

Falco



Middle East Falcon Research Group

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Letter from the Chairman' s Office

Report by Jaime Samour

The last few month have seen a great deal of activity for many members of the Group based in the Middle East. The hunting season started as expected around the first week of October, the usual time when most of the falcons have just completed their moulting. This is also the time when falconers flood the Falcon Hospitals requesting general health examinations, imping, coping or treatments for all kind of medical conditions affecting falcons in the area.

In this part of the world, falcons are taken out of their moulting rooms around this time to initiate the training period. It is a fascinating time of the year when you can see falconers proudly carrying their falcons wherever they go. The training process consists of a preliminary taming period in which the falconer has to establish the kind of bond that is essential in a master / servant relationship with his charges. It is only when the falcon is considered ready that the real training begins. Initially and for the first few days, the falcon is fed on the fist. When this step has been achieved, the food is offered at certain distance from the perch, persuading the falcon to take a short jump to the fist in order to feed. The next step consists of increasing gradually the distance between the perch and the falconer. This is carried out while fixing a long piece of cotton thin rope to its jesses and allowing it to fly towards the falconer who is

holding a lure containing a small piece of pigeon or sheep meat. The type of lure used in the Middle East is normally made out of dried houbara bustard (*Chlamydotis undulata*) wings obtained during the previous season. This step is continuously practiced until the bird can fly up to 30 mt.

Then the big moment arrives, when the falcon is allowed to fly freely from a standing vehicle to the falconer who is handling a lure at a distance of up to 300 to 400 mt. If the falcon was not ready or sometimes due to disturbances, this is also the moment when falconers see their falcon and all the efforts placed in the training flying away. Many falcons are lost in this way every year and the implications can be serious. There are always risks of introducing captive-related diseases into the wild populations, but also is the potential danger to the wild gene pool if the falcon that had just escaped is a hybrid. Later in this issue, we examine the problem in detail and appeal to all members of the group to contribute ideas on how to deal with this serious dilemma.

May I take this opportunity to wish you and your families a very happy and productive New Year and I shall look forward to more active cooperation between Members and Institutions worldwide.

Please, keep sending contributions for future issues



A bird thinks nothing of its flying or it would fall.

*Leslie Sahler, B. 1952
American Writer*

Treatment of traumatic hip dislocation in birds of prey - a case report

Report by Mr M.J. Dallimore BVSc MRCVS. Milfeddygon - Veterinary Surgeons, Gwynedd, UK.

The femoral head of the bird is held in place by the Teres ligament and the muscle mass of the gluteals. However, in most raptors, the gluteal mass is relatively poorly developed, even compared to waterfowl and especially to our companion animals. Because of this, there is a potential risk of dislocation by unnatural forces.

Fortunately, these are rare, but they do occur after major impact (i.e. car accident) or due to a sudden, excessive force being applied to the leg. The latter is seen in birds incorrectly tethered to solid perches (not screens) with no "give" in the tether. The "give" is made up of a ring, a well oiled and correct length leash and well oiled jesses.

The first case involved a female buzzard tethered temporarily on a farm implement. After a number of bates, the left leg became dislocated. The bird was treated conservatively and put in an aviary for two weeks. Although the lameness disappeared, the leg remained abducted for the rest of the birds life.

The second case involved a male Harris hawk which again injured itself on some temporary tethering. The bird was not presented however, until two days after the incident, and by this stage the great trochanter had penetrated out through the skin above the hip joint. The bird was in obvious distress.

The hawk was anaesthetised (halothane) and open reduction of the dislocation attempted, but this was unsuccessful. A femoral head arthroplasty was then performed and the gluteal mass sutured over the femur (interrupted mattress / catgut) to hold it in place. The skin was sutured (interrupted mattress / nylon) and the hawk given ampicillin orally for five days (200 mg/kg). The bird made an uneventful recovery and was hunting the following season.

In these circumstances, I think femoral head arthroplasty is probably the best approach, as any other method of fixation (i.e. toggles) is made impracticable by the real tissue lying on the other side of the ileum. It is this close proximity of renal tissue that makes any dislocation associated with other forms of major trauma a far more serious and life-threatening condition.



