 20,000 nuts, bolts and washers.

Photos: N. Dixon (above) and C. Sritawip (below)

Progress so far

The workshop, previously a cow barn, has been established in Bayan, a small town 100 km south of Ulaanbaatar. Electricity has been connected and there is plenty of room to work and store the completed nest boxes. The workshop has continued to operate throughout the harsh Mongolian winter, with our team working in temperatures of -30°C making 1,500 artificial nest boxes ready for erection in the spring. A truck has been acquired to transport raw materials to our workshop and completed nests from the workshop to our field sites. All materials are sourced within Mongolia.

The project employs 22 people, providing an income for local families. Experienced craftsmen are training young, unskilled workers to become welders and metal cutters; skills they will use all their lives and not just till the end of the project. Four teams of three men will be employed to fix the five thousand nests into 60 cm deep holes with concrete. Each of the 20 districts will have 250 nests, which are spaced at 1.5 km intervals and erected in grids. So far, prior to the onset of winter, 355 nests have been erected in two districts. Erection work will begin again in March 2010, weather permitting.

Photos: C. Sritawip (above) and N. Dixon (below)

Locations of artificial nests

The locations of the nest grids have been decided after field visits to assess their suitability and discussions with local district leaders. The positions of each nest are plotted using Google Earth and then downloaded to hand-held GPS devices for the field workers to correctly position the nests in the field. Transporting 5000 nests across vast stretches of road-free steppe to their local destinations is no easy task and our drivers all have to be trained in the use of GPS to find the correct locations. At the end of the project, our drivers will have travelled over 50,000 km to erect the nests.

Meetings with the Mongolian Ministry for Nature, Environment and Tourism (MNET) has ensured government support and co-operation for the project whilst a workshop for district officials was well attended by 50 people and enthusiastic support was obtained from local communities receiving the artificial nests. The workshop for district leaders was held on the 8th

January 2010 in Puma Imperial Hotel, Ulaanbaatar. The meeting had four aims;

1. To present the results of the research that led to the initiation of this project.
2. To explain sustainable use and the proposed outcomes of the project.
3. To decide where the 250 nests should be erected in each district area, taking into consideration rodent density, proposed mining areas and pasture issues etc.
4. To explain future benefits to the community through tourism and education.

Photos: N. Dixon

The Artificial Nest Boxes will be erected in the following provinces (aimags) and districts (soums) of central Mongolia in 2010.

- **Tov Aimag** : Bayanjargalan, Bayantsagaan, Bayan, Buren and Bayan-Onjuul soums
- **Hentiy Aimag;** Darhan, Bayanmonh, Bayanhutag and Galshar soums
- **Suhbaatar Aimag;** Monhhaan, Suhbaatar, Uulbayan, Tuvshinshiree, Halzan and Bayandelger
- **Dornagovi Aimag;** Ayrag and Ihhet soums
- **Dundgovi Aimag;** Gurvansaihan, Mandalgovi and Adaatsag soums

Working with local communities

A calendar has been published in Mongolian and English which explains the project in brief. While we were putting the up nests in Bayan in October 2009, many herdsmen and local people came to discuss the project with us. Each person was given a calendar to hang in their ger (Mongolian yurt).

The project has been publicised and discussed in several meetings, festivals and events. Huyagaa and Amaraa, two biologists from our Mongolian research team, travelled to the UK in 2009 to attend the Festival of Falconry and advertise the artificial nest project as a good example of sustainable use. Prince Andrew was very interested in the project and spoke to our biologists for some time.

Photo: S. Crichton

Education is an important part of the project. We plan to link schools in Mongolia with schools in the UK and UAE. This will enable students from different parts of the world and different cultures to find out about each other and the way other people live. We also intend to produce educational resources on raptors, falconry, satellite tracking and sustainable use which will be translated into Mongolian, English and Arabic. These will be available on our website as soon as they are completed.

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The Lanner Falcon *Falco biarmicus* in Macedonia

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Summary
A concise overview of the status and biology of the Lanner Falcon in the Republic of Macedonia is given for the period 1980-2009, with emphasis on the period 2002-2009. In the period 2002-2009 14 breeding pairs were noted, nesting at an altitudinal range between 220 m and 1000 m. Information on probable or possible breeding exists for further 11 territories. The entire population is estimated at 25-35 pairs with a stable population trend. Some information is also provided on the diet, threats and conservation of the species.

Male Lanner Falcon *Falco biarmicus feldeggii*. Bird kept in captivity and originating from Macedonia.

Introduction
The Lanner Falcon *Falco biarmicus* (subspecies *feldeggii*) is a very rare and insufficiently studied bird of prey in Macedonia and the Balkan Penninsula (Grubac, 1996). Its population in Europe is estimated at 480-900 breeding pairs, majority of them in Turkey and Italy (BirdLife International, 2004). The species' large global population (100,000-1,000,000 pairs), large range (17,900,000 km^2) and stable or increasing trend are the reasons why the species has been evaluated as Least Concern (BirdLife International, 2009a and b).

Literature data for Macedonia before 1979 are exceptionally rare (Matvejev 1950, 1955, Kalaber 1970, Danko & Szilard 1971, Limbrunner 1988). The first studies on the status and the biology of the Lanner Falcon in Macedonia were done one of us (B. Grubač) during a survey of birds of prey over the period 1980-1981, which provided information on the status and the biology of the species in Macedonia and central parts of the Balkan Peninsula (Grubac, 1996). Also, some new and interesting data are given in ornithological reports for Macedonia in recent years (Škorpikova *et al*. 2006, 2007).

Study area and methods
The authors carried out intensive surveys in a large part of the Republic of Macedonia (covering *ca*. 80% of the territory) over the period 2002-09. During the field work, special attention was also paid to the Lanner Falcon, mostly in the breeding season and during the summer (from March to September). Data from other published sources or unpublished data of other researchers have been used in the paper.

We have decided not to reveal the precise locations of the nests known from the recent period (2002-09) to reduce the risk of nest robbery. A distribution map has not been included for the same reasons.

Typical breeding habitat of Lanner Falcon in Macedonia.

Results and discussion
Overview of the findings until 1979
Matvejev (1950) states that he had found three specimens in the collection of People's Museum in Struga, collected in the wider surrounding of Lake Ohrid (southwestern Macedonia) in the period between 1924 and 1936. Matvejev (1955) observed Lanner Falcon at Pelister Mt. (southern Macedonia) during June 1954. A pair or single birds were regularly observed in the Gorge of the Babuna River (central Macedonia) during 1969, 1971, 1973 (Danko & Szilard 1971, Limbrunner 1988). The species has also been observed in the gorge of Raec River (southern Macedonia) in 1970 (Kalaber, 1970) and gorge of Pcinja River near the village of Katlanovo (Skopje valley, northern Macedonia) in 1977 (J. Rašajski *pers. comm*.).

Overview of the findings in the period 1980-1991
Grubac (1996) states that during the survey of the

Lanner Falcon in Macedonia seven breeding pairs were known for the period 1980-91, and that the species was also found at other seven localities where it probably or possibly bred. Breeding pairs were known for the regions of Demir Kapija (southern Macedonia, regular presence of 1-2 pairs, 1980-1991), wider region of Crna Reka valley (at least two pairs, 1984-1991), Babuna River Gorge (one pair, 1980-1983), on the slopes of Dautica Mt., village Gorna Belica (a family on 24.06.1980) and probably one pair in Pcinja River gorge. The species has also been found in the surrounding of Prilep, in Mariovo region (southern Macedonia), Radika River valley (western Macedonia), Strumica region (southeastern Macedonia) and at Jablanica Mt. (southwestern Macedonia, the last record of one juvenile bird during dispersion, 12.08.1985).

Overview of the findings in the period 2002-2009

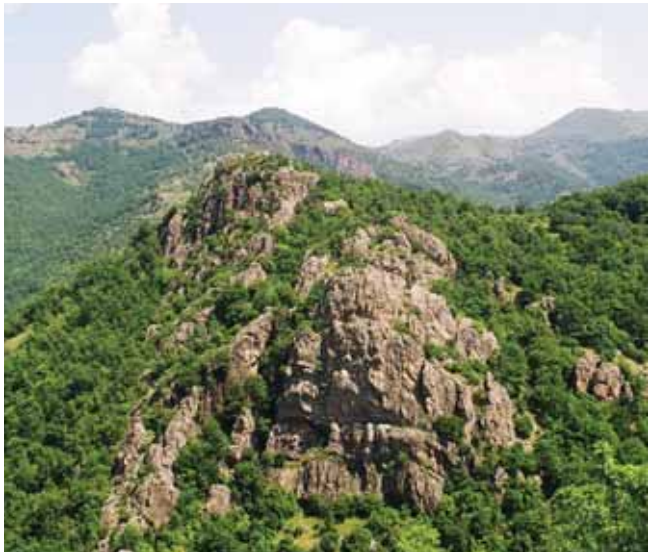
The Lanner Falcon was mostly found in southern, central and eastern parts, and rarely in the northern parts of Macedonia. Fourteen breeding pairs at different territories have been recorded, at all locations the breeding has been proved during one or several years. Probable or possible breeding has been suspected at additional 11 territories, where pairs or individual birds have been observed.

Population size estimation and trend

Grubac (1996) estimated that at least six to ten pairs were breeding in Macedonia in the period 1980-91, and considered the population stabile. According to the rough estimation of BirdLife International (2004), the population size was estimated between 10 and 30 pairs. According to our latest research, we estimate the population size to be a maximum of 25-35 pairs in the period 2002-09. The population trend has been stable or in slightly increasing. Our latest estimate includes new sites discovered at localities that were not surveyed previously (or, rarely, on previously surveyed localities where Lanners were not found in the past). Also, some of the earlier known locations were not surveyed by us in the period 2002-09.

Habitat

Lanner Falcons hunt for food from the river valleys and plains (150 m asl) to mountainous areas up to 2200 m asl. Most often they are found on open and arid terrains, from river gorges and valleys in lowlands and mid-mountain regions from 200-1500 m asl. The foraging range mostly includes sub-Mediterranean and steppe-like terrains, and to lesser degree mountainous and semi-desert regions. Main habitat types are cliffs and rocky places, different types of pastures, scrubs and different forest habitats (mostly scrubs and degraded forests in the sub-Mediterranean and oak zone) and rarely cultivated regions (agricultural land and settlements).



Typical habitat of the Lanner Falcon in a hilly area of Macedonia; a dead adult Lanner was found at this nest site in May 2008.

Diet

According to the preliminary work of Grubac (1996), based on prey remains and pellets (n=25) collected in Macedonia, it has been found that the Lanner Falcon mostly feeds on pigeons *Columba livia* (probably domesticated) – 16%, other birds, mostly passerines – 24%, rodents – 20%, lizards *Lacerta sp.* (*trilineata* ?) – 12% and insects *Coleoptera* – 16%. During the survey in the period 2002-09 different prey remains have been found (feathers and other remains in the nests or at roosting places) from pigeons *Columba sp.* (*livia*), one woodpecker *Dendrocopos sp.*, one lark (*Alaudidae*), one Blackbird *Turdus merula*, one thrush *Turdus sp.* (probably *philomelos)*, one Starling *Sturnus vulgaris* and probably one Black-eared Weatear *Oenanthe hispanica*.

Breeding

For breeding the Lanner Falcons in Macedonia often use nests of other birds (most often Raven *Corvus corax*, very rarely - by one case known - of Long-legged Buzzard *Buteo rufinus* and Egyptian Vulture *Neophron percnopterus*), or else they lay their eggs on a surface without any nest material, in holes, crevices or shelves. One pair was found breeding in Raven's nest on an electricity pylon in central Macedonia in 2005 (E. Stoynov, pers. comm.). Five nests were found on sand cliffs, four on magmatic cliffs, two on granite cliffs, one on conglomerate cliff and one on limestone). Nests were situated on an altitudinal range from 220 m to 1000 m asl (average 580 m., median 520 m), always in a mosaics of several habitat types: dominated by dry pastures (five pairs), oak scrubland (seven pairs), degraded oak forest (one pair) and arable land (one pair). Former data (1983) also include one nest on limestone at *ca.* 750 m asl, surrounded by sub-Mediterranean pseudomaquis.

