International

Agreement to protect small cetaceans

In October 1988, in a conference convened by the UN Environment Programme in Geneva, 26 nations agreed to take steps to protect sea mammals that are threatened with extinction. They also agreed to a global study of the dangers to dolphins, porpoises and small whales and that priority should be given to dolphins and porpoises in the North Sea and the Baltic Sea, dolphins in the eastern tropical Pacific, the Mediterranean and the Black Sea, narwhals in the Arctic and the Ganges river dolphin in India.

United Press International, 14 October 1988.

Traders call for tropical timber levy

European traders in tropical timber. represented by the Union pour le Commerce des Bois Tropicaux, have proposed a levy on sales of tropical timber, which could raise \$200 million a year for conservation. The proposal was made in November at the International Tropical Timber Organization (ITTO) meeting in Japan and is a reaction to pressure in Europe to ban imports of tropical timber. Such a ban would be counterproductive, argue the European traders, because it would reduce the economic value of the forests and leave them to the mercy of local agricultural colonists. It is proposed that the levy would go to a special conservation fund administered by the ITTO. New Scientist, 19 November 1988, 18.

CITES to meet in Switzerland

The next meeting of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora will be held 9–20 October 1989 in Lausanne, Switzerland.

New international convention for conservation

The draft of a new international convention for the conservation of biological diversity is now available. It would impose obligations on member states to conserve their native biological diversity and would provide funding mechanisms to support biological 106

diversity conservation programmes. Drafted by the Environmental Law Centre in Bonn, the convention is a response to resolutions from IUCN's last two General Assemblies.

IUCN Tropical Forest Programme Newsletter, November 1988, 6.

96th Party for CITES

Burundi acceded to CITES, effective on 6 November 1988, the 96th Party to the Convention.

New World Heritage Sites

At its meeting of 5-9 December 1988 the World Heritage Committee added five sites to the World Heritage List; Wet Tropics of Queensland, Australia; Manovo-Gounda-St Floris National Park, Central African Republic: Nanda Devi National Park, India; Sinharaja Forest Reserve, Sri Lanka; and Henderson Island, UK Dependent Territory. The total list of natural sites is now 68. The number of State Parties has now reached 108, with USSR, Byelorussia SSR, Ukranian SSR, South Korea, Malaysia and the German Democratic Republic having recently ratified the Convention.

CNPPA Newsletter, October/November/December 1988, 1.

Grants for field research

In 1990 EARTHWATCH will award grants of US\$10,000–100,000 for 110 projects. The Center for Field Research invites scholars engaged in biological field research to apply for awards of funds and volunteer staff. Since funds are derived from contributions of participating volunteers, non-specialist volunteers must be integrated into the research design. For further information contact: The Center for Field Research, 680 Mount Auburn Street, PO Box 403, Watertown, MA 02272, USA.

Europe and North Africa

Muskoxen increase

Thirty muskoxen *Ovibos moschatus* (10 from Banks Island, Canada, and 20 from Nunivak Island, Alaska) were introduced into the tundra of Poluostrov Taymyr in the northern USSR. The muskoxen, originally enclosed, were released in 1980/82 near a re-

search station in the Bikada Valley. The first calf to survive infancy was born in 1978 and since then the death rate has been extremely low. By July 1987 the population had risen to 230, in 10–12 herds. Most still range close to the release site, but one 40-strong herd has moved north across the main range of Byrranga Gory and single bulls have wandered up to 300 km from the release site. In August 1985 two bulls appeared at Mys Chelyuskina, the northermmost tip of the continent. Yakushkin, G. D. and Barr, W. 1988.

Yakushkin, G. D. and Barr, W. 1988. The introduced muskoxen of Poluostrov Taymyr, Polar Record, 24, 321–324.

Elk dying in Sweden

An unidentified virus has killed 600 Swedish elk Alces alces in the past two years. The disease is spreading and has so far proved impossible to treat. Some animals shot recently have shown very high levels of radioactivity in provinces badly polluted by the Chemobyl nuclear reactor accident in 1986 in the Illeraine.

