



# GIBRALTAR NATURE NEWS

The News Magazine of the Gibraltar Ornithological & Natural History Society



## 30 YEARS OLD – IN BIODIVERSITY YEAR

The Gibraltar Ornithological & Natural History Society (GONHS) was 30 years old on 10th January 2006. That day 30 years ago saw the gelling of the idea of a small group of young birdwatchers who some years previously had become the Ornithological Group of the Gibraltar Society, into the Gibraltar Ornithological Society. Following the partial opening of the Frontier with Spain in 1982, the name was expanded to include Natural History to arrive at the initials by which we are mostly known today "GONHS".

The young birders had been brought together by Ernest Garcia, and encouraged by Juaquin Bensusan, the Curator of the Gibraltar Museum, who provided premises and administrative assistance as well as constant support and encouragement. Also present at the first meeting were Clive Finlayson, Mario Mosquera, Charlie Perez and John Cortes. As the Society developed, it expanded, and other personalities were brought in. Eric Shaw, who had long been a diver and active in marine studies, and had been building the Gibraltar Artificial Reef since even before the 1976 meeting at the Museum, formed

the Marine Section. Leslie Linares and Arthur Harper, whose photography had brought them into intimate contact with botany, created the Botanical Section, and others followed on.

The programme of activities was expanded – and is the largest ever this year. Contacts with organisations and institutions around the world were established, with the Society's own research expanding now that collaboration with others was a possibility.

The late 1980s were a very significant time for GONHS. Not only did the new sections develop, but Government ensured that a number of sites, surplus to MOD requirements, were handed to the Society. These provided a physical base for expansion. At about the same time, GONHS was involved in the updating of nature conservation legislation, resulting in the Endangered Species Ordinance (1990) and the Nature Protection Ordinance (1991). The late 1990s saw GONHS acquiring two important Government contracts, the first to cull yellow-legged gulls and the second to manage the Barbary macaques. The latter generated its own

series of activities and collaborative research culminating in a major international conference in 2003.

EU/Gibraltar Government co-funded projects allowed GONHS to develop its observatory at Europa Point and, significantly, to engage full time staff in preparing the Upper Rock Management Plan. More recently, UK Overseas Territories Environment Programme funds have allowed the elaboration and publication shortly of a Biodiversity Action Plan.

Publications have always been important to GONHS and over recent years these have included the new Bird Report, the scientific publication *Iberis*, and one-off publications such as the Upper Rock Guide. More are planned, including the return of *Alectoris* as a series of nature identification guides.

Through GIBMANATUR, an EU INTERREG Project, close contacts have been established with Moroccan partners and work is progressing in several areas with results expected to come on-stream soon.

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**PHOTO CREDITS**  
 Photographs in this issue are by Keith Bensusan, John Cortes, Janet Howitt, Leslie Linares, Charles Perez, Eric Shaw, Ian Thompson, Bob Wheeler, Helping Hand.

Items with the *Ischnura* logo are generated by the GONHS Biodiversity Project team co-ordinated by Charles Perez.



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**Editorial**

**NOTHING TO FEAR**

Recent months have seen two events that have impacted on Gibraltar's man-made heritage, the demolition of Rosia Tanks and the withdrawal of Gibraltar's bid to become a World Heritage Site. Aside from any of our own personal views, as an organisation we have taken a back seat and let those more qualified take a lead. Some have. Others, for whatever reason, have remained silent.

The Gibraltar Heritage Trust regretted the decision that would deprive Gibraltar of World Heritage Status; Government felt that it would restrict its ability to chart its own future for Gibraltar. Neither had anything to fear. Ultimately Gibraltar will decide its own direction. Not being a World Heritage Site does not mean that everything is any more threatened than it used to be. Being one would not mean that sensible development could not happen.

The Rosia Tanks issue was more contentious. In the end the Trust decided to withdraw its Court action as did the South District

Association that had also opposed the works. Clearly these organisations took the decision that they thought was best, and my comment is not one of praise or criticism as I am not aware of all the facts. However, there are those issues and causes whose importance transcends the ability of an organisation to pay monies imposed by the legal system. If the result of the legal procedures is the inevitable dissolution of an organisation, then, however unjust, so be it. The cause is more important.

GONHS Council discussed this issue at the time and concluded that were it to have to fight an issue in Court which it felt violated Gibraltar or international law and which was necessary in the interests of the protection of our biodiversity, then it would fight the case even if, in the eventuality of losing, the Society would have to dissolve.

Because we would not go away.

*John Cortes*

**BIRD FLU AND GIBRALTAR**

The presence of H5N1 in birds, and its transmission to humans, especially in the Far East, has led to understandable concern about human health and to a tremendous amount of discussion, not least in Gibraltar.

The Gibraltar Government was quick to summon the Civil Contingencies Committee ("C3"), chaired by the Chief Minister, and to create an Avian Influenza Committee by adding specialist representation, including Dr John Cortes, GONHS General Secretary, and the Gibraltar Veterinary Clinic's Mark Pizarro. This Committee has met regularly and kept abreast of developments on bird flu worldwide.

Among the results of the work was the issuing of an information leaflet on bird flu, which sets out clearly and concisely what bird flu is and what concerns the population should and should not have. Other documents have been prepared which deal with how Gibraltar would tackle an outbreak of bird flu and of a new human pandemic were the virus to mutate to become a form that can readily infect and be transmitted between humans.

The likelihood of such an event is something on which experts do not agree. A human flu pandemic is likely to happen, and it will spread fast in this age of fast travel. But its virulence will depend on the form the virus takes – whether a human flu virus takes up a few bird flu genes, and so we have some resistance to it, or the reverse occurs, which could mean less resistance.

While human flu vaccine would have no effect in reducing the virulence of bird flu, persons working closely with birds were treated last autumn. This was purely a precaution in case bird flu did arrive and the handlers had human flu, acting as a laboratory where the change in the virus could occur.

There have been no reports of H5N1 near Gibraltar. The outbreak in Turkey will not threaten us directly as there is little east-west migration of wild birds. If wild birds are in fact to be the vector bringing the virus to southern Iberia or northern Morocco, then the next possible occasion would be the autumn migration back south to our area.

Most controversial in Gibraltar has been the decision of the C3 bird flu committee to start a cull of feral and domestic pigeons. Because of the fact that these birds are those that in Gibraltar are in closest contact with humans, GONHS supports this cull. Pigeons in any case are a threat to wild birds, including the threatened Lesser Kestrel, whose nest sites they take over. Humane methods of trapping and disposal are being used. Pigeon numbers in Gibraltar city centre are clearly down. Meanwhile, the yellow-legged gull cull also continues, although, despite large numbers being removed, a reduction is less easy to detect.

Measures are now in place to deal with any sickly or dead birds found around Gibraltar and in general, Gibraltar seems well prepared to deal with any contingency likely at present.

*Information on bird flu, in particular advice to birders and frequently asked questions, is available from the BirdLife International website and can be accessed from the GONHS Home Page www.gonhs.org.*



# GIBMANATUR

## GIBRALTAR-MOROCCO INTERREG PROJECT NEWS

GIBMANATUR, the Gibraltar-Morocco Interreg IIIA project, a collaboration between GONHS and the Institut Scientifique of the Université Mohammed V Rabat-Agdal, continues to progress.

In January, GONHS carried out an extensive survey of wetland birds in northern



Morocco, covering areas from Smir on the Mediterranean coast to Asilah and Larache on the Atlantic side. Very interesting results were obtained, and spectacular sights were seen. Species included Great Bustard and Long-legged Buzzard, but incredibly the most memorable sight was that of literally countless thousands of Lesser Black-backed Gulls coasting northwards over Larache at sunset. The team's results will be added to those of other observers throughout Morocco and are part of an annual survey of wintering wetland birds in the country.

Bird ringing resumed in Smir in February, Ian Thompson once again leading the team, assisted by Mohamed Amezian of Tetouan University, who received a scholarship from GONHS and is very rapidly developing bird ringing skills. Ringing operations have continued in March, April and May, and there have also been extensive surveys of birds in different habitats in the area.

There is still concern about the future of Smir (see *Gibraltar Nature News 10*), particularly as dumping of rubble in the wetland is continuing apace, despite the site being included in the planned intercontinental Biosphere Reserve linking Spain and Morocco.

The first of what is expected to be a series of important publications resulting from the project

was published in *Go-South Bulletin*, dealing with the capture of the less common or rare birds during the ringing campaign of autumn 2004 and spring 2005\*.

The project was joined in April by Ricardo Lopes of the Instituto da Conservacao da Natureza in Portugal, who is working on the genetics of the Purple Swamphen. Future collaboration with the Instituto is now planned.

Meanwhile, the Rabat-based members of the team have been developing the work

on invertebrates, with a number of site visits to the area of Smir and to the south, sampling the unspoilt habitats there.

Also executed this spring was a joint botanical visit to the eastern Rif mountains, with the aim of locating sites where species found only in Gibraltar and Morocco, such as the candytuft *Iberis gibraltatica*, may occur.

As part of another Interreg IIIA project, a conference on women in business was organised in Gibraltar at the John Mackintosh Hall. GONHS manned a stand at the event in which details of GIBMANATUR were exhibited.

Other work is still planned and it is hoped to be able to extend the project for another season at least. Undoubtedly, apart from the scientific results, one of the aims of Interreg, the establishment of close links between countries across the regions, is being achieved most successfully.