" Always be brave, and try and make the world a happier place for others to live in"

*Jim Corbett
Naturalist
1875 - 1955*

Aspergillosis in falcons - Middle East Falcon Group workshop

Report by Jaime Samour

The Middle East Falcon Research Group held its first regional workshop on the 8th of December at the Sweihan Station of the National Avian Research Centre. The theme of the workshop was "Aspergillosis in Falcons". The workshop was attended by 22 participants from different veterinary, academic and research Institutions from the United Arab Emirates. Throughout the workshop, that incidentally lasted over two hours, the discussion was lively, open and very productive. Especial contributions were made by Dr Kenton Riddle, Director of the Al-Khasna Falcon Research Hospital, Dr David Remple, Director of the Dubai Falcon Hospital, Mr Peter McKinney MRCVS from the Veterinary Hospital (My most sincere apologies to you Peter, since we left you out from the Emirates News article) and Professor Andrew Garner, Head of the Pharmacology Department at the United Arab Emirates University.

The discussion was framed around the following topics: Aethiology, physiopathology, clinical signs, post-mortem findings, diagnosis, therapeutics and prevention of aspergillosis and the need of setting up public awareness/educational programmes related to this condition. The audience agreed that *Aspergillus fumigatus* was the main aethiological agent causing the disease, but *A. flavus* and *A. niger* have also been implicated. The mechanism of transmission and propagation was also discussed in the light of the wide spread practice to maintain falcons in dark, humid, hot, unventilated and dusty moulting rooms during the summer months. There was a lively discussion related to clinical signs and post-mortem findings and it was highlighted the need of early diagnosis through clinical signs. This was followed by a slide presentation showing the common appearance of sporulated fungal colonies on the wall of the air sacs of falcons and slides of histopathological preparations illustrating the structure of fungus particles and related lesions. Different methods available to the

veterinary profession for the diagnosis of aspergillosis were also discussed. Fibre-optic endoscopy was the method of choice by all the clinicians present at the meeting, since it provides both quantitative and qualitative assessment. The audience also discussed the advantage and disadvantages of support diagnostic tools such as radiology and haematology and the possibility of developing a serological test. Radiology was voted as useful only when the diseases is well advanced therefore not practical. Several participants express their doubts about the feasibility of setting up a practical serological test. This is based on the principle that the serological analysis could only work if the falcon has already antibodies against *Aspergillus*. This may not be feasible in birds with acute aspergillosis or immunosuppressed falcons. There is an Indirect ELISA test available in the United States developed by Dr Patrick Redig of The Raptor Centre, University of Minnesota. This test was recently described during the Annual Conference of the Association of Avian Veterinarians in Reno, Nevada. The Chairman offered to investigate this test and inform the Group in a later date. The use of haematology assays was proposed as a feasible research programme to study the haemopathological responses to aspergillosis. Draft copies of this proposed research programme have already been drawn up and circulated amongst members of the Group in the United Arab Emirates for consideration. There is a real hope that this first inter-institutional research programme can be accomplished for the benefit of falcon biomedicine.

The real discussion started when the issue of therapeutics was addressed and I am deeply grateful to all participants, but especially to Dr Riddle, Dr Remple and Mr McKinney for sharing all their experience and "trade secrets" with everybody. Here I have tried to summarised the current methods for the treatment of aspergillosis as described by the participants during the workshop.

At the Dubai Falcon Hospital, Dr David Remple treat falcon with aspergillosis following the treatment underlined below:

Sporunox (Janseen) 10 mg/kg orally bid x 20 days.

Fungizone (Squibb) 1.5 mg intravenously bid x 5 - 7 days.

Imaverol (Janseen) 0.1 ml (diluted to 2 cc in Ringers solution, 2 cc intratraqueally, 1 cc in each bronqui once only).

Note: This is a standard treatment specific for aspergillosis. The duration of the treatment varies according to each patient. Support treatment is also given in the form of antibiotics and multivitamins.

