

# A GLOBAL STRATEGY FOR THE CONSERVATION OF FALCONS AND HOUBARA



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*A Global Strategy  
for the Conservation of Falcon and Houbara Resources*





Twenty-one years ago we hosted our first international gathering of brother falconers from all over the world. Now, as this millenium draws to a close and we prepare ourselves for a new one, it is even more important that we come together to secure the future for our children and the world that they will inherit from us. It is truly said that we borrow the world from our children and hold it in trust for them.

The traditional sport of falconry was passed down to us from our fathers, from a time when we were closer to nature and life was more simple. It is a constant reminder to us of the forces of nature, of the inter-relationships between living things and the land they share, and of our own dependence on nature. Falconry depends on healthy populations of the quarry, such as the Houbara, and they in turn depend on the continuing health of their breeding and wintering grounds. Falconers thus have a concern for natural habitats and for the sustainable use of resources.

During my own lifetime I have seen many remarkable changes and achievements occur in the Middle East. Oil has brought immense benefits for the welfare of our people. But progress can also pose problems for nature - pollution of land and sea, unwanted development and spoiling of natural areas, and disturbance of quiet places which once gave refuge to wildlife. Some of the prey species have suffered from loss of habitat, and from persecution or over-hunting. It is important for us to take steps to turn the tide before it is too late, in order to safeguard the future.

This plan is essential in helping us to recognise how these complex systems interrelate and depend on each other. It helps us to see clearly our way forward and our priorities for action. So much is already being achieved by many organisations in many countries. We will reach our goals by working together, hand-in-hand, in co-operation, not by confrontation.

All of us share a common goal: the sustainable, balanced use of resources. We wish to leave the Earth as good, or better, than we found it.



*Foreword by*

*His Highness*

*Sheikh Zayed bin Sultan Al Nahyan,*

*Ruler of the United Arab Emirates*



# THE ARABIAN FALCONERS ASSOCIATION

## AIMS

- To cater for all Arab falconers' needs
- To provide international representation for Arab falconry
- To work for improvements in the health and welfare of captive falcons
- To monitor wild falcon and quarry populations and work for their continued health through programmes of research and conservation funded by falconers
- To monitor national and international laws and Agreements relating to falconry
- To represent Arab falconry on the international falconry scene
- To support falconry all over the world
- To hold international falconry meetings

## A LANDMARK IN THE HISTORY OF FALCONRY

A centuries-old tradition - a matchless rapport with their birds - Falconers throughout the Middle East have a unique heritage. There are more falconers in the Middle East than anywhere else in the world.

In an Arabian Falconers Union, these falconers would possess great strength - strength to conserve and protect for the future those very things upon which falconry depends - wild falcons, the houbara, kurrowan and hare, and the fragile hunting grounds.

## STRUCTURE

**Board of National Representatives**  
From each National Falconers Association

**Co-opted Specialists**  
Offering a scientific advisory service

**Spokesman**  
**Secretary**  
**Treasurer**  
**Media and Public relations**







# THE NATIONAL FALCONERS' ASSOCIATIONS OF EACH MEMBER STATE OF THE ARABIAN FALCONERS ASSOCIATION

## AIMS

- To bring together falconers and information
- To produce magazine or newsletter
- To hold local meetings and talks
- To open a National Falconry Center and Falcon Hospital
- To ensure that enough quarry is available for falconers
- To administer local hunting
- To maintain national falconry archives
- To maintain a PIT microchip database
- To help administer CITES
- To hold international conferences
- To teach and help young falconers







NATIONAL FALCONERS ASSOCIATION

## ABU DHABI FALCON HOSPITAL

Specialising in the care and treatment of falcons, the wildlife veterinary research institute of the UAE National Falconers Association will also research the health and disease of wildlife in the UAE. The Headquarters at Mafraq, Abu Dhabi, are open to the General Public and provide a veterinary service to falcons and other animals.

It is staffed by specialist falcon veterinarians for the highest standard of health care.



Bumblefoot



Serratospiculum worm inside a falcon

### RESEARCH PROJECTS

On falcon health problems aiming to improve the medical and surgical care of falcons

### QUARANTINE UNIT ISOLATION WARDS

For isolation of recently imported falcons to ensure they are healthy before being trained

### HOSPITAL WARDS

- For falcons undergoing veterinary treatment
- Staffed by specialist falcon veterinarians for the highest standard of healthcare



Using an endoscope to examine a live falcon





## MOULTING WARDS

- Modern quarters for moulting falcons under contract.
- Falcons maintained on a top quality diet with vitamin supplements to ensure strong new feathers and good overall health.

## PUBLIC AWARENESS UNIT

- To promote public awareness of health and disease issues in captive falcons
- To encourage good husbandry of captive falcons
- To promote the sustainable use of the houbara as a quarry species
- To show the importance of falconry to Arab cultural heritage



## FALCON HEALTH INSURANCE

May be purchased for falcons



## MOBILE CLINIC

First aid and health care for falcons on hunting expeditions

NATIONAL FALCONERS ASSOCIATION

# THE EMIRATES FALCONERS' CLUB

ESSENTIAL MODERN FACILITIES FOR THE FALCONER

This center, currently still in the planning stage, will have immense benefit for Falconers in the UAE. A central base for the National Falconers Association, it will fulfill many roles.

The education of young people will be a priority, not only young falconers - but to teach everyone the true tenets of falconry - a love and respect for both the falcon and quarry, a deep and abiding concern for the health of the hunting grounds, and an awareness of the unbroken line of tradition which follows falconry back to the very earliest days of the Arab people.



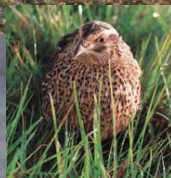
Falcon sales rooms



**SALES ROOMS**  
Modern sales rooms for falcons



**SPORTING AGENCY OFFICE**  
Co-ordinating hunting trips for Arab falconers and sportsmen abroad



**COLD STORES FOR FALCON FOOD**  
Top quality food to keep falcons in the best of health







NATIONAL FALCONERS' ASSOCIATION  
OFFICE



CITES OFFICE  
Authority dealing with the import of falcons into  
the UAE



MEFRG OFFICE  
National Headquarters of the Middle East Falcon  
Research Group

EXHIBITION HALL  
For falconry and falcon related  
exhibitions

- hunting equipment
- fine art of falcons and wildlife
- conservation
- Arabian Sporting Heritage



SHOP  
Allowing easy access to the  
world's best books, health care  
and falconry equipment



CONFERENCE FACILITIES

For conferences on:

- Falconry
- Wildlife legislation
- Conservation





Photographing a wild saker falcon as part of a scientific study into the relationship between different types of saker falcon



# CONSERVATION AND RESEARCH

A priority for the future of Arab falconry. The commitment of the Arab Falconers' Association to wise conservation will be absolute. What would falconry be with no falcons? What would falconry be if the hunting grounds are bare of quarry? Research projects are the first stage in creating practical conservation programmes. Their contribution to the continuation of species - and the future of falconry - cannot be overestimated.

## STAGE II PREPARATION

- Develop the project structure
- Estimate costs
- Prepare budgets
- Obtain funds
- Obtain relevant permits (fieldwork permits, CITES)
- Hire staff
- Sign Research Agreement between government and/or non-governmental organisations

## STAGE I PRELIMINARY DISCUSSIONS

- Identify the aims of the project
- Identify suitable biologists and institutions
- Sign a Memorandum of Understanding between government and/or non-governmental organisations



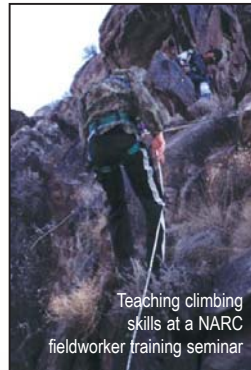
Representatives from the National Academy of Sciences, Kazakhstan, signing a collaborative houbara Research Agreement with NARC





## STAGE V RESULTS

- Secure a sustainable, long-term future for the target species, the habitat in which it lives, and other species dependent upon those habitats
- Closer ties and understanding at all levels between participating countries
- Funds, resources and training for range countries' biologists and scientific institutions



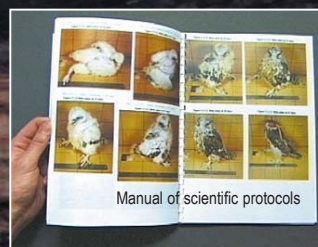
## STAGE IV PROGRESS

- Progress reports
- Visiting field teams
- Receiving data
- Processing data
- Re-evaluating project (meetings, workshops, conferences, feedback, external advice)
- Publishing results (scientific journals, popular media, articles etc.)