\* the paper can be downloaded from [http://www.go-south.org/go-south-bulletin/go-south\\_bull\\_3\\_10-14.pdf](http://www.go-south.org/go-south-bulletin/go-south_bull_3_10-14.pdf)



# GIBRALTAR BIODIVERSITY YEAR 2006

The launch of the Gibraltar *Biodiversity Matters* poster late last year was a good prelude to Gibraltar Biodiversity Year, 2006. Early in the new year, the Upper Rock Guide was launched, also contributing to the public's appreciation of the biodiversity of a very important part of Gibraltar.

The 2006 programme ([www.gonhs.org/events.htm](http://www.gonhs.org/events.htm)) is packed with interesting activities with a biodiversity theme, including outings to the Upper Rock and the seashore, walks along Gibraltar's coastline, and talks on subjects as diverse as alien plants and environmental management.

The main thrust of the biodiversity year will come following the publication of the Biodiversity Action Plan (BAP), which has been in preparation by GONHS Biodiversity Officer Charlie Perez, and a team of other GONHS members for the past two years. This Action Plan, whose production has been funded by the UK Overseas Territories Environment Programme, will contain general descriptions of Gibraltar's biodiversity and specific action plans for the protection and enhancement of biodiversity. These plans will deal with habitats as well as with certain of the most important species of plants and animals.

The Biodiversity Action Plan is part of the Gibraltar Biodiversity Project (GBDP), launched by GONHS in 2004. Other aspects of the Project are also proceeding in 2006. The cataloguing of invertebrates is progressing well, with for example, 440 species of beetles now having been recorded.

Next in line is the third arm of the GBDP, which deals with the re-introduction of species lost from Gibraltar in the past 500 years. Plans for this aspect are being elaborated. It is hoped some will come to fruition in 2006, while others will be more long term.

## The 2010 Biodiversity Target

GONHS has in the meantime officially enrolled in Countdown 2010, a movement to halt all loss of biodiversity by 2010 – and there are only four years to go.

Globally, biological diversity is being lost at an alarming rate. The recent findings of the Millennium Ecosystem Assessment show that 70% of all ecosystem services worldwide are in decline and species are extinct up to 1.000 times the normal rate.

The target to "halt the loss of biodiversity by 2010" is Europe's response to this alarming loss, originating from the 2001 EU Summit in Gothenburg.

### Countdown 2010's Goal:

All European governments, at every level, have taken the necessary actions to halt the loss of biodiversity by 2010.

### Objectives:

To encourage and support the full implementation at all existing relevant legislation and international binding commitments;

To champion and support the full implementation of all necessary actions, in particular in the Message from Malahide and Kyiv Resolutions on Biodiversity.

To demonstrate clearly what progress Europe is making to meet the 2010 commitment.

Launched in May 2004, Countdown 2010 combines efforts to achieve the 2010 biodiversity target within a powerful network of active members, including governments, cities and regions, and civil society organisations. Several countries, including Italy, Norway and the United Kingdom, have already reconfirmed their determination to halt the loss of biodiversity and declared their support for the Countdown 2010 initiative.

GONHS will work towards these aims in Gibraltar in 2006 and beyond.



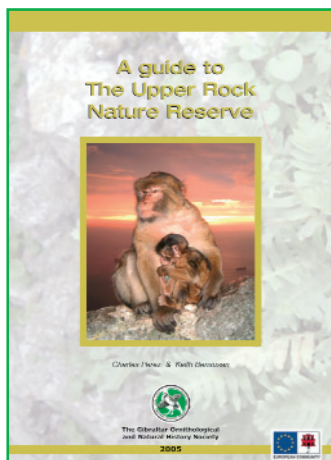
Halt the loss of biodiversity

**Meanwhile, the Ministry for the Environment, under the leadership of the Minister the Hon Jaime Netto, is supporting Biodiversity Year and marking it with special events on World Environment Day on 5th June, with educational activities and an international seminar to celebrate our biodiversity.**

## NEW PUBLICATIONS

### Upper Rock Guide

GONHS recently launched a new Guide to the Upper Rock Nature Reserve, as part of a European Regional Development Fund Project co-funded by the EU and the Gibraltar Government. It is primarily a guide to the natural history of the nature reserve but also includes reference to structures of cultural heritage interest. Compiled by Charles Perez and Keith Bensusan, it includes photographs by Leslie Linares and Eric Shaw as well as the authors, and illustrations of butterflies and special flowers by Christian Hook. Plans of three of the main paths on the Upper Rock have been designed by Dylan Rocca.



Copies of the Guide will be circulated free of charge to GONHS members and to tour operators and tourist sites and are available at The Nature Shop in Casemates or at the Botanic Gardens.

The guide is available as a PDF document on [www.gonhs.org/news.htm](http://www.gonhs.org/news.htm).



### Bird Report 2004

Also published at the end of last year was the Gibraltar Bird Report 2004, the fourth in the current format.

Edited by Dr Ernest Garcia, the bird report sets to summarise observations of birds in Gibraltar during 2004, a most interesting year for birds on the Rock. The year included the first recent observation of Eagle Owl, culminating in 2005 with successful nesting for the first time in almost a century. The year also saw the first recorded nesting of the White Wagtail in Gibraltar at West View Park, and a number of rarities, like the African Chaffinch, a North American Indigo Bunting and a Purple Gallinule.

The publication also includes a bird ringing report, and a number of articles.

One of these reports on the results of the satellite tracking of two Short-toed Eagles released from Gibraltar. Others report an unusual Robin with a white breast, discuss bird mimicry in the Spotless Starling, nesting of Common Swifts in palm trees in Gibraltar and Morocco, and summarise records of significance from the Gibraltar hinterland between 2001 and 2004. The authors of the various articles are Paul Acolina, John Cortes, Ernest Garcia and Charles Perez.

Copies of the Gibraltar Bird Report are circulated to GONHS members and to institutions around the world. They can be purchased from The Nature Shop in Casemates for £2.50.



The Gibraltar Ornithological & Natural History Society

Gibraltar Bird Report 2004 Number 4

## JOUAQUIN DONATES LIBRARY

Jouaquin Bensusan, Honorary Life Member of GONHS, former treasurer and founder of the Society has donated part of his personal collection of books to the GONHS/Botanic Gardens Library at the Cottage in the Gardens.

Jouaquin has kept in close contact with the Society in recent years, providing advice on a number of matters, including invertebrate collections and herbarium techniques. Jouaquin was for many years until 1990

Curator of the Gibraltar Museum, transforming its appearance and doing the groundwork to establish it internationally. During this time he actively encouraged the young naturalists who went on to join him in founding the Gibraltar Ornithological Society. This was typical of his personality, always encouraging others to develop their interests.

In so doing, Jouaquin achieved what many never do. He ensured that the work he started, his collections of plants and animals, his involvement as advisor to the Government in bringing to Gibraltar the realities of international conventions, notably the Washington Convention which led to CITES being implemented in Gibraltar, carries on. GONHS has a wonderful example to follow in Jouaquin Bensusan, and gratefully receives his donation of books, and acknowledges his fundamental involvement in the Society's current work and success.



*Jouaquin Bensusan and his wife, Mari.*

## ROTHAMSTED LIGHT TRAP FOR GIBRALTAR

Under the auspices of GONHS member Charlie Perez, moth trapping has been ongoing at Gibraltar intermittently since the 1970s. Charlie has made an enormous contribution to the knowledge of Gibraltar's Lepidoptera fauna, and over 400 species of butterfly and moth have already been recorded.

Whilst taking part in a workshop on the effect of climate change on migratory fauna at Cambridge with some other GONHS members, Charlie entered discussions with Ian Woiwood of Rothamsted Research Centre over the possibility of setting up a Rothamsted Light Trap at Gibraltar.

Rothamsted Research has been running a network of light traps since 1968. These light traps can be found at hundreds of locations all over Britain. In addition, a smaller but increasing number of traps is being set up around Europe. The Rothamsted trap network has been instrumental in discerning a sharp decrease in most species of large moths in Britain. As such, its value to conservation as a population-monitoring tool is considerable, and correlations between environmental factors and population trends may help to illustrate conservation problems and to come up with possible solutions.

In October 2005, a team consisting of Ian Woiwood and Jason Chapman of Rothamsted and Don Reynolds of the University of Greenwich came to Gibraltar with the view of setting up projects dealing with the migration of butterflies and moths. The trip was successful and on the 3rd March 2006, a

Rothamsted Light Trap was set up at the Alameda as part of a Europe-wide network. It is hoped that a trap at Gibraltar will provide important information on emergence periods and migratory movements in the Mediterranean, and that these may then be related to patterns observed in Central and Northern Europe. Additional work shall be carried out during the Spring of 2006, when Ian Woiwood, Don Reynolds, Phil Gould of Rothamsted and PhD student Rebecca Nesbit will be carrying out experiments on migrant butterflies and moths.



## NOTES & NEWS

### Earth Day Stand

GONHS manned a joint stall on Main Street with the Environmental Safety Group on World Earth Day (22nd April), to spread the message of the dangers of global warming and pollution and the need to protect biodiversity. Together with Friends of the Earth, which had its own stand at Casemates, an Exhaust Free Day was supported, with the public urged to leave their cars at home.