Regularly, the eggs are laid in the first half of March and the juveniles fledge by the end of May. Also, some broods have been recorded later - in one case new breeding attempt was noted after loss of the first clutch. Breeding success is 1.57 fledglings (N = 26 breeding attempts). The main reason for this low breeding success is the robbing of nests by man; five broods of chicks were taken and two clutches were lost without known cause (maybe due to disturbance). At one nest an adult was found dead (probably killed). Two eggs were found unhatched in another nest where two juveniles were raised. The number of fledged juveniles per successful pair was one to four (average 2.15, N = 19).

Two chicks and an unhatched egg of the Lanner Falcon in Macedonia, 1st May 2005.

Threats and conservation problems

There is not enough data on the threats and conservation problems of the Lanner Falcon in Macedonia. A few new cases of shooting and nest robbery were discovered during the recent survey. According to our inquires one bird was been shot by pigeon-breeders in the region of Strumica. Also, two juvenile individuals have been injured by pigeon-breeders or hunters – one of them in the region of Radoviš (southeastern Macedonia) in the autumn/winter 2002 and the other one in the region of village Petrovec (Skopje valley) in February 2005. One adult bird was found dead in the nest in eastern Macedonia on 1st May 2008, probably killed (the bird was inaccessible, but without signs of predation).

Nest robbery has been recorded in Macedonia in the past (Vasić *et al*. 1985, Grubac 1996). Some nests were regularly robbed in the period 2001-2008. The removal of juveniles from nests has been recorded from four territories (i.e. a minimum of four broods with juveniles), and at two of these at least, the robbery was repeated during subsequent years.

Juvenile Lanner Falcon in captivity, originating from Macedonia, August/September 2008.

Occasional disturbance by bee-keepers trying to capture wild bees by accessing the breeding cliffs has been recorded on two territories. Habitat degradation is present to lesser degree, but has not been evaluated. There are no data on chemicals use in agriculture and other human activities, although they are very probable.

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Satellite Telemetry of Eleonora's Falcon Migration from Greek Islands

Hellenic Ornithological Society

www.ornithologiki.gr

Background

For the first time in Greece, satellite telemetry is being used to track the migration of Eleonora's Falcons *Falco eleonorae* from Greece to their wintering areas in SE Africa and Madagascar. For this purpose, birds were equipped with light, solar-powered satellite transmitters based on ARGOS system, which are used worldwide to track movements of various animal and avian species. Technological developments during the last years allowed for the creation of lighter transmitters suitable for monitoring of smaller species, such as Eleonora's Falcon

In continuation of the LIFE Project «Conservation Measures for *Falco eleonorae* in Greece (LIFE03NAT/GR/000091), four Eleonora's Falcons (2 adults and 2 juveniles) were equipped with satellite transmitters in their colony on the island of Andros (Photo 1).

Photo 1. Eleonora's falcon (named Iris) fitted with PTT (HOS archive).

Results and Discussion

The present research action is being implemented by the Hellenic Ornithological Society in collaboration with the University of Patras and German scientists from abroad with expertise in satellite tracking of Eleonora's Falcons. Similar actions have been implemented during the recent years in Spain (Balearic Islands; Lopez-Lopez *et al*, 2009) and on Sardinia (Gschweng *et al*, 2008) and demonstrate that, on the contrary to the earlier perception that Eleonora's Falcons migration routes follow the coast of Northern Africa, they actually cross directly the Sahara desert to reach their destination as fast as possible. The four tracked Eleonora's Falcons started their migratory journey from Greece to Africa in mid October. Satellite tracking of these birds will continue until the end of 2010 to determine their migratory routes on their return back to Europe and their breeding colonies.

Greece hosts around 85% of global breeding population of the Eleonora's Falcon, meaning that more than 12,000 pairs breed every year in Greece. As shown on the map (Figure 1) all four birds on their way back from Greece, avoid crossing the Sahara desert by following the direction of the river Nile.

Tracked adult and juvenile individuals followed significantly different routes until they finally all arrived to Madagascar. While adults flew directly to their destination, juveniles after crossing the Sahara desert flew to central Africa where they stayed for a few weeks until they continued their route towards Madagascar. By mid-December all four birds had arrived in Madagascar, where they were dispersed in different regions of the Central Highlands' rain forest.

The migratory journey of Eleonora's Falcons

The four tracked Eleonora's Falcons started their migratory journey from Greece to Africa in mid October. The following map (Figure 1), which is regularly updated thought the HOS website (www.ornithologiki.gr), shows the migratory routes of the four birds. They all started their journey from the island of Andros and travel towards their wintering areas, in South Africa and Madagascar.

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Comments on the study:

***Jakob Fric (Scientific coordinator of the Eleonora's Falcon project)*:**

"Despite the fact that the Eleonora's Falcon is one of best studied bird species in Greece, their migration routes to their wintering quarters in Africa are still insufficiently known. The present survey provides an opportunity to answers these questions and to provide information for future conservation of the species."

***Tasos Dimalexis (Scientific Director)*:**
"Eleonora's Falcon is a migratory raptor feeding on migratory birds, thereby being one of the most sensitive indicators of the impacts of Climate Change on birds. One of the challenges that migratory birds are expected to be forced to face in the future is the expansion of the inhospitable Sahara desert, which will increase the danger and difficulties of birds attempting to cross it. The study of the migration routes of Eleonora's Falcons from Greece, where the vast majority of the species global population breeds, across the Sahara Desert, is vital to predict the consequences of the Climate change on the survival of the species."

Figure 1. Map showing the migration of the four Eleonora's Falcons

The Hunting of Bustards in South Africa: An assessment of the potential risks and challenges.

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Background

Environmental Journalist Ian Michler (2009) recently published an article in *Africa – Birds and Birding* which highlighted concerns regarding the interest by Arab falconers in hunting bustards in Southern Africa. His article provides some insight into this as a possible threat to Southern African Biodiversity but the topic merits further consideration. Concerns regarding the hunting of bustards by Arab falconers in Southern Africa have been fuelled by reports of land purchases by Arab buyers in South Africa, but indeed such concerns are not new. This has been one reason cited for the refusal to grant permits for falconry in Namibia. Similar reasoning was applied by the Northern Cape's Nature Conservation Department in its decision to prevent the use of exotic and hybrid raptors for falconry in that province of South Africa.

The unsustainable hunting of the Houbara Bustard (*Chlamydotis undulata*) is of serious concern to falconers, including many of those in the Middle East. To put this in context, the Houbara has been hunted sustainably for the past 2,000 years and it is only in the past 50 years or less, that unsustainable hunting of this species has occurred. This could be compared to the activities of Victorian hunters whose unsustainable hunting activities resulted in the virtual extirpation of many of the larger mammals of Southern Africa. The pendulum is turning in the Middle East, championed by the late Sheikh Zayed bin Sultan Al Nahyan of Abu Dhabi. The reintroduction of the Houbara Bustard is currently being undertaken in Morocco with a release rate of 10,000 birds per annum. It is being initiated in Western Pakistan and examined in the Yemen. This will be the largest reintroduction program for a species ever and the production of Houbara Bustards in Morocco in 2008 was slightly in excess of 16,000 birds and almost 1,000 birds were produced in the Sweihan project in Abu Dhabi (see *Falco* #33 *pp*. 30-31).

Bustard hunting in South Africa?

I am sceptical as to the veracity of reports that suggest that there is potential for breeding projects of the Houbara in South Africa (Michler, 2009) and would consider that the control of such activity by South African Conservation Authorities to be relatively straight forward. The breeding of Houbara Bustards in captivity is a remarkably complex and labour-intensive exercise. The Houbara does not imprint on humans or on an artificial environment. This means that they require constant management and habituation to keep them relatively tame. Coupled with this, being creatures that naturally occur in widely dispersed populations, they are very susceptible to disease when confined. The management problems are immense and can easily be seen by a visit to a Houbara Bustard breeding facility. This must enhance the need for caution in Southern Africa where a reintroduction program of this complexity could not be contemplated.

The scenario of Arab hunters targeting Southern African bustards will appal many conservationists and certainly elicits a knee-jerk reaction in people who are interested in the well-being of Southern African Biodiversity, but this may bear closer consideration. Bustard populations in Southern Africa are not currently hunted in any conventional sense. Historical hunting of the larger bustards with rifles and shotguns was not sustainable. Bustards are currently facing a number of threats including habitat loss and death through collision with fences and power-lines. These birds show slow recruitment rates due to small clutch sizes and slow maturation. Of the 10 species of Khoraans and bustards in South Africa, four are listed in terms of the Biodiversity Act of South Africa (2004). The Kori Bustard (*Ardeotis kori*), Blue Korhaan (*Eupodotis caerulescens*) and Ludwig's Bustard (*Neotis ludwigii*) are listed as vulnerable, while the Denham's Bustard (*Neotis denhami*) is listed as protected. None of the other bustards are listed in terms of this legislation but a permit would be required to hunt them. Of these, all are considered not threatened globally, although the White–bellied Korhaan is considered vulnerable in South Africa and Black–bellied Bustard is considered near-threatened in South Africa (Hockey *et al*., 2005). Mammalian species in similar categories of protection are hunted on permit, so whilst legislation is in place to control or prevent the hunting of these birds; this protection does not preclude their hunting under special permit. Arab falconers may be particularly interested in hunting those species that most equate to the Houbara Bustard in terms of size, but it is possible that any bustard species will be of interest to them. Only the Kori Bustard would be excluded as it is too large for consideration (if for no other reason). There have been some approaches made to South African falconers and to Hunting Outfitters regarding possible falconry opportunities by Arab falconers but the seriousness of these approaches is difficult to assess. Certainly, if the farms in South Africa have been purchased with the intention of hunting bustards, as suggested by

Mr. Michler, this must indicate serious intent and the practicalities of this activity must be examined.

It is the understanding of the author that Arab falconers wish to practice their traditional style of falconry which they see as an integral part of their heritage. Traditional Arab falconry involves the hunting with large falcons, generally Sakers, and the prize quarry is the Houbara Bustard, although Thick Knee (*Burhinus sp*.) and hares are also pursued. The traditional style is described as "out of the hood" or "pursuit" falconry. In this style of falconry the quarry is sighted, the falcon's hood is removed and the falcon is cast off to chase the flushed quarry. The Falconer then follows the hunt on foot, horse or camel-back, or, more recently, 4x4 Vehicle. Chases can be a kilometre or more and the falcon needs assistance from the falconer to keep pressure on the bustard which will fight back on the ground and an unassisted hawk may think twice about tackling such large quarry again. Arab falconers view the traditional Western falconry method, where the falcon is trained to "wait-on" above quarry that is flushed, with some disdain. They believe this form to be less sporting and less exciting. Similarly they have little interest in the traditional Western quarries such as duck and game-birds. For these reasons, safari operations offering "western style" falconry to the Arabian market have failed.

Consideration must be given to the logistical challenges that would face the provision of falconry opportunities to Arab falconers in South or Southern Africa if the legal and permitting restrictions were to be overcome. To do this we need to examine each of the components required for this practice.

The Falcons: Only large, aggressive and heat-tolerant birds are suitable for this practice. These would include Sakers and Gyrfalcon x Saker or Peregrine x Saker hybrids. Pure Gyrfalcons could possibly be flown in the Karoo in winter, with great care. There are no indigenous falcons that hunt Korhaan. The African Peregrine could possibly be induced to take Black Korhaan but would be very unlikely to do this on any sort of regular or predictable basis. The Arab falconers could bring their own birds from the Middle East. These birds would be subject to a one month quarantine, which would mean that they would require fitness training before they could be hunted. They would also be out of season with their moult coming from northern to southern hemispheres. Essentially this is not a practical proposition. The alternative would be to establish a collection of hunting birds in South Africa. A falconry bird will generally only take one kill per day, with good fortune. A falconer will require three birds to have at least two hunts per day. In order to establish sufficient birds on a renewable basis for an operation of any magnitude, a breeding facility would be required with birds set aside for breeding purposes. This sort of operation would require competent staff, with the knowledge to fly big falcons, the ability to run a very technical breeding facility and manage the veterinary problems associated with these exotic and valuable birds.