At the Al Khasna Falcon Research Hospital in Abu Dhabi, Dr Kenton Riddle treats aspergillosis in falcons following the treatment described below:

Sporunox (Janseen) 20 mg/kg orally daily x 30 days.

Fungizone (Squibb) 1.5 mg intravenously bid x 5 days

Imaverol (Janseen) 0.1 ml (diluted to 2 cc in Ringers solution, 1 cc intratraqueally, 1 cc sprayed directly onto the sporulated fungal colonies of each affected air sac once only).

Note: This is a standard treatment specific for aspergillosis. The duration of the treatment varies according to each patient. Support treatment is also given in the form of antibiotics and multivitamins. Dr Riddle also recommends to initiate treatment the following day after initial endoscopy examination since deaths have been registered after administration of fungizone the same day of general anaesthesia with Isoflurane.

Participants at the workshop also agreed that promotional/educational campaigns were useful. Several members shared their experience with "handouts". The feasibility of making educational videos in the near future was also discussed.

As an outcome of this discussion, it was decided to commission the design of an "aspergillosis" educational leaflet". Teri Bailey, Information and Liaison Officer at the National Avian Research Centre offered to undertake this task. Dr David Remple kindly offered copies of handouts previously prepared at the Dubai Falcon Hospital so the information contained in these could be used in the preparation of a new version. Dr Nick Fox, Dr Jaime Samour and Dr David Remple contributed photographs and helped editing the text. The final draft is now ready to go to the translators, since the leaflet will be printed in Arabic and distributed amongst all falcon hospital in the region.

The next workshop will probably take place the first week of April and before everybody begins disappearing to more cooler climates during their annual holidays.

Suggestions for workshop titles will be greatly appreciated

Falcon study workshop to focus on diseases - article published by Emirates News

(Abu Dhabi, United Arab Emirates, Thursday, December 8, 1994).

By a Staff Reporter

SWEIHAN: Scientists from throughout the Emirates gather at the National Avian Research Centre (NARC) at Sweihan today for the first-ever workshop of the recently founded Middle East Falcon Research Group (MEFRG), the Group's Chairman, Dr. Jaime Samour, said yesterday. The MEFRG was created in March (1994), at the suggestion of the International Advisory Committee of the National Avian Research Centre, to provide a focus for all those involved in falconry and in falcons.

Dr Samour, who is also the Head of Veterinary Science at NARC, describes the new body as "unique", because those involved include "falconers, experts in falconry, veterinary surgeons, falcon biologist and conservationist working in the Middle East, as well as other professionals interested in falcons and falconry from around the world, to collaborate in research programmes that will benefit falcons and the art of falconry". According to Dr Samour, around twenty people are expected to attend today's workshop, coming from the Emirates University, the Al Khasna Falcon Hospital, the Dubai Falcon Hospital and the Dubai Central Veterinary Laboratory, as well as from NARC itself.

The subject of the workshop is "aspergillosis in falcons" An infectious and fungal disease commonly caused by the fungus *Aspergillus fumigatus*, aspergillosis is the most common of the fungal diseases to affect birds. According to a statement issued by NARC about the workshop, newly imported falcons are at high risk if they have been subjected to adverse conditions such as stress, malnutrition and inadequate housing, although treatment is generally successful if carried out when the disease is in its early stages. Most of the falcons used by local falconers are imported each autumn for sale, and are often kept in unsuitable

conditions by the sellers, with the result that the birds of local falconers often develop the disease, and need treatment at the country's two falcon hospitals. One of the topics to be discussed at the workshop will be the need for a public awareness programme about the disease, so that local falconers have a better understanding of ways in which to protect their birds, while diagnosis and treatment of aspergillosis is also due to be discussed.