### Bunkering Stinks

Smells of hydrogen sulphide pervading different parts of Gibraltar during westerly winds were eventually confirmed to emanate from bunkering operations in the Bay and led to complaints from GONHS and the ESG. GONHS in particular asked bunkering companies to comment – but none was forthcoming. The Port Authority insisted bunkering firms were resolving the problem, but the smells continued. At the time of going to press, these had diminished significantly

### Pet Ordinance

Gibraltar Government has enacted the Pet Animals (Sales) Ordinance 2005, a move publicly welcomed by both GONHS and the Gibraltar Veterinary Clinic (GVC). Both entities had been working on this issue with Government for some years. The benefits of the new law include the protection of the public from the sale of illegal or diseased animals or animals too young to be removed from their mothers. It also affords protection to the animals, by making pet dealers legally responsible for ensuring that persons buying pets will be able to care for them adequately. Additionally, only animals born in captivity can be sold.

### Reef Addition

Another vessel was sunk on the Artificial Reef in April. Eric Shaw, Head of the Marine Section and the Helping Hand Charity organised the preparation of the vessel by Ocean Village, with the co-operation of the Port Authority. The vessel *True Joy*, known affectionately as "Noah's Ark", was a 85ft 65 ton wooden boat and was sunk off Camp Bay just west of the wreck known as the "482". The wooden vessel will add diversity to the reef, encouraging species that will not colonise metal vessels, and should last on the seabed for between 20 and 25 years.

### Motor Cycle Concern

Motor cycle trials have apparently been held on the lower parts of the Talus slope on the east side of Gibraltar. From a well defined area they moved at some point to the base of the Talus proper, causing loss of plants, erosion, and disturbance to nesting birds, which include Barbary Partridge. GONHS has raised its concerns with the Ministry for the Environment and will be monitoring the situation closely.

# ACTION ON INDUSTRIAL POLLUTION IN THE BAY

The official complaint lodged with the European Commission in 2002 by the Environmental Safety Group (ESG) and GONHS received a serious push last year when a team from Gibraltar accompanied by international experts went to Brussels to present yet further evidence of infringement of environmental legislation by the heavy industries in the Bay.

ESG member Janet Howitt, with David Dumas QC and Professor Benach of Barcelona University and Denny Larson – Director of Global Community, Monitor and

ther investigation it became clear to them that Spain appears to be in breach of EU Directive 2000/69 which stipulates the need for every member state to provide information to the public on benzene emissions. This was clearly not the case and has prompted a follow-up by the Commission directly to Spain. The ESG was informed that more news should emerge soon of the next steps the Commission will take on this specific issue.

The Commission was informed of statements issued by the Junta de Andalucia regarding the need for immediate and urgent changes to be introduced to the Refinery and Power Generating Stations. These changes include the use of low sulphur content fuels and for the preference of gas to oil for the Refinery operating processes. La Junta also announced the beginning of medical surveys in the worst affected populations (Puente Mayorga) to establish the extent of the impact on the community of these polluting industries.

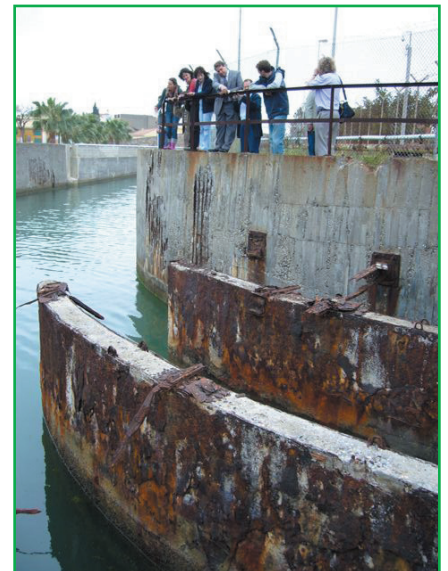


leader of Bucket Brigades worldwide, met a legal team from the Commission. A detailed file was submitted which included a full copy of the bucket sample report and the bucket was also presented. The official response was that although it acknowledged the data obtained by the bucket giving evidence of massive levels of benzene crossing the refinery fence-line, this alone could not allow the Commission to take action. Instead upon fur-

There was a further visit to EU officials in Strasbourg in February, which was followed by one from Gibraltar MEP Neil Parish to the industries around the Bay, accompanied by Bay Bucket Brigade members, which includes the ESG, the Gibraltar Women's Association and GONHS. The MEP was shown examples of zero maintenance on pipes and infrastructure as well as broken down health and safety equipment in place to protect workers on site. The MEP was

shocked and dismayed to see the proximity of these large, aging industrial plants to residential areas, nurseries, schools and recreational areas. He witnessed the nearby cars, patios and playgrounds covered in chemical droplets which had eaten away at the paint and top surfaces. Mr Parish said he had previously been made aware of the disgraceful condition of these plants and their devastating effect on the surrounding environment but that today he had: "felt, tasted and seen the pollution with his own eyes".

The concerns expressed by environmentalist campaigners on both sides of the border have already seen MEPs from both the UK and Spain calling on the European Union and European Parliament to address the continued concerns after data revealed that the Cadiz area is considered one of the worst industrial pollutants in Spain.



# UPPER ROCK MANAGEMENT PLANNED



In late 2002 there was a great deal of public criticism, featured prominently especially in the Gibraltar Chronicle, directed at the Upper Rock Nature Reserve. Political parties, taxi drivers, and other groups were all vociferous in their accusations aimed at the Upper Rock management, concerning especially the amount of litter in many of the sites.

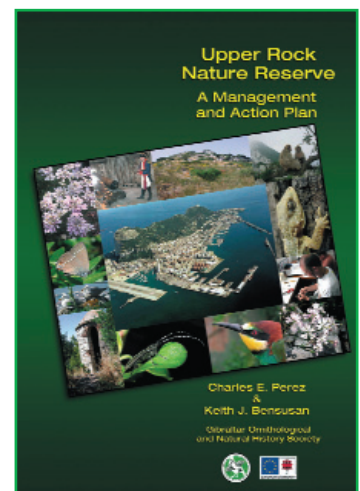
GONHS considered publicly joining the debate, especially as one of its members, Charlie Perez, had just produced a briefing assessing the state of the Reserve, which was presented to both Government and the Ministry of Defence. Instead, however, the support of the Ministry for the Environment was obtained and a bid made for European Union Objective 2 Funds to carry out a feasibility study of the management of the Upper Rock and produce a Management and Action Plan for this important wildlife area. The funds were obtained and Charles Perez and Keith Bensusan engaged to carry out the work, calling upon other GONHS expertise in specific areas.

This work included interviews and discussions with Upper Rock users, a year-long traffic survey, vegetation mapping, and analysis of published and unpublished records. The report, which took two years to complete, was presented to the Government of Gibraltar early in 2005. It includes a recommended management plan, and a costed action plan to ease implementation. The report will be released both in Gibraltar and overseas.

It is the type of document that is required by many of the international instruments that relate to conservation.

The report chronicles the shortcomings of the Upper Rock as a nature reserve, largely stemming from a need for its managers to take greater account of natural environment management needs together with a need to direct more funds to nature conservation. However, the approach is constructive and supportive, with clear indications being given as to what needs to be done – much of it relatively easy to achieve.

The Upper Rock Management and Action Plan is an impressive document and a testament to the calibre of its authors and the commitment of the organisation. It is currently with Government and will shortly be published.



# CLEARING OF FOOTPATHS IN THE NATURE RESERVE

A team of workers from Community Projects has been busy over the last few months clearing up some of the footpaths on the Upper Rock. The team, under the supervision of Reuben Senior and Albert Marfe, has already opened up the section of Martin's Path leading from Jew's Gate up to St Michael's Cave. This path had not been touched



Charles V Road to Bruce's Farm. Here they have their work cut out as they not only have to cut down the vegetation manually, but also carry the plants removed down to the roadway. Their work has not been made any easier by the presence of thorny shrubs such as the *Asparagus* and *Smilax*! Once this path is cleared it will offer walkers an excellent and interesting route of about one kilometre through the Nature

Reserve, well away from traffic.

The team is formed by Teresa Nankani, Richard Alman, Christian Asquez, George Joyce and Nigel Martinez (not in the photos).



for years, and it is now a pleasure to be able to walk within the Nature Reserve for some 400 metres without being hassled by traffic.

At present they are tackling Inglis Way Path. They have already cleared up the southern stretch of some 250 metres which leads from Charles V wall to Charles V Road. The whole length of this part of the path is now clearly visible from the road. The team is now clearing the much more overgrown northern stretch which runs for over 700 metres, from



# NEW STAMPS ON FLOWERS

The Gibraltar Philatelic Bureau has released four new stamps to supplement the definitive issue from 2004 on Gibraltar wild flowers. These stamps depict the Gibraltar campion, the paper-white narcissus, the sea

daffodil and the Gibraltar restharrow. The design and illustrations are by Stephen Perera, based on photographs by GONHS botanical co-ordinator Leslie Linares, who also provided descriptive texts for each flower.



## Ape Research

Researchers from the German Primate Centre, Vienna University and Notre Dame University, Indiana, are all carrying out field work on the Barbary macaques in Gibraltar in collaboration with GONHS. The research includes studies on reproductive biology and on the impact of tourists on macaque behaviour, and vice versa. More collaborative projects are planned.

## Visitors

Visitors to GONHS this spring have been many. They have included bird ringers assisting with the work at Jew's Gate. Using the facilities at Bruce's Farm has been the now annual Leeds University Ecology Field Trip, a team of ten from the Royal Botanic Gardens, Kew, entomologists from Rothamsted Research, and senior staff from the University of Vienna.