The Quarry: The Karroo and Blue Khoraan are territorial and can be found fairly predictably in suitable habitat. Ludwig's and Denham's Bustards are more mobile and are less predictable, although appropriate habitat management would increase numbers and may have the effect of concentrating birds. The smaller Black Khoraan *Eupodotis afra,* is relatively plentiful in grassland areas and may be the most suitable quarry species. As already mentioned the slow recruitment of these birds would mean that overhunting would rapidly denude the farms purchased by Arab investors (if this is indeed was the purpose of those farms) of suitable quarry. The next alternative would be to purchase or hire hunting rights on other land, given that most huntable land is in private hands.

An angry Dikkop *Burhinus capensis* (Patrick Seeton)

Hunting Requirements: The Arab hunting style and preferred quarry requires large open spaces. Hunts may easily cover a kilometre or more. Internal fencing on the farms would have to be dismantled and boundary fences (to say nothing of neighbour's permission) would pose a considerable problem. Following the hunt is also a significant issue. The use of horses in the Karoo or Free State veldt, riddled with Aardvark (Ant-bear) and ground squirrel holes, is somewhat limited. Quad-bikes or 4x4 vehicles are a possibility, but also have limitations (to say nothing of ethical considerations). The author's personal opinion is that, even given the considerable enthusiasm of the Arab falconers who like to be in at the kill, much of the South African terrain is too rugged and unsuitable for this style of hunting to be carried out in any real magnitude.

The Norms and Standards for Hunting in South Africa

New legislation, *The Norms and Standards for Hunting in South Africa*, is currently in draft form. The latest draft fails to address falconry but representations have been submitted to correct this deficiency and have had the support of all major hunting organizations in South Africa. These representations require that the legislation contains a definition of falconry and will have the effect of making falconry a legitimate hunting method. Further, it is requested that, in terms of these regulations, all Falconers will need to hold a Grading from an Accredited Grading Body and this will be reviewed annually. The falconers believe that this Accredited Body should be the South African Falconry Association (SAFA), being the umbrella organization representing all of the Provincial falconry clubs in South Africa. This body has set minimum standards for the practice of falconry in South Africa since its inception some 20 years ago and has the current Grading System written into its Constitution. This Grading System is currently under review and will be re-vamped to reflect current practice and circumstances. This process will not compromise the system and, if anything, the requirements for higher grades will become more formal and rigorous. The Grading System ensures that our falconers are competent and responsible and is admired and envied elsewhere in the world. In terms of the Grading System, only A Grade falconers may fly Peregrine Falcons (*Falco peregrinus minor*) and only those with sufficient experience flying Peregrines may fly exotic falcons. This limits the use of exotic falcons to a very select few and, coupled with SAFA's very stringent requirements for the flying of these falcons, negates any impact that these birds would have on our biodiversity. In terms of the Draft Norms and Standards legislation, SAFA, as the Accrediting Body, would have considerable say and interest in any venture involving the hunting of bustards with falcons in South Africa. Indeed, in terms of the proposed legislation, those involved would be outside the law, without a Grading from SAFA. Falconers in South Africa have an excellent record of co-operation with the authorities and we have demonstrated ourselves clearly willing to restrain any "deviant" practitioners of our Art (as described by Mr. Michler). SAFA is a Member of the International Association for Falconry and the Conservation of Birds of Prey (IAF), which, itself, is a full member of the IUCN, the World's largest conservation organization. Sustainable use is the cornerstone of IUCN strategy.

The Nature Conservation Authorities in South Africa are well informed regarding falconry. Appropriate falconry policies are either in place or in process, both on a national and provincial level. Similarly any illegal or unacceptable activities by members of the professional hunting community would receive rapid sanction by AGRED, the South African delegation of the International Council for Game and Wildlife Conservation (CIC) or PHASA. It is difficult to envisage a situation in South Africa, given the competency of the Nature Conservation Authorities, the well-motivated bodies which control hunting as well as the vigilant Conservation NGOs, where bustard hunting on any organized or commercial scale could be practiced illegally.

South African falconer with Peregrine (Yukio Asoaka)

Conservation and sustainable use

Ian Michler (2009) quotes the depredation of Sahelian species resulting from unsustainable hunting as a result of the "Tragedy of the Commons" in that region. This clearly does not apply to the South African situation where private land ownership has resulted in custodianship which has benefited many indigenous species. Indeed the Middle Eastern purchasers of land in South Africa are following a very different pattern to that which we are decrying in North Africa and their intentions for this land need to be investigated. Further lessons can

be learned by examining this contrast. South Africa has a proud tradition as an innovator of "sustainable use" conservation. It is possible that the sustainable hunting of bustards could benefit conservation through habitat improvement and extending conservation measures to additional large tracts of land. It may also be of benefit to the economy through creating jobs, developing infrastructure and drawing additional well-paying tourists to our land. Before any bustard hunting can be countenanced in South Africa, a thorough Environmental Impact Assessment (EIA) should be done, to establish which, if any, species can be hunted, what numbers could be harvested and what dates could be considered for hunting seasons. It is the opinion of AGRED that bustards should not be hunted in South Africa and such an EIA is likely to fail to show that bustards can be hunted.

Falconers with the wealth to purchase large areas of farm land can be required to fund these studies, if the hunting of bustards is indeed their intention. Over and above this, effective checks need to be in place to ensure that hunting quotas are not exceeded and all falconers, be they professional, paying guests or foreign nationals, must comply with the law and the grading requirements of SAFA. Furthermore, there must be strict controls on the number of exotic falcons utilized and the restraints governing their use, imposed by SAFA and enumerated in the Falconry Code of Conduct applied by the Dept. of Agriculture, must be enforced. While such measures are probably possible, it remains the opinion of SAFA and that of the Author, that bustard hunting on any significant scale is not desirable and will certainly create problems that we wish to avoid. Falconry currently enjoys a position where it is acknowledged as being a minimally consumptive sustainable use activity that encourages conservation. This position is jealously guarded by falconers in South Africa.

The hunting of bustards with falcons in South Africa may present a means of encouraging conservation through sustainable use. It remains uncertain whether sustainable use is a practical possibility and it is probable that it is not. If this activity is prohibited in South Africa, the potential falconers may cast their eyes elsewhere. Falconry is well established in Zimbabwe and conservation authorities there are capable of restricting activities of this nature. Falconry has been forbidden in Namibia and there is little knowledge of this activity amongst the authorities. This may make the country more vulnerable as the checks and balances enumerated for South Africa are not in place. There are suitable areas in Angola and Zambia but these countries lack the South African infrastructure and share the negative issue of being in the Southern Hemisphere. East Africa, in particular Tanzania, must be seen as vulnerable to unsustainable bustard hunting practices and particular vigilance is needed with respect to East Africa as a whole. We must also be alert to the danger of illegal trapping and trade in our bustards which could certainly pose a serious unsustainable threat.

The best way to ensure the co-operation and compliance of falconers in defeating any threat to our biodiversity, be it the unsustainable hunting of bustards or the use of significant numbers of exotic raptors, is to continue to permit a controlled, limited and sustainable harvest of wild raptors for falconry purposes. This process is now well understood by our conservation authorities, the Bird of Prey Working Group of EWT and Birdlife South Africa. Falconers are very cognizant of this significant privilege and will defend it through maintaining standards of excellence, compliance with the law and involvement in conservation. This is indeed conservation through sustainable use, as envisaged by the Convention on Biological Diversity.

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Falconry and Veterinary Medicine

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Introduction

The relationship between man and raptor is an ancient one. However, unlike man's relationship with many other species, the raptor could never be considered domesticated and, until recently, no attempt had been made to alter the morphology of a raptor by selective breeding. In the symbiotic relationship between man and hawk, man exploits the bird's natural hunting instincts by encouraging the bird to exploit man as an easy source of food.

Origin of hawking

It is generally accepted that hawking with birds originated in Central Asia, with the earliest records dating back to Hittite art from the 13th Century BC. Whilst hawking had existed in the Middle East, central Asia and Europe for many centuries, the Muslim occupation of Spain (AD 710–1492) and the Crusades (AD 1096–1291) brought Western Europeans into close contact with Islamic civilization. With this closer contact came an exchange of ideas, notably the introduction of the hood and the lure to European falconry. During the Third Crusade, Saladin is reputed to have taken pity on the plight of Richard the Lionheart's birds at the siege of Acre (AD 1189–1191) and sent his finest fowls to feed them. Falconry records in China and India date back to the 7th Century BC. In the United States the pursuit of falconry has a more recent history, with a huge increase in popularity following the establishment of the American Falconers Association (NAFA) in the 1960s.

Picture 1. Raptors, such as this falcon are even raced in competitions in Dubai, UAE.

The expense of keeping birds, and privileged access to hunting grounds, meant that falconry in Europe was to become a preserve of the elite. The 'Book of St Albans' (1486) describes a hierarchy of hawks and proposes the social rank to which each bird was suited. A similar elitist situation existed in Japan where falconry was considered the preserve of the Samurai and noble classes. However, among the nomadic desert populations of the Arabian Peninsula and Mongolian steppes this did not occur, as the art of trapping falcons or eagles and training them for the hunt was a valuable means of supplementing their diet.

Changing times

With the modern development of firearms and the attendant decline of the natural world in relation to mankind, falconry has lost its practical purpose of providing food for the pot. However, the sport of falconry is still practiced worldwide, from China, Central Asia, Indo-Pakistan, the Middle East, Africa and Europe, to North America. The parallel development of falconry in geographical locations around the world has led to varied techniques suited to the culture, legislature and natural environment of the country in which they originated. For instance, in his *Kitab al-Hayawanat* or 'Book of Animals', the Iraqi scholar Al-Jahiz (AD 869) noted that Arab falconers preferred to hunt with the Saker and Peregrine, rather than with the Goshawks favoured by Persians, Turks and Indians. This preference still exists today and may be due to the fact that desert is open terrain and unsuited to the ambush hunting style practiced by the short wing hawks.

Role of veterinary medicine

Veterinary medicine for hawks has been around almost as long as hawking itself. The first known Arabic treatise on falconry, the *Kitab Manafi al-Tair* **o**r 'The Book of the Benefits of Birds' (AD 800) runs to 153 chapters and deals with every aspect of the hawk and its diseases. Whilst covering Sakers, Peregrines and other hawks, it dealt chiefly with the Goshawk - the favoured bird of Persian falconers. The first book printed in English on falconry (*The Boke of St Albans*, 1486) listed a considerable number of falcon diseases. Many of the diseases listed in these early texts, such as frounce, bumblefoot and aspergillosis, are still recognisable today but inevitably treatments have progressed over the years. Consider the cure for aspergillosis recommended by Blome in 1683, which included butter, damascus rosewater, saffron and sugar candy. Compare this with the current treatment favoured by avian veterinarians today which includes use of the latest antifungal drugs.

Traditional treatments are still used by falconers in the Middle East today. Honey is used to aid wound healing,

whilst garlic may be used for internal parasites and sugar given for slow digestion. Unfortunately, some treatments have disastrous consequences. Burning of the head and cere with a hot iron is sometimes used to treat neurological disease, whilst caustic chemicals are sometimes used to burn away bumblefoot lesions. Inevitably, these methods cause more problems than they cure and are often beyond the help of even modern medical techniques.

Picture 2. Grade 1 bumblefoot lesion: severe bruising on the plantar aspect of the foot. Reproduced from the *BSAVA Manual of Raptors, Pigeons and Passerine Birds* with the permission of BSAVA Publications.