In the long run, the Middle East Falcon Research Group plans to act as a central body for the coordination of research activities related to falcons and falconry in the area and will promote research on falcon health and diseases, nutrition, captive breeding programmes, field studies, and improved management conditions for captive falcons. It will also work to promote a better understanding of falconry as part of the Arab heritage. Besides holding workshops and publishing papers and a quarterly newsletter, the Group also plans occasional international conferences. "Our objective", say Dr Samour, "can be summed up as looking after the interest of falcons and falconry".

The National Avian Research Centre, which is hosting the workshop at its purpose-built scientific Centre at Sweihan, was created by an Emiri decree issued by Sheikh Khalifa bin Zayed al Nahyan, Abu Dhabi Crown Prince and Deputy Supreme Commander of the Armed Forces. Besides a wide-ranging remit to study the wildlife, in particular the birdlife of the Emirates, the Centre specialises in research into falcons and the houbara bustard, the favoured prey species of local falconers. NARC has its own successful falcon breeding Centre in Britain, where weather conditions are more suitable, and a number of NARC-raised falcons have been performing well for local falconers during the current hunting season.

The ethics of hybrids

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

First of all what is a hybrid? A hybrid is a cross between different species. Some hybrids are very outcrossed, such as crosses between separated genera, for example redtail x Harris hawk, or Coopers x Harris hawk. Some of these species and genera have completely different chromosome complements and their hybrids are probably fertile. The genus Falco, as we know it today, has in the past been split into separate genera or sub-genera such as the peregrine group (*Rhyncodon*) and the great or desert falcons (*Hierofalco*). Hybrids between these sub-genera are more outcrossed and usually less productive than hybrids within each sub-genus. Thus a saker x peregrine is more outcrossed than say, a saker x gyr or a shaheen x peregrine. Research is still continuing on the relationships within the gyr / saker complex, and it is likely that genetically they are a single "super-species". They are fully fertile over several generations. It is thus debatable whether or not these could be termed hybrids at all.

Are hybrids likely to interbreed with wild raptors and thus alter their genetic structure? Again, there is no blanket answer. There are two aspects: **Could** they breed (are they sufficiently genetically compatible?) and **would** they pair up (would they recognise a wild raptor as a potential mate?) For example, the only large falcon in Britain is the peregrine. A shaheen x peregrine hybrid might breed normally with a wild peregrine, but a peregrine x desert falcon hybrid paired to a peregrine (in captivity at least) shows reduced hatchability. A released desert falcon x desert falcon hybrid, such as a gyr / saker, would be no more likely to breed with a wild peregrine in Britain that would a pure desert falcon such as a gyr, saker or lanner. Lanners have been flown and lost in Britain since the Middle Ages without a single report even of a pairing with peregrines. The reasons why individual birds pair or fail to pair are too complex to discuss fully here, but there is growing evidence from falcons, and from some non-raptorial species, that imprinting on the parents critically affects future mate selection. Thus, for example, a saker reared by a peregrine

may be more likely to pair up with a wild peregrine than would a saker reared by a saker. Even here there is a natural block because, although the saker might try to pair with a wild peregrine, the wild peregrine would repel its advances, recognising it as an alien species. The implication for managing hybrid raptors is either to imprint them on man, or on a species which is not found in the wild in the country where the bird will be flown. Precocial and social species, such as ducks, have different systems of imprinting and mate selection and we cannot make valid comparisons between them and solitary, altricial raptors whose imprinting period is much more protracted.

Basically the problem is not one of hybrids, as such, but one of genetic pollution of a wild gene pool. This is happening all over the world and with increased movements of plants and animals is likely to continue. In Britain for example, the domestic cat has polluted the Scottish wild cat, the ferret has polluted the polecat, and examples among ducks and pigeons are rife. To argue that wild gene pools must remain pristine is nice, but it implies also that the habitat for that population also remains pristine so that the two remain well adapted in evolutionary terms. This is not so easy. Most of the species are living in very different and fast-changing habitats to those in which they originally evolved. Those which can adapt in the space of a few generations have a chance to survive. The specialists go. In replacing the *anatum* peregrine in North America, The Peregrine Fund released several races of peregrine, on the principle that natural selection would gradually choose the best-adapted birds for modern conditions.

