Falco

Middle East Falcon Research Group

National Avian Research Centre

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Letter from the Chairman's Office

Report by Jaime Samour

It gives me an immense pleasure to introduce the first issue of our first newsletter "Falco" and to welcome you all officially to the Middle East Falcon Research Group (MEFRG).

It was the brain-child of Nick and Barbro Fox to create a group that could include Veterinary Surgeons, Biologist and Conservationist working towards achieving the same goals. The Group intends to bring together the expertise already in existence in the different countries of the Middle East and to enlist valuable support from experts from around the world in subjects related to falcons and falconry.

The Middle East is an area of the world in which there are excellent opportunities to conduct medical and ecological research, but it is also an area where you can be isolated if you are not prepared to help and to be helped...

Times have changed in the Middle East. There is now a genuine interest amongst young enthusiastic people to preserve falcons and falconry as part of their cultural heritage and a great interest in preserving wildlife and wild habitats as part of their natural heritage. If you are not convinced, all that you have to do is to pay a visit to the different Research Stations and the Natural Reserve Network Programme of the National Wildlife Commission for Conservation and Development in the Kingdom of Saudi Arabia, Al-Areen Wildlife Park and Reserve in Bahrain, the National Avian Research Centre in the UAE, the re-introduction programme of the Arabian oryx in the deserts of Oman, and several other privately owned sanctuaries, reserves and captive breeding programmes to be fully aware of the ecological research and conservation work carried out on this part of the world. Also, there are now well-established falcon hospitals and falcon research programmes in Gulf countries such as in Bahrain, Qatar and in particular in the United Arab Emirates, including some of the most sophisticated bird hospitals in the whole world.

Yes, it is true...times have changed in the Middle East...but we have to change with it. It is time to start working together ... to share our expertise and knowledge ... and to be positive and constructive in order to achieve common goals.

I would like to express my gratitude to all who contributed articles for this first issue and especially to Nigel Barton for suggesting the name "Falco" for the newsletter and to Nick Fox for donating the art work for our logo.

Please, keep sending contributions for future issues

" The beauty and genius of a work of art may be reconceived, though its first material expression be destroyed ... a vanished harmony may yet again inspire the composer; but when the last individual of a race of living things breathes no more... another heaven and another earth must pass before such a one can be again ...".

William Beebe (1877 - 1962)
American naturalist and explorer.

What is the Saker ?

Report by Dr Nick Fox, Director of Falcon Research and Management, National Avian Research Centre, Abu Dhabi, United Arab Emirates

One of the aspects we are covering in our programme of research on the saker falcon is the old-age question "What is the saker". Is it part of a super-species with the gyr falcon and Altai falcon? Is it a polytypic species or is it polymorphic or both? We need to answer this, not just out of academic curiosity, but also because of the implications for conservation and management of wild sakers, and because of differences in their performance when used in falconry and consequently the implications for breeding programmes.

Previous studies have tended to be inconclusive because they have concentrated on just one aspect of the saker, such as plumage variation, to the neglect of others. We have several specialist teams providing input so that we can examine up to five characteristics for each individual bird. We need to know:

1.- The place where it was hatched.
2.- The colours of its plumage in juvenile and in adult form.
3.- Its bodily proportions based on about 30 measurements.
4.- Its genetics.
5.- Its performance as a hunter and as a flying machine.

Dr Robert Kenward and his team (See report in this issue) have been studying sakers in Kazakhstan and microchipped 81 young sakers this year and Dr David Ellis has chipped a further 40 sakers in Mongolia. This is beginning to identify birds with their geographic origins. Members of the Middle East Falcon Research group will be scanning for these birds this season and we need to know, not only details of any chipped birds, but also statistical details of unmarked birds so that Robert can begin to make estimate of the harvest of wild populations.

Mr Chris Eastham has just started an MPhil looking at the plumage variation and morphometry of sakers and correlating them with other aspects of saker morphology such as genetic characteristics and performance. If you have any dead saker, Dr Jaime Samour at Sweihan has facilities to store and catalogue these for processing by different specialists as needed. Chris will also be measuring study skins and we are providing financial support for Dr Jon Wetton and Dr David Parkin at the University of Nottingham to develop techniques using DNA from feathers, which would make study skin data much more valuable and enhance our sampling.

