

## Oryx 100% Fund

At its meeting on 8 September 1992 the FFPS Conservation Committee agreed to fund the following Oryx 100% Fund applications.

### *£5000 for studies in the Paraganá Peninsula, north-western Venezuela*

An earlier study, which was also supported by the Oryx 100% Fund, identified the Agua Sabrida area as being in particular need of protection. This small valley contains the only freshwater body in the peninsula. It has a high level of animal species diversity, a plant community as yet unrepresented in the protected areas system and, most notably, an endemic fish species *Rachovia hummelincki*, which was believed extinct, has been rediscovered there. A biological inventory will be made and the habitats mapped as a first step towards establishing a reserve. The local community has already expressed its willingness to donate land for this purpose. The work will be carried out by BIOMA (a Venezuelan voluntary conservation organization), which has already set up three other biological reserves in the peninsula. Their protection programme not only safeguards important wildlife sites and protects watersheds in an area where water is scarce, but also provides jobs for local people. Part of the grant will also be used to assess the current population status of two bat species, *Glossophaga longirostris* and *Pteronotus parnellii paragananensis*, which occur on two of BIOMA's existing reserves but are threatened by deforestation of surrounding lands. Information will be collected to ensure that the best management measures are taken to ensure their survival. (Project no. 92/22/9.)

### *£1200 for a captive-breeding and reintroduction programme for the swift fox in Canada*

This grant will provide 60 plastic cloud kennels (each to bear the FFPS logo), which will be used to transport captive-bred swift foxes *Vulpes velox* to their release sites. This species was once widespread over the Great Plains of North America but has been extirpated in the

wild in Canada and in much of its historical range in the USA. The Cochrane Wildlife Reserve in Alberta has been breeding swift foxes for reintroduction since 1970 and, in cooperation with the Canadian Wildlife Service, has been carrying out releases since 1983. It now has the world's largest captive swift fox colony and is capable of producing 110 cubs a year. In 1991 the Grasslands National Park was inaugurated, providing the opportunity for substantial releases into the fox's native prairie but it is some distance away and the kennels are essential to ensure safe transport. The kennels will also be used for other endangered species reintroduction work as well as for the Wildlife Rescue Service run by the Cochrane Wildlife Reserve. (Project no. 92/27/10.)

### *£1195 to investigate problems facing the Barbary macaque in Morocco*

The Middle Atlas in Morocco is the last main stronghold of the Barbary macaque, which was once widespread throughout North Africa but is now confined to a few forest habitat remnants in Morocco and Algeria. The cedar forests of the Middle Atlas are exploited commercially and foresters view the macaques as pests because they feed on the bark of the young branches and the apical shoots. It appears that the problem is caused in part by overgrazing of the understorey by livestock, forcing the macaques to seek food in the trees. The foresters, however, say that there are too many macaques and they propose a cull. This study, which will be carried out by John Fa jointly with the Moroccan authorities, will examine the level and causes of macaque damage in the cedar forests and identify ways to deal with the problem for the benefit of the species as well as for the continuing economic value of the forests. (Project no. 92/36/13.)

### *£1000 for a survey of 11 Red Data Book bird species in the Mesopotamia Region of Argentina*

No detailed ornithological studies have been made in the area, which spans the provinces of Entre Rios and Corrientes, and there are

only two protected areas, constituting 119.5 sq km in the 167,000 sq km grassland/wetland area. Serious threats include habitat modification, misuse of pesticides and commercial trapping. Mark Pearman will assess the status and vulnerability of 11 RDB bird species and 19 near-threatened species and their habitat and will identify critical areas for protection. He will also assess the levels of trapping of the Red Data Book species for commercial trade. Recommendations will be made for a conservation strategy, which might include proposals for bird tourism with a view to enhancing local conservation awareness. The results will contribute to the IUCN South American Action Plan due to be published later in 1993. (Project no. 92/31/11.)

**\$US700 for a study on sarus cranes at Lumbini, Nepal**

Lumbini is the most important area for sarus cranes *Grus antigone* in Nepal and several pairs nest there annually. However, human disturbance and inadequate habitat have resulted in the failure of most breeding attempts. The study, by Rajendra Suwal, will determine the cranes' habitat requirements and prepare a management plan to ensure their future survival. A conservation programme at Lumbini, which is Buddha's birthplace and an international shrine, will have a wide impact among Buddhist communities world-wide. (Project no. 92/33/12.)