Curiously, our attitude to this problem is very dichotomous. With plants and animals other than man, the moral high ground is to maintain original gene pools. On the other hand, with the human races, the morality is against discrimination and pro introductions of non-indigenous genetic races. Morality is a wonderful thing.

The wild gene pool is seldom what one thinks it is. Studies by Dr Wink and others have

shown that the falcon species share most of their genetic material, just as man has about 95 % of his genetic material in common with the other apes. Our whole concept of species is changing, and taxonomic edifices are tumbling. It is foolish to jump to conclusions. But as a rough and ready guideline the most likely individuals to interbreed with a wild population are subspecies or very close relatives, non-indigenous to the area, for example, peales peregrines, shaheens or Barbaries flown in central USA or Europe. In the Middle East, where gyr / saker hybrids are flown, these could interbreed with wild sakers. Genetic pollution is not a bad thing, in fact the very term is a misnomer. The introduction of a few genes from a related gene pool can inject some vigour into ailing or maladapted populations. The red kite in Wales, which has now been studied genetically by Dr David Parkin's team, probably received genes from a stray German red kite several generations back, which seems to have given the population a much needed kick in the genetic pants. Some of these local populations which have recently become genetically isolated from the main population may benefit from a flow of genes to prevent them becoming inbred.

If lost, could a hybrid survive in the wild? Certainly the hybrids between gyrs, sakers or peregrines kill quarry in falconry as well or better than their pure-bred counterparts, and one must therefore assume that they would continue to do so in the wild. Thus they could survive as individuals for their lifetime, even though their genes might die out. Unentered falconry birds of whatever parentage have a poor chance of surviving in the wild, and it is essential that the falconer takes all possible precautions to prevent the loss of an unentered bird, which could not kill for itself.

There is a last point on the "con" side of the argument, and that is that hybrids are in some way unnatural. I cannot see that hybrids are less "natural" than say flying a non-indigenous species, or using telemetry, or transporting hawks in cars with hoods on their heads, or keeping a hawk in a city.

The trained peregrine is only suitable for certain types of land. In Britain these are grouse moors and in certain very limited lowland areas.

Most falconers do not have legal access to suitable land in lowland Britain to fly a peregrine. Does this stop them? No, instead they try to hawk land which is unsuitable for peregrines, and they come unstuck. The peregrine is a superb aerial specialist and in the right situation, such as a grouse moor, can scarcely be more than equaled. But it has three faults which make it unsuitable for pursuit flights in most of lowland Britain: First, it chases in a series of stoops, a method which although spectacular to watch, means the flight tends to cover a lot of distance, and most prey can reach cover first. Secondly, the peregrine is seldom willing to enter the flimsiest of cover. If the prey just lands on the ground, or under a sheep, the peregrine will stoop ineffectual and then, if not taken down promptly, is likely to drift away and get into mischief. Thirdly the peregrine tends to lack persistence; if things aren't exactly to its liking it often refuses or checks at something easier. Peregrine / sakers on the other hand get onto prey more quickly than a peregrine and, even when stooping, do not go so wide that the prey has so much time to make towards cover. They can kill in thin trees which means that large areas are not rendered unhawkable by walls, fences, sheep and so on, as they are for a peregrine. Finally, on the ground, they have the confidence and determination to kill a crow quickly, whereas a peregrine, although physically capable of doing so, often hesitates or refuses. Thus, for hawking with trained birds in managed habitats, hybrids are sometimes better adapted than pure-breds.

It may well be that some hybrids, such as those between redtail, Harris and ferruginous hawks, have no significant advantages, in which case their production will soon be abandoned. So-called "developed" countries are suffering increasing obstacle pollution in the form of roads and traffic, barbed wire and overhead cables. This has had a major impact on wildlife and closed up huge areas of country to all but the most basic types of hawking. If some designer hybrids enable falconry to adapt and continue despite these massive changes then they will have a role to play in the future. It is up to responsible falconers to ensure that hybrids do not have a negative impact on wild populations of raptors.