## Siskins stay on

A large number of Siskins wintered on the Rock, being seen in particular in the Botanic Gardens until March. In the Gardens they were attracted to the seeds of the fallen fruits of Indian Laurels *Ficus microcarpa*, and to the various ponds. A concentrated ringing effort led to over 100 siskins being ringed whereas only 30 had been ringed in the previous 14 years since ringing started in Gibraltar.

## Peregrine up

Seven pairs of Peregrine Falcon are occupying nest sites in the cliffs around Gibraltar this year. This is the highest number ever recorded since accurate plotting of sites by GONHS began in 1974. The newest pair was present in 2005 but was established too late to allow successful nesting. There are now five pairs on the cliffs on the east side of the Rock, one pair on the North Face and one pair on one of the cliffs on the west side.

## Dead Whale

A dead Minke Whale was washed up on shore in Rosia Bay, Gibraltar, in March. It had been dead for some time, possibly the result of impact with a ship. It was towed away and disposed of with the assistance of the Port Department, the Ministry of the Environment, and the Helping Hand Trust

## Major new site for plant

An initial survey by the GONHS Biodiversity Team in the area of Buena Vista and North Gorge has revealed an interesting population of caper *Capparis spinosa*, growing on the cliffs of the area. The species had previously been known in Gibraltar from just one plant, at the base of the cliff at Camp Bay a hundred metres directly below the new site. The caper, with its attractive flowers, which as buds are used as a spice, is also the food plant of a rare butterfly, the Morocco Orange Tip.



# ALIEN SPECIES

The total number of plant species that constitute the flora of Gibraltar is not something that is easy to establish. The fact is that over the centuries, a number of species have been introduced by various means, from other parts of the world, either accidentally or deliberately. Some are brought in for specific purposes such as for ornament in gardens and other planted areas, providing shade, repelling insects, stabilising sand. Others arrive with imported soil and building materials, while others have their seeds dispersed by lorries and other means of transport involved in world-wide trade.

The term *alien* or *exotic* is used to describe these species that originate from other regions and are not native to Gibraltar. Many of these species are unable to survive in the wild, and are largely found in gardens and other planted areas, where they are watered and cared for. However, there are some that find the conditions in the wild favourable, become adapted to their new environment, and manage to survive without the help of man. These plants are said to have become naturalised. These species invade local habitats and compete with local species. In some cases they become the dominant species, taking over entire habitats and replacing the native species. Such species are termed *invasive species*.



It is sometimes difficult to tell what is a native species and which is an introduced one. Certain species have

been introduced during historical times and in some cases even earlier. Included here are vines, olives and figs which probably come from the Middle East. Citrus fruits come from the Far East, and Eucalyptus and Acacias from Australia. Some species have become naturalised to such an extent that they are now well established as an integral part of our present flora. Of the 629 species of plants that have been recorded as found growing in the wild in Gibraltar to date, 63 are introduced aliens, the majority of which have become naturalised. Most are inconspicuous and/or rare, while some others are quite the opposite.

Naturalised species become apparent when they are invasive and threaten the existence of native species. In Gibraltar there are a number of such species. The table lists the most invasive of these species, and indicates the threat they pose, and where they are becoming a problem.



Species	Threat	Extent of problem
<i>Oxalis pes-caprae</i> Bermuda buttercup	vp	Well established and spreading throughout Gibraltar with extensive cover on the East Side talus slopes.
<i>Carpobrotus edulis x acinaciformis</i> Hottentot fig	vp	Mainly on the East Side sand slopes, and around Europa Point. Also on Windmill Hill Flats.
<i>Disphyma crassifolium</i> Purple dewplant; Rounded noon flower	p	Around Europa Point.
<i>Chasmanthe floribunda</i> African cornflag	vp	Spreading fast on the firebreak north of St. Michael's Cave and at Jew's Gate, and forming several stands in scattered places around the Nature Reserve.
<i>Pennisetum clandestinum</i> Kikuyu grass	vp	Established and spreading on Windmill Hill Flats and along Engineer Road
<i>Aloe arborescens</i> Tree aloe	pp	Extensive stands along Europa Advance Road and at Europa Point, North Gorge, around Catalan Bay and on Windmill Hill Flats.
<i>Aloe maculata</i> Soap aloe	pp	Well established and spreading on Europa foreshore and above Hole in the Wall.
<i>Agave americana</i> Century plant	p	Large stand on the East Side sand slopes above Both Worlds, and also along Europa Advance Road. More are found around Europa Point.
<i>Agave ghiesbreghtii</i> Green century plant	p	Along the East Side and Europa Point, with a number of scattered plants inside the Nature Reserve.
<i>Opuntia ficus-indica</i> Barbary fig; Prickly pear	vp	Extensive stand above Hole in the Wall and surrounding cliffs, and well established on some cliffs on the west side of the Rock.
<i>Acacia cyclops</i> Rooikrans; Red eye wattle	vp	Extensive stand on the East Side sand slopes above the Caleta Hotel, and spreading over the rest of the slopes.
<i>Paraserianthes lophantha</i> Stink bean; Cape or Swamp wattle	vp	Extensive stand above Camp Bay, and several trees on the East Side and below Devil's Gap.
<i>Ailanthus altissima</i> Tree of Heaven	vp	Spreading in The Mount gardens, above Catalan Bay, at Sandy Bay and inside the ex-PSA nursery.
<i>Senecio angulatus</i> Cape ivy; Climbing groundsel	vp	Spreading fast throughout the lower slopes of the Upper Rock, with other stands at Europa Point and North Gorge.

(vp: very problematic; p: problematic; pp: potentially problematic)

The areas in Gibraltar most affected by alien invasives are: the East Side from the north talus all the way to Sandy Bay; the Hole in the Wall area; Europa Advance Road; Europa Flats and the southern parts of Windmill Hill Flats; the Europa foreshore; Camp Bay and Little Bay; North Gorge. It is not surprising that these parts of Gibraltar are so affected. Those on the East Side have been introduced mainly in an attempt to stabilise the sand slopes. Those found in the other areas, which happen to be on the southern parts of the Rock, would have been introduced to adorn the gardens and other planted areas of the MOD properties that were concentrated there.

The control, reduction and eradication of invasive species are matters which require careful, and in some cases urgent attention. At present nothing is being done to address the problem as a whole, though GONHS has been involved in a couple of successful attempts in the removal of Hottentot fig from the mound at Europa Point as part of the "Clean up the World Campaign,

and from a few areas on Windmill Hill Flats with the collaboration of visiting military personnel. The Gibraltar Government through the Ministry of the Environment need to establish a programme to tackle the problem, taking the following factors into consideration:

- Identify the scale and size of the problem
- Establish which method of control to use and the manpower needed
- Remove the species before they go to seed
- Identify a suitable means of disposal
- Conduct a habitat restoration programme
- Follow up with a monitoring programme







# URBANISATION – THE BIGGEST THREAT TO OUR LANDSCAPE AND BIODIVERSITY?

It is ironic that, at a time when most work is being done in discovering and promoting Gibraltar's biodiversity, the boom in urban developments is presenting it potentially with its biggest threat. And note the word "potentially", because it needn't be so.

Up to the present, most development pressure has been on "brown" sites, sites which hold or have held buildings and building on which, directly does not replace a habitat.

## CLIFFTOPS



Some of these have been well within the confines of the extended city of Gibraltar. King's Wharf on Queensway, the Naval Ground Development not far away, even the Anchorage in the South District, regardless of what we feel about size and scale need not have a direct impact on biodiversity. Indeed, in some cases, careful planning could provide additional habitat, for example, nest sites for swifts, bat roosts, and areas of gardens for species such as Blackbirds, Sardinian Warblers and House Sparrows.

The biggest problem here is that such sites are being used up very quickly. Once they have "gone", once they have been sold for a "Premium" by the Government to a private developer, they will not be available again for the foreseeable future. Not available when they are needed socially more than commercially. Where do we move to then?

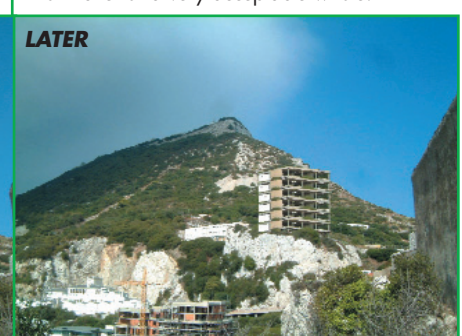
This clearly applies to many developments, even those that are greener. However, if we can for a moment be as short-sighted as most, at least the greener developments are not too negative on the environment. Ocean Village in particular and

Trade Winds also, are talking loudly about green roofing and large gardens. One small development at Europa Road, The New Aloes, if carried out according to plan will recreate a diminishing habitat for open ground plants on its rooftop. Another development currently being considered near Lathbury Barracks has also agreed to a green roof to recreate a natural habitat as far as possible. While green roofs will never be acceptable in areas currently vegetated, they are certainly an environmental gain when the site is currently concrete or tarmac.



In fact, at this point in time, though for how long is hard to tell, our biodiversity is less threatened by urban development, than is our landscape. The Landscape Convention clearly refers to the need for protection of Europe's landscapes – and there can be few more iconic or dramatic landscapes in Europe than Gibraltar.