Finally, we are investigating ways of assessing the flight performance of sakers, in consultation with Professor Colin Pennycuick and Dr Mark Fuller and are carrying out trials this autumn.

Our source materials for these studies are wild nesting sakers, study skins and falconry birds. None of them are able to supply complete data. However, if we can locate falcons that have been microchipped and follow them through, we could actually obtain some complete datasets. If we can find marked birds with the dealers, we could either buy them and keep them until they were adult before releasing them to see if they will return to their nesting areas, or failing that, follow them with their owners, measuring and photographing them in juvenile and adult plumages, and possibly flight testing them. Thus, by a cooperative effort from different specialists in different places, we can start to put together the pieces of this jigsaw puzzle and not only answer our original question, but also be in a position to suggest practical measures to ensure the long-term future of the saker both in the wild and as a resource for falconry.

The National Avian Research Centre Study of Wild Saker Falcons

Report by Dr Robert Kenward, Institute of Terrestrial Ecology, UK.

The National Avian Research Centre has been running a study of wild saker falcons for 18 months. The project includes the first experiments to study the movements and survival of falcons released after use for falconry, and the first extensive study of demography, genetics and health in saker falcons.

Thanks to Mr Mohammed Al-Bowardi and Mr Simon Aspinall, radio-tagging in 1993-4 showed that falcons released during March-April in the United Arab Emirates (UAE) moved rapidly away from release areas, with initial flights typically downwind. Experiments in tracking by satellite started in 1994, but gave few reliable data. Much more work is needed to determine the most appropriate release times and areas for releasing trained falcons.

Thanks to Dr Ken Riddle, Dr Dave Remple and Dr Nigel Barton, 3 female sakers marked with microtransponders as nestlings in Kazakhstan were recorded in the UAE during 1993, after rings (and radios) had been removed by trappers. The recovery of 4 ringed females was also reported, with 1 ring from Syria corresponding to the microtransponder detected by Dr Ken Riddle. These results, from a total of 61 falcons tagged in 1993, show that Kazakhstan is an important source of sakers for falconers in the Gulf States, and that the marking system should give reliable estimates of harvest rates when data have been collected for 2-3 more years. To help record the birds, the micro-transponders used in 1994 display on Avid receivers in a different way to the usual veterinary ones: they start with **1111** and end with **A**. The team in Kazakhstan marked 81 young sakers with the new transponders this year, and Dr Dave Ellis from the USA helped by tagging another 40 in Mongolia, so "good hunting" !

The radio-tagging of nestlings has also produced exciting results. At least 4 of the nestlings tagged in summer 1993 were confirmed in their natal areas in Kazakhstan in spring 1994, with possible signals from another 4; they were first recorded about 1 month before breeding pairs lay eggs, and stayed for up to 3 weeks. With improved techniques to ensure that all returning falcons are detected in future, these records should give an adequate estimate of first and second year survival, with an adult survival rate estimated from turnover at nests. Breeding was relatively poor in 1994, with many failures attributable to bad weather. However, the resulting low value of only 1.9 young/pair, and the 2.8/pair in the excellent 1993 season, provide useful bounds for the likely range of breeding success.

Many biological samples have now been provided to Dr Jaime Samour for veterinary analysis, and Dr Nick Fox has a new student to help with morphological studies. Preliminary analysis of blood samples from 1993 shows that saker falcons are not threatened by contamination with organochloride or heavy metal residues in the Centre of their geographic range. Assistants Anatoli Levin and Yevgeny Bragin are now trained to sample and mark falcons in the established study areas, and contacts made so Dr Ralf Pfeffer and myself can extend the work to China, Hungary, Mongolia, Russia and Uzbekistan.

If all goes well, a suite of morphological, genetic, residue and pathogen "biomarkers" from these areas will eventually be used to estimate the proportion of trained falcons originating in each area. It should then be practical to monitor population sizes and trends of wild saker falcons from veterinary records, combined with ringing and transponder tagging in a few key areas. This pioneering conservation work is possible thanks to the guidance of Mr Mohammed Al-Bowardi, and generous support from His Highness Sheikh Khalifa bin Zayed Al-Nahyan and His Highness Sheikh Mohammed bin Zayed Al-Nahyan.

Falcons as an Educational Tool - A report on a visit to the Al-Ain University

Report by Mrs Teri Bailey, Information and Liaison Officer, National Avian Research Centre, UAE.