The Globe and Mail, 2 November 1988

Wolf persecution continues in Norway

A hunter shot one of the six wolves trying to establish themselves in an area of the Norwegian-Swedish border in July 1988. The animal, one of two males born in 1987 in Varmland in southcentral Sweden to the country's only breeding pair, crossed the border into the Norwegian province of Hedmark and began to kill sheep. Although sheep farmers in Norway are allowed to kill wolves if they consider them to be a threat, the hunter was not himself a sheep farmer and he now faces a criminal investigation. Viggo Ree, a wellknown Scandinavian conservationist. publicly condemned the law that allowed the shooting and has received telephoned death threats. Apart from farmers in Hedmark, public opinion may be changing; a nationwide poll in 1987 found that 80 per cent of Norwegians were willing to pay for the conservation of their country's large carnivores and editorials in some of the leading national farmers' journals have called for an end to 'primitive' hatred of wild animals.

BBC Wildlife, September 1988.

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A muskox in captivity. Thirty animals released in northern USSR have bred to form a population of 230 (*Fritz Vollmar/WWF*).

Ban on lead shot

The use of lead shot has been banned on Danish sites covered by the Ramsar Convention. Non-toxic ammunition may be used in areas where hunting is permitted. This is the first example in Europe of legislation against pollution through lead shot; in North America lead shot has been banned in wildlife refuges for several years (see *Oryx* 21, 121).

Sanctuary: The Ministry of Defence Conservation Magazine No. 17. 1988, 7.

Year round protection for seals

The close seasons for common seals Phoca vitulina and grey seals Halichoerus grypus in England and Wales were extended on 31 October 1988 under Section 3 of the Conservation of Seals Act 1970. The order also extends the close season of the common seal in Scotland; most of Britain's grey seals breed on the Scottish coast but this species was within its current legal close season until 31 December and its protection was to be reviewed at the end of the year. The order was requested by the Nature Conservancy Council because of the high mortality of common seals from a viral disease in 1988; although grey seals had not suffered in the same way there were fears that the stress of breeding yet to come might trigger illness. The virus that killed the seals is neither canine distemper virus Briefly

nor rinderpest virus as reports had originally suggested (*Oryx* **23**, 2), but a new species in the same genus, which some researchers have called phocine distemper. Two teams in Britain, at the Agricultural Research Council's Institute for Animal Health at Pirbright, Surrey, and at Queen's University, Belfast, Northern Ireland, drew broadly similar conclusions.

Nature Conservancy Council, 31 October 1988; New Scientist, 19 November 1988, 28.

Privatization looms for nature reserves

The UK's Nature Conservancy Council had its grant pegged at £40.15 million over the 1988/1989 financial year and as a consequence will have to trim its assistance to voluntary conservation bodies and will largely halt its work on marine and urban conservation. Pollution research will also suffer. The NCC is now being forced to consider selling 17 national nature reserves to be managed by private individuals or voluntary organizations in an effort to improve its worsening financial situation.

New Scientist, 3 December 1988, 25.

Death of a giant leatherback

On 23 September 1988 the largest leatherback turtle *Dermochelys coriacea* ever recorded was found dead on

a beach in Wales. It weighed 916 kg and had a curved carapace length of 256.5 cm. The cause of death was drowning and a tightly compacted piece of plastic, which blocked the entrance to the small intestine, could have contributed. The ingestion of plastic is an increasing problem for marine turtles. Merchant ships generate almost 90 per cent of all wastes found in the world's oceans and every day the world's fleet tosses 5.5 million containers into the sea. The turtle is being prepared for permanent display at the National Museum of Wales.

Marine Turtle Newsletter, November 1988, 2.

Islet reserve

Filfla Nature Reserve, a 3–4-ha islet 6 km south of Malta, was established in June 1988. It supports one of the largest known Mediterranean colonies of storm petrel Hydrobates pelagicus, as well as colonies of Cory's shearwater Calonectris diomedea and yellow-legged herring gull Larus argentatus michahellis. It is also important for an endemic lizard and two endemic snails. The islet was bombed by armed forces for many years, until 1971 when its importance for wildlife was recognized. World Birdwatch, July–December 1988, 5.

Maltese hunt in Egypt

Malta is so overhunted that in order to seek more game Maltese hunting parties have visited Fayum in Egypt, killing thousands of birds of protected as well as unprotected species.

Sinai Newsletter, October 1988, 1.

New nature conservation service in Spain

The Spanish Civil Guard has created a service for nature conservation, employing 1000 men with the task of monitoring all 'anti-nature' actions and to protect all species in danger of extinction.

Grupo Lobo Newsletter, November/ December 1988, 3–4.