Regional differences

With hawking practiced in a number of countries around the world, the veterinarian can expect to see different diseases and presentations in each region. Many of these differences are purely attributable to geography (e.g. the lung worm *Serratospiculum* spp. is common in the Middle East but not endemic in Northern Europe), whilst others may be related to culture and tradition e.g. the consequences of 'sealing' (sewing the eyelids) wild caught falcons is not commonly encountered in Europe. Education of owners is vital in every instance; for example, while the dangers of feeding wild caught or shot birds is probably well known in Europe, there is still a high incidence of Newcastle disease and lead poisoning in the Middle East.

Picture 3. Shadow over the lung in the right airspace caused by an aspergilloma in a falcon. Reproduced from the *BSAVA Manual of Raptors, Pigeons and Passerine Birds* with the permission of BSAVA Publications.

The shrinking modern world has meant that some enthusiasts train birds that would not normally be found in their climatic region and this has given rise to a host of other specific health issues. In the Middle East, the recent popularity of species used to colder climes, such as Gyr falcons, is undoubtedly associated with the high incidence of fungal respiratory disease seen in this species. Conversely, birds such as Harris hawks which are used to warmer climates may suffer from wing tip oedema when exposed to the colder temperatures of Northern Europe.

Hawking has a long and rich history throughout the world. It is hoped that both the tradition of falconry and the demand for increasing standards of veterinary care will continue for generations to come.

The use of F10 in falcon medicine: practical applications

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Introduction

Falcons and falconry have formed an integral part of life of the deserts of the Arabian Peninsula for thousands of years. In the past, Bedouin tribesmen, during the winter months, used to trap, train and hunt with migratory falcons in order to supplement their basic diet. The falcons were subsequently released in the spring, as the caring of these falcons throughout the year could strain their already limited resources. Today, after the hunting season, Arab falconers keep their falcons in air-conditioned rooms or aviaries during the long moulting months so they can be used again for the following season. As a byproduct of this change of attitude, a substantially large population of hunting falcons are kept in captivity every year throughout the Gulf countries. The need for professional health care to such a large captive population of falcons prompted the creation of modern falcon hospitals in most countries of the region.

Biosecurity programme

Falcon hospitals in the Gulf, in common with other medical facilities dedicated to the exclusive care and treatment of avian species somewhere else, are exposed to a wide range of pathogens from incoming out-patients. The need of designing and implementing a biosecurity programme that could prevent propagation and the spread of pathogens throughout the facility cannot be underestimated.

Housing a large number of falcons (e.g. falcon hospital, moulting facility and breeding programme) within the same facility could represent a potential risk of infection if a comprehensive biosecurity programme is not implemented.

One of the main pillars of any biosecurity programme is disinfection which could be defined as a procedure intended to eliminate, from a particular defined area, any pathogenic organism or to render them inert with one or a combination of chemicals. There are many products available in the market that could be used within a biosecurity programme. However, the authors have found F10 disinfectant products to be ideal for such undertaking due to its safety and non-corrosive properties and the unique synergic activity of its quaternary ammonium and biguanadine compounds acting against a wide range of viruses, bacteria, fungi and spores.

The following is an account of the uses of F10 products in our biosecurity programme used in our falcon medical facility.

Footbath – access/exit quarantine/hospital wards

Footbaths should be installed in all entrance/exits of the quarantine station and isolation and hospital wards. F10SC is normally used diluted 1:250 and placed in shallow fibreglass or plastic trays. Very often a pad of plastic matting (Astroturf™) is placed within the tray in order to help cleaning the sole of soiled protective shoes. It is highly recommended to clean the tray and replace the solution everyday if the use is intensive. During the summer months, it is recommended to place the footbaths within the facilities to avoid evaporation due to prevalent hot and dried weather conditions.

Fogging – medical facilities/falcon wards

All rooms within a clinic or a hospital facility should be disinfected using a commercially available fogging unit two or three times a week or daily as required (Fig. 1). The objective is to eliminate or drastically reduced airborne pathogens and to disinfect all contact surfaces and inaccessible or difficult to reach areas. Fogging has been particularly important in clinical examination and post-mortem room facilities during the handling of suspected cases of Newcastle disease and avian influenza. The recommended dilution commonly used for fogging is 1:250 using either F10SC for post-cleansing disinfection or F10CXD for a more comprehensive cleansing and disinfection procedure.

Figure 1. Fogging

Surface disinfection - medical facilities/falcon wards

During the falconry season, hundreds of falcons are admitted in falcon specialist hospitals in the Middle East for clinical examination or for treatment. In the course of a normal day, it is not uncommon to handle 20 to 40 or more falcons undergoing a diverse

array of clinical conditions including trichomonosis, aspergillosis, Newcastle disease and avian pox. The need of implementing an adequate disinfection protocol of work tops, tables, door handles, sinks and others cannot be overemphasized. Adequate disinfection can be carried out using a hand spray using F10SC or F10CXD in a dilution 1:250 and disposable paper towels (Fig. 2).

Figure 2. Disinfecting

Surface disinfection – incubation, hatching and rearing rooms, egg disinfection

Falcon captive breeding programmes have become very popular in some countries in the Middle East, but in particular in the United Arab Emirates due to a ban on the use of wild-caught falcons in the sport of falconry. This is in agreement with the legislation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). At our facility we use F10 products in the general disinfection of incubation, hatching and rearing rooms and for the sanitation of eggs. Prior to the breeding season the rooms are thoroughly cleaned and disinfected including fogging and spraying of worktops. Similarly, the equipment is cleaned and sprayed using a solution of F10SC at the dilution 1:250. Eggs are usually sprayed with the same solution and allowed to dry on racks prior placement within incubators.

Therapy

Nasal and sinal flushing in the therapeutic management of upper respiratory disease

Nasal and sinus flushing are an integral part of the therapeutic management of clinical conditions affecting the upper respiratory system in falcons. The flushing solution is commonly prepared using F10SC diluted 1:250 with saline. A 20 ml syringe is filled up with the flushing solution. A modified rubber cup is placed on the tip of the syringe before applying this to the opening of the nares (Fig. 3). The solution is gently injected in the nares and exists through the choana. The procedure is repeated on the contralateral side if the medical condition is bilateral. It is usually recommended to repeat the same procedure twice a day for 5 to 7 days depending on the severity of the infection. Surgical debridement to remove caseous masses within the different diverticula of the infraorbital sinuses is very often required in falcons as part of the post-operative treatment of infections with *T. gallinae*. After the surgical removal of caseous masses and seropurulent exudates, the flushing of the sinus with the same solution and using a cannula is highly recommended.

Figure 3. Nasal and sinal flushing

Nebulisation in the therapeutic management of lower respiratory diseases

Air sacculitis of fungal and bacterial origin is very common in falcons in the Middle East. The diagnosis is commonly made through a combination of survey radiographs, haematology analyses and endoscopy. The collection of biopsies and microbiology swabs during endoscopy examinations are indispensable in the differential diagnosis. The therapeutic management depends largely of the results of the examination of the samples collected. Nebulisation is commonly used in the therapeutic management of lower respiratory system in falcons. At our facility we use a custom-made chamber constructed out of laminated plywood to ease the cleansing and disinfecting procedures. The chamber is provided with an observation window covered with Plexiglas to allow observation of the falcon during nebulisation. The chamber is connected to a nebulising unit capable of producing a particle size smaller than 5μm (Fig. 4). A solution of F10SC in saline 1:250 is used once or twice a day for up to 6 to 8 weeks depending on the severity of the case. Food retention in the crop has been reported if the falcons are immediately fed after nebulisation. It is recommended to nebulise falcons in the morning and at midday and to allow a minimum of 4 hours rest period before offering any food to the falcons.

Figure 4. Nebulising chamber

Foot baths in the therapeutic management of bumblefoot

Bumblefoot is the single most important medical condition affecting hunting falcons in the Middle East. Predisposing factors include lack or sudden cessation of exercise, nutritional deficiencies and inadequate perches. At our facility we use disinfectant footbaths as part of the therapeutic management of bumblefoot. A plastic tray, firmly attached to a falcon stand is filled out with a warm (41°C) solution of F10SC diluted 1:250 with saline. A cut out piece of plastic matting (Astroturf™) is placed at the bottom of the tray to avoid further pressure sore injuries. The falcon is allowed into the bath for periods of up to 30 min twice a day (Fig. 5). Supervision by a veterinary technician during this period is essential. Early bumblefoot stages benefit by applying F10 Germicidal Barrier Ointment after the bath.

Figure 5. Foot bath

Aspergillosis in raptors after smoke-inhalation injury

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Summary

Exposure to fire and smoke is a rare incident in avian medicine. In one published report seven blue-fronted Amazon parrots (*Amazona aestiva aestiva*) developed severe mycotic airsacculitis and pneumonia after exposure to fire and smoke. Here we report two similar cases, one from Dubai (Gyr x Saker-falcon), UAE and one from Belgium (Harris hawk; *Parabuteo unicinctus*). In Dubai a female falcon was rescued from a fire in overnight quarters. A further three falcons died in the facility. The Harris hawk was housed in a summerhouse, which caught fire. Both birds were immediately taken to veterinary hospitals where they received supportive care for leg and wing burns. Four days later, the birds became anorectic, showing conjunctivitis and dyspnea.

Although the birds received antifungal therapy, both birds died after seven (falcon) and 10 (hawk) days. Necropsy revealed severe diphtheroid tracheitis with many bacteria and fungal hyphae in the debris and smoke-granulomas in the lungs of the falcon, as well as mycotic pneumonia in the hawk. High numbers of *Aspergillus fumigatus* were cultured from the falcon. Mycotic airsacculitis and pneumonia due to *Aspergillus fumigatus* appear to be a common sequelae following smoke-inhalation injury in raptors.

Introduction

Exposure to fire and smoke is a rare incident in avian medicine. One case report discusses Aspergillosis in an African Grey Parrot following smoke inhalation and systemic antibiotic use (Oglesbee, 1991). In another published report seven blue-fronted Amazon parrots (*Amazona aestiva aestiva*) developed severe mycotic airsacculitis and pneumonia after exposure to fire and smoke (Verstappen et al., 2005)

Materials and Methods

Here we report two similar cases, one from Dubai (Gyr x Saker Falcon), UAE and one from Belgium (Harris hawk; *Parabuteo unicinctus*). In Dubai a female

falcon was rescued from a fire in overnight quarters. A further three falcons died in the facility. The Harris Hawk was housed in a summerhouse, which caught fire. Both birds were immediately taken to veterinary hospitals where they received supportive care for leg and wing burns. Routine clinical investigations were performed including physical examination, endoscopy and haematology before being euthanized due to poor prognosis.

Results

Although the birds received antifungal therapy, both birds died after seven (falcon) and 10 (hawk) days. Necropsy revealed severe diphtheroid tracheitis with many bacteria and fungal hyphae in the debris and smoke-granulomas in the lungs of the falcon, as well as mycotic pneumonia in the hawk. High numbers of *Aspergillus fumigatus* were cultured from the falcon.

Picture 1. Harris hawk after presentation to the hospital.

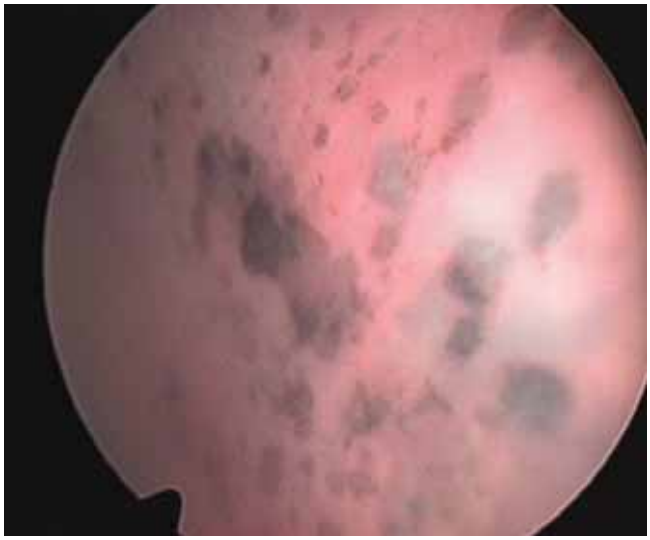
Picture 2. Wing burns on the Harris hawk.