The hybrid debate - Discussion on methods for sterilising falcon hybrids

Report by Jaime Samour

There are several methods available to the Veterinary profession to sterilise birds. One of these methods was recently described at the Annual Conference of the Association of Avian Veterinarians in Reno, Nevada, by Dr Martin G Orr. He described a surgical method used to castrate mainly male peacocks without testicular artery/vein ligation. The bird is anaesthetised and prepared for laparotomy. Through the abdominal incision, the tunic covering each testicle is incised and the testicular tissue suctioned using a standard suction unit. The purpose of this procedure is to stop testosterone induced behaviour in pet birds.

Another way of sterilising birds could be by using vasectomy. This procedure could be carried out in male falcons either internally using fibre-optic endoscopy or subcutaneously around the cloaca. This procedure has been used successfully to vasectomise birds as small as budgerigars and finches. The only problem related to this method is that falconers in this part of the world very seldom use male falcons. Arab falconers prefer to hunt using female falcons as these are generally much larger than males.

Chemical sterilisation is another option. This is based on implanting long acting diethylstilbestrol preparations subcutaneously. The main disadvantage of this method is related to the duration of the implant as all the known commercially available preparations last only a few months.

My personal feeling is that orchiectomy as described by Dr Orr, seems to be the most likely option. The same procedure could be carried out in male falcons and could also be adapted for females. Also the surgical intervention could be performed using fibre-optic endoscopy rather than a full scale laparotomy. There are, however, some questions here that need to be addressed: What about secondary effects on growth (in the case of young birds), plumage, weight or behaviour following orchiectomy or ovariectomy? How feasible it could be to perform this procedure in young male and female falcons? Any comments?

I would like to appeal to members of the group to write directly to me suggesting methods that we could use here in the Middle East for sterilising mainly female falcon hybrids and the possible implications involved with the procedures.

Contributions will be published in the next issue of Falco



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Dates for your diary

**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.

**Association of Avian Veterinarians Annual
Conference and Expo**
28th August - 2 September 1995
Philadelphia, Pennsylvania, USA

Conference office
2121 So. Oneida St., Ste 325
Denver, Colorado, USA 80224
Phone 01-303-7568380
Fax 303 01-7598861

Announcements

The Institute of Zoology
(Zoological Society of London)

and

The Royal Veterinary College
(University of London)

MSc in Wild Animal Health

This is a twelve month course for European and overseas graduates in veterinary and relevant sciences making a career in wild animal health. The course includes practical and theoretical instruction in the husbandry and nutrition of wild animals, taxonomy, population biology, conservation genetics, welfare and ethical aspects, epidemiology, immunology, infectious and non-infectious diseases, disease investigation, restraint, preventive medicine and surgery, together with an individual research project. Training will be given by staff at The

Institute of Zoology and the Royal Veterinary College, as well as invited speakers from other veterinary and zoological centres. Applications are now invited for the 1995/96 course starting in October 1995.

Full particulars and an application form are available from the Registrar, The Royal Veterinary College, Royal College Street, London NW1 OTU, United Kingdom.
Tel: + 44 - 71 - 3872898.
Fax: + 44 - 71 - 3882342.

International Conference - Middle East Falcon Research Group

Abu Dhabi - United Arab Emirates

Second Announcement - Call for papers and poster presentations

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 at the end of October or early November 1995, immediately after the International Advisory Committee Meeting of the National Avian Research Centre. This is the second official announcement to all wishing to attend and to present papers and posters. The Conference will be held in one of the hotels in Abu Dhabi. The final programme and dates will be announced 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 pododermatitis, 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.

All members are welcomed to attend at their own expense. Those wishing to attend please let me know before the 1st of September 1995.

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

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

Note: I would like to apologise to all members for stating that the above conference was going to be held in March. The mistake was due to a misunderstanding concerning the dates for the International Advisory Committee visit to Abu Dhabi. As soon as we have a define date for the IAC visit, we will be in a position to give more accurate dates for the Conference.

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.
- Field 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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