The Columbretes Islands

The Columbretes Islands, off the east coast of Spain, near Majorca, were declared a nature reserve by the Spanish

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authorities on 25 January 1988. They form an archipelago of volcanic origins and are of botanical, ornithological and marine interest with many indigenous species and subspecies. Now a refuge for seabirds and migrants, of especial interest are Audouin's gull Larus audouinii and Eleonora's falcon Falco eleonore. The islands are home also to the endemic subspecies of lizard Podarcis hispanica atrata. The surrounding waters are protected for their important communities which include a rare algae Laminaria rodriquezi and red coral Corallium rubrum. Visitors are allowed, but under certain restrictions so that this important ecosystem is left undisturbed. Director-Conservador del P.N. de las Islas Columbretes, Conselleria de Agricultura y Pesca, C/. Herrero 23, 12071 Castellon.



Arab hunters in Niger

Hunters from Saudi Arabia, having eliminated wild animals from much of the Arabian peninsula, are pouring into Niger by the planeload according to diplomats and aid workers in Niamey, the capital. Reports say that the heavily-armed hunters are travelling to the remote mountains of Air where scimitar-horned oryx, dama gazelle, dorcas gazelle, addax and barbary sheep are already critically rare and where a 77,700 sqkm reserve has been established. Hunting has been banned in Niger since 1964.

The Independent, 31 December 1989.

Simien jackal research

The Simien jackal Canis simensis is the focus of a new conservation project funded by Wildlife Conservation International (a new division of the New York Zoological Society). Fewer than 1000 individuals survive, most of them in Bale Mountains National Park, Ethiopia, where, although protected by law, they are threatened by grazinginduced changes to the habitat and domestic dogs, as direct competitors and as vectors of diseases. The main goals of the project are to determine total population and density in Bale and throughout their range, to study their spatial and social organization, feeding ecology and habitat require-108



Simien jackals in Bale Mountains National Park, Ethiopia, where a new conservation project has just started for these endangered animals (*J. Stephenson/WWF*).

ments and to develop a conservation management plan.

Claudio Sillero-Zubiri and Maria Gottelli, Bale Mountain Research Project, Ethiopian Wildlife Conservation Organization, PO Box 386, Addis Ababa, Ethiopia.

Meru's white rhinos killed

All five remaining white rhinos Ceratotherium simum cottoni in Meru National Park, Kenya, were killed on the night of 30 October 1988. Thirty well-armed Somali poachers attacked the park headquarters and held rangers at bay while they killed the animals and removed their horns. The incident occurred only days after Kenya's Ministry for Tourism and Wildlife announced plans to upgrade the weapons available to anti-poaching units and to intensify anti-poaching training.

Wildlife News, Winter 1988, 3.

Dwarf ibis survives still

Reliable reports from two local men who live on the south-west coast of São Tomé indicate that the dwarf ibis Bostrychia bocagei still survives. This single-island endemic has not been seen by ornithologists since it was last collected in 1928. According to the reports the bird is seen only in untouched primary forest and never in regenerating secondary forest, even when this is tall. The reports were

received by John Burlison and Peter Jones who visited São Tomé and Príncipe in the Gulf of Guinea recently to draw up a proposal for a rain forest conservation project to be co-ordinated by IUCN with EEC funding.

World Birdwatch, July-December 1988. 5

Forest conservation in Central Africa

The IUCN Tropical Forest Advisory Group met in Gabon in November 1988 and prepared a draft action plan for forest conservation in the Central African Republic, Cameroon, Equatorial Guinea, Gabon, Congo, São Tomé and Principe, and Zaire. It approved proposals for demonstration projects, intended for funding by the European Community, which focus on various approaches to rural development in areas adjacent to critical forest ecosystems. Approaches include rationalization of subsistence hunting, promotion of secondary forest products, applications of traditional knowledge, and buffer zone fuelwood plantations. This Central African Regional Programme will be completed by the establishment of a major new research centre for conservation and development issues related to the forests; it will be built adjacent to the Salonga National Park in Zaire.

IUCN Tropical Forest Programme Newsletter, November 1988, 6.

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Northern white rhino numbers

white rhinoceros northern Ceratotherium simum cottoni population in Garamba National Park. Zaire, now numbers 21; nine calves are known to have been born and survived since 1983. The Garamba Rehabilitation Project, which started in 1984, having completed its initial three years, has been extended for a further three. The improvements to the park and the increase of the rhino population have fully justified the decision to protect the animals in their natural habitat, but the project still relies heavily on international aid. Two separate sightings of northern white rhinos have recently been reported from Southern National Park, Sudan, but the current political situation means that very little can be done about them and the best hopes for the survival of the subspecies remain with Garamba.