**Langurs found and bats captured in successful Oryx 100% Fund projects**

In 1992 Radoslaw Ratajszczak, with the help of an Oryx 100% Fund grant of \$US5000, went in search of the endangered Tonkin snub-nosed langur *Pygathrix avunculus* in Ha Tuyen province, northern Vietnam (Project no. 91/24/6, *Oryx*, 26, 58). It had never been studied in the wild, there were no population estimates and the survey was accorded highest

priority in the IUCN/SSC Action Plan for Asian Primates. After interviews with local hunters and extensive searches Ratajszczak found several groups of the langurs, all outside protected areas. One village has a pet baby langur and the animals are prime hunting targets. We expect a full report shortly.

As reported in Briefly (this issue, page 12) the University of Bristol team that set out to study and capture Livingstone's fruit bats *Pteropus livingstonii* in the Comoro Islands were successful (Oryx 100% Fund project 92/13/7). They conducted detailed surveys of Anjouan and neighbouring Moheli, finding three roosts on the former island and one on the latter. One of the roosts on Anjouan and the one on Moheli were both new discoveries. The species had been believed to be extinct on Moheli. The remaining population of these bats is probably fewer than 200 individuals. The bats were caught in mist nets placed above the tree canopy at heights of up to 30 m and the team members had to work on steep slopes. The problems were exacerbated by high winds and visits from armed soldiers. The capture of six animals in these circumstances is a remarkable achievement and the bats are now settling down well at Jersey Zoo. A further capture attempt is planned for 1993. The largest roost of these bats in the Comoros is being watched over by the Comorien member of the team, Mohamed Attoumane, who has become the islands' first bat warden.

**Drill update**

As part of the FFPS Drill Project we have given £5150 to the Drill Rehabilitation and Breeding Centre in Nigeria. This initiative started as a result of the drill survey in that country during which orphaned drills were found being held illegally in villages, their mothers having been shot for bush meat.

Drills *Mandrillus leucophaeus* are endangered in captivity as well as in the wild, with fewer than 60 in zoos. Efforts are being made to enhance breeding, but little progress has been made and the captive population is not

increasing. It was felt that the orphaned drills could be potentially valuable additions to the international captive-breeding programme as well as being a focus for promoting conservation locally.

It was decided in 1991, in collaboration with the Cross River State Department of Parks and Wildlife, to rescue and rehabilitate these animals as the founder group of an *in situ* captive-breeding programme. The effort to seek out and rescue all captive drills in the state proved immensely successful due to close co-operation with the Department and the Cross River National Park Project. Local people donated some illegally kept drills; wildlife officers confiscated others. The Centre now maintains 14 drills (eight males and six females), the world's largest captive group. They are rehabilitated to the extent that they live as an evolving dynamic social group.

The Centre has been successful in enlisting the help of local people; residents and businesses in the area are becoming aware of local conservation issues through the captives and support is nurtured by public visits to 'Drill Ranch', school conservation clubs and a newsletter, which has an educational content and is sent to all those who have donated drills or supported the project in some way. Until recently operating costs have been met by donations of food, cash, building materials and services mostly from within Nigeria itself, but more funds are needed for expansion of the project.

The aim is to build a permanent Centre. It will occupy 1–2 sq km with enclosures and buildings. There will be a main enclosure of 4–6 ha of forested former drill habitat, which will enable the drills to roam, forage and sleep naturally. The proposed site in the Afi River Forest Reserve is close to Cross River National Park and the land will be leased directly from the villagers who have demonstrated great enthusiasm for the project's siting on their tribal lands. The FFPS is pleased to support this effort and the project's aims, which are stated below.

1. To found a natural-sized, cohesive, reproducing drill group.
2. To rescue and rehabilitate illegally held and

inadequately maintained drills to increase the small captive gene pool.

3. To raise public awareness, in an important drill habitat area, of the world-wide concern for endangered species' preservation and for the drill in particular.
4. To provide income to nearby villages by leasing a small portion of their community forest, and to provide enjoyment and training opportunities to villagers.
5. To create an added attraction and educational resource for visitors to a newly created national park in a developing country.
6. To provide an opportunity for local and foreign researchers to increase our limited understanding of drill behaviour and reproductive ecology.
7. To provide drills on loan to zoos participating in international breeding programmes for the species.
8. To rehabilitate a group of wild-born drills for possible reintroduction should the prerequisites for release occur in the future.

This is only Phase 1 of a much wider programme for forest conservation in the area. It will involve regazetting part of Afi River Forest reserve as a wildlife sanctuary, training local hunters as rangers and establishing a conservation education programme for the surrounding villages. The area is especially important because it contains the northernmost and westernmost drill and lowland gorilla populations in Africa and is also home to many other endangered species, including chimpanzee, forest elephant and red-eared guenon *Cercopithecus erythrotis*. It is also threatened by logging and hunting and because the Afi Reserve was excluded from Cross River National Park establishing the project there should help secure the habitat.