That is our quarrel with Sharrock Shand over their "Clifftops" development and with OEM over their Buena Vista development. Clifftops in particular, green roof and all, will break the skyline of the south of Gibraltar, interrupting its gradual, terraced descent to the Straits from the summit,



But perhaps most important – and something that GONHS has been advocating for decades – is the need for environmental (and heritage) input to be integrated at the earliest stages in planning.



Not at the final stage when the buildings are designed and the political decisions taken. The political decisions will benefit from early informed input and will be sounder, more defensible and more popular as a result. Even the Rosia Tanks episode, which resulted in legal interventions in a failed attempt to stop a development, could have been much less contentious if it had been tackled differently from the outset.

Gibraltar is set to continue to change. Our vision is that it can do so without negatively impacting biodiversity or landscape.



providing a privileged view for a privileged few and depriving everyone else.

We have not given up thinking that Sharrock Shand will be able to broker a deal with Government that will return their development to a more acceptable scale.

One of the main failings in Gibraltar's planning system is the absence of in-built safeguards against haphazardness. Papers that are presented for consideration at the Development and Planning Commission tend to be well and thoroughly discussed and environmental aspects are certainly aired, heard and taken into account. But of course, some papers are better presented than others. And then, there is an outdated Development Plan whose successor has been years in the making. This is a problem, as there can be no overview of how Gibraltar will look in the future, and matters dealt with in isolation do not make for a very acceptable whole.



## NORTH FRONT CEMETERY

The isthmus between the Rock and the Spanish mainland is today largely built over but originally it formed an important habitat very different from others found on the Rock. The soil was very sandy and exposed to strong Easterly winds which are often salt-laden. Tiny, isolated fragments of this habitat remain on the Spanish side north of the frontier fence, and very little remains on the Gibraltar side. A small dune at Western Beach and the North Front Cemetery are the last vestiges of this habitat in Gibraltar, with some areas also in and around the former MOD aerial farm.

The composition of the soil and the exposed nature of the habitat give rise to a unique community of plants (and associated fauna) which have become adapted to survive in those conditions. A number of species found there will also be commonly found elsewhere on the Rock, while others common in the Cemetery will be rare elsewhere on the Rock. But of special interest are those which grow in the Cemetery but do not grow anywhere else in Gibraltar. It is the survival of these which give rise to concern. This survival is being compromised

by repeated attempts at clearing and eliminating the natural vegetation of the area by any means possible. The method most commonly applied is that of using a motorised strimmer to remove vegetation down to the bare earth. Other methods include the covering of the soil with stone chippings, the laying down of lawn, and the use of weed killer.

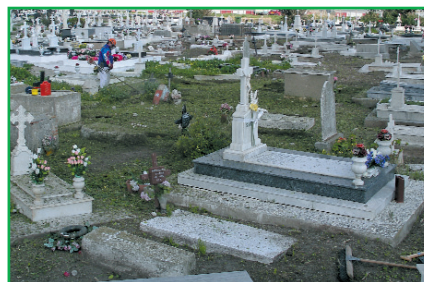
The result of indiscriminate clearing has been to drastically reduce the numbers of the rarest species, many of which are not found elsewhere on the Rock. These include the bladder campion (*Silene vulgaris*); the soapwort (*Saponaria officinalis*); the opium poppy (*Papaver somniferum*); narrow-leaved spurge (*Euphorbia terracina*); the sand cachrys (*Cachrys libanotis*); the Arabian star flower (*Ornithogalum arabicum*); the polyanthus narcissus (*Narcissus tazetta*); the sea daffodil (*Pancreatum maritimum*);

golden bur-marigold (*Bidens aurea*). Some have been virtually wiped out from the site, with very few plants, if any, remaining. These include the pink sandwort (*Minuartia geniculata*); the prickly round-headed poppy (*Papaver hybridum*); field fumitory (*Fumaria agraria*); tall ramping fumitory (*Fumaria bastardi*); the Tangier pea (*Lathyrus tin-gitanus*); winged scarlet vetchling (*Lathyrus*

*amphicarpos*); the branched carline thistle (*Carlina racemosa*); the chicory (*Cichorium intybus*); the sand reichardia (*Reichardia gaditana*); the smooth hawksbeard (*Crepis capillaris*); the round-headed club-rush (*Scirpus holoschoenus*).

It has to be accepted that the upkeep and maintenance of the Cemetery is a sensitive issue, and that visitors to the Cemetery have a right to expect the area to be clean and tidy. Graves should not be allowed to become overgrown with vegetation, and there is a need to clear any such overgrowth from around graves and the approaches to them. However, this does not mean that everything in sight has to be cut down to the bare earth; especially as the space available to the wildlife of the area is constantly being reduced with the construction of new graves. It is reasonable to expect a sensible and responsible approach to the management of the vegetation in the Cemetery; one which respects the fauna and flora of the site, and its importance as a habitat. Suggestions as to how this can be done have been put forward in the past, and include the following:

- allowing the natural vegetation to grow, flower and set seed, especially where there are no graves
- trimming down the vegetation in the areas around graves with care and attention to what is growing there
- clearing the bulk of the vegetation during the summer months, after flowers have set seed and not before
- seeking advice as to which are the plants that should not be disturbed, and where they grow
- no use of weed killers
- no introduction of alien grasses to lay down as lawn
- no blanket covering of soil with stone chippings



Wild flowers look best

### No Heritage on this World Site

The Government of Gibraltar has withdrawn its bid to have the territory declared a UNESCO World Heritage Site. Gibraltar had worked hard to be listed as a candidate site against competition from many other historic sites in the UK. Much of the work of the Gibraltar Museum in recent years has been focused on making a case for final designation. The Government's reasons were stated as being a desire to not have future projects curtailed if the status was achieved. It hoped to be able to propose individual sites in the future. However, in the light of the decision and the reasons given it is unlikely that such piecemeal designation will ever succeed. Full designation would, in the view of GONHS not curtail development, but instead give this a direction and sense of purpose that is hard to detect at present.

### Plant Taxonomy Review

Euro+Med is a review of the taxonomy of Europe's plants currently being undertaken in which Gibraltar is represented through the Botanic Gardens and in which GONHS is contributing. John Cortes and Leslie Linares are contributing data from Gibraltar, which is being included in the Europe-wide database. This will record all the latest taxonomic names of plant species and varieties as well as their status in every European country.

### Vincent at St Anne's

Vincent Robba of the Raptor Rehabilitation Unit gave a presentation on birds of prey and conservation at St Anne's Middle School in the spring term. Vincent's enthusiasm is contagious and the talk resulted in numbers of children from the school enrolling as members of GONHS.

### European Birdwatch and National Moth Night

European Birdwatch 2005 was held on 1st October and combined with the first Gibraltar National Moth Night. Most activities – including the moth trap – were at the Botanic Gardens, with sea watching also organised from the observatory at Europa Point and bird ringing both at the Gardens and at Jews' Gate. Over 50 birds were ringed at the Gardens and over 70 at Jews' Gate, and 171 moths of 33 species were recorded. Among birds seen was an Eleonora's Falcon. Members of the public attended what was a successful weekend.

### Moroccan Scholarship

The Society has awarded a scholarship to Mohamed Amezian, a student from the University of Tetouan, who is being trained as a ringer as part of GIBMANATUR. The scholarship, the first of its kind awarded by GONHS will enable Mohamed to travel to the ringing site and increase his experience and expertise in bird ringing and identification.



# THE GREAT SAND SLOPES OF THE EAST SIDE OF THE ROCK - Update

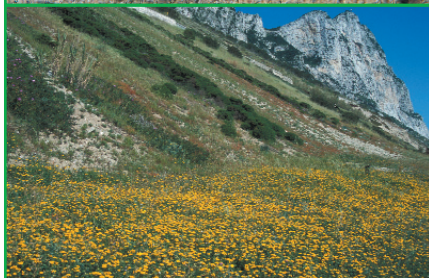
These slopes were created in prehistory from wind-blown sands, at a time when the Mediterranean Sea level was much lower than at present, and a sandy plain stretched eastward from the Rock. This now forms a giant consolidated sand dune which is quite unique, and forms a habitat which contains a rich and diverse community of plants and animals. This would seem unlikely if seen during the summer, but during a short flowering period between March and June, the slopes are ablaze with colour.

The habitat is a harsh one: there is no cover to protect from the sun; it is exposed to a fair amount of sea spray; the sandy soil does not retain a lot of moisture. Whatever manages to survive here has to be well adapted to these conditions. It is not surprising therefore that the vegetation here is quite distinct and many of the plants growing here are either not found elsewhere on the Rock, or else are rare and threatened in the other two places where some may be found, namely the North Front Cemetery and Western Beach.

Plants that are only found here include the endemic Gibraltar restharrow *Ononis natrix* subsp. *ramosissima* var. *ramosissima*, the sticky catchfly *Silene nicaeensis*, shore campion *Silene littore*, coastal crucianella *Crucianella maritima*, sand sedge *Cyperus capitatus*, violet larkspur *Delphinium nanum*, fringed pink *Dianthus broteri*, brown bluebell *Dipcadi serotinum*, sand storksbill *Erodium laciniatum*, southern spurge *Euphorbia baetica*, sand cat-sear *Hypochaeris salzmanniana*, sheep's bit *Jasione montana* subsp. *blepharodon*, branched toadflax *Linaria pedunculata*, silver sea stock *Centaurea sonchifolia*, cottonweed *Otanthus maritimus*, giant mullein *Verbascum giganteum* subsp. *martinezii*, yellow sand vetch *Anthyllis hamosa*, sporobolus *Sporobolus pungens*, and sand fescue *Vulpia alopecuros*.