In April this year I was invited to give a talk at the Al-Ain University's Women's English Majlis and decided that I would take our saker falcon along to the session. The women were absolutely spell bound by the falcon and her presence allowed very fruitful discussions to be opened up on natural history, falcons, birds in general, falconry, Arab heritage and the National Avian Research Centre.

Interestingly, and I suppose not surprisingly considering that falconry is very much part of the United Arab Emirates (UAE) heritage, the Arab women showed no aversion to the idea of hunting with falcons and were concerned for the continuation of the tradition of falconry. It was therefore a relatively simple task to help them understand that the preservation of falconry relies on the conservation of other species such as houbara bustard, stone curlew and habitats not only in the UAE but abroad.

Two women in the group were particularly knowledgeable about falcons and falconry and it soon came to light that these women were sisters from the Manassir tribe of Liwa and were themselves falconers. The sisters told the other women how all the women, as well as the men, in their family hunt with falcons in the Empty Quarter (Saudi Arabia). It would be interesting to know how many other women in the UAE practice falconry.

The following day Mr Khalifa Saif Al-Qumzi joined me at the Men's Campus of the University and conducted the session. Both Khalifa and I were surprised that of the 100 or so young men that attended the talk only three were themselves falconers, although quite a number of others had fathers or grandfathers who did or had practised falconry. Does this little survey point out, we wondered, that the heritage of falconry is dying out in the UAE? Khalifa took the trouble to emphasise to the men who claimed to be falconers that a responsible falconer was someone who did not have the largest catch of prey at the end of the day, but someone who had shown the wisdom in leaving some prey for tomorrow.

It was agreed that these sessions were very constructive thanks largely to the fact that the UAE young men and women can relate to and are fascinated by falcons. To this end therefore, falcons are a very valuable teaching tool particularly in the education of students about heritage and conservation issues.

Dubai Falcon Hospital News 1993 -1994.

Report by Dr Nigel Barton, Dr David Remple and Mrs Cheryl Remple, Dubai Falcon Hospital, UAE.

As in previous years, the numbers of falcons treated in the hospital continues to increase. This year saw a 17% increase over 1992-1993 for the number of falcons treated. Of these birds, 2079 were taken as never having been in the hospital before (no implant present in bird). This figure is probably a good indication for the number of wild-caught falcons passing through the hospital this year (up to 1st June 1994) which were also trapped in the same year. It is possible that a few of the adult birds had been trapped the previous year or earlier but never brought to the hospital or implanted with a transponder elsewhere. This number of falcons provides a unique opportunity to gather a large amount of relevant data in a relatively small space of time.

There are several ongoing projects in the hospital and any information or collaboration relating to them would be welcome.

a) Falcon species, sex and age groups are monitored each year as an indication of "trapping trends".

It is clear which class of falcons is most numerous in Arab falconry, the juvenile female saker. If we assume that the majority of individuals in the adult female saker class were trapped in the "93-94" season, this figure is also high considering they are all adults. Slightly more worrying are the numbers of species not traditionally used in the United Arab Emirates, particularly the barbary falcon (*Falco pelegrinoides pelegrinoides*) and the red-head falcon (*Falco pelegrinoides babylonicus*). Little about the biology of these two species is known, including how to distinguish between the two. Morphological parameters and photographic records are being collected to try and establish guidelines for identification.

b) We will continue to check all new incoming falcons for AVID tags implanted in Central Asia.

c) In collaboration with researchers at the National Avian Research Centre in Sweihan, the effects of aspergillosis and lead poisoning on blood parameters will be investigated. Samples will also be taken from clinically normal saker and peregrine falcons to try and establish a haematology database for these two species.

The accompanying table shows figures for this year:

Species	**Saker falcon**		**Peregrine falcon**	
	Male	**Female**	**Male**	**Female**
Adult	26 (1.3)	225 (10.8)	19 (0.9)	81 (3.9)
Juvenile	112 (5.4)	929 (44.7)	189 (9.1)	372 (17.9)

Note: Values in parentheses are a percentage of the trapped birds.

Barbary falcons	28 (1.3)
Red-headed falcon	8 (0.4)
Black peregrine (Shaheen)	6 (0.3)
Other species and hybrids	84 (4)

Stress Related Conditions in Captive Falcons.