## STAGE III SETTING UP

- Direct the project internationally
- Manage the project nationally
- Link with sister projects (e.g. through the MEFRG PIT scheme, migration studies)
- Communicate in different languages
- Standardise methods and data (e.g. a manual of scientific protocols and datasheets)
- Obtain equipment and transport
- Get funds and supplies to fieldwork countries and teams
- Maintain resource and cash flow schedules
- Optimise use of resources
- Transport scientific specimens/material to other institutions for analysis





# HOUBARA FIELD RESEARCH IN THE UAE



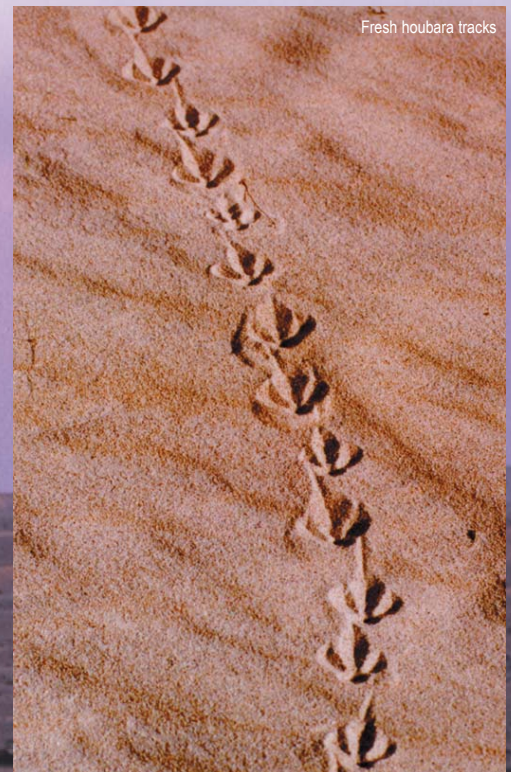
To catch live houbara for research purposes, this Saker wears a special hood and has beads glued to its talons. It can catch houbara, but the houbara remain unharmed.

The arrival of the Houbara in the United Arab Emirates has been a much-awaited event for hundreds of years. Falconers and their falcons must use all their traditional skills to track the shy houbara during the winter months. Nowadays, fewer and fewer houbara visit the UAE. We need to discover the reasons behind their declining numbers, and we need to know how to halt this decline before the houbara becomes extinct in the UAE.



Houbara trapped in Baynunah, UAE, for research purposes

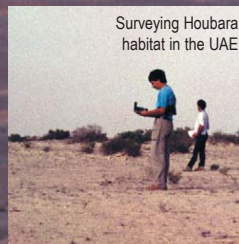
ASSESS AND CHECK THE  
DISTRIBUTION AND OCCURRENCE OF  
HOUBARA THROUGHOUT THE  
COUNTRY



Fresh houbara tracks

MONITOR THE WINTERING POPULATION OF  
HOUBARA IN THE UAE IN ORDER TO  
EVALUATE POPULATION TRENDS

CREATE NETWORKS OF WILDLIFE RANGERS TO  
MONITOR THE UAE HOUBARA POPULATION  
COUNTRYWIDE

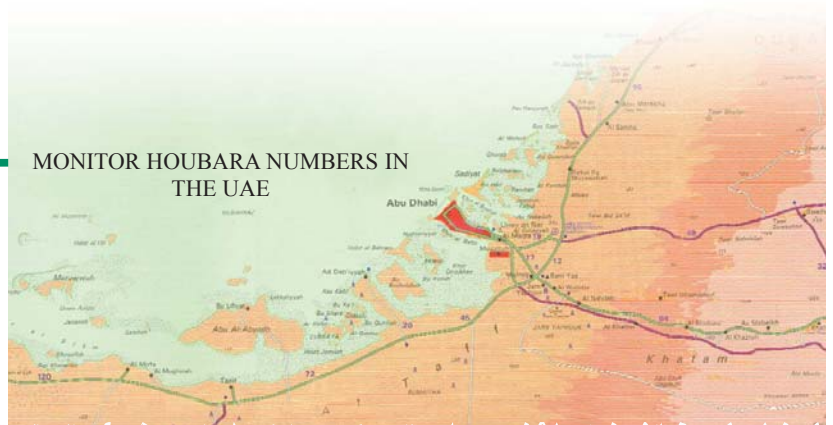


Surveying Houbara  
habitat in the UAE



ASSESS AND MONITOR  
THE IMPACT  
OF HUNTING AND  
DISTURBANCE  
ON THE UAE HOUBARA  
POPULATION

MONITOR HOUBARA NUMBERS IN  
THE UAE

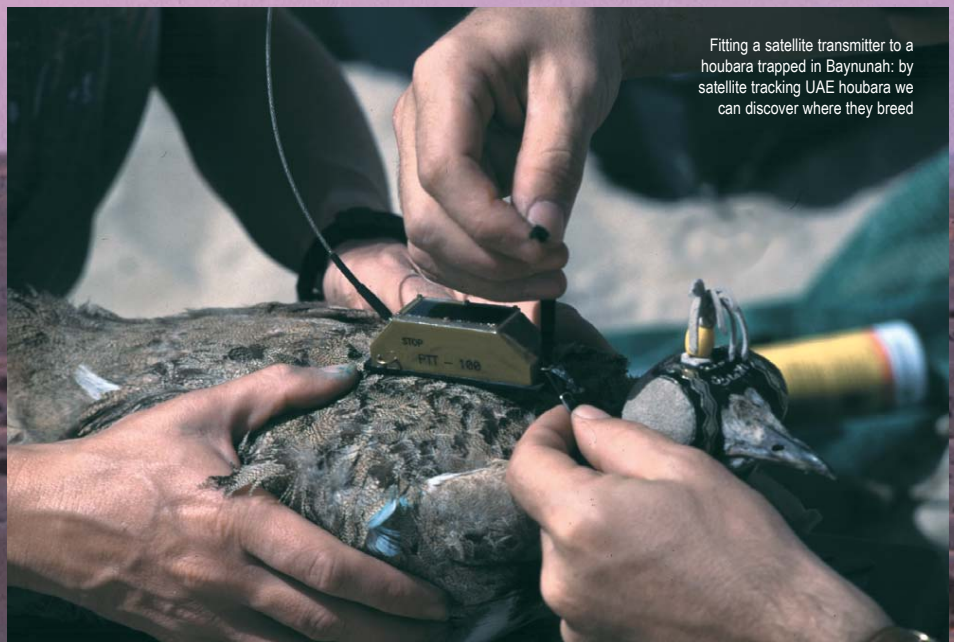


IMPLEMENT RESEARCH ACTIVITIES  
TO INVESTIGATE:

- Houbara habitat choice
- Houbara diet
- Genetic studies on the origin of wintering populations
- Time of houbara arrival and departure
- The numbers and distribution of the houbara in the UAE

IDENTIFY TRENDS IN  
THE HOUBARA  
POPULATION AND  
HABITAT  
AVAILABILITY  
IN THE UAE

ESTABLISH  
PROTECTED  
MANAGED AREAS  
(HOME HUNTING  
GROUNDS) FOR  
HOUBARA



Fitting a satellite transmitter to a houbara trapped in Baynunah; by satellite tracking UAE houbara we can discover where they breed

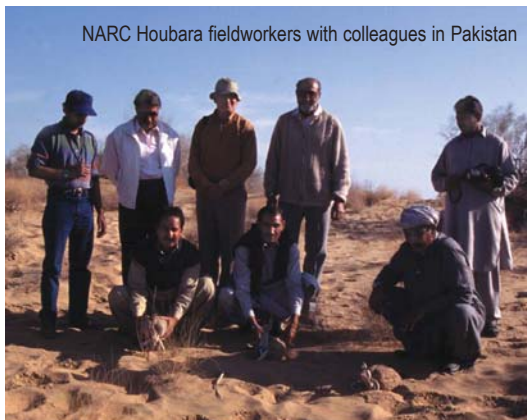


## CHINA

Collaborative research on:

- Breeding biology (Productivity)
- Migration
- Distribution
- Population Dynamics
- Population Monitoring

NARC Houbara fieldworkers with colleagues in Pakistan

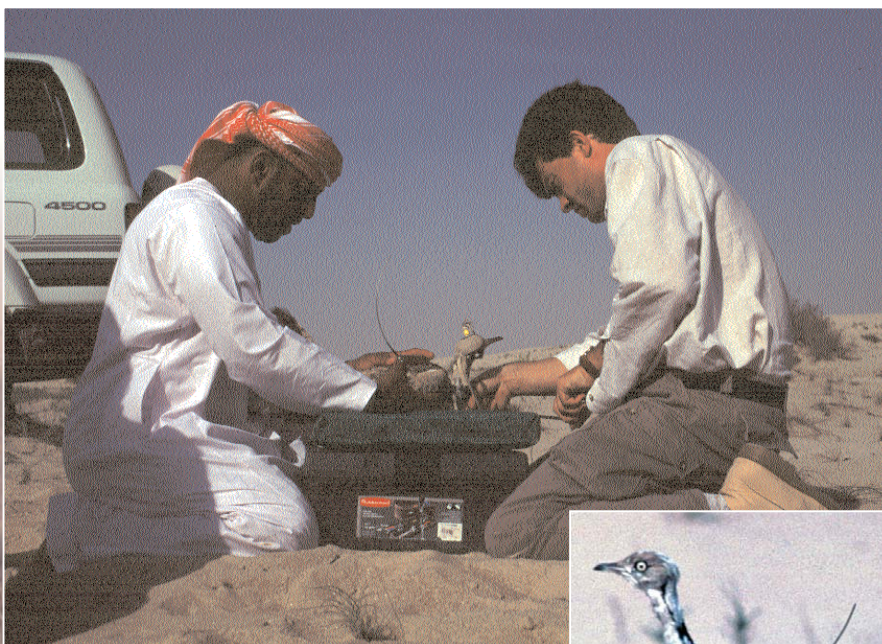


# HOUBARA RESEARCH IN THE RANGE COUNTRIES

The Asian Houbara Bustard is a widely distributed bird found in twenty-three countries. Some populations are migratory and travel thousands of kilometers to reach their wintering grounds in the Arabian Peninsula. The responsibility of ensuring a secure future for these birds rests with all the countries crossed by the houbara. A concerted, integrated effort to conserve the houbara is therefore essential.