Plants also found here and threatened elsewhere (as indicated) are: sea daffodil *Pancratium maritimum* – North Front Cemetery and Western Beach, sea medick *Medicago marina* – Harbour Views Promenade, sea holly *Eryngium maritimum* – Western Beach, sand cachrys *Cachrys libanotis* – North Front Cemetery, sea rocket *Cakile maritima* – Western Beach, silver knapweed *Centaurea sonchifolia* – North Front Cemetery, cutandia *Cutandia maritima* – Western Beach, and sand reichardia *Reichardia gaditana* – North Front.

The fire that raged over part of the slope in August 2005 seems to have had no lasting negative effects. Many species are re-sprouting, including the Gibraltar Restharrow and the Giant Reed *Arundo donax*, while the invasive *Acacia cyclops* has fortunately not recovered. The whole of the area that was burnt is vegetated again following the winter rains, with some of the species of more open ground, like the sticky catchfly, making a resurgence. However, the Cottonweed, which had been successfully re-introduced seems to have disappeared.



## NOTES & NEWS

### Back in Gib

Ian Thompson is back in Gibraltar this spring running the Jews' Gate bird Observatory and supervising the ringing programme. He has also been leading the bird ringing expeditions in Morocco organised as part of the GIBMANATUR INTERREG project in collaboration with the Rabat Scientific Institute.



### Europa Point vegetation recovers

The part of Europa Point Mound where an area of the exotic invasive Hottentot Fig was removed in the autumn has responded well. A good cover of native species has appeared, and it is expected that next year the area will have fully recovered.

### Rabbits on the foreshore

The release of domestic animals into wild habitats is not just illegal; it is also bad for the environment. Domestic rabbits released at the Foreshore at Europa Point have intensively grazed some of the native littoral vegetation. Measures are having to be taken to remove these rabbits to allow the vegetation to recover.

### Parson's Lodge well managed

Parson's Lodge Battery is managed for the Gibraltar Heritage Trust by Terry Penfold. Apart from its history and impressive structures, the battery offers breathtaking views of the Rock and the Strait. Its flora is also of interest, and includes a fine specimen of the buckthorn *Rhamnus lycioides* and numbers of Giant Tangier Fennels. Wild flowers are allowed to develop and are not removed until after they have seeded, adding to the interest of the site and ensuring a great diversity of invertebrate life, as recorded during a site visit by the Biodiversity Team. Terry is to be congratulated for his environmentally sensitive management – and they serve great tea and scones and Sunday lunch!

### Mistaken shag

A recently-fledged Western Mediterranean Shag lost its way from its breeding caves and walked onto the beach at Catalan Bay on 15th April and rescued by Catalan Bay Village resident and Senior Environmental Health Officer Francis Martin. The Bird Rehabilitation Unit was contacted and the young bird taken round to Europa Advance Road and released close to its place of birth. The Shag flew well and sat on the water for a while, evidently none the worse for its experience.



## AUTUMN SURVEY OF WINDMILL HILL FLATS

On the 7th November 2005 Charlie Perez, Keith Bensusan and Leslie Linares visited Windmill Hill Flats to carry out a brief survey of the area. The main purpose of the visit was to confirm the continued existence in the area of the southern autumn crocus, *Crocus serotinus salzmannii*. In Gibraltar, this species is only found on the Flats. It is a true crocus and should not be confused with the other member of the family, *Colchicum lusitanum*, which grows throughout the Upper Rock, and which most people call the

autumn crocus. This latter species is actually not a true crocus.

In the past, the crocus had been seen growing to the north and to the south of the signal station. On this occasion none were seen on the north side, but quite a number were seen on the south side. Most of the plants were past their best so they must have started to flower in late October. Next year it will be necessary to start surveying the area a little sooner, and check out the northern site once again.

Three other species new to Gibraltar were also recorded on that day. The first was the slender wall rocket, *Diplotaxis viminea*. This is a small member of the mustard family, and two small stands were identified east of the Signal Station. The second was the fiddle dock, *Rumex pulcher* subsp. *pulcher*. This was found growing on the firing range, but other plants of the same species were seen subsequently on the mound at Europa Point. The last species was a single plant of the mandrake, *Mandragora autumnalis*, which was also seen on the firing range.



## RE-INTRODUCTION OF SILENE TOMENTOSA



At the beginning of January this year, members of the Botanical Section were involved in planting out some Gibraltar campion (*Silene tomentosa*) at Windmill Hill. To date, other attempts at re-introducing this species into the wild have only met with very limited success. In February of 1996 a number of plants were planted along Martin's Path, but all eventually died out, though a couple survived for about four years. The only plant to survive that initial re-introduction is one that was planted at the top of Mediterranean Steps. It still survives.

Suitable sites for re-introduction, and which are accessible to enable monitoring of their

progress, are not easy to find. This species grows from crevices in the limestone, and seems to do better if not exposed to the sun all day. Sites on the east cliffs or on north-facing cliffs have been deemed appropriate, and as actual sites are identified, programmes for re-introduction will be put into operation.

One such site was identified at Windmill Hill. A total of eight plants were put in: four of them were three years old, and four about three months old. The plants were placed in four different locations: two facing north-west, four facing north and two facing north-east. The sites used were selected using the following criteria:

- Orientation (roughly north-facing)
- Protection from the wind
- Presence of fairly deep soil but on limestone outcrops
- Presence of other plants that grow well on limestone outcrops
- Lack of invasive species such as *Oxalis pes-caprae*



The plants were inserted into the existing natural soil, but kept in the composted soil where they had been raised. Each plant was well watered in, and their positions marked.

An initial check was made on the plants at the beginning of March, and of the initial 8 plants, only 5 had survived: 3 of the older ones and 2 of the younger ones. Those which have survived best are those that were planted facing north-west and north, probably as these are better protected from strong easterly winds.

All surviving plants will be monitored over the coming flowering period, and if the operation is successful, then next year a more ambitious programme will be put into effect.



## ORCHIDS ON THE CONVENT LAWN

A stand of bumblebee orchids *Ophrys bombyliflora*, has been discovered growing on the lawn of the gardens of The Convent. The discovery was made by Alan Brownbridge of Greenarc, who reported it to GONHS. Members of the Botanical section, Leslie Linares and Arthur Harper went along to check the plants on 8th March, and made a positive identification. The colony contains over one hundred plants in excellent condition, and at various stages of development. Some 20 plants were in full flower. The last time this species was seen flowering in Gibraltar was in the mid 1980s.



Bearing in mind that these plants take from 6 to 8 years to develop to full flowering, it is remarkable that the colony has managed to survive the regular mowing of the lawn, and events such as the Garden Party! Alan has marked out the position of the stand in order to protect it, and will be putting up an information label identifying the species.



### Scottish raptor talks

Bird Report editor Dr Ernest Garcia was invited to give two talks in Scotland in 2005, on behalf of GONHS. The first was at the annual conference of the Scottish Raptor Study Groups, hosted by the Tayside Raptor Study Group at Battleby, near Perth, on February 26th. The second occasion was the annual conference of the Scottish Ornithologists' Club at Newtonmore, Highland, from Oct 28th to Oct 30th. The subject of both talks, Raptor Migration at Gibraltar, attracted a lot of attention and quite a few promises of visits to see the spectacle at first hand. The Perth conference members included Brian Etheridge and Andrew Upton, both familiar names to birders in Gibraltar, as are Norman Elkins and Bill and Rowena Quantrill, who were at Newtonmore. All had many happy reminiscences of times spent at Gibraltar and all send their regards to their many friends on the Rock.

### Friends of the Earth

Lyanna Armstrong Emery, formerly of the Reform Party, and Green Party Candidate in the last European elections, has retired from party politics and started a Gibraltar branch of the environmental organisation Friends of the Earth. FoE Gibraltar is developing activities which have so far been mainly aimed at increasing awareness of global environmental matters as they apply to Gibraltar. A meeting between representatives of FoE, the Environmental Safety Group (ESG) and GONHS has been held in order to try and maximise the overall effect of the growing environmental movement in Gibraltar.

## 190 YEARS OF ALAMEDA

The 14th April this year marked the 190th anniversary of the opening of the Alameda Gardens, now the Gibraltar Botanic Gardens. These were opened in 1816 by General George Don, Lieutenant Governor of Gibraltar, after two years of work paid for by the takings from public lotteries and amateur stage productions.

Mostly known for its attractive walks, monuments and its history, the Botanic Gardens now play an important role in research and conservation.

The Gardens hold an important living collection of succulent plants, in particular of the largely African genus *Aloe*, many of which are rare or endangered in the wild.

There is an ever increasing collection too of species native to Gibraltar, like the Gibraltar Campion *Silene tomentosa*, and the Gibraltar Candytuft *Iberis gibraltatica*, and its hinterland, like *Narcissus viridiflorus* and *Narcissus fernandezii*. Many other wild plants are cultivated in a number of beds dedicated to native species, and some are encouraged elsewhere, as is the case of *Ononis cossoniana*, a coastal species of sandy areas which survives in the Gardens from the days when the red sands were coastal dunes.