## Save the Swallowtails campaign

Swallowtail butterflies are now receiving attention as part of FFPS's programme to support the work of the Species Survival Commission by funding the preparation of Action Plans and the implementation of their

recommendations. Many of our Oryx 100% Fund grants are given to individual projects that have been identified as priorities by various Action Plans and we provided the major part of the funds needed to compile the Fruit Bat Action Plan, which is in press. The Fish Action Plan is currently being compiled by Simon Mickleburgh, an FFPS staff member, and the FFPS is providing a major portion of the funding for this.

The support for the swallowtail butterflies is taking a rather different approach. The Action Plan for this group was published in 1991 and with 78 species out of a total of 573 swallowtails under threat, there is much to do. We have received £2850 from the Peter Scott IUCN/SSC Action Plan Fund to start the ball rolling. The first phase is to find sponsors for the 34 priority recommended projects in the Action Plan and David Simcox is currently under contract to the FFPS to carry out this task.

## Indigenous Propagation Project, Turkey

A report from Andy Byfield, FFPS Field Project Officer

It was the case of *Cyclamen mirabile* that brought the plight of Turkey's wild bulbs to the notice of the international conservation movement. Originally discovered at the turn of the century in western Turkey, the few specimens introduced into cultivation at the time ultimately perished, while the dried and preserved scientific specimens were destroyed during the war-time bombing of Berlin. With no precise record of the original locality the plant was effectively lost to science. It was British botanists Peter Davis and Oleg Polunin who rediscovered the legendary plant in the wild some 50 years later. Around this time relatively small numbers of plants were introduced into cultivation, where they were cherished by the few lucky enough to possess them. In the wild the plant was believed to be very restricted in distribution.

It was therefore with much concern that nature conservationists viewed the large-scale importation of *C. mirabile* into Britain and elsewhere during the 1970s. This, together with rumours of large-scale collection of other types of bulbs in Turkey for export, resulted in a series of surveys by conservationists. From 1987 the Fauna and Flora Preservation Society led these investigations, which culminated in the publication of *Grown in Holland?* (Read, 1989a) and a report in *Oryx* (Read, 1989b).

Read uncovered a trade that was considerably larger than previously believed: in the latter part of the 1980s some 60,000,000 bulbs were being collected from the Turkish hills and mountain sides annually for export to bulb-hungry markets abroad. In addition, vast numbers of bulbs were simply dumped every year, being damaged or too small for export. At the height of the trade over 40 million snowdrops (principally *Galanthus elwesii* and *G. ikariae*), 11 million winter aconites (*Eranthis hyemalis*), 10 million Grecian windflowers (*Anemone blanda*) and 5 million cyclamen (principally *Cyclamen cilicium* and *C. hederifolium*, and of course *C. mirabile*) were being exported annually. The bulbs were being collected by mountain villagers at the behest of a handful of Turkish exporters. The latter cleaned, graded and packaged the bulbs before exporting them, principally to the Netherlands, the bulb trade's international centre. From here they were being repackaged for markets as far afield as North America and Japan, as well as to western European markets in Britain, West Germany, Scandinavia and elsewhere – often erroneously labelled 'Grown in Holland'.

Conservationists considered such collection unsuitable for a variety of reasons, so the FFPS investigated means by which a practical conservation plan could be put into action to save this element of Turkey's rich flora. Rather than putting pressure on governments, traders and gardeners to simply halt the trade, the FFPS decided on a more positive approach.

With funding from the World Wide Fund for Nature-International, the FFPS formed a partnership with the Istanbul-based Turkish Society for the Protection of Nature (Dogal

Hayati Koruma Dernegi). Since January 1992, Sema Atay, from Turkey, and Andy Byfield, from England, have been advancing this new project. Ultimately the FFPS's aim is to leave the project in Turkish control, without any outside input. The project has three stated objectives:

1. The removal of pressures from wild populations of bulbs in Turkey that are threatened by collection for horticulture, by means of a transition to widespread but small-scale, village-based cultivation of threatened species.
2. The insurance, wherever possible, of safe and secure incomes for those making the transition from collection to cultivation.
3. The supply of high-quality plants to horticulture.

Education, research, monitoring, and propagation form the main elements of the two project officers' work. On the education front, a Turkish version of the FFPS' full-colour cyclamen poster has been produced, together with a full-colour explanatory leaflet about the project. The project workers have distributed these widely within Turkey and they have been received well by local people.