## PAKISTAN

- Rehabilitation Center (*Houbara Foundation International*) for confiscated Houbara
- Assessment and control of Houbara trade
- Assessment of the impact of hunting and trapping
- Breeding biology (productivity)
- Migration



This satellite-tagged Houbara, trapped in the UAE, was tracked all the way back to its breeding grounds in China, giving essential data on houbara migration routes





## GLOBAL MANAGEMENT OF THE WILD POPULATION OF THE ASIAN HOUBARA BUSTARD THROUGHOUT ITS RANGE

### KAZAKHSTAN

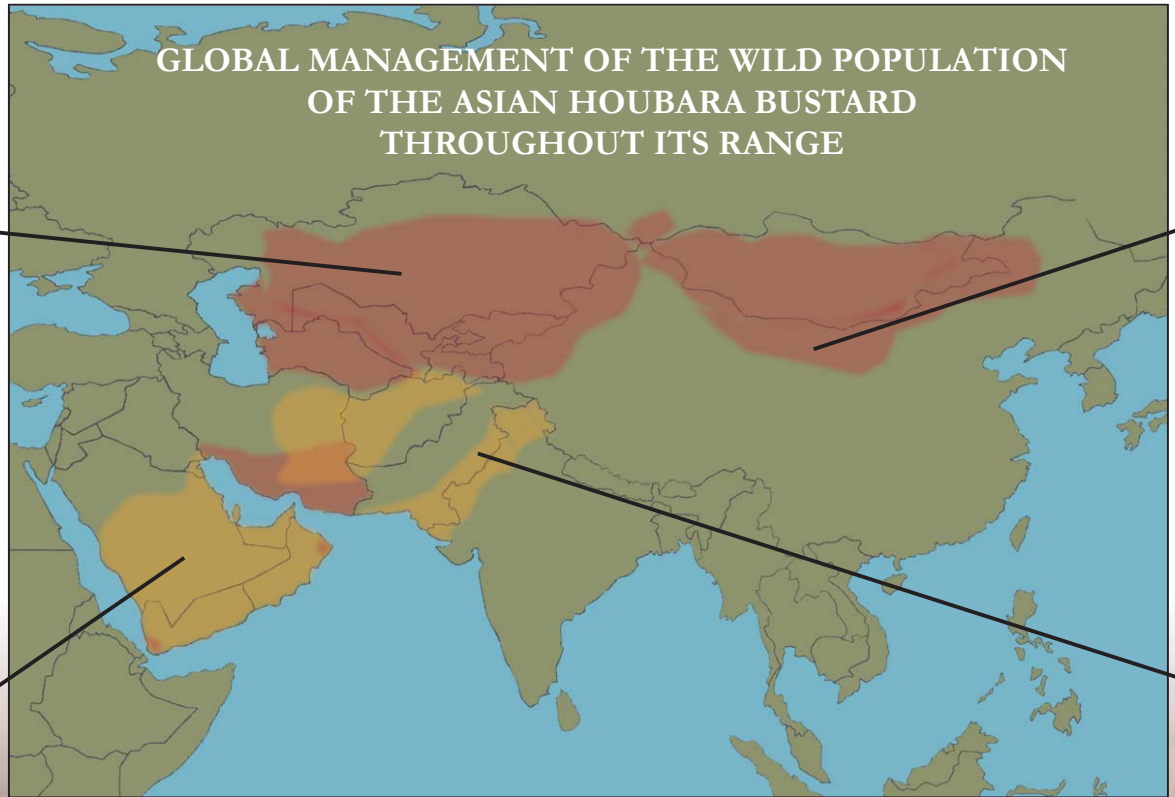
Collaborative research on:

- Assessment of the impact of hunting and trapping
- Breeding Biology (Productivity)
- Migration
- Distribution
- Population Dynamics
- Population Monitoring

### ARABIAN PENINSULA

(Oman, Saudi Arabia,  
Yemen, UAE)

- Distribution
- Breeding population
- Protected Areas
- Trends in the population
- Migration



Breeding range

Wintering range



Illegally-trapped houbara awaiting release back into the wild at a rehabilitation center in Pakistan





# HOUBARA CAPTIVE BREEDING PROGRAM

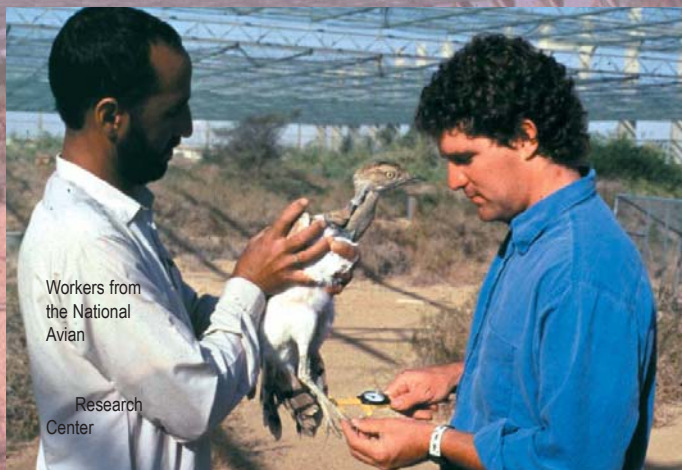


Captive-bred Houbara

The overall aim of breeding houbara in captivity is to provide a sustainable quarry resource by increasing the number of houbara wintering in Abu Dhabi. It is hoped this can be achieved through an appropriate combination of captive breeding and release, improving habitat, and by establishing and conserving breeding populations centered on intensively managed protected areas.

## AIMS OF THE HOUBARA BREEDING PROGRAM

- To breed houbara cost-effectively in captivity for release to supplement the UAE's wintering population
- To release houbara for hunting
- To re-stock wild populations on their wintering and breeding grounds
- To provide houbara for training falcons



Workers from  
the National  
Avian

Research  
Center



Collecting semen from a hand-reared male houbara  
by persuading it to mate with a model female



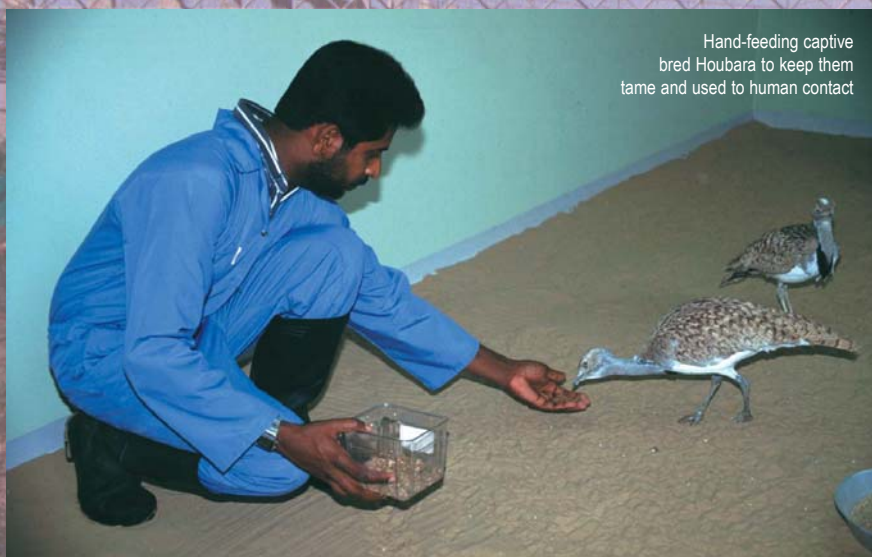
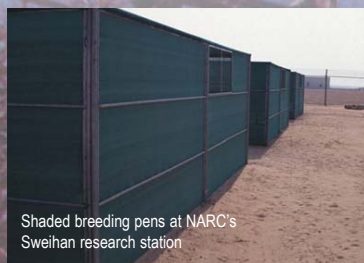


## RESEARCH INTO

- Artificial insemination
- Nutrition and diet
- Physiology of Reproduction
- Release techniques
- Rearing and handling techniques
- Genetic management of the captive population
- Behaviour in Captivity
- Health

## INTERNATIONAL COLLABORATION

- Increase the exchange of birds between captive breeding centers to maximise their genetic variation and reduce the need to collect birds from the wild
- Establish a database of the origins of each captive houbara
- Share expertise and information between captive breeding centers





# THE HOUBARA YEAR

The life story of the Houbara takes place over thousands of miles and many countries. Some houbara stay year-round in the same region. Most houbara spend the winter thousands of miles from their breeding grounds. We must ensure that the houbara is protected from hunting during the vulnerable times of the year - during courtship, egg-laying and chick rearing. This diagram shows the movements and life-cycle of the houbara, and shows those seasons when responsible falconers should hunt houbara, and those seasons when the houbara should be left unhunted, to breed in peace, producing many young houbara for the next season's hunting.