Wildlife is encouraged, with minimal use of chemicals. The gardens, for example, have a good population of Two-tailed Pasha butterflies *Charaxes jasius*, whose caterpillars feed

on *Osyris quadripartita*. Nesting birds include Sardinian Warblers, Wrens and Blackcaps, but these species are joined in winter by others, like Robins, Chaffinches and Siskins and many more in migration.

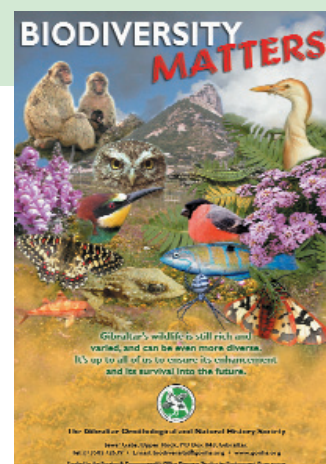
The water features have attracted Grey Wagtails, Kingfishers and Grey Herons. They also have introduced populations of European Pond Terrapins *Emys orbicularis* and Perez's Frogs *Rana perezi*. Reptiles in the Gardens include Horsehoe Whipsnake *Coluber hippocrepis*, Amphisbaenian *Blanus cinereus*, Iberian Wall Lizard *Podarcis hispanica*, and Turkish Gecko *Hemidactylus turcicus*.

The Gardens also hold the Wildlife Park which houses species confiscated from illegal trade.

GONHS is offered many facilities in the Gardens, including an office base for some of its staff, the GONHS Library, which is combined with the Garden's own, and sites for bird ringing and the recently installed Rothamsted Light Trap.

For nearly two centuries it has provided enjoyment for residents of and visitors to Gibraltar. Now it provides that and a great deal more.

GONHS wishes the Alameda Gardens a Happy 190th Year and looks forward to many more of collaboration.



**TO JOIN...and support our work send your subscription to GONHS, PO Box 843, Gibraltar with your name and address, or fill in the on-line form at [www.gonhs.org](http://www.gonhs.org).**

## OUR NATURAL HERITAGE: A PERSONAL VIEW

by Dr. Ernest Garcia

Mention 'heritage' in Gibraltar and most people will think of the Gibraltar Heritage Trust and perhaps also Gibraltar Heritage Magazine. 'Heritage' is widely taken to mean the preservation of old buildings and other historical artefacts. The Oxford English Dictionary

defines heritage as 'valued things such as historic buildings that have been passed down from previous generations' and 'of special value and worthy of preservation'. The key word here is of course 'value'. Simply being old does not make anything intrinsically valuable

and worth keeping but that which is valued is treasured. The Heritage Trust does excellent work in ensuring that Gibraltar's monuments, fortifications and notable buildings are indeed valued and that all these constructions survive for the benefit of later generations. I fully endorse its efforts, and also the work of the Gibraltar Heritage ministry and the magazine. Still, something worries me and it is this. Does the emphasis on 'human' heritage risk not only overlooking our natural heritage but also in devaluing it?

The problem is a real one. If our natural heritage is not regarded as 'proper' heritage then it will not be valued and respected as it deserves and requires. There is then a danger that it will gradually be eroded by development. The risk is particularly severe in such a small place as Gibraltar, where shortage of land for any purpose is acute and the pressures to sacrifice parts of the local equivalent of the 'green belt' will arise repeatedly. It has been heartening to see that the sort of large-scale despoliation which the recently-proposed Rock Gun funicular railway would have caused was convincingly rejected. Similar threats are bound to arise again and the case for preserving the natural heritage of Gibraltar must continue to be made and to be given prominence.

The GONHS biodiversity campaign is a big step in the right direction. It is impossible to conserve something if nobody knows it is there. Hence, the cataloguing of all of Gibraltar's fauna and flora, both terrestrial and marine, and of the habitats which support it, is of the greatest importance. More publicity too needs to be given to those species, such as the Gibraltar Campion, which are endemic to Gibraltar alone and therefore for whose global population we are responsible. Furthermore, the general public and the Government need to be reminded of the amenity value of the Nature Reserve, and other green places such as the Botanic Gardens. Gibraltar would not be such a pleasant place to live in, and to visit, if all of the Upper Rock consisted of a residential suburb or other buildings. The eye-catching skyline of

the Rock itself needs to be particularly carefully conserved if our extraordinary piece of Jurassic limestone is to continue to deserve its status as a world-renowned landmark.

Threats to wildlife conservation there certainly are but Gibraltar is benefiting from real environmental improvements and some recent changes have added very significantly to the value of its natural heritage. The use of reclamation from the sea has been an excellent way to tackle the shortage of building land. The removal of the aerial farms has greatly improved the landscape. The decommissioning of the water catchments has done wonders for the appearance of the eastern side of Gibraltar: a stark place for most of the 20th century, defaced by what was probably the planet's

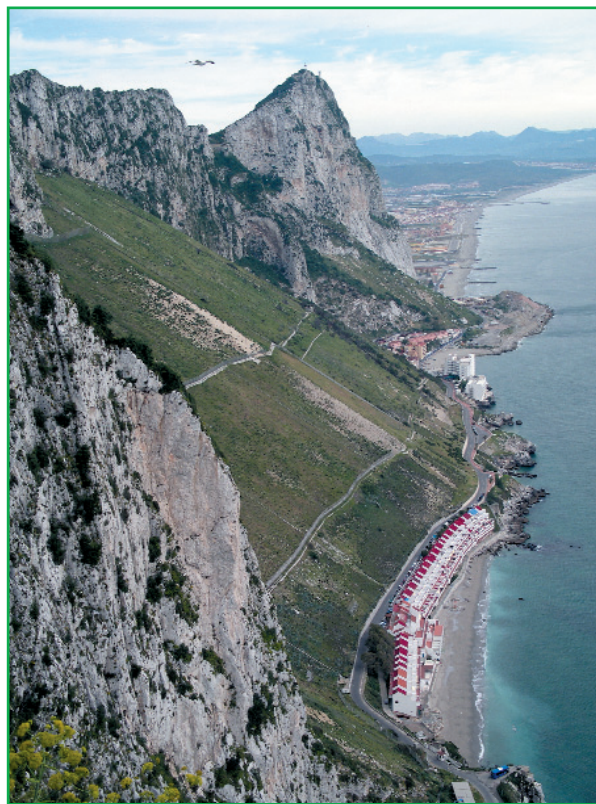
largest expanse of corrugated iron sheeting. Once again, the plant-covered Great Sand Slope can be seen in all its glory – and it is a remarkable phenomenon in its own right, whose restoration has provided an important refuge for many of our plants and animals and made possible the return of some species which had been lost.

To distinguish between our natural and historical heritage is unwise and unnecessary. Both are important, in different ways, and both contribute enormously to the character of Gibraltar and to the quality of life of its human inhabitants. They deserve our most careful and devoted stewardship.

*The Great Sand Slope. A major and world-class element of Gibraltar's heritage, which has only recently begun to return to its natural condition.*



Dr Ernest Garcia



## CLIMATE CHANGE RECORDED IN GIBRALTAR CAVES:

A major new study of climate change as a collaborative project between Royal Holloway, University of London and the Gibraltar Ornithological and Natural History Society began in April and was inaugurated by a field visit to New St Michaels Cave by the project leader Professor Dave Matthey (Royal Holloway, University of London) and co-investigators Professor Tim Atkinson (University College, University of London) and Professor Ian Fairchild (University of Birmingham)

The objective of the project is to calibrate the chemical and isotopic record preserved in speleothem (stalagmites) that have grown over the last 200 years to the instrumental climate record of temperature and rainfall that has been recorded in Gibraltar since 1792. Gibraltar is

in a climatically sensitive position along the Atlantic seaboard and boasts one of the longest and most complete weather records in the world dating back to measurements made by the Admiralty and the Royal Engineers through the 19th century.

Speleothem deposits in caves form by the passage of rainwater through the limestone roof, dissolving calcium carbonate from the bedrock and re-precipitating layer after layer of carbonate as stalactites, stalagmites and flowstone deposits. Naturally occurring 'stable' (non-radioactive) isotopes of oxygen, oxygen-16 and oxygen-18, vary in abundance in rain according to temperature and source of the moisture in the water cycle and this climate 'fingerprint' is recorded in the layers of calcite as

the speleothem deposits grow slowly year by year. The oxygen isotope variations in speleothem are increasingly used by palaeoclimate scientists to reconstruct past trends in temperature and rainfall but the fidelity of this record is still not well understood. The objective of this project is to accurately calibrate the isotope and chemical record to the unique 200 year weather record in Gibraltar and provide a sound basis for interpreting speleothem rainfall 'archives' elsewhere in the world.

An essential part of this project is to understand how the cave lives and breathes – the cave physiology. The Gibraltar climate is strongly seasonal with cool wet winters and hot dry summers and it is necessary to know whether speleothem grow just in the winter, the

# THE BIRDING SCENE 2005

by Charles Perez - GONHS Biodiversity Officer

An interesting six months to the end of the year with some remarkable observations. The highlight of course was the Long-legged Buzzards that took up residence on the Rock for over three months. This species has a wide distribution in Eastern Europe, the Middle East and Asia and also has a small population in North Africa of the subspecies *B. rufinus cirtensis*. The birds are usually sedentary and rarely wander into North-western Europe, but in the last decade records of the species have increased in our area where they are classified as a vagrant bird. It made its first appearance on the 2nd September when it was seen hunting over Spur Battery. This bird, an adult, then spent much of the following days foraging along the crest of the Rock between Rock Gun and O'Hara's Battery, and could be observed hunting in the early mornings and late evenings throughout September. Much to our surprise it was joined by a second bird, a juvenile, on the 16th October, and both were regularly seen over the Rock. They occasionally wandered across to Spain, but would return flying low over the town,



Europe and Russia. They occur irregularly in very small numbers in the Gibraltar area and are absent in some winters. On occasions, the pine seed crop, on which the finches depend, fails, and then hundreds of thousands of birds move south in search of food. This year the first Siskins were observed on the very early date of the 12th October, after which they were the most commonly recorded finch on passage, with a particularly large movement at the end of October. Many stayed on the Rock for the winter.