Active practical propagation is perhaps the most important element and much effort has been put into promoting this aspect of the work. At three field sites the project has propagated some of the widely collected 'bulk export' species, concentrating in this first year on the winter aconite (*Eranthis hyemalis*) and snowdrops (*Galanthus elwesii*, *G. fosteri* and *G. ikariae*). A fourth site is under preparation. As seed sowing is an important and environmentally acceptable means of propagation, it is pleasing to report that well over 1 million seeds have been sown so far. In addition, vegetative propagation has not been overlooked: individual trials have been set up to compare the relative rates of natural and enhanced vegetative increase of *Galanthus* spp, *Fritillaria imperialis*, *F. persica* and *Anemone blanda*.

On the monitoring front, the study of wild populations of some of Turkey's rarest bulbous plants has been an important aspect of the work. The establishment of baseline data will allow future fluctuations in population size to be monitored. The studies have high-

lighted many threats other than collection to the bulbs: for example, the restricted *Fritillaria forbesii* and *F. carica* ssp. *serpenticola* (the latter confined to a single serpentine mountain) are threatened by state-funded afforestation schemes, while the western *Iris pamphylica*, which was described in 1961, is severely threatened by overgrazing at its type locality. Where possible the project has endeavoured to seek the protection of such sites through discussion with the landowners and relevant authorities. Collecting, however, in addition to these types of threats poses a very real problem, and there is little doubt that some of Turkey's rarest bulbs are severely threatened by collection by foreign nurserymen, as well as private amateur gardeners.

For this reason a nursery site has been set up at the Ataturk Arboretum near Istanbul, where special attention can be afforded to some of the rarer bulbs, with the aim of producing an environmentally friendly crop for future sale to gardeners who might otherwise be tempted to take from the wild. Here the project is growing: the fleshy pink *Biarum davisii*, until recently thought to occur only in Crete; the ice-blue *Crocus baytopiorum*, described in 1974 and known from only a handful of south-west Turkish mountains; *Iris gatesii* with its sumptuous rounded blooms of cream, shot with a fine tracery of dusky veins; and *Sternbergia candida*, believed to have been brought to the verge of extinction by collectors seeking its bold blue green foliage and freesia-scented, pearly white flowers.

Throughout, the project has been keen to work closely with the trade both in Turkey and the Netherlands and the increased levels of co-operation between the Dutch bulb industry, the Turkish bulb exporters, Turkish government departments and scientific institutions, and the conservation bodies must be regarded as a major achievement. In fact, the Dutch and Turkish traders have developed a complementary project to run concurrently with that of FFPS/DHKD, and the Ataturk Horticultural Institute has now started a project to determine the best propagation and storage conditions for bulbs. All parties are in frequent contact and propagation information

will be pooled at a technical meeting in Yalova in January.

Through liaison with the trade important concessions have been achieved over the past year or so. For example, in the Netherlands it is now mandatory to clearly state the origins – either ‘from cultivated stock’ or ‘from wild sources’ – on packs or consignments of bulbs. In Britain, the FFPS is currently pressing the UK bulb importers and major retailers to follow the good example set by the Dutch. In Turkey, a quota system is in place to regulate the export of wild-collected material: for *Galanthus* the export quotas dropped from an annual 38–40 million during the period 1986–88, to 15 million in 1991, while legal export of *Sternbergia* was suspended for the first time last year.

Many problems still remain. In 1992 large consignments of *Sternbergia lutea* were ‘spied’ in Dutch warehouses: our records of the levels of propagation of *Sternbergia* indicate that these are clearly wild-collected. Consignments of *Sternbergia* are notorious for containing a mixture of species, and in recent years exports of the relatively widespread yellow *S. lutea* are known to have contained large proportions of bulbs of the endangered *S. candida* – a fact usually only discovered when the bulbs flower in west European gardens.

*Sternbergia candida* was formally described in 1979. In a genus originally thought to comprise yellow-flowered, and typically autumn-blooming plants, the discovery of a white fragrant spring flowering *Sternbergia* caused an understandable stir amongst the botanical and, unfortunately, the gardening communities. It immediately became the target of specialist bulb growers, and foreign nurserymen were quick to cash in, stripping the only known wild population of its plants. Persistent rumours abounded that the plant was extinct in its sole locality on earth – a victim of the greed of a few nurserymen and the untempered desires of gardeners.