Report by Mr Peter McKinney MRCVS, The Veterinary Hospital, Dubai, United Arab Emirates.

The cynical reader will retort that all diseases of captive falcons are stress related! If we accept that this is a half-truth then perhaps we can identify areas where preventative medicine and falconer education can help reduce the degree of stress to which our captive falcons (any wild caught bird) are exposed.

The points I try to get across to local falconers in an effort to prevent problems are:

1.- Diet.

I am amazed at the number of species which are fed to captive falcons in the United Arab Emirates (UAE). From desert agamas, snakes to baby kittens! These are probably quite good for the falcons but some of the more commonly fed items like pigeons are often clinically affected with Newcastle's disease, mycoplasmosis or ornithosis. Feeding wild caught falcons which are already under stress is a recipe for disaster. I encourage flock medication of pigeons and quail which are used as a food source. I also point out the merits of feeding frozen quail which many falconers now accept.

2.- Training.

Weight loss during training is well known by the falconers but few seem to weigh the birds. I encourage falconers to weigh the bird each day at a specific time and if there is an unexplained drop in weight, veterinary attention is required.

3.- Housing.

The extreme conditions in the UAE during the summer are difficult for falcons as they are for us. Combine this with a boring sedentary lifestyle for three months and you wonder how any bird survive! By promoting flight aviaries with air conditioning, I try to convince falconers that the disease incidence in their falcons will fall e.g. less cases of air sacculitis, aspergillosis and bumblefoot.

I have been fortunate to work with UAE falconers for four years and during this period I have been taught many things but I trust that it has been a two-way process which will continue to work for the benefit of man and falcons.

Book Review. Raptor Biomedicine. 1993. Edited by Patrick T. Redig, John E. Cooper, David Remple and D. Bruce Hunter.

Report By Mr Tom Bailey MRCVS, Veterinary Officer, National Avian Research Centre, UAE.

This book is a collection of 41 papers presented at the Second International Symposium on Biomedical Research in Raptors that was held in Minneapolis in 1988. The papers in this book complement the proceedings of the First International Symposium on Raptor Biomedicine (edited by Cooper and Greenwood, 1981). Between them these two works bring together findings from the worlds foremost raptor researchers and cover the current status of most medically relevant issues about birds of prey.

The book is divided into five sections. The areas covered include two introductory papers followed by papers on pathology and microbiology, surgery and anaesthesia, medicine and therapeutics and environmental toxicity. Contributing authors and peer reviewers are listed and these are a useful source of reference for contact addresses.

The progress of raptor biomedicine is summarised by Patrick Redig in the first introductory paper and in the second introductory paper John Cooper appeals for the need for closer collaboration between biologists and vets in research on raptors. The establishment of the Middle East Falcon Research Group, at which John Cooper was in attendance is an important step towards synergising the research activities of veterinarians and biologists working on raptors in this part of the world.

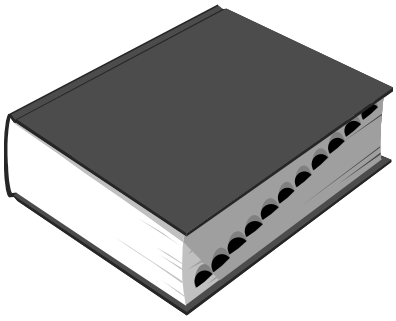
The second section on pathology and microbiology is composed of 17 papers covering a wide range of topics in captive and free-ranging raptors including cytodiagnosis, helminth and protozoan infections, neoplasia, egg pathology, causes of breeding failure, mortality studies, herpesvirus infections, immune responses and bumblefoot pathology.

In the third section 9 papers cover surgery and anaesthesia and included are papers on electrosurgery, orthopaedics, fracture healing, inhalation anaesthesia, injectible anaesthetic combinations and bumblefoot surgery.

The third section of medicine and therapeutics is composed of 10 papers dealing with the assessment of rehabilitated raptors, wound management, treatment of electrocution injuries, hospital design, dexamethasone evaluation, physiological monitoring, elbow luxations, physical therapy, allometric scaling and appetite stimulation.

The last section of 3 papers dealt with barbiturate poisoning, pesticide poisoning, and a review of raptor poisonings in the Netherlands.