HOUBARA WIN-  
TERING IN  
ARABIA

NOVEMBER  
Managed Hunting

OCTOBER  
Managed  
Hunting

SEPTEMBER  
No hunting

DECEMBER  
Managed  
Hunting



PRE-MIGRATION  
POPULATION

JANUARY  
Managed  
Hunting

FEBRUARY  
Managed Hunting  
(special cases)

MARCH  
Egg-laying





# INTERNATIONAL AGREEMENTS ON THE HOUBARA BUSTARD



The Houbara Bustard is a bird of great international importance due to its wide distribution across much of Asia and north Africa.

The migratory existence of the houbara means that over-hunting or habitat loss in one country may affect Houbara populations in another. International efforts are therefore essential to ensure the long-term survival of this beautiful bird.

CMS  
CONVENTION ON THE CONSERVATION OF  
MIGRATORY SPECIES OF WILD ANIMALS, BONN, 1979



CMS CONFERENCE OF THE PARTIES  
SECOND MEETING, GENEVA 1991



CMS CONFERENCE OF THE PARTIES  
THIRD MEETING, NAIROBI 1994

Appendix I:  
Northwest African Houbara (endangered)  
Appendix II:  
Asian Houbara (Unfavourable Conservation Status)

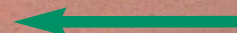


Recommend the transfer of Houbara  
from CITES Annex I to Annex II before the next CITES  
Conference of the Parties



CITES  
CONVENTION ON INTERNATIONAL TRADE IN  
ENDANGERED FLORA AND FAUNA,  
WASHINGTON 1973

Appendix I: Houbara (threatened with extinction)





## HOUBARA MANAGEMENT PLAN

### DRAFT AGREEMENT ON THE CONSERVATION AND MANAGEMENT OF THE ASIAN HOUBARA

November 1995

Parties to the Bonn Convention on Houbara

#### PROPOSED HOUBARA MANAGEMENT COMMITTEE

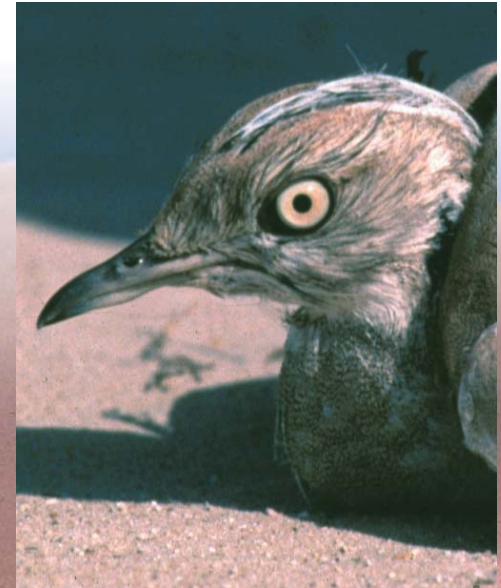
- 5 Experts representing different range countries
- 1 Representative from Western Conservation Organisations
- 1 Representative from Arab Falconers
- 1 Expert on Houbara Bustard Management
- 1 Expert on Rural Development
- 1 Expert on Environmental Law
- Up to 3 Observers from International Organisations

#### DRAFT AGREEMENT AREA

Afghanistan, Bahrain, China, India, Iran, Iraq, Kazakhstan, Kuwait, Mongolia, Oman, Pakistan, Qatar, Russia, Saudi Arabia, Turkmenistan, United Arab Emirates, Uzbekistan, Yemen

#### CONSERVATION FUND

Identify sources of funding and where funds will be spent



CMS CONFERENCE OF THE PARTIES,  
FOURTH MEETING, GENEVA 1997

CONVENTION ON BIOLOGICAL  
DIVERSITY 1992

THE AFRICAN CONVENTION ON THE  
CONSERVATION OF NATURE AND  
NATURAL RESOURCES 1968



# THE KURROWAN AND HARE

The ageless flight of the saker at houbara - the peregrine at kurrowan.

The falconer, kneeling by his falcon after it has caught a desert hare.

These precious moments rest upon the delicate balance between predator and prey, between the prey and its habitat. Conservation projects are planned on the desert hare and kurrowan.

The Arabian Falconers Association will be a powerful force working towards reversing the decline of traditional quarry species.

## RESEARCH CAPTIVE QUARRY SPECIES

- Captive breeding
- Incubation studies
- Health studies
- Diet studies
- Behavioural studies
- Genetic studies
- Growth studies
- Release techniques

## INCREASE PRODUCTIVITY:

- By captive breeding and releasing
- By improving wild breeding success

## PRODUCTIVITY

Identify and measure:

- Breeding areas
- Breeding populations
- Nesting success
- Total productivity - i.e. total number of young produced per year

## USE ALTERNATIVE PREY FOR TRAINING FALCONS

- Captive bred houbara, kurrowan, hares
- Pheasants, ducks, pigeons, seagulls

## MORTALITY

Identify causes of death in wild populations and measure relative importance of:

- Natural factors
- Illegal killing
- Live trapping
- Hawking
- Pesticides

## RESEARCH WILD QUARRY

### KURROWAN

*Burhinus oedipnemos*  
Declining populations

### HARES

*Lepus capensis*  
Declining populations

The desert hare



The kurrowan





## MAXIMISE SUSTAINABLE YIELD FOR FALCONRY

Maximise the number of quarry that can be taken without harming the wild populations of quarry upon which falconry depends

IMPROVE WARDENING AND INCENTIVES

BREED QUARRY FOR:

- Re-stocking areas
- Hunting
- Training falcons

DIET STUDIES  
GENETIC STUDIES  
MIGRATION STUDIES

PUBLIC AWARENESS  
SCIENTIFIC PUBLICATION

ASSESS HABITAT

- Quality of habitat for quarry species
- Quantity of habitat
- Degradation factors
- Restoration measures
- Reduce disturbance
- Change grazing patterns
- Public education

REDUCE MORTALITY

- Illegal killing
- Live trapping



The desert hare



Shaheen and kurrowan



Monitoring Wild Falcon Populations

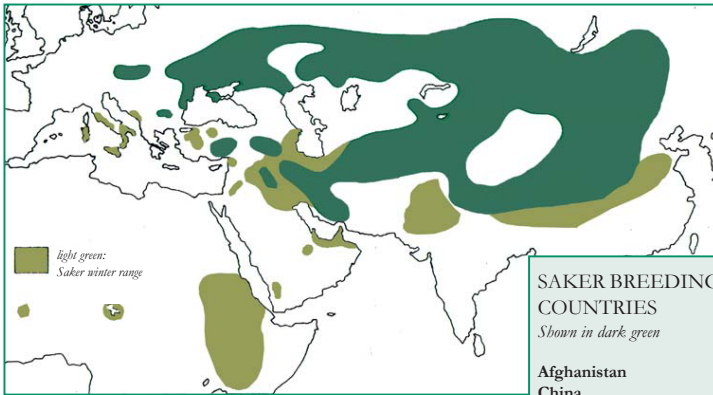
# THE SAKER FALCON

*Falco cherrug*

OUR TRADITIONAL HUNTING PARTNER

Throughout history, Saker falcons have hunted in partnership with man - their nesting lands the cradle of falconry. But sakers are now in grave danger. In the past ten years, overtrapping in their breeding grounds has increased and they face many other threats such as loss of habitat. For the sake of Falconry, we need to conserve wild Saker populations - populations which have supplied mankind with hunting partners for four thousand years.

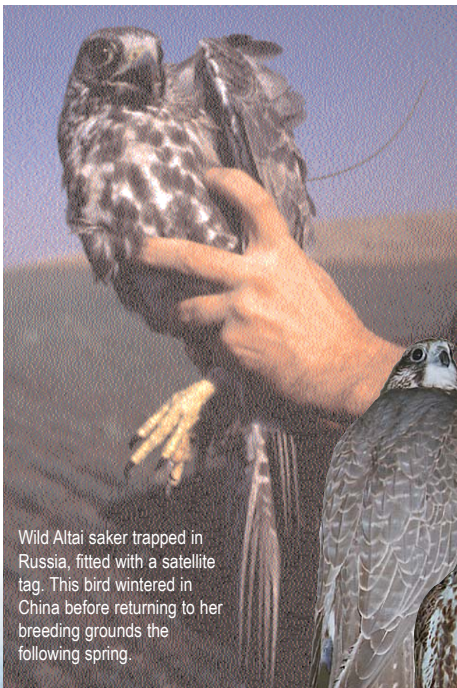
To that end, research programmes are underway across much of the Saker falcon's range. Their primary goal is to identify the precise nature of threats to wild populations. Once the results are known, conservation programmes can target resources where they are most needed. Their final aim is to safeguard the future of the Saker falcon and, in so doing, Arab falconry itself.