These things might well have remained, but in 1990 Turkish botanists were informed that one of the four principal exporters in Turkey had collected the plant from a site some 200 km to the east of its type locality. Reports vary

as to the fate of these bulbs – some say they have been planted in a field site in southern Turkey, while other rumours suggest that the bulbs were ‘accidentally’ mixed with consignments of the more common yellow-flowered *S. lutea* exported to the Netherlands, despite a ban on their export. In the previous year ‘lucky gardeners’ in Britain acquired one bulb of the rare *S. candida* for every three *S. lutea* bought from certain supermarkets and garden centres.

On a happier note, during the project’s first field season the project officers found many new colonies of *S. candida* on one mountain, totalling perhaps 2 million bulbs. According to local people, these populations have been subject to collecting for medicinal purposes in recent years. The project officers have collected seed, which will be cultivated at Istanbul – so all being well the FFPS, with DHKD, will be able to go some considerable way towards alleviating the horticultural collecting pressures from the handful of wild localities of this handsome plant.

#### References

- Read, M. 1989a. *Grown in Holland?* FFPS, London. 12pp.  
 Read, M. 1989b. The bulb trade – a threat to wild plant populations. *Oryx*, **23**, 127–134.

## British Airways Assisting Nature Conservation

It is always encouraging to receive support for conservation from the world of commerce. In this respect praise is due to British Airways for its Assisting Nature Conservation programme (BAANC), which is organized virtually single-handedly by British Airways employee, Rod Hall. It has supported an increasingly wide range of conservation organizations and activities over the past few years and in 1992 several FFPS projects benefited.

In the summer Drill Project personnel, Liza Gadsby and Peter Jenkins with the veterinary adviser John Lewis, all received free flights to Nigeria, a great boost for the project budget.

Six Livingstone's fruit bats became high profile BA passengers on a flight from the Comoros Islands in the Indian Ocean to Jersey Zoo, where they will form the nucleus of a captive breeding group. These highly endangered animals are accorded priority rating in the Action Plan for the Old World Fruit Bats and the study team was the recipient of an Oryx 100% Fund grant (92/13/7) in May 1992.

British Airways cargo also played its part and delivered 10,000 promotional leaflets to Athens for the Greek Society for the Study and Protection of Chiroptera (Oryx 100% Fund 92/7/3). The leaflets had been printed free in the UK by FFPS Honorary Treasurer, Edward Wright, but transporting the weighty boxes to their destination was a problem until BA stepped in.

## Salep Project

At its meeting on 25 August 1992 the FFPS Flora Committee passed a recommendation for a project to tackle the conservation problem caused by the commercial collection of orchid tubers in Turkey. This was approved by the Conservation Committee on 8 September.

Turkey has a rich terrestrial orchid flora with approximately 100 species, many of them endemic. For centuries orchid tubers have been collected, boiled, dried and ground for use in the preparation of salep – a warming winter drink – and as an ingredient for ice-cream. Over the last few years, however, annual exports have averaged 7–8 tonnes (equivalent to 20 million orchids) and domestic consumption an estimated 15 tonnes (40 million orchids). Turkish botanists have expressed concern over the disappearance of many threatened and endangered species from known sites. The declining average weight of tubers and the increasing time taken to collect each kilogram are other indications of the unsustainability of the collection.

The FFPS is preparing a project to reduce the collection of terrestrial orchids in Turkey by: identifying alternatives and promoting the transition to these; by promoting artificial

propagation of terrestrial orchids or appropriate alternative species in Turkey where feasible; public education as to the consequences of collection; implementation of CITES controls in importing countries, notably Germany; and assessment of other means by which conservation of Turkey's orchid flora can be achieved.

## Meetings

### London

*Tuesday 23 February 1993.* An illustrated talk on endangered canids by Josh Ginsberg. Please see insert in this issue of *Oryx*.

*Wednesday 7 April 1993.* One-day workshop on Plants Endangered by International Trade – How Horticulture can Help. Please see insert in this issue of *Oryx*.

### Bristol

*Thursday 18 February 1993.* Russian Wildlife with John Sparks, Senior Producer at the BBC Natural History Unit.

*Thursday 29 April 1993.* An Evening in Belize. Jo Clarkson, Eco-tour operator, will talk about conservation through tourism with reference to Programme for Belize.

Bristol meetings start at 7.30 p.m. and are held in Bristol Zoo lecture theatre. The Zoo has challenged the Bristol, Bath and West of England Regional Group to raise £300 for FFPS at every meeting, so please support these meetings by bringing your friends. Admission is £5 for adults and £3 for students, and senior citizens with a 20 per cent reduction for FFPS members. The price includes a cheese and wine buffet as well as a lecture and a film.

### Other Regional Groups

For information about other regional groups please contact the FFPS Secretariat (telephone: 071 823 8899).