Discussion

Mycotic airsacculitis and pneumonia due to Aspergillus fumigatus appear to be a common sequelae following smoke-inhalation injury in raptors. Similar to the findings in an African Grey Parrot (Oglesbee, 1991) and in blue-fronted Amazon parrots (*Amazona aestiva aestiva*; Verstappen et al., 2005) both our birds developed severe mycotic airsacculitis and pneumonia after exposure to fire and smoke.

Picture 3. Radiograph showing marked diffuse opacity of left and right lung fields and airspaces of the falcon.

The primary cause of death in most smoke inhalation toxicoses is carbon monoxide (CO). There are, however, other irritant (aldehydes, HCl, sulphur dioxide) causing delayed, complicated pulmonary failure (LaBonde, 1991). These clinical problems may not surface for days. Therefore, persistent monitoring and treatment should continue for days up to three weeks post smoke exposure.



Picture 4. Endoscopy image showing black pigmentation in the lungs of the falcon.

Treatment of smoke inhalation includes access to fresh air immediately followed by emergency therapy as needed. Oxygen in a dark, stress free environment is used to stabilize and if possible, humidified oxygen or nebulized saline in oxygen will minimize drying of secretions and seeding of bacteria (LaBonde, 1991). Bronchodilator therapy can be used to alleviate reflex bronchospasms. Fluid therapy will aid in cardiac output and enhance oxygen delivery to tissues. Antifungal therapy should be initiated immediately after presentation.

Picture 5. Smoke-granulomas in the lungs of the falcon at necropsy.

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The Use of HEALx Booster® Concentrate in the Treatment of Falcons with Poxvirus

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Summary

At the Hospital de Rapaces Altai, Madrid, Spain more than 80 falcons with poxvirus skin lesions were treated using HEALx Booster® Concentrate. In all cases every lesion disappeared without the loss of any digits and without evidence of a visible carrier. In most cases of poxvirus, the skin lesion healed even before finishing the Booster® Concentrate treatment (scars began to dry out after 1 week of treatment). Before using Booster® Concentrate, carrier falcons would live for many years with scars on their feet, which would infect other falcons. The Booster® Concentrate seems to resolve this issue, and no reinfection was seen. A severe poxvirus skin lesion was diagnosed in an 800 g juvenile male Gyr x Peregrine (*Falco rusticolus* x *Falco peregrinus*) hybrid. Marbofloxacin was administered for the first week. The hybrid was administered two pearls of Booster® Concentrate orally per day for the first 3 days and one pearl per day for the next 40 days. This case involved a severe poxvirus strain.

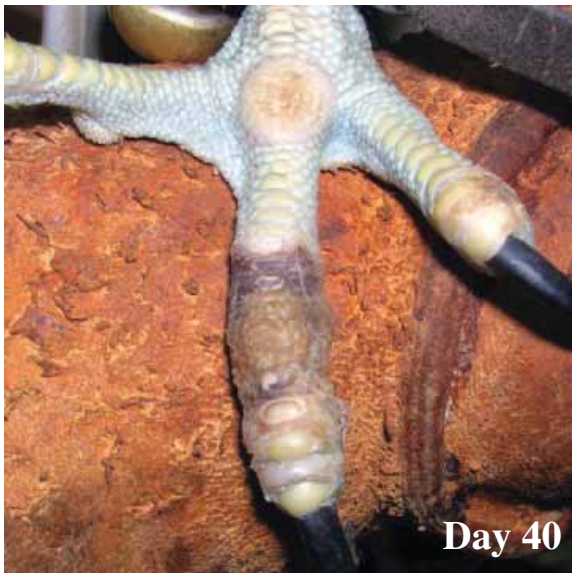
Mechanism of Action

HEALx Booster® Concentrate is a patented, highly distilled monoglyceride (monolaurin glycerol monolaurate). While nontoxic and approved as a GRAS (Generally Recognized as Safe) direct food additive by the Food and Drug Administration, Booster® Concentrate adversely affects bacteria, yeast, fungi, protozoa and enveloped viruses. Researchers found that the properties that determine the anti-infective action of lipids are related to their structure: e.g., free fatty acids and monoglycerides. While the monoglycerides are active, diglycerides and triglycerides (fats) are inactive. Of the saturated fatty acids, lauric acid has greater antiviral activity than caprylic acid (C-8), capric acid (C-10), or myristic acid (C-14). Fatty acids and monoglycerides produce their killing/inactivating effects by several mechanisms. An early postulated mechanism was the perturbing of the plasma membrane lipid bilayer. The antiviral action attributed to monolaurin is that of fluidizing the structure in the envelope of the virus, causing the disintegration of the microbial membrane. Recent studies indicate that one antimicrobial effect in bacteria is related to monolaurin's interference with signal transduction/ toxin formation (Projan *et al*., 1994). Another antimicrobial effect in viruses is due to lauric

acid's interference with virus assembly and viral maturation (Homung *et al.*, 1994). The third mode of action may be on the immune system itself (Witcher *et al.*, 1996).

Body Weight	Booster Concentrate Daily Dose
100 - 500 g	½ pellet
500 g - 1 kg	1 pellet
1 kg – 3 kg	2 pellets
> 3 kg	3 pellets

Table 1. Dosing used in raptors (oral dosages)
Initial dose should not exceed 3 pellets, regardless of body weight. Normal recommendations for all species do not exceed 1 tsp (5 ml) per 150 lb (68 kg).



Acknowledgements
We thank staff from Hospital de Rapaces Altai, Madrid.

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Mycoplasmas Isolated from Stone Curlews (*Burhinus oedicnemus*) and Houbara Bustards (*Chlamydotis undulata*) used in Falconry in the United Arab Emirates

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Summary

The aim of this study was to evaluate the risk of transmission of *Mycoplasma* (*M.*) spp. from quarry to hunting falcons in the Middle East. Groups of 17 Houbara Bustards (*Chlamydotis undulata*) and 29 Stone Curlews (*Burhinus oedicnemus*) kept at three different private collections in Dubai were examined microbiologically for mycoplasmas. Additionally, 10 falcons used for hunting were investigated for comparison. From all birds conjunctival and choanal swabs were taken and examined equally using PCR and culture methods. *M. gypis* and *M. falconis* were isolated from the majority (28 of 29 stone curlews; 97%) of the stone curlews. Most of the birds had no associated pathological findings. *M. falconis* was also detected in samples collected from 2 of the 10 falcons, while *M. buteonis* was isolated from the majority of falcons (6 of 10 falcons) from choanal (n = 5) and conjunctival (n = 1) swabs.

Introduction

Little is known about pathogenicity of mycoplasmas in falcons, but prevalence of mycoplasmas in falcons is supposed to be high (Gluender *et al*, 1976; Furr *et al*, 1977; Poveda *et al*, 1990; Erdelyi *et al*, 1999; Lierz *et al*, 2000; 2002). Mycoplasmas are traditionally thought to be rather host specific. Recent findings have weakened this dogma, suggesting that some mycoplasmas are able to infect a diversity of hosts. An example among avian mycoplasmas is *M. meleagridis*, which was long thought to be host-specific for turkeys, but has also been found in raptors (Lierz *et al*, 2000).

Material and Methods

A total of 17 Houbara Bustards (*Chlamydotis undulata*) and 29 Stone Curlews (*Burhinus oedicnemus*) kept at three different private collections in Dubai were examined. Ten adult falcons [four Saker Falcons (*Falco cherrug*), four Gyr-Peregrine hybrids (*Falco rusticolus* x *Falco peregrinus*), one Peregrine Falcon (*Falco peregrinus*), one Gyrfalcon (*Falco rusticolus*)] were examined during routine health checks at Dubai Falcon Hospital, UAE. All 10 adult female birds were used for falconry (Table 1).

Sampling:

For mycoplasma isolation, conjunctival and choanal cleft swabs were tested (Kleven, 2008). Additionally swabs from the left caudal thoracic air sac were taken during endoscopies in the two sick Houbara Bustards and in 2 of 10 healthy falcons. In one healthy falcon only air sac swabs were collected (Table 1) (Lierz *et al*, 2000). Organ samples of syrinx, oviduct and liver were obtained from one Stone Curlew which died in consequence to injuries caused by a falcon. Sterile cotton swabs were pre-wetted in 2SP-medium (48.46 g sucrose, 2.088 g K_2HPO_4, 1.088 g KH_2PO_4 ad 1000 ml distilled water, supplemented with 120 ml foetal calf serum) to improve recovery rates (Kleven, 2008). Immediately after collection of the samples, the swabs were put into 2SP-medium and stored at –80°C until further analysis (Kleven, 2008).

Picture 1. Stone Curlew

Detection of mycoplasmas:

Molecular detection of mycoplasmas was carried out by genus-specific amplification (Vojdani *et al*, 1998). Swabs and tissue samples were suspended in 4 ml of a modified Hayflick's medium or Frey medium for propagation of mycoplasmas (Kleven, 2008). After 7 days of incubation at 37°C, modified Hayflick's and Frey agar plates were inoculated and incubated at 37°C in 5% CO_2 for 14 days and were checked daily for the presence of colonies. Mycoplasma isolates were

identified to species level by immunofluorescence using species-specific rabbit antisera against avian *Mycoplasma* species (Spergser, J., and Rosengarten, R., 2007). To confirm serological results sequencing of the 16S-23S intergenic transcribed spacer (ITS) region of 2 isolates of each serologically identified mycoplasma species was performed as previously described (Harasawa *et al*, 2004).

Results

There was no discrepancy between molecular detection and cultural isolation of mycoplasmas. Mycoplasmas were not detected in any of the swabs taken from houbara bustards. In contrast, *M. gypis* was isolated from the majority of the stone curlews (28 of 29 birds), predominantly colonizing their choanal cleft (27 of 28 tested choanal swabs) only. *M. falconis* as well as *M. gypis* were recovered from choanal swabs of 11 stone curlews kept in different collections without any disease-association (Table 1). Tissue samples (liver, oviduct, syrinx) were positive for *M. gypis* in one dead Stone Curlew. Mycoplasma isolates were recovered from 8 of 10 falcons, predominantly identified as *M. buteonis* (n = 6).

Discussion

M. falconis was isolated from both falcons and Stone Curlews, suggesting that transmission from prey to predator is viable. *M. gypis* was found in choanal swabs of almost all Stone Curlews, and much less frequently in conjunctival swabs. In one Stone Curlew, which died of injuries caused by a falcon, *M. gypis* was present in syrinx, oviduct and liver. Considering the isolation of mycoplasma from liver and oviduct, a systemic spread of *M. gypis* in this bird is likely. Stress caused by the falcon-inflicted injuries may have represented an important factor in promoting the supposed systemic spread. The finding of mycoplasmas in oviduct samples of stone curlews may also be important in the context of reproductive health, as besides *M. gallisepticum* and *M. synoviae,* the involvement of other mycoplasmas is discussed in causing eggshell top abnormalities in chickens (Basenko *et al*, 2005; Feberwee *et al*, 2009). As expected, the prevalence of mycoplasmas in captive healthy falcons in our study was high (80%) (Lierz *et al*, 2002; Wernery *et al*, 2007). Colonization of healthy falcons with *M. buteonis, M. falconis* and *M. gypis* has been described previously (Lierz *et al*, 2002). Surprisingly, no mycoplasmas were isolated from the Houbara Bustards in this study, but bustards may also be infected by these agents as demonstrated for Stone Curlews in the present study (Silvanose *et al*, 2001). Further investigations on mycoplasma prevalence in falcons and their quarry are needed, in particular to assess the potential health risk for reproduction- and conservation facilities.

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Table 1: Mycoplasma isolates, associated sampling sites of Houbara Bustards, Stone Curlews and falcons.