## SAKER BREEDING RANGE COUNTRIES

*Shown in dark green*

Afghanistan  
China  
Eastern Europe  
Iran  
Kazakhstan  
Kyrgyzstan  
Mongolia  
Nepal  
Pakistan  
Russia  
Siberia  
Tajikistan  
Tibet  
Turkmenistan  
Ukraine  
Uzbekistan



Wild Altai saker trapped in Russia, fitted with a satellite tag. This bird wintered in China before returning to her breeding grounds the following spring.

TYPES OF SAKER  
DNA studies  
Taxonomic studies  
Morphometric studies





HEALTHY  
POPULATION OF  
SAKER FALCONS  
IN THE FUTURE

BASELINE FOR  
FUTURE  
CONSERVATION  
PROGRAMME

SUSTAINABLE YIELD  
ESTIMATES  
The maximum number of  
young falcons that could  
be taken from the wild  
without harming the wild  
population

PRODUCTIVITY ESTIMATES  
The number of young falcons  
produced every year

PERSECUTION  
Assess numbers and impact

ILLEGAL  
TRAPPING  
Assess numbers  
and impact

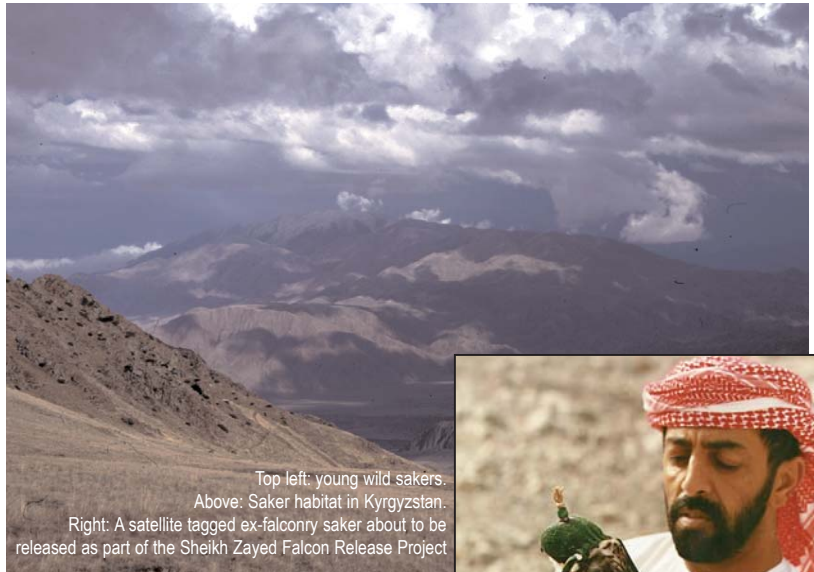
PESTICIDE STUDIES  
Research contaminants and  
effect on wild population

DIET STUDIES  
How food availability  
affects breeding  
success

HUNTING  
BEHAVIOUR  
STUDIES

SCIENTIFIC PAPERS

SAKER FILM  
SAKER BOOK  
Making research findings  
available to a wide  
audience



HISTORICAL AND CULTURAL USES  
Mankind's relationship with the Saker  
falcon through the centuries and how it has  
shaped Saker falcon populations

RELEASE STUDIES  
Tracking released sakers to  
monitor their movements  
and health







ARCTIC PEREGRINE  
Breeding range

HEALTHY POPULATION  
OF ARCTIC  
PEREGRINES  
IN THE FUTURE

↑  
BASELINE FOR FUTURE  
CONSERVATION  
PROGRAMME

↑  
PRODUCTIVITY  
ESTIMATES  
the number of young  
falcons produced every year

↑  
MIGRATION  
STUDIES  
Using leg rings  
and satellite tags

↑  
DIET STUDIES  
How food  
availability affects  
breeding success

↑  
PESTICIDE STUDIES  
Research chemical  
contamination of wild  
peregrines and its affect  
on their breeding  
population

↑  
HEALTH STUDIES  
Research biomedical  
profile of wild  
population

↑  
BREEDING  
BIOLOGY AND  
NESTING SUCCESS

CITES  
APPENDIX I  
SPECIES  
Internationally  
endangered



An adult arctic  
peregrine

## Monitoring wild falcon populations ARCTIC PEREGRINES *Falco peregrinus calidus*

MIGRATION, DIET AND BREEDING BIOLOGY OF  
ARCTIC PEREGRINES IN SIBERIA

Arctic peregrines are large, pale and highly migratory. Each year they travel from their nesting grounds in the Arctic to wintering grounds as far south as South Africa.

The aims of this collaborative project between The National Avian Research Center and the Wildfowl and Wetlands Trust are twofold. First, to gather essential scientific data on the breeding biology and diet of this falcon; and second, to trace the migration routes and wintering grounds of the falcon. Without knowing the whole range of the falcon, any conservation programmes could offer it only partial protection.



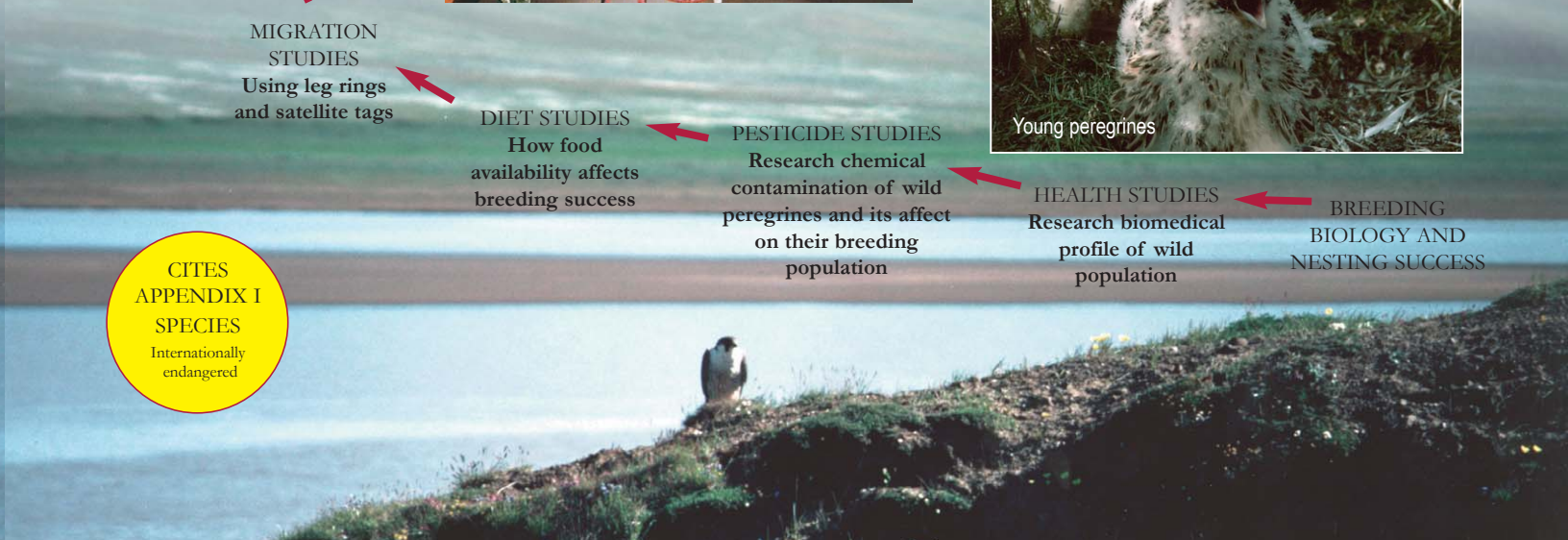
Wildfowl and Wetlands  
Trust, UK



National Avian Research Center  
Abu Dhabi



Young peregrines





Why is it important to know where these falcons spend their winter, and the routes they take to get there? Because then we will know if they face dangers on their journey such as poisoning by pesticides, or habitat loss.