Pachyderm, Newsletter of the African Elephant and Rhino Specialist Group, January 1988, 22.

Army denies ivory smuggling

The US Government has filed criminal charges against three South Africans and five Americans for their roles in smuggling endangered species into the US from Angola via South Africa. Two officers in the South African Defense Force are charged with trafficking in rhino homs and leopard skins and the US has asked the South African Government to arrest and extradite the two officers to the US for prosecution. However, a board of inquiry in Pretoria, South Africa, convened by the armed forces, has found that the army helped Angolan rebels transport elephant tusks in 1978-79, but rejected charges of continued large-scale military involvement in ivory smuggling. The Guardian, 8 December 1988; Monitor, 21 November 1988.

Zimbabwe's parks budget cut

Zimbabwe's Department of National Parks took a massive \$2 million (14 per cent) cut in the 1988-89 budget. Despairing officials say they needed an additional \$7 million in order to do their job properly. Field operations in particular will be hard hit, which will severely limit the effectiveness of anti-poaching patrols.

Zimbabwe Wildlife, September 1988, 17.

Briefly

Wildlife scheme in Zimbabwe

A major wildlife utilization scheme is planned in the Mzarabani district of Zimbabwe. The Myuradonha Wild Life Area, which was gazetted as a wilderness area in August 1988, covers almost 50,000 ha of uninhabited country on the edge of the Zambezi escarpment. Wildlife populations are currently sparse, although elephants. lions, sable, kudu, leopard, warthog, zebra and reedbuck have been sighted and the area is believed to have been much more species-rich in the past. Income from the scheme, possibly after restocking by the Department of National Parks, will be derived from hunting, photosafaris and associated industries such as curio manufacture. Zimbabwe Wildlife, September 1988,

Asia

Bustard population static

Despite legal protection the houbara bustard Chlamydotis undulata macqueeni population in the north-western Negev in Israel has not grown since the late 1970s. A recent study suggests that the reason for this may be disturbance at nesting time. Since the vegetation is overgrazed by sheep, nests have sparse cover from predators and the presence of shepherds and their dogs increases the probability of the birds abandoning their nests. Ravens, prominent nest predators, have increased considerably in the area due to the spread of agriculture and rubbish dumps. The situation for the bustard would be improved if nesting areas were to be declared sanctuaries where livestock grazing would be forbidden during the breeding season.

Lavee, D. 1988, Biological Conservation, 45, 47–54.

Onagers to go to Jordan

Five onagers, or Asiatic wild asses Equus hemionus, are to be reintroduced to Jordan, two from the Zoological Society of London and three from Germany. It is hoped that they will form the basis of a viable breeding group for the species, which has declined dramatically in numbers over the last 10–20 years as a result of hunting for sport and for food, and

which is believed to be extinct in Jordan. The reintroduction will take place at the Shaumari Wildlife Reserve under the auspices of the Jordanian Royal Society for the Conservation of Nature. Whipsnade Park Zoo, 27 October 1988

New species of deer in China

A male muntiac deer captured in the mountains of Gongshan county, Yunnan, China in March 1988, appears to be a new species and is being described by Professor Shi Liming and Professor Wang Yingxiang of the Kunming Institute of Zoology. The new species differs in chromosome number from Fea's muntjac Muntiacus feae, with which it was originally confused. The new muntjac appears to have a localized distribution, is subject to considerable hunting pressure and is probably endangered in Yunnan. Since the discovery, examination of skins collected in Bome county, Tibet, China in 1982. has revealed that the new species also occurs there, but it status is unknown. The finding also means that the known range of M. feae is much smaller than believed.

Species, Newsletter of the SSC, November 1988, 15.



Asiatic wild asses are to be reintroduced into Jordan. These individuals were photographed in Israel where the species is recovering thanks to conservation efforts (W. Clark).

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Japanese taking more porpoises

Japanese fishermen have begun the large-scale taking of Dall's porpoises *Phocoenoides dalli* in anticipation of a demand for a substitute for whale meat. There are reports that the populations of porpoises are already declining locally.

Japan Environment Monitor, 30 September 1988.

Indo-Malaya

New location for Siberian crane

A Siberian crane *Grus leucogeranus* arrived at Dihaila Jheel in India on 20 November 1988. In the last 50 years the cranes' only known Indian wintering site has been Bharatpur Bird Sanctuary, where usually fewer than 40 winter; in 1988 only 24 were counted. The new record for Dihaila emphasizes its importance as a wetland and highlights the need for its listing as a Ramsar site (see *Oryx*, **22**, 211).