Bird species [number of birds]	Sampling site	Isolated* *Mycoplasma* (M.) sp. [number of birds]
Houbara Bustards [n = 15]	Choana	Negative
	Conjunctiva	Negative
Houbara Bustards [n = 2][a]	Choana	Negative
	Conjunctiva	Negative
	Air sac	Negative
Stone Curlew [n = 22]	Choana	*M. gypis* + *M. falconis* [n = 9] *M. gypis* [n = 12]
	Conjunctiva	*M. gypis* [n = 1]
Stone Curlew [n = 4][b]	Choana	*M. gypis* [n = 4]
	Conjunctiva	*M. gypis* [n = 1]
Stone Curlew [n = 2][c]	Choana	*M. gypis* + *M. falconis* [n = 2]
	Conjunctiva	Negative
Stone Curlew [n = 1][d]	Liver	*M. gypis*
	Syrinx	*M. gypis*
	Oviduct	*M. gypis*
Gyr-Peregrine hybrid [n = 1]	Choana	*M. buteonis*
	Conjunctiva	Negative
	Air sac	Negative
Gyr-Peregrine hybrid [n = 3]	Choana	*M. buteonis* [n = 1] *M. falconis* [n = 2]
	Conjunctiva	Negative
Gyrfalcon [n = 1]	Choana	Negative
	Conjunctiva	Negative
Peregrine Falcon [n = 1]	Air sac	Negative
Saker Falcon [n = 1]	Choana	Negative
	Conjunctiva	*M. buteonis*
	Air sac	Negative
Saker Falcon [n = 3]	Choana	*M. buteonis* [n = 3]
	Conjunctiva	Negative

* Identical results by molecular and cultural isolation
[a] Sick birds with cachexia and purulent rhinoconjunctivitis
[b] Sick birds with anorexia and cachexia
[c] Recently caught by falcon, skin injuries
[d] Died due to traumatic injuries

What's new in the literature?

Experimental infection of a North American raptor, American Kestrel (*Falco sparverius*), with highly pathogenic avian Influenza virus (H5N1).

Hall JS, Ip HS, Franson JC, Meteyer C, Nashold S, TeSlaa J, French J, Redig P, Brand C.
PLoS ONE. 2009 4(10)

Several species of wild raptors have been found in Eurasia infected with highly pathogenic avian influenza virus (HPAIV) subtype H5N1. Should HPAIV (H5N1) reach North America in migratory birds, species of raptors are at risk not only from environmental exposure, but also from consuming infected birds and carcasses. In this study we used American kestrels as a representative species of a North American raptor to examine the effects of HPAIV (H5N1) infection in terms of dose response, viral shedding, pathology, and survival. Our data showed that kestrels are highly susceptible to HPAIV (H5N1). All birds typically died or were euthanized due to severe neurologic disease within 4–5 days of inoculation and shed significant amounts of virus both orally and cloacally, regardless of dose administered. The most consistent microscopic lesions were necrosis in the brain and pancreas. This is the first experimental study of HPAIV infection in a North American raptor and highlights the potential risks to birds of prey if HPAIV (H5N1) is introduced into North America.

Increasing fatal AA amyloidosis in hunting falcons and how to identify the risk:
a report from the United Arab Emirates.
Hampel MR, Kinne J, Wernery U, Pospischil A, Kellermann J, Linke RP.
Amyloid. 2009 Jul 31:1-11.

In hunting falcons, a fatal syndrome of wasting, weight loss, green mutes and, finally, sudden death of emaciated birds has been observed in the United Arab Emirates (UAE). Histological examination using Congo red has revealed amyloid in most organs, in particular in the liver, spleen, kidney, and adrenal glands. Moreover, a retrospective study revealed amyloidosis in 100 cases among a total of 623 necropsied falcons between August 1995 and March 2004 in Dubai/UAE (16%; varying from 8 to 30% in different raptor bird species). The amyloid was immunohistochemically classified as amyloid A (AA), which was confirmed by Western blot analysis and N-terminal amino acid sequence analysis, suggesting it to be secondary to a chronic inflammatory process. Retrospective analysis has indicated a significantly increased prevalence of bumble foot and visceral gout among falcons with amyloidosis. In addition, a significant increase of amyloidosis from 5.6% of necropsied falcons with amyloidosis in 1995 to 40.0% in 2004 has been noticed. Finally, a semi-quantitative serum test for falcon serum amyloid A (f-SAA) has been developed. Among 38 falcons with fatal AA amyloidosis, f-SAA was increased pathologically in 36, whereas f-SAA was elevated in only one of 15 apparently disease-free falcons ($p < 0.001$). This significant result indicates that a normal f-SAA will indicate a minimal or even absent risk of succumbing to AA amyloidosis.

Population status of breeding Saker Falcons (*Falco cherrug*) in Turkey
Dixon A, Ragyov D, Ayas Z, Deli M, Demerdzhiev D, Angelov I, Kmetova E and Nedyalkov N.
Avian Biology Research, 2009, Vol. 2(4), 213-220.

The Saker Falcon *Falco cherrug* breeds in Turkey and also occurs in the country during passage and in winter. Turkey represents the southwestern range limit of the global breeding distribution of the species and is relatively isolated from the neighbouring population centres in Europe and Central Asia. A review of literature and other record sources indicated that the 19th century breeding population in Thrace had disappeared by the 1950s, in line with dramatic declines in the Southern Balkans. We could find no data on the Saker Falcon population elsewhere in Turkey prior to the 1960s. In the 1960s, the Saker Falcon was a rare breeding species found mainly in steppe habitats of Central and Eastern Anatolia. Despite increased ornithological recording activity in the country, the number of Saker Falcon records declined in the 1980s and 1990s, probably because of habitat loss, a reduction in the Anatolian Souslik (*Spermophilus xanthoprymnus*) population and the activities of falcon trappers. A recent resurgence in records since 2000 probably reflects an increase in ornithological recording by resident and visiting ornithologists. Our survey in 2007 confirmed that the Saker is a rare breeding species in Central and Eastern Anatolia despite there being much apparently suitable habitat and prey available in these regions. It is not clear whether or not the Saker population in Turkey is currently held at a low level by anthropogenic factors or whether the low population size is a characteristic of an isolated population of a species occurring at the edge its global distribution range.

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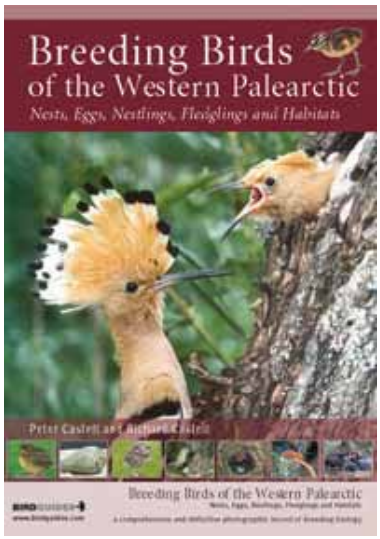

Which came first: the chicken or the egg? You may discuss it for a long time, but undoubtedly the scientific fact remains – ornithology as a science was born and largely stimulated as a result of oology (the study of bird eggs) and nidology (the study of bird nests). Even now, at the beginning of 21st Century, we do not know exactly what the downy chicks of some species look like. Compared to Western European bird species, which have undergone extensive study, little is known about the early stages of life (nests, eggs and chicks) of bird species inhabiting the eastern borders of the Western Palearctic region, particularly those bordering the Middle East.

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Reviewed by Jevgeni Shergalin

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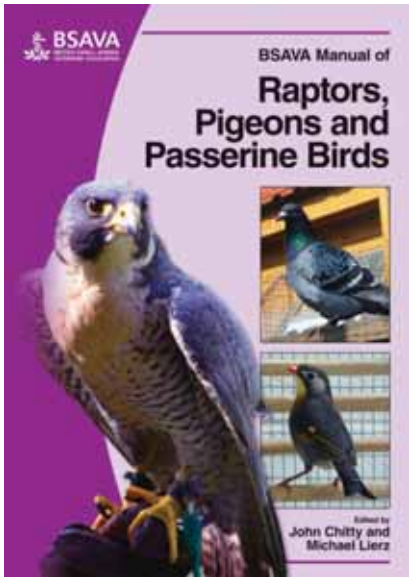

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News & Announcements

Obituary

Academician, Professor Osor Shagdarsuren (1929-2010)

We are deeply saddened to announce that Academician, Professor Osor Shagdarsuren passed away on Tuesday, 2 February 2010, at the age of 81. He was highly respected biologist, ornithologist, educator, and father of three. The Mongolian scientific community has lost a prominent scientist and educator.

Professor O.Shargdarsuren was born in 1929to a herder family in Matad *Soum*, Dornod *Aimag*. As with many Mongols of his generation, he spent his childhood time on the vast grassland steppes in eastern Mongolia herding sheep and goats. He graduated from the Matad *Soum* Middle School in 1948, and subsequently entered the Chemistry and Biological Department of the National University of Mongolia. In 1955, he graduated from the University and returned to his home town as a teacher. Following his dreams he returned to Ulaanbaatar. At that time, Mongolia was at early stages of exploring its wildlife and biological resources with the cooperation of Russian scientists. Soon his talent shone. Professor Shagdarsuren garnered a recommendation to go to Moscow to study biological sciences where he studied the ecology of birds of prey in central and southern Mongolia for his PhD degree under the supervision of renowned Professor G. P. Dementiev at Lomonosov Moscow State University from 1961-1964. After successfully completing his study in Russia, he returned home as the first ornithologist in his country. At that time, he was much-needed because Mongolia contained very few educated people in the natural sciences. Having graduated from one of the top universities in the world, he continued his work and expanded his research to mammals, animal husbandry, and ecology and evolutionary biology, at same time he undertook several positions of responsibility at the University and the Academy of Sciences. For many years, he studied game animals and pastoral livestock husbandry in Mongolia. Later he earned his Doctor of Sciences degree, again from the Lomonosov Moscow State University in 1972.

Professor O. Shargdarsuren was an active creator, developer, and supporter of the leading scientific and higher educational institutes in the country. He served as the Director of the Institute of Biology at the Mongolian Academy of Sciences from 1964-1982, and continued as the Science Secretary from 1982-1983. Afterward, he worked as President of the National University of Mongolia for six years until 1989. Until his final days he remained an honored professor at the National University of Mongolia and continued teaching in the Department of Zoology.

He was elected as a Corresponding Member of the Mongolian Academy of Sciences in 1982 and became an Academician (full member) in 1991, and also received his Professor title in 1984. He was honored by his scholarly colleagues at the National University of Mongolia and the Mongolian Academy of Sciences for his lifetime efforts and accomplishments for developing and creating these important scientific institutes.

Professor O. Shargdarsuren was the lead researcher of Mongolian scientists working in the Joint Soviet-Mongolian biological expedition of the Russian Academy of Sciences and Mongolian Academy of Sciences and also the Joint Mongolian-German Biological Expedition until 1990. He was chief editor and lead author for many scientific publications resulting from these two significant international expeditions. He also served as chairman of the Scientific Committee for Doctorate Degrees in Biological Sciences for many years.

He wrote over 200 papers and publications including some 20 milestone monographs such as “Raptors of Central and Southern Mongolia and their practical importance,” “Rare mammals of the Mongolian People’s Republic,” “Contributions to the study of mammals in the Khangai Mountains,” “Issues in the conservation and management of mammals of Mongolia”, “Game animals and their conservation in Mongolia,” “Natural selection and nomadic livestock husbandry,” “Pastoral livestock husbandry and related issues in theoretical biology,” and “Pastoral livestock husbandry in Mongolia.” Several species discovered new to science bear his name. Furthermore, based on his own research results and eagerness to transfer his knowledge and experiences from the formal halls of the university to practice in real life, he led several wildlife management projects that were never before practiced in Mongolia, such as the introduction and translocation of Musk Rats to Khar Us Lake and Mongolian Gazelle to the Khomiin Steppes in western Mongolia.