Scientists in Siberia discovered one wild female peregrine wearing sabooks. She must have been lost on a hunting trip, and found her way back to the breeding grounds. She was rearing a nest of three healthy young falcons

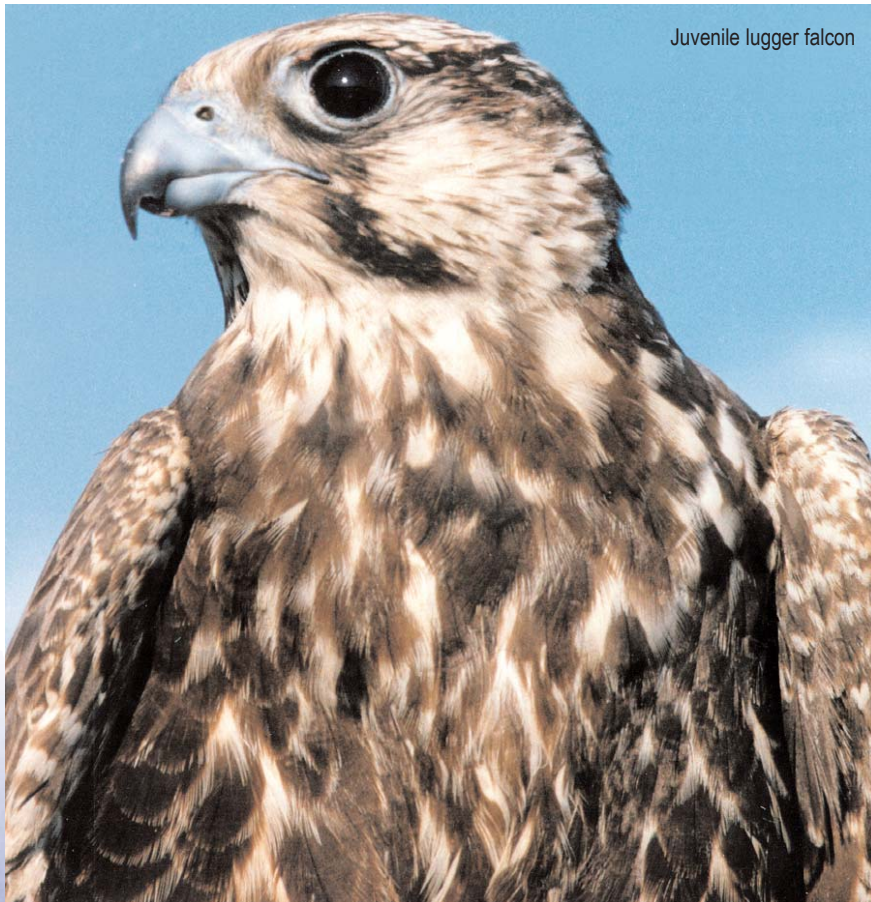
We fitted satellite tags to Siberian peregrines to trace their mysterious migration routes across Asia. We also have links with scientists in South Africa who are trapping arctic peregrines on the coastal dunes in the winter months.



One falcon was trapped by a falcon trapper in Pakistan. Other falcons, fitted with leg rings and microchips when young, like the birds below, were trapped in Abu Dhabi. Falconry in Arabia is reliant on the health of breeding falcon populations thousands of miles from the hot deserts of the Gulf states.







Juvenile lugger falcon

Monitoring wild falcon populations

# THE LUGGER FALCON

*Falco jugger*

AN INTERNATIONALLY ENDANGERED SPECIES  
AFFECTED BY THE FALCON TRADE

The Lugger falcon is a small falcon but it is a close relative of the Saker and its numbers are declining in the wild. The reasons for this are poorly understood. Around 2000 are used each year as *barak* - decoy birds for trapping Sakers and Peregrines in Pakistan.

Perhaps overtrapping is one reason. Other possibilities include pesticide contamination or habitat changes affecting breeding success. This collaborative project between NARC and Falcon Foundation International,

Pakistan, aims to discover the reasons behind the lugger's decline in Pakistan, and in so doing, identify conservation priorities for this rare species.



Falcon Foundation International,  
Pakistan



National Avian Research Center  
Abu Dhabi

HEALTH STUDIES  
Research biomedical  
profile of wild  
population



Lugger chicks in Pakistan

PRODUCTIVITY  
ESTIMATES  
the number of young  
falcons produced every  
year

IMPORTANCE OF TRAPPING TO  
LOCAL COMMUNITIES  
Any conservation plan must take  
into account the needs of local  
communities





# HEALTHY POPULATIONS OF LUGGER FALCONS IN THE FUTURE

BASELINE FOR  
FUTURE  
CONSERVATION  
PROGRAMME

CITES  
APPENDIX I  
SPECIES  
Internationally  
endangered



DISTURBANCE  
Assess pressures of  
human population on  
lugger breeding success

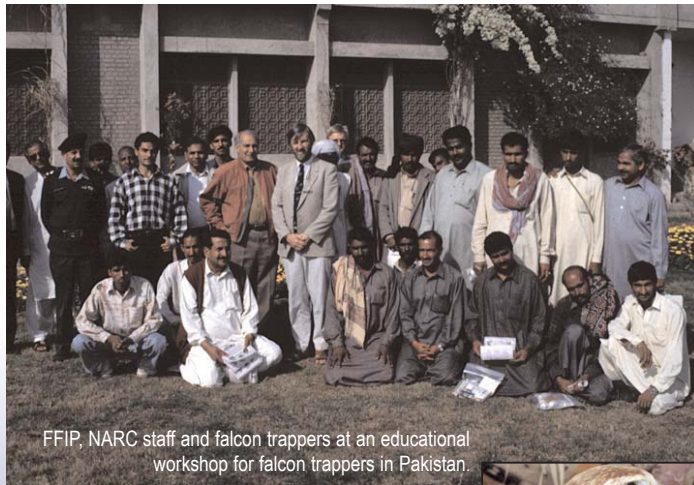
PESTICIDE STUDIES  
Assess chemical contamination  
and its impact on lugger breeding  
success



LUGGER  
Breeding range

TRAPPING  
Assess numbers trapped and  
trapping's impact on the  
population

SUSTAINABLE YIELD  
ESTIMATES  
Estimate of the maximum  
number of falcons that  
could be trapped without  
harming the wild population



FFIP, NARC staff and falcon trappers at an educational  
workshop for falcon trappers in Pakistan.

After luggers have been trapped they are kept by local dealers for weeks before they are sold to saker and peregrine trappers. They are kept in very poor conditions and many die of starvation and disease. The National Avian Research Center and Falcon Foundation International hold educational workshops which teach falcon trappers and dealers in Pakistan how to look after falcons properly. If fewer falcons die, fewer will need to be taken from the wild.







# CAPTIVE BRED FALCONS

Top Hunting Falcons Produced by Selective Breeding

More Choice for Falconers

Good News for Falcons

Captive bred falcons are proving their worth at hunting camps - strong, fast falcons well-suited to life in the desert. But there is more to captive breeding than is immediately apparent. It has active conservation and research benefits - cutting down on the number of wild falcons that need to be trapped and safeguarding the best falcon bloodlines for the future. A sales agency would ease the problems currently associated with buying hawks.

## IMPROVING SUPPLY AND CHOICE OF FALCONS

- Streamlining importation procedures
- Stabilising prices
- Encouraging sterilisation of hybrids to prevent breeding with wild falcons
- Encouraging microchipping and health records
- Breeders and falconers together working to produce best birds
- Improving care of falcons in transit



White gyr x saker hybrid falcon and her chicks



Newly hatched falcon



A young captive bred saker is measured and photographed for scientific study



Captive bred gyrfalcons

From traditional types of saker to the newest hybrid falcons, these captive bred birds carry fewer diseases, have stronger feathers and usually moult faster than wild-caught falcons.



## SALE OF CAPTIVE BRED FALCONS IN THE MIDDLE EAST

- Reduces the problems of buying falcons one by one from private breeders
- View the falcons in Arabia before buying
- Specially designed sales rooms

### SALES AGENCY

- Purchases top falcons from selected breeders worldwide
- Personally examines quality of parent stock and provides pedigrees
- Ensures falcons are reared and handled properly for falconry
- Attends to all import/export documentation of falcons
- Attends to veterinary checks and health certificates for falcons
- Pays the breeders for their birds at time of export
- Attends to preparation of falcons for travel and travel boxes
- Arranges flights, custom checks and collection of falcons
- Fits sabooks and burqa to falcons, removes travel tapes
- Provides a microchipping service and health check on arrival
- Provides a guarantee of fair dealing on each falcon

### AT THE SALES ROOMS

- Falcons arrive in October
- Largest selection of top falcons in the world available for viewing
- Falcons can be compared with each other, making selection easier
- Falcons can be examined before purchase
- Payment made at time of purchase