This book is a must for veterinarians, falconers, falcon breeders, field biologists and rehabilitators. In fact anyone working with wild or captive raptors will benefit from this important text. What a pity it took so long to come off the press!



Dates for your diary

British Veterinary Association Congress
September 29 - October 2, 1994
Bath, United Kingdom
BVA Congress Office
7 Mansfield Street, London W1M 0AT
Phone: 71-6366541
Fax: 71-4362970.

American Association of Zoo Veterinarians
and
Association of Reptilian and Amphibian Veterinarians
Annual Conference
Conference Registration Office
P.O. Box 924
Roswell, Georgia 30077-0924
USA.

Association of Avian Veterinarians
September 27- October 1, 1994
Reno, Nevada
AAV Conference Office
2121 S Oneida Street
Suite 325
Phone: 303 - 7568380
Fax: 303 - 7598861.
Denver, CO, 80224-2552, USA

XIV Pan American Congress on Veterinary Sciences
October 9 - 15, 1994
Acapulco, Mexico
Executive Secretariat
XIV Pan American Congress on Veterinary Sciences
Manzanillo 83-8th floor, Col. Roma Sur 06760 Mexico City, Mexico
Phone: 5 - 2647652 Fax: 5 - 2647890.

World Veterinary Congress
XXV Congress of the World Veterinary Association (WVA)
and
XX Congress of the World Small Animal Veterinary Association (WSAVA)
September 3 - 9, 1995
Yokohama, Japan
Secretariat for WVC 95
c/o Sankei Convention
Sankei Bldg. 10F, 1-7-2
Otemachi, Chiyoda-ku
Tokyo 100, Japan.

International Conference - Middle East Falcon Research Group
Abu-Dhabi, United Arab Emirates

First Announcement - Call for papers and poster presentation

The Middle East Falcon Research Group would like to invite all members to participate in the first International Conference of the Group due to be held in late March 1995 immediately after the International Advisory Committee Meeting of the National Avian Research Centre.

This is the first official announcement to all wishing to attend and to present papers and posters.

The Conference will be held in one of the five-star hotels in Abu Dhabi. Definite dates and final programme will be announce later in the year. It is intended to allow one full day for paper and poster presentations and a second day on workshops. Speakers should allow 40 min for each presentation with 15 min for questions. Slide and over-head projectors, poster stands and video-monitor facilities will be available in the Conference room. The workshops of the second day are intended to stimulate group interaction on selected topics like pododermititis, aspergillosis, falcon pox, Newcastle disease, nutrition, captive breeding programmes and genetics. Suggestions for this sessions will be greatly appreciated.

It is intended to publish all papers presented at the Conference in the form of proceedings. The manuscripts would have to be handed to the Chairman just before or during the Conference. It is envisaged to publish the proceeding no later than two months after the Conference.

Lets all participate actively and make the Conference a great success.

The Middle East Falcon Research Group

The Middle East Falcon Research Group (MEFRG) intends to bring together Experts in Falcons and Falconry, Veterinary Surgeons, Falcon Biologists and Conservationists working in the Middle East and other professionals interested in falcons and falconry from around the world.

The main objectives of the MEFRG are:

1.- To provide

- A central body for the coordination of research activities related to falcons and falconry.

- A common forum for exchange of information and for promoting collaborative research programmes.

2.- To promote

- Research on health and diseases in falcons, falcon moulting patterns in the Middle East and falcon nutrition, captive breeding programmes and semen cryopreservation and artificial insemination.

- Fields studies on falcon migration, taxonomy, morphometrics, reproductive biology, nutritional ecology and behaviour.

- Improved management conditions of captive falcons through educational awareness programmes.

- A better understanding of falconry as part of the Arab cultural heritage.

3.- To hold

- Regional workshops on veterinary medical aspects, falcon biology topics, falconry and conservation issues.

- An International Conference immediately after the International Advisory Committee Meeting (IAC) of the National Avian Research Centre. It is envisaged to publish the papers and posters presented at the conference in the form of proceedings.

4.- To publish

- Joint papers on aspects concerning falcons and falconry.

- A quarterly newsletter containing contributions on medical, biological and conservation topics of common interest, new developments and recent medical advances.

- Membership

Any Veterinary Surgeon, Biologist, Conservationist or Falconer working in the Middle East or any other person interested in medical, biological and conservation aspects of falcons and falconry from around the world.

For further information please contact:

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