O. Shagdarsuren was an inspirational teacher and mentor for many young researchers, and a renowned professor of the National University of Mongolia. During his years of teaching in the largest university in Mongolia, he mentored countless excellent students and supervised over 20 Ph.D. and Doctorate candidates, and offered advice and guidance to many more. He also authored many textbooks on biology and ecology subjects including "Zoology I," Zoology II," "Pastoral livestock husbandry and its theoretical foundation," and "Essentials of Ecology", and published numerous articles and essays in mainstream newspapers, magazines, and journals. It is said that every biologist in Mongolia met with him and was taught by him.

Professor O. Shagdarsuren was not only an educator and good scientist, he was an important political and social activist too. Several times he was appointed as a Representative to the People's Great Congress, elected as honorary Mongolian consul to the Biophysics Center of the Council for Mutual Economic Assistance Organization (the largest international economic organization for cooperation during the Soviet era), Chairman of the Mongolian Union, and Director General of the Mongolia and India Friendship Union. Finally, he was actively involved in various governmental committees on science, technology and higher education.

The Government of Mongolia praised his many years of productive service for the country and decorated him with several high ranking medals and honors, such as the Mongolian State Honorable Teacher, Order of North Star, Honorary Credential of the Government of Mongolia, anniversary medals of the People's Revolution of Mongolia, and Best Employee titles from educational, science, agriculture, and environmental sectors.

Professor O. Shagdarsuren was very kind man and a true scholar, committed to and passionate about his work until the end of his life. His deep and broad knowledge, teaching skills, and friendship will be sorely missed by his family, relatives, colleagues, friends, and thousands of his students around the country.

Ministry of Education, Culture and Science of Mongolia
National University of Mongolia
Mongolian Academy of Sciences

CONFERENCE:

Conservation of Saker Falcon in Europe: presenting the results of the Hungarian-Slovak Saker Conservation LIFE-Nature Programme and other Saker conservation programmes

Bükk National Park Directorate, Eger, Hungary
16-18 September 2010

The Hungarian-Slovak Saker conservation LIFE-Nature project supported by the European Union started in 2006. Bükk National Park Directorate has been taking the overall management of a team of more than a dozen organisations working on the project, and BirdLife Hungary has been the co-ordinator in chief as for conservation work about the species. The project is coming to an end in September 2010. During these years a vast amount of information have been gathered about the species and enormous efforts have been made in the field and behind desks in order to improve the conservation status of Sakers not only in these two, but also in other countries.

There are results, of course, and those results – we believe – are impressive. As a final major act of the project, we would like to share our findings with every colleagues interested in conservation of Sakers (or raptors general) and related fields of conservation. In the conference, we plan to cover the following topics:

- Reviewing recent population figures and trends in Europe;
- Reviewing endangering factors
- Thematic presentations on practical conservation activities and experiences
- Importance and possibilities of communication and PR related to Saker conservation

We also plan round tables: on the matter of hybrids and a round table will be assigned for drawing conclusion of the project experience, discussion and phrasing proposals for a more efficient work against threats involving various stakeholders.
If you are interested in participating in the conference, please, make your registration at:
saker.conference@gmail.com and see http://www.sakerlife.mme.hu/en/content/show

استخدام مركبات F10 في طب الصقور : تطبيقات عملية

خايمه سمور، و جيسوس نالدو

شكلت الصقور والصيد بالصقور جزءا لا يتجزأ من ال حياة في صحاري شبه الجزيرة العربية منذ آلاف السنين . في الماضي، كانت القبائل البدوية تقوم خلال أشهر الشتاء بصيد وتدريب الصقور المهاجرة واستخدامها في الصيد لدعم وجباتهم الأساسية . كانت الصقور تطلق لاحقا في فصل الربيع، حيث أن رعاية هذه الصقور على مدار العام يشكل ضغطا على مواردهم المحدودة أصلا . أما اليوم، فيقوم الصقارون العرب بعد انتهاء موسم الصيد برعاية الصقور في غرف أو أقفاص مكيفة الهواء طيلة أشهر رمي الريش لاستخدامها مرة أخرى في الموسم التالي . كنتيجة جانبية لهذا التغير في السلوك، يتم الاحتفاظ في الأسر بأعداد كبيرة من صقور الصيد في كل عام في جميع أنحاء دول الخليج . قادت الحاجة إلى الرعاية الصحية المهنية لمثل هذا العدد الكبير من الصقور إلى إنشاء مستشفيات الصقور الحديثة في معظم بلدان المنطقة إن مستشفيات. الصقور في منطقة الخليج، كغيرها من المرافق الطبية المخصصة للعلاج والرعاية الحصرية لأنواع الطيور في الأماكن الأخرى، تتعرض لطائفة واسعة من مسببات الأمراض الوافدة المرضى .الخارجيين. إن الحاجة لتصميم وتنفيذ برنامج السلامة البيولوجية التي يمكن أن تمنع نشر وانتشار مسببات الأمراض في جميع أنحاء المنشأة أمر لا يمكن الاستهانة به .إن أحد الركائز الأساسية في أي برنامج للأمن البيولوجي هو التطهير الذي يمكن تعريفه بأنه إجراء يهدف إلى القضاء ، في منطقة محددة بعينها، على الكائنات المسببة للأمراض أو لجع لها غير فعّالة باستخدام مادة كيماوية أو مجموعة من المواد الكيميائية .هناك العديد من المنتجات المتوفرة في الأسواق التي يمكن أن تستخدم في إطار برنامج الأمن البيولوجي. إلا أن الكاتبين قد وجدا أن منتجات F10 للتطهير هي مثالية لمثل هذه المهمة نظرا لخصائصها في ال سلامة وعدم قابليتها لإحداث التآكل والخصائص التآزرية الفريدة لنشاط مركبات الأمونيا الرباعية وانحلال مكوناتها التي تعمل ضد طائفة واسعة من الفيروسات والبكتيريا والفطريات والجراثيم .يستعرض مقالنا استخدامات منتجات F10 في برنامجنا للأمن البيولوجي في مرافقنا الطبية للصقور.

داء الرشاشيات في الطيور الجارحة بعد الإصابة باستنشاق الدخان

جي. كنّه، ت أ. بيل، سي. كيلجالون، إي. لويجي، يو. فيرنيري

يعتبر التعرض للنار والدخان واقعة نادرة في طب الطيور . يشير تقرير نشر إلى سبعة ببغاوات أمازون زرقاء الصدر (*Amazona aestiva* aestiva) لكُيَيْساتُ هَوائِيَّة فطرية حادة والتهاب رئوي بعد التعرض لحريق ودخان . نقدم هنا تقريرين عن حالتين مماثلتين، أحدهما من دبي، الإمارات العربية المتحدة، لصقر مولّد (سنقر *x* غزال)، والثاني من بلجيكا لباز هاريس *Parabuteo unicinctus*. في دبي تم إنقاذ أنثى الصقر من حريق شب في مرقدها الليلي وقتل من جرائه ثلاث طيور أخرى، أما باز هاريس فكان مقيما في مرفق صيفي شبت فيه النار . أخذ الطيرين فورا إلى مستشفيات بيطرية حيث تلقيا عناية مساعدة لحروق في الساق والجناح . بعد أربعة أيام فقد الطيران شهيتهما وظهر عليهما التهاب الملتحمة والزلّة . ورغم أن كلا الطيرين كان قد تلقى علاجات مضادة للفطريات إلا انهما نفقا بعد 7 أيام (السنفر) و10 أيام (الباز). أظهرت تشريح بعد الموت وجود التهاب رغامي شَبِيْهُ الخُنَاق مع الكثير من خيطان البكتيريا والفطر في الحطام، وأكياس من الدخان في رئة الصقر، وكذلك التهاب رئوي في الباز . زرع عدد كبير من رشاشيات فوميجاتوس أخذت من الصقر، وظهر أن التهابا فطاريا للأكياس الهوائية والتهابا رئويا كانا نتيجتين مشتركين للإصابة باستنشاق الدخان في الطيور الجارحة.

استخدام مركّز "هيل إكس بوستر" في علاج الصقور المصابة بالفيروسَة الجُدَرِيَّة

مارينو جارسيا مونتيانز إل.في. و إينس لواكس إل. في.

في مستشفى دي راباسس ألتاي في مدريد عولج أكثر من 8- صقرا مصابا بآفات جلدية ناتجة عن الفيروسَة الجُدَرِيَّة باستخدام مركّز ALx Booster® Concentrate. في كل الحالات اختفت كل الآفات دون أي فقد للأصابع ودون ما يدل على ناقل واضح، في معظم حالات الإصابة بالفيروسَة الجُدَرِيَّة، التأمت آ الجلد قبل انتهاء المعالجة بهذا المركّز (بدأت القروح تجف بعد أسبوع من العلاج). قبل استخدام المركّز كانت الصقور الناقلة تعيش لعدة سنوات حاملة قروحا ـ أقدامها، هي التي تنقل العدوى للصقور الأخرى . يبدو أن Booster® Concentrate قد حلّ هذه المشكلة، ولم تشاهد أي حالات إعادة العدوى . تم تشخيص جلدية حادة ناتجة عن الفيروسَة الجُدَرِيَّة في صقر مولد (سنقر *x* شاهين) يافع *Falco peregrinus* x *Falco rusticolus*. استخدم عقار ماربوفلوكساس Marbofloxacin في الأسبوع الأول، ثم أعطي الصقر المولد قطرتي Booster® Concentrate يوميا عن طريق الفم لثلاثة أيام، ثم قطرة واحدة يومي للأربعين يوما التالية، وكانت هذه حالة تتعلق بسلالة حادة من الفيروسَة الجُدَرِيَّة.

عزل مفطورات من طير الكروان الجبلي (الصخري) ودجاج الحبارى مستخدمة في الصقارة في الإمارات العربية المتحدة.

هولكر شميدت، يواخيم سبرجسر، كرستن كرامر، انطونيو دي سوما، ماريا-إليزابث كراوتفالد-ينجهانس، توم بيلي

تهدف هذه الدراسة إلى تقييم خطر انتقال مفطورات *Mycoplasma (M.) spp*. من صقور صيادة في محاجر الشرق الأوسط . تم فحص 17 طير حباري *Chlamydotis undulate* و29 من طيور الكروان الجبلي (الصخري) *Burhinus oedicnemus* يحتفظ بها في 3 مجموعات خاصة مختلفة في دبي ميكروبيولوجيا بحثا عن المفطورات . إضافة إلى ذلك جرى فحص 10 صقور تستخدم في الصيد للمقارنة . أخذت مسحات ملتحميّة ومنعريّة وفحصت عن طريق فحوص تفاعل PCR والزرع. تم عزل *M. Gypis* و*M. Falconis* من معظم طيور الكروان (28 من 29 طيرا؛ أي 97%) . لم تكن معظم الطيور مرتبطة بالنتائج المرضية. عثر على *M. Falconis* في عينات جمعت من صقرين فقط من العشرة، لكن تم العثور على *M. Buteonis* في أغلب الصقور (6 من العشرة) وذلك من المسحات المنعريّة (n = 5) والملتحميّة (n = 1).

الأعشاش الاصطناعية لصقر الغزال I: دورها في تنمية تجارة سايتس CITES مستدامة وزيادة أعداد صقر الغزال في منغوليا

أندرو ديكسون، و نيامبايار باتبايار

نقدم في هذا المقال معلومات عن خلفية الحصاد والاتجار في صقور الغزال البرية من منغوليا والتي تتم بصورة قانونية تحت رعاية اتفاقية سايتس. نستعرض المسائل المتصلة بحفظ هذه التجارة التي تمت مناقشتها في استعراض هام للتجارة من قبل سايتس، ونقدم معلومات محدّثة عن الحالة الراهن ة، ونناقش المخطط الذي ترعاه دولة الإمارات العربية لإنشاء 5000 عش اصطناعي لدعم مستدام لصقر الغزال وفوائد الصون التي يقدمها هذا البرنامج.