Grey Herons are common in winter in the flood plains and river estuaries surrounding Gibraltar, but they are rarely seen at Gibraltar, and then only as a scarce migrant bird. It came as a surprise when one was discovered fishing the Coi carp at the Alameda Botanic Gardens in the open-air theatre pond on the morning of the 13th December. Once it had discovered an easy food source, the heron was there for its morning breakfast on most days until well into the New Year.

Other notable sightings included owls, with a juvenile Barn Owl caught in one of the hangers at North Front on the 24th July. There is a possibility that the bird may have been part of a family group that had bred in Gibraltar. It was taken into captivity, ringed and released once it had fully recovered. Another Barn Owl was found inside a flat in Harbour Views on the 5th November, but flew out of the kitchen window before it could be captured. On the morning of the 16th October a Long-eared Owl was caught and ringed at Jew's Gate. The bird was subsequently seen perched on the monument at the



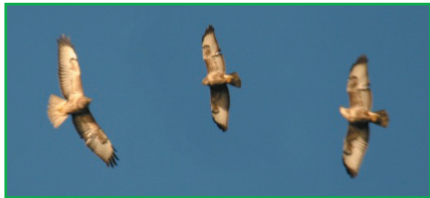
same location on the 7th November. This is only the third record of Long-eared Owl for Gibraltar; the first seen back in 1973 and the second in October 2003. Given the secretive nocturnal nature of owls, the species may well be more common than previously thought. Tawny Owl was certainly more common than usual with birds heard on many evenings in the Jews' Gate and the Mount gardens area throughout September, October and November.

The ringing programme at the Strait of Gibraltar Bird Observatory at Jew's Gate provided some interesting records with the ninth record of Goldcrest, the third ever ringed, five Wrynecks in September and early October, a Rock Thrush on the 29th September, the fourth ringing record, a Bullfinch on the 8th November and a Ring Ouzel two days later. Bullfinches and Goldcrests now seem to be annual occurrences thanks to the consistent ringing effort that is now showing these interesting results.



But the most remarkable record of the period was made on a shopping spree by Ernest Garcia, the editor of the Bird Report. A visit to a shopping mall on the other side of the Gibraltar Bay produced an exciting find of a yellowish warbler feeding indoors. Closer inspection proved this to be a Yellow-browed Warbler, a vagrant from Siberia that has rarely been recorded in the region. The bird was happily pecking away at the grapes oblivious to the hordes of shoppers inside the supermarket. The shoppers were unaware of the bird too, until it was spotted by our editor who quickly managed to snap a few photographs to prove to us it was not a figment of the imagination. News of the bird travelled fast and the local ringing group in the area, GOEs, captured, ringed and released the bird back into the wild. The extraordinary photograph of the rare bird in such an unusual environment has been reproduced in several birding magazines.

News of other ornithological records for the year is summarized in the Gibraltar Bird Report 2005 that will soon be circulated to members.



totally unconcerned by any human presence. One of the birds tried to rob the Peregrine Falcon of a recent kill but did not succeed, and both Buzzards were observed food-passing, a common practice among birds of prey that leads to the bonding of the pair. This gave rise to speculation that the birds may eventually pair and breed on the Rock if they stayed into the following year. Unfortunately, only one of the birds remained into November and was last observed over the Rock on the 12th December. They probably moved into the surrounding countryside, where there have been reports of Long-legged Buzzards that could have been the Gibraltar birds.

Another fascinating event was the influx of Siskins in the autumn. The Siskin is a small finch that breeds in the far north in Scandinavia, in Central

## CALIBRATING THE PAST AND FORECASTING THE FUTURE

Dave Matthey

summer, or all year round. All these options are possible depending on how rapidly rain events

pass into the cave or whether water is stored for long periods within the aquifer. The way the cave is ventilated also affects when and how speleothem grow – the deeper parts of New St Michaels cave has a constant temperature of 18.5°C all year round and is warmer than the outsider air during the winter. This temperature contrast can set up a chimney effect dragging air in through fissures and out through

the roof in winter and this ventilation forces speleothem to grow faster than they otherwise might do if the air was static. In order to understand when the speleothem grow a program of monitoring has been carried out as a pilot study through 2005 and will continue as part of the funded research programme led by the Cliffs and Caves section of GONHS. The monthly monitoring will include collection of air and water samples for chemical analysis, measurement of temperature and humidity and deploying data loggers and sensors to monitor cave water drip rates and water flow.

The project is funded by the UK Natural Environment Research Council for three years and will hopefully become a major contribution to cave research and climate science.





# BIODIVERSITY IN PHOTOGRAPHS

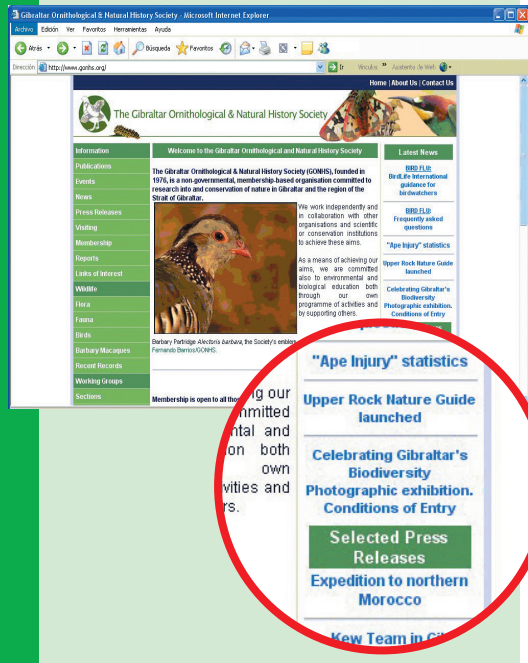
As a way of celebrating Gibraltar's Biodiversity, GONHS and the Gibraltar Photographic Society (GPS) are organising an exhibition on the theme this coming autumn. It will be held at the John Mackintosh Hall from 17th to 27th October.

Leslie Linares, Secretary of the GPS as well as head of the GONHS Botanical Section, is co-ordinating the event and will be leading the team that will choose the photographs to be exhibited.

Persons wishing to enter photographs should submit these in digital format. The size of each image must be such that a good quality A4 size print can be obtained from it. All images must carry the name of the author and a title identifying the subject correctly. They can be sent to either GONHS or GPS or handed in at the GPS headquarters at Wellington Front, Gibraltar, or at The Nature Shop in Casemates Square or at the Gibraltar Botanic Garden no later than 30th June.

All the photographs exhibited will be published in a book to mark Gibraltar Biodiversity Year and the 30th Anniversary of GONHS.

Full details are available on the GONHS website at:  
[www.gonhs.org/PHOTOEXHIB.htm](http://www.gonhs.org/PHOTOEXHIB.htm)



# 30 YEARS OLD – IN BIODIVERSITY YEAR

Involvement with other NGOs from outside Gibraltar has always been a feature of GONHS work. After a great deal of hard work following objections from the Spanish Partner, GONHS was accepted as a full Partner of BirdLife International again during the most successful European Partnership Meeting of the organisation, held in Gibraltar in 2001. GONHS has also been a member of IUCN, The World Conservation Union, for many years. It is involved in the Iberian Council for the Defence of Nature, the British Trust for Ornithology Partnership and the Overseas Territories Conservation Forum, also having close links with other entities such as the Royal Society for the Protection of Birds (RSPB) and GOEs (Grupo Ornitológico del Estrecho) in Spain.

Research partners include the Institut Scientifique of the Université Mohammed V Rabat-Agdal, Royal Holloway, University of London, Rothamsted Research, The German Primate Centre, Notre Dame University, Indiana USA, Greenwich University and Vienna University.

In Gibraltar, GONHS works in within and outside official committees and Commissions in advocacy, striving to impart a pro-environment stance in the policies and actions of Government and business alike, and not miss-

ing an opportunity to ensure that decisions at all levels are consistent with the welfare of the environment and the guaranteed survival of our biodiversity.

It is no coincidence that our 30th Anniversary is also Gibraltar Biodiversity Year. That we have been around for all this time has ensured that our biodiversity has remained important, if not intact, and with the potential to improve. Had we not been around –and that includes all our members and supporters too– awareness of the environment in Gibraltar would not be what it is now and there would be a lot less environment to be aware of anyway.

From a practical conservation point of view, our biggest achievements so far are probably the artificial reef mentioned above, and the restoration of the vegetation of the Great Sand Slopes on the East side. The first has not only improved marine biodiversity, but has also attracted many divers to Gibraltar – helping the human economy; the second is already increasing the biodiversity of Gibraltar's terrestrial organisms even beyond its confines. We have chosen these as the main theme for the photographs that accompany this article.

We look forward to the next thirty years. They will be challenging, but, after the experience we've gained, we feel we are up to it.