Asad Rahmani, Bombay Natural History Society, 10 December 1988.

Translocated rhino bears calf

The first calf has been born to a translocated greater Indian rhinoceros *Rhinoceros unicomis* in Royal Bardia Wildlife Reserve, Nepal. Thirteen rhinos have been transported there from Royal Chitwan National Park since 1986 (see *Oryx* **20**, 191). *Los Angeles Times*, 4 December 1988.

Call to protect a Nepalese forest

The forests on Phulchowki Mountain in Nepal need protection. Although only 16 km from the country's capital, Kathmandu, the mountain slopes support luxuriant forests with a high diversity of wildlife. A recent ICBP study found 256 bird species there, 90 per cent of them dependent on forest cover, and including 35 species for which Nepal may hold internationally significant breeding populations. However, these forests are now disappearing fast due to an extensive marble quarry and the daily removal of wood and foliage. World Birdwatch, July—December

1988, 4. 110



These Siberian cranes were photographed at Bharatpur, the only known winter site for the species in India for the last 50 years. In the winter of 1988–89 a single Siberian crane was also seen at Dihaila Jheel in Madhya Pradesh (Y.-J. Rey-Millet/WWF).

Thailand bans all logging

The six-month-old Government of General Chatichai Choonhavan of Thailand passed two royal decrees in January banning all logging. The initiative, in the face of bitter opposition from powerful vested interests in the logging industry, was made possible after outrage at flooding and mudslides, which killed 350 people in Thailand in November 1988 and which were blamed on illegal logging. The Government has declared 1989 a 'year of nature and environmental protection'. The Guardian, 12 January 1989.

Indonesia restricts timber exports

Indonesia is reported to be banning exports of rough sawn timber in ramin, agathis, white meranti and jelutong from January 1989. The move is part of the Government's attempt to increase the local processing of wood in order to generate greater foreign income from its timber and to slow down the rate of deforestation.

TRF Times, Winter 1988, 7.

Tree planting in the Philippines

President Corazon Aquino has announced that the Philippines will spend \$1 million over the next 12 years in reforestation projects to replant 1.4 million ha of denuded watersheds.

More than 90 per cent of the Philippines' virgin forests have been destroyed leaving only 1 million ha that is commercially productive. *TRF Times*, Winter 1988, 7.

Not much hope for Palawan's forests

The Manila-based Haribon Foundation is collecting a million-signature petition asking Philippines' President, Corazon Aquino, to delare a logging ban in Palawan. This island, one of the last to contain untouched forest (see *Oryx*, **22**, 30–35), has been losing 19,000 ha of forest every year since 1979. It is unlikely that the conservationists' pleas will be answered, however, because huge timber concessions are under the control of people with influential government connections.

Far Eastern Economic Review, 24 November 1988.

North America

Ontario's good record on parks

In 1988 the Ontario Provincial Government, Canada, announced the creation of 53 new parks, having already established 104 since 1983. When all the new parks are operational Ontario will have 270 provincial parks covering 63,000 sq km (24,000 sq km are in Polar Bear Provincial Park alone)—

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approximately 6 per cent of the province's total land area. Ontario's Minister of Natural Resources has also banned trapping, mining and hydroelectric projects in the parks and has allowed restricted logging only in two. Canadian Nature Federation Almanac, in Nature Canada, Fall 1988.

Network for owl

The US Forest Service is to establish a network of habitat areas in Oregon and Washington national forests that will link 6475 sq km of protected old growth forest to maintain populations of northem spotted owls *Strix occidentalis caurina*. The new areas will range from 405 ha to 890 ha and will protect nesting owls and act as 'stepping stones' between larger, already protected areas. It is estimated that the move will reduce timber harvest in these forests by 180 million board feet annually.

Outdoor News Bulletin, 16 December 1988, 2.

Golden buckwheat found

The golden buckwheat Eriogonum chrysops, a distant relation of cultivated buckwheat, was rediscovered in 1988 by two naturalists working with the Oregon Department of Agriculture's Endangered Species Programme. The plant had last been seen in 1910 by William Cusick in the Steens mountain range and was relocated by piecing together this early collector's field notes. The Center for Plant Conservation, Fall 1988, 4.