الأعشاش الاصطناعية لصقر الغزال II: التقدم والخطط

نيكولا ديكسون، و باتسوخ مونكجارجال، و دامدِنسورن شيجيرما

أطلقت أبو ظبي في عام 2009 برنامجا لإنشاء تجمعات متكاثرة جديدة من صقر الغزال في المناطق المحدودة الأعشاش في السهوب المنغولية المركزية. يشمل المشروع تشييد 5,000 عشا اصطناعيا عبر 20 مقاطعة . تصنع الأعشاش الاصطناعية من براميل من الصلب معلقة على أعمدة معدنية بارتفاع 3 أمتار. أقمنا ورشة لبناء الأعشاش الاصطناعية 100 كيلومترا إلى الجنوب من أولان باتور. وكان قد تم الحصول على شاحنة لنقل المواد الخام إلى الورشة ونقل الأعشاش الجاهزة من الورشة إلى المواقع الميدانية. إن جميع المواد المستخدمة هي من مصادر داخل منغوليا، ويوظف المشروع 22 شخصا، ويوفر التدريب لعمال اللّحام الشباب والدخل للعائلات المحلية. تم إنشاء 355 عشا حتى الآن وقبل بداية فصل الشتاء. استمرت الورشة في العمل طيلة فصل الشتاء المنغولي القاسي وصنعت 1,500 من صناديق العش الاصطناعية جاهزة للتركيب في الربيع. ضمنت اجتماعات مع الوزارة المنغولية لحماية الطبيعة والبيئة والسياحة (MNET) دعم وتعاون الحكومة للمشروع ، بينما أقيمت ورشة عمل لمسئولي المناطق بحضور جيد، وتم الحصول على دعم حماسي من المجتمعات المحلية التي ستستقبل الأعشاش الاصطناعية.

الصقر الأحمر (الحر) *Falco biarmicus* في مقدونيا

براتيسلاف جروباتش، و ميتوديا فيليفسكي

نظرة عامة على وضع وبيولوجيا الصقر الأحمر في جمهورية مقدونيا في الفترة 1980-2009 ، مع التركيز على الفترة 2002-2009. شوهد وجود 14زوجا متكاثرا في الفترة 2002-2009 تعشش في مجال ارتفاعات بين 220 و 1000 متر . هناك معلومات عن احتمال أو إمكانية وجود تكاثر في 11 منطقة أخرى . تقدر الأعداد الكلية بـ 25-35 زوجا مع وجود اتجاه ثابت للأعداد. شملت بعض المعلومات المقدمة النظام الغذائي والتهديدات والحفاظ على النوع.

القياس عن بعد بالأقمار الصناعية لهجرة لصقر إليونورا من الجزر اليونانية

الجمعية الهيلينية للطيور

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تم، لأول مرة ، استخدام القياس عن بعد بالأقمار الصناعية لتتبع هجرة صقور إليونورا من اليونان (جزيرة أندروس) الى مناطقها لتمضية فصل الشتاء في جنوب شرق أفريقيا ومدغشقر . جهزت أربعة طيور بمرسلات خفيفة للأقمار الصناعية تعمل بالطاقة الشمسية وفق نظام أرغوس . بدأت الصقور الأربعة المتتبعة رحلتها في منتصف أكتوبر، ووصلت جميعها بحلول منتصف ديسمبر إلى مدغشقر . تم تنفيذ البحوث الحالية من قبل الجمعية الهيلينية للطيور بالتعاون مع جامعة باتراس والعلماء الألمان .تستضيف اليونان حوالي 85 ٪ من صقور إليونورا المتوالدة في العالم، ويتكاثر أكثر من 12,000 زوج كل عام في اليونان. يمكن أن يتبع رحلة العودة من خلال الخريطة المحدّثة في موقع الجمعية.

الصقارة والطب البيطري

كريستوفر لويد

العلاقة بين الإنسان والطيور الجارحة تاريخية وقديمة. لكن، على خلاف علاقة الإنسان مع الكثير من الأنواع الأخرى ، فلا يمكن اعتبار الجوارح مستأنسة، لم تبذل حتى وقت قريب، أي محاولة لتغيير مورفولوجية الجوارح عن طريق التكاثر الانتقائي. في العلاقة التكافلية بين الإنسان والصقر، يستغل الإنسان غرائز الصيد الطبيعية للطيور في من خلال تشجيع الطيور على استغلال الإنسان كمصدر سهل للغذاء. تستعرض هذه المقالة العلاقة المتغيرة طب الصقور والصقارة عبر القرون.

مع اقتراب مؤتمر أطراف اتفاقية سايتس في الدوحة، قطر، في شهر مارس عام 2010، يبدو الوقت مناسبا للتفكير في المشاكل التجارية التي تؤثر على الصقور والتحدي الصوني الذي يمثله هذا للمجتمع الدولي. تخلق الصقارة العربية طلبا كبيرا على ثلاثة أنواع من الصقور ؛ صقر الغزال والشاهين والسنقر.(الجير) يمكن أن تأتي هذه الصقور من (أ) مراكز الإكثار أو من (ب) البرية .في هذه الأيام ، فإن عددا كبيرا من الصقور التي تزود للصقارين العرب أكثرت في الأسر ، وخاصة تلك المستخدمة من قبل الصقاريين في دولة الإمارات. إلا أن الصقور التي ربيت في الأسر لا يزال ينظر إليها على أنها أقل شأنا من الصقور البرية من قبل العديد من الصقارين الذين يفضلون أن الصيد بالطيور البرية المصدر. لم يتم القبض إلا على عدد قليل جدا من الصقور في عبورها لشبه الجزيرة العربية لتلبية الطلب على هذه الطيور، كما أن أحد الأنواع المرغوبة، السنقر، لا يسافر قط لهذا المدى جنوبا. وهذا يعني أن معظم الصقور التي صيدت في البرية والتي تباع في أسواق الشرق الأوسط يتم استيرادها من الخارج .هذه هي التجارة الدولية.

تقدم سايتس الإطار القانوني لتنظيم التجارة الدولية في الصقور، وينبغي أن ينعكس هذا على المستوى الوطني من خلال التشريعات المحلية للأطراف الموقعة عليها .وتحظر سايتس التجارة الدولية في الشواهين وصقور السنقر (الملحق I) ، ولكنها تسمح بالتجارة في صقور الغزال (الملحق II). ومع ذلك، فإن المملكة العربية السعودية لديها تحفظ بالنسبة لجميع الأنواع من الطيور الجارحة Falconiformes ، مما يعني أنها ليست ملزمة بأحكام الاتفاقية على أي من هذه الأنواع. يحظر القانون الوطني في الإمارات استيراد أي صقور غير مسجلة في قوائم سايتس ، مما قلل كثيرا من استيراد الطيور البرية المصدر، ولكن ليس من الواضح لنا كيف تعكس التشريعات الوطنية في الكويت وقطر للوائح سايتس.

ترجع التجارة من آسيا الوسطى إلى المنطقة العربية لآلاف السنين، ومن المرجح أن هذه التجارة كانت دائما تشمل الصقور. التجارة بالصقور تجارة راسخة وشائعة في سوريا وباكستان وإيران على سبيل المثال . إن نصب الشراك وتصدير الصقور من معظم بلدان المصدر غير قانوني بموجب القوانين الوطنية، ومع ذلك فإن التشريعات في كثير من بلدان المصدر غير واضحة ، والتنفيذ متراخي، هو إنفاذ التراخي، والعقوبات ضعيفة. وما أن تبلغ الطيور فإن لدى التجار "باباً مفتوحا" في أجزاء كثيرة من الشرق الأوسط. ما هو إذا الدور الذي تلعبه سايتس في هذه المسألة؟ إن اللوائح الأشد صرامة يتحملها بشكل رئيس قبل التجار الشرعيون في الطيور التي أكثرت في الأسر، مما يجعل إدارة عملهم أكثر صعوبة ، في حين أن التجار غير الشرعيين ، تحديدا ، لا يتأثرون بقواعد أكثر صرامة. توافق أطراف الاتفاقية على أن تكون مل تزمة بلوائحها، ويمكن المضي خطوة إلى الأمام في فهم المشكلة إذا ما أظهرت كيف سرّبت تشريعاتها الوطنية لمنع تهريب الصقور إلى بلدانها.

لكن، لا توجد مفتشيه "شاملة" متعددة الجنسيات تستطيع تجميع تقرير عن مختلف القوانين الوطنية المتعلقة بالتحكم بالتجارة غير المشروعة في الصقور. نسمع في نشرة فالكو عن حالات قبض على ناصبي الشراك والمهربين في في روسيا، وأوكرانيا ، والصين ، وكازاخستان (ضمن عديد من الدول) وعن عقوبات تتراوح بين غرامة من بضعة دولارات لأحكام الإعدام!! من الذي يقوم بجمع هذه المعلومات؟ من الذي ينسق الاستجابة دولية؟ سبق أن كان هناك قوة عمل لإنفا ذ قوانين الصقور تعمل برعاية من سايتس لكن يبدو أنها قد انتهت . إن أسلوب العمل المجزأ على المستويات الوطنية لمواجهة الاتجار بالصقور يظهر أن الحاجة ما زالت قائمة لمثل تلك الهيئة، ويمكن لها أن تلعب دورا هاما في تقديم المشورة للدول حول طرق تحسين وتطبيق تشريعاتها لمعالجة هذه المشكلة.

في هذا العدد نصف التطورات في مشروع الأعشاش الاصطناعية في منغوليا، والذي يؤمل أن يشكل الأساس لحصد مستدام واضح الإثبات لصقر الغزال في هذا البلد. إن وضع السياسات واللوائح التنظيمية لموسم لحصد على أساس مشروع الأعشاش الاصطناعية أمر بالغ الأ همية ومجال يمكن أن تقدم سايتس مساعدة كبيرة فيه.

لدينا مقال عن الصقر الأحمر في مقدونيا ، وهي بلد يقع على حدود نطاق توزيع تكاثر هذا النوع. لقد أدى التقدم التكنولوجي في مرسلات الأقمار الصناعية إلى جعلها أصغر حجما وأخف وزنا، بشكل يتيح استخدامها الآن على الطيور الأصغر حجما ، كصقر إليونورا. لدينا ملخص وجيز عن تحركات أربع طيور جرى تتبعها من اليونان في شرق البحر المتوسط.

تتضمن المقالات البيطرية في هذا العدد المشاكل الطبية للصقور التي يمكن أن تنشأ عن استنشاق الدخان ، واستخدام المكملات الغذائية في علاج الفيروسَة الجُذَرِيَّة. يقدم كريس لويد لمحة عامة عن تاريخ تطور الرعاية البيطرية لطيور الصقارة في الجزيرة العربية، كما يوضح خايمي سمور ضرورة اتخاذ تدابير الأمن البيولوجي في تربية وعلاج الصقور ويستعرض الاستخدامات العملية لمطهر يستخدم على نطاق واسع من قبل الأطباء البيطريين في جميع أنحاء المنطقة . يصف مقال كتبه فولكر شميدت وزملاءه كيف يمكن لأنوا ع من أنواع الطرا ئد نقل الأمراض للصقور الصيّادة، بينما يدرس لومبارد ادريان الصراعات التي تنشأ عندما بسعي الصقارون العرب إلى أنواع جديدة من الطرائد ومن مناطق رياضة الصيد.

بسم الله الرحمن الرحيم

﴿يَسْأَلُونَكَ مَاذَا أُحِلَّ لَهُمْ قُلْ أُحِلَّ لَكُمُ الطَّيِّبَاتُ وَمَا عَلَّمْتُم مِّنَ الْجَوَارِحِ مُكَلِّبِينَ تُعَلِّمُونَهُنَّ مِمَّا عَلَّمَكُمُ اللَّهُ فَكُلُوا مِمَّا أَمْسَكْنَ عَلَيْكُمْ وَاذْكُرُوا اسْمَ اللَّهِ عَلَيْهِ وَاتَّقُوا اللَّهَ إِنَّ اللَّهَ سَرِيعُ الْحِسَابِ﴾ صدق الله العظيم

سورة المائدة (٤)

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احتفاء بتراث حي

النص بقلم الدكتور خافيير سيباللوس

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