White gyr x saker hybrid



White gyr x saker hybrid



Gyr x peregrine hybrid

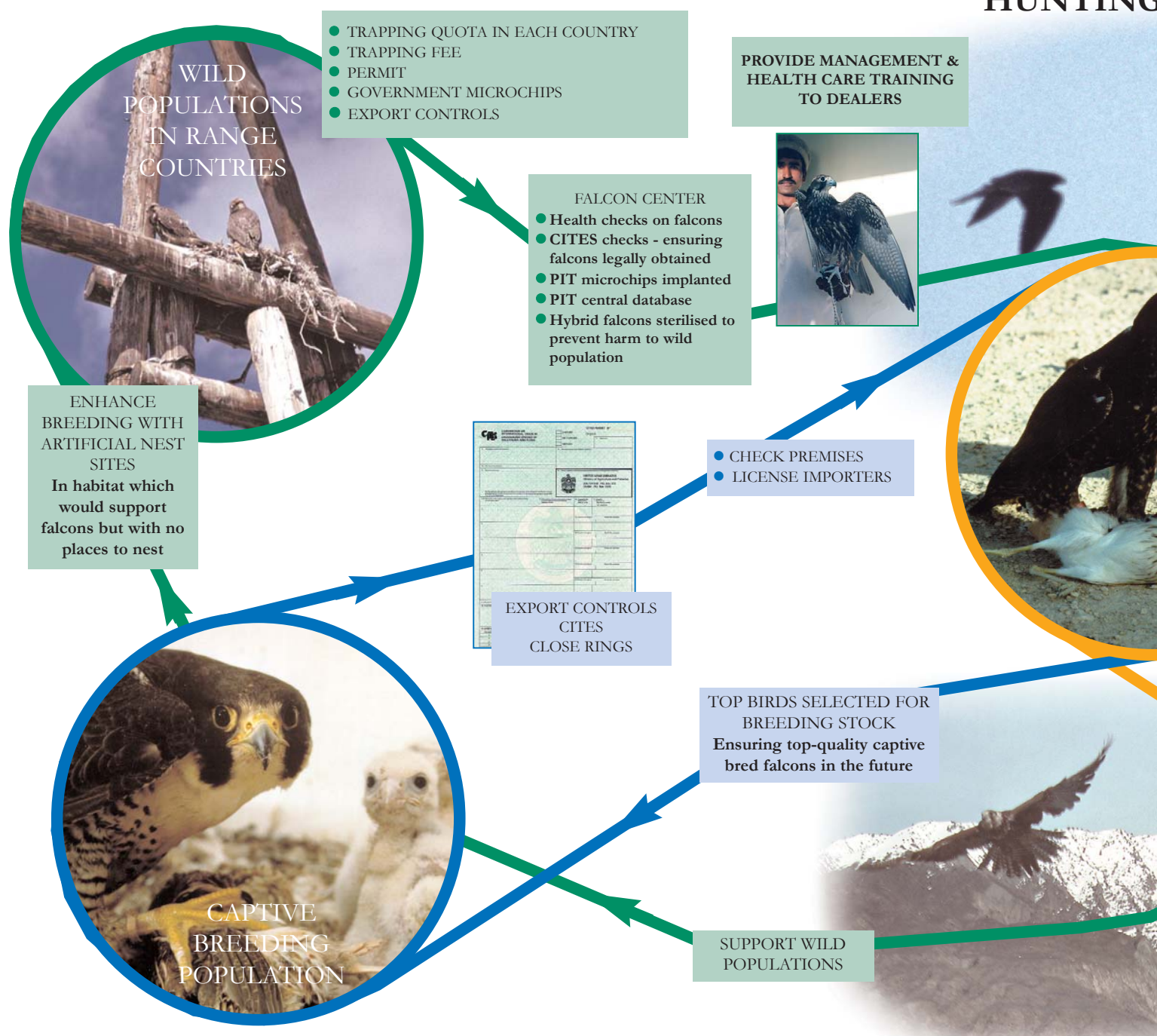


Black gyr x saker hybrid

### AT THE END OF THE SEASON

- Moulting service with full health care on site
- Surplus falcons may be brought back from the falconer

# HUNTING



# MOULTING



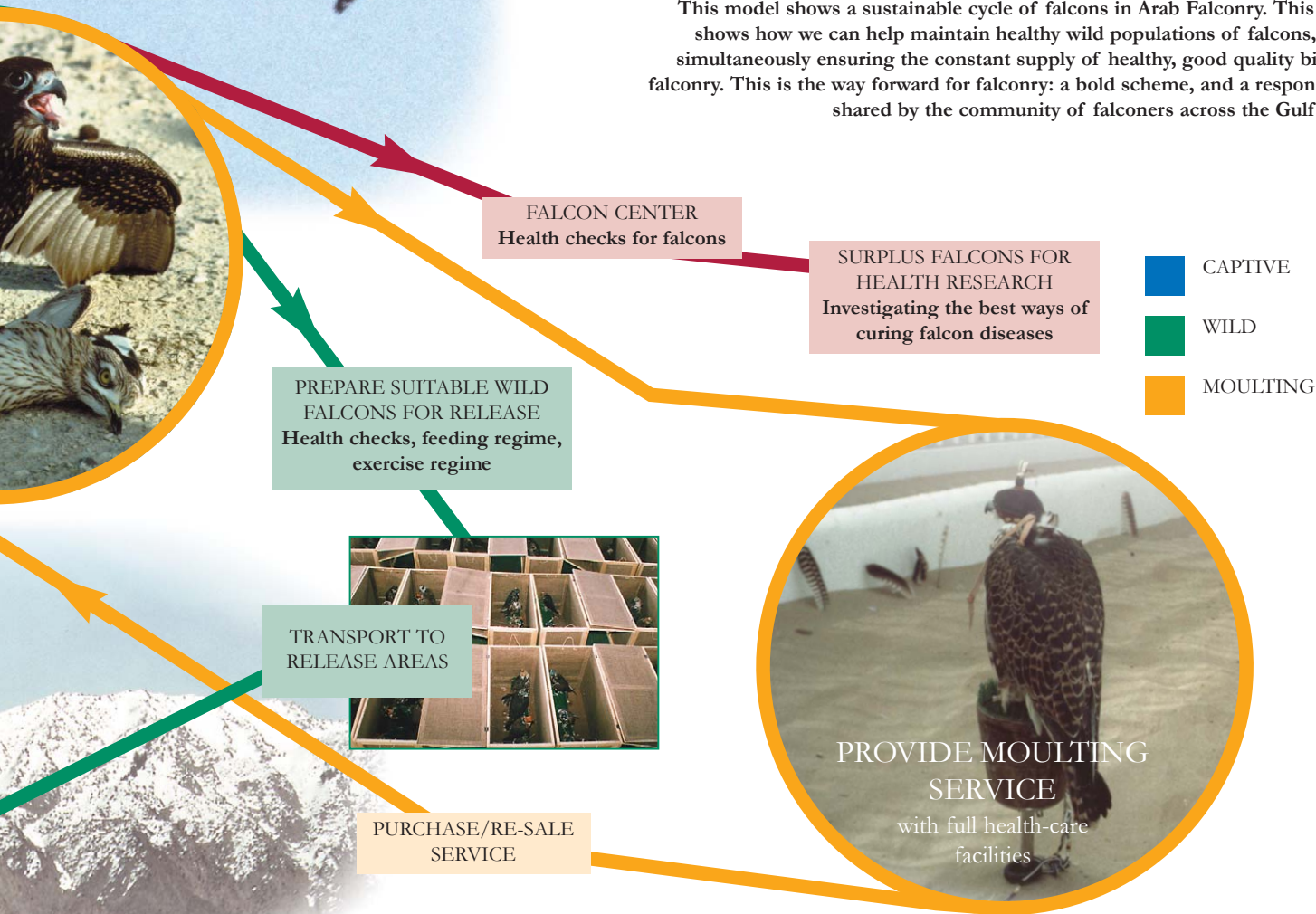
G SEASON

# THE FALCON YEAR

## A VISION OF ARABIAN FALCONRY IN THE FUTURE

The movements of falcons in Arab falconry are complex. A falconer may get his falcon from many sources: from a trapper, a falcon dealer, from a friend or from captive breeding programmes in the Gulf States or abroad. At the end of the hunting season, saker and peregrine falcons can be released back into the wild, so that they can breed young falcons and keep wild falcon populations strong.

This model shows a sustainable cycle of falcons in Arab Falconry. This model shows how we can help maintain healthy wild populations of falcons, whilst simultaneously ensuring the constant supply of healthy, good quality birds for falconry. This is the way forward for falconry: a bold scheme, and a responsibility shared by the community of falconers across the Gulf States



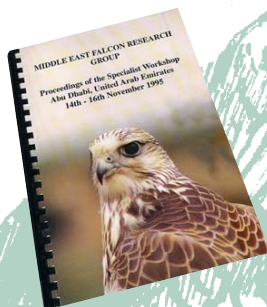
SEASON

A FORUM FOR EXCHANGE OF  
INFORMATION AND TECHNICAL  
DEVELOPMENTS

PUBLISHING QUARTERLY  
NEWSLETTER - FALCO



HOLDING WORKSHOPS AND  
CONFERENCES



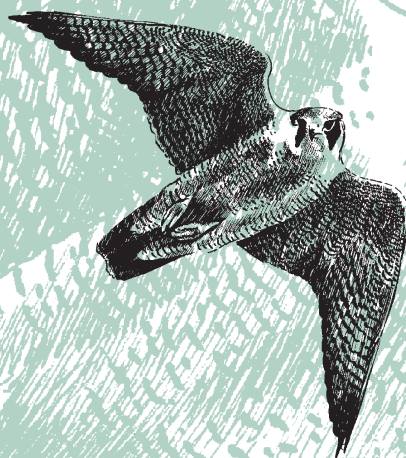
PUBLISHING SCIENTIFIC PAPERS  
AND PROCEEDINGS

SUPPORTING EDUCATIONAL  
PROGRAMMES

CENTRAL DATABASE FOR THE  
MICROCHIPPING SCHEME

# THE MIDDLE EAST FALCON RESEARCH GROUP

Founded 1994



A CONCENTRATION  
OF EXPERTISE FROM AROUND  
THE WORLD

SCIENTIFIC ADVISORY SERVICE  
OFFERED TO ARABIAN  
FALCONERS UNION

A NETWORK FOR ALL RAPTOR  
BIOLOGISTS AND VETS WORKING  
IN  
THE MIDDLE EAST

WORKING TO INCREASE  
INTERNATIONAL  
UNDERSTANDING OF  
ARAB FALCONRY

WELFARE OF FALCONS

Promoting research into:

- Diseases
- Health care
- Breeding
- Management

RESEARCH ON WILD FALCONS

- Promoting field studies on:
- Falcon migration
- Taxonomy
- Morphometrics
- Breeding biology
- Ecology
- Sustainable use

LIAISING BETWEEN  
COLLABORATIVE RESEARCH  
PROGRAMMES

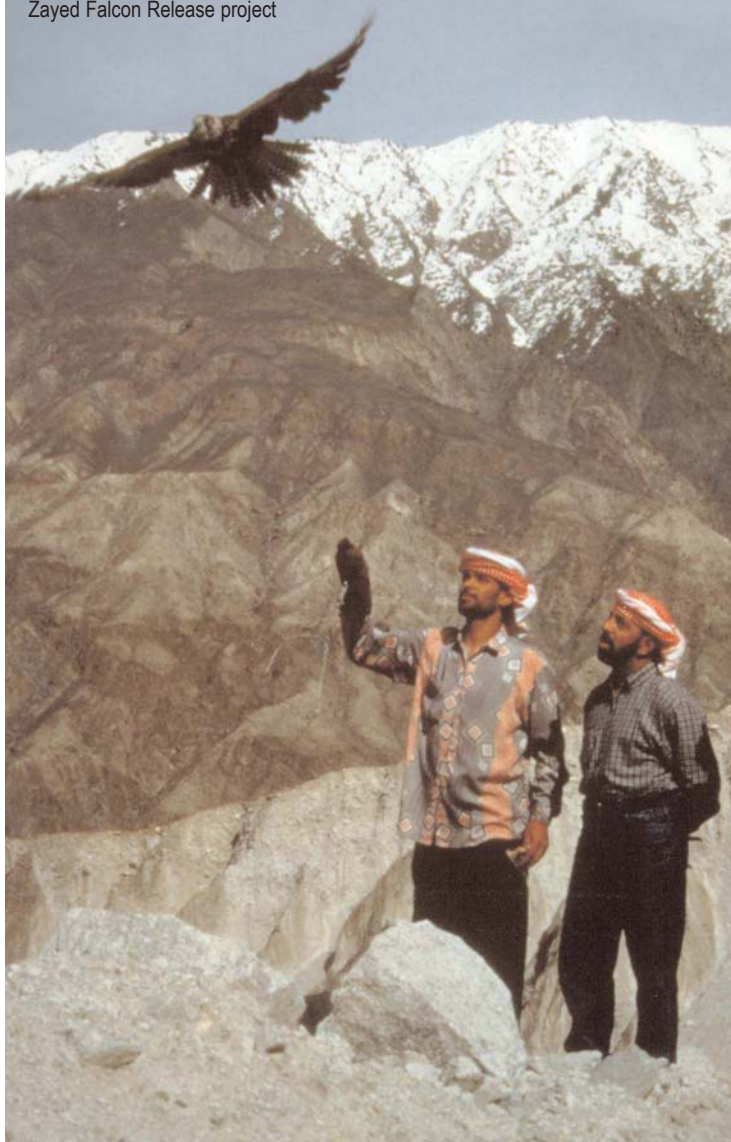


MEFRG inaugural meeting, Abu Dhabi 1994





Releasing a microchipped ex-falconry saker in the Karakorum Mountains as part of the Sheikh Zayed Falcon Release project



(Actual size)



MICROCHIP OR PIT TAG

Fieldworkers insert chips into baby falcons in Kazakhstan, Mongolia, Siberia, Pakistan and other range countries

Falcon dealers' (Peshawar, Karachi, the Gulf) falcons scanned by MEFRG

Breeders insert chips into captive-bred falcons

Vets insert chips at falcon hospitals

Falconers

MICROCHIPS  
DETECTED BY  
SCANNERS TO  
MIDDLE EAST FALCON  
RESEARCH GROUP'S  
CENTRAL DATABASE

## THE MICROCHIPPING (PIT) SCHEME

### STUDYING WHAT HAPPENS TO WILD AND CAPTIVE FALCONS

A PIT is a tiny microchip implanted harmlessly under the skin of a falcon. Each PIT has an unique number which can be read by a special scanner. This allows the movements of both wild and captive-bred birds to be studied in detail. This scheme has already provided much valuable information on the movements of falcons. It could be integrated with conservation programmes on wild falcons to ensure that no illegally trapped falcons can be exported or sold. This would have immense conservation benefit for wild falcon populations.

## THE SHEIKH ZAYED FALCON RELEASE

### RELEASING EX-FALCONRY BIRDS BACK TO THE WILD

Collaborative project between the MEFRG and the Environment & Wildlife Management Private Department for H. H. Sheikh Zayed bin Sultan Al Nayhan.

His Highness Sheikh Zayed asked that his own falcons be used to study the ability of released ex-falconry birds to readapt to life in the wild, and to investigate their migration and breeding patterns. Every year since 1995, around 80 saker and peregrine falcons undergo health tests and a training programme before release. Some are fitted with satellite tags so their movements can be tracked in detail.

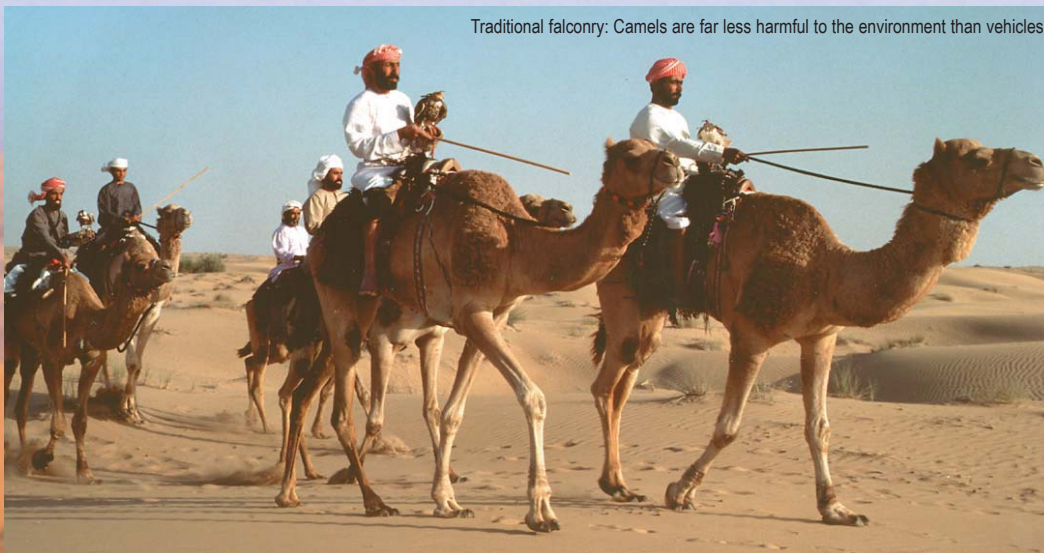
# SUSTAINABLE HUNTING FOR THE FUTURE A RESPONSIBLE GIFT FOR OUR CHILDREN

- Make International Agreements on Hunting and Conservation
- Map the hunting areas
- Identify the organisations responsible for each hunting area
- Make written Hunting Agreements:
  - By areas
  - By bag limits
  - By seasons
- Produce funds from hunting rents to help pay for management



## OVERSEAS HUNTING GROUNDS

- Make long term agreements for sustained management and hunting with recognised groups, eg parties of falconers' associations
- Link up with Wildlife Managers to promote sustainable use of areas
- Provide financial input for management, research and the local economy



Traditional falconry: Camels are far less harmful to the environment than vehicles



The desert hare: now scarce in many areas

## HOME HUNTING GROUNDS

- Increase hare numbers
- Provide sufficient quarry for falconers to hunt near home successfully



# THE HUNTING GROUNDS

## CONTROL HUNTING

Many of the traditional hunting grounds in the Gulf States have suffered greatly in recent years. Overgrazing, erosion and disturbance from vehicles have meant that in many areas, traditional quarry species are rare or can no longer be hunted by falconers.

## MONITOR

- Habitat quality
- Seasonal weather
- Numbers of prey bred
- Numbers of prey arrived for winter
- Number of prey harvested

Houbara in other countries are also under threat from overhunting, habitat loss and disturbance. This model shows ways in which falconers and others concerned can protect the fragile ecosystems through scientific research and practical conservation programmes, ensuring there is enough land and quarry for all falconers in the future

## RESEARCH

- All factors affecting wintering quarry numbers
- Link with research on breeding areas
- Study migration routes
- Estimate local quotas for next season's harvest

## MANAGE

- Prevent disturbance on hunting ground
- Reduce grazing pressure
- Increase natural food supply
- Increase plant cover to give concealment from predators and disturbance
- Control predators where necessary
- Educate local people to care for game needs
- Provide financial encouragement and employment to local people
- Encourage traditional use of camels and salukis
- Ban cars from some of the hare hawking grounds



## WARDEN

- Carry out local monitoring
- Prevent live trapping and illegal killing
  - Supervise releases
- Predator control if needed, e.g. foxes
  - Assist Hunting Parties
  - Assist Research