New endangered species listings

In July 1988 two fish, a mussel, a mammal and two plants were listed by the US Fish and Wildlife Service as endangered or threatened. The shortnose sucker Chasmistes brevirostris and Lost River sucker Deltistes luxatus are both restricted to the Klamath Basin of south-central Oregon and north-central California, where dams, drainage, diversion of rivers and dredging of lakes have reduced their ranges and numbers by more than 95 per cent. James spinymussel Pleurobema collina is endemic to the James River drainage of Virginia and West Virginia, but survives in only 5-10 per cent of its historical Briefly

range, being in danger from water quality degradation and competition from the introduced Asiatic clam Corbiculata fluminea. The Tipton kangaroo rat Dipodomys nitratoides nitratoides has been eliminated from 96 per cent of its former range in the San Joaquin Valley, California, and much of its remaining habitat is severely fragmented. Houghton's goldenrod Solidago houghtonii, a vellow-flowered perennial, is now restricted to 39 sites in Michigan and several in Ontario, Canada. The main threats are development of its lakeside habitat, off-road vehicles and rising lake levels. Pitcher's thistle Cirsium pitcheri occurs on the sandy shores of the Great Lakes and its habitat is likely to become increasingly vulnerable to development and recreation.

Endangered Species Technical Bulletin, August 1988, 3.

Grizzlies increasing in Yellowstone

There are probably more than 170–180 grizzly bears *Ursus arctos* alive now in the Yellowstone ecosystem, the first time the population has shown an increase since 1975 when the grizzly was declared a threatened species in the conterminous 48 states. The increase is believed to be partly a result of management programmes, but continued intensive management and public support are essential for the bear's survival and long-term recovery.

Endangered Species Technical Bulletin, August 1988, 8.

Kirtland's warbler increase

The 1988 Kirtland's warbler *Dendroica* kirtlandi census recorded 207 singing males on the breeding grounds in

Michigan, USA, an increase of 40 birds over the 1987 census of 167 males. Five additional singing males were found in north-central Wisconsin up to 400 km from the traditional jack pine habitat in Michigan. A large fire in 1980 resulted in the opening up of much more suitable habitat for the warbler. Bird Watcher's Digest, November/December 1988. 8–9.

Andean condors to be released in California

Up to 10 young Andean condors Vultur gryphus were to be released in August 1988 at the Hopper Mountain National Wildlife Refuge and Sespe Condor Sanctuary, California, as the start of a two-year project to test potential release sites and techniques that can be used in the eventual re-establishment of Californian condors Gymnogyps californianus.

Endangered Species Technical Bulletin, June-July 1988, 2.

Ravens destroying tortoises

Several hundred ravens are likely to be killed in California's Mojave Desert as part of an effort to save the desert tortoise Gopherus agassizii. According to surveys, the population of ravens has grown by more than 300 per cent in the past 20 years, while over the past six years the number of tortoises has shrunk by as much as 70 per cent in some parts of the desert. Ravens are blamed for eating large numbers of juvenile tortoises and the US Fish and Wildlife Service and the Bureau of Land Management have proposed shooting and poisoning ravens in a limited area to see whether the tortoise population recovers.

New Scientist, 3 December 1988, 25.



A sea otter at Monterey, California (G.W. Frame/WWF).

Sea otter census encouraging

The May/June 1988 census of Californian sea otters *Enhydra lutris nereis* produced a count of 1724, including 219 pups. This is the highest since counts began and took place after 67 animals had been removed to San Nicolas Island. The increase is believed to be due primarily to three consecutive mild winters and California's prohibition on gill and trammel nets in the shallow waters of the otter's range. *The Otter Raft*, Winter 1988–1989, 3.

Stars versus squirrels

The University of Arizona plans to build a 'world class' observatory on Mt Graham, a last stronghold for 200 Mount Graham red squirrels *Tamiasciurus hudsonicus grahamensis*, which are the only remaining examples of the subspecies. They are protected under the Endangered Species Act, but the US Fish and Wildlife Service issued a biological opinion that the facilities might not eliminate the squirrels.

Outdoor News Bulletin, 4 November 1988, 2.

US priority plants identified

The US-based Center for Plant Conservation conducted a survey in 1987 and 1988 to determine which taxa of native plants are most at risk of extinction in the next decade. Replies suggest that 680 taxa may become extinct in the next 10 years. Nearly three-quarters of these occur in California, Florida, Hawaii, Puerto Rico and Texas. The Center is attempting to bring all of the highest priority plants into the National Collection of Endangered Plants in the next three years for research and propagation, and will launch a Priority Regions Programme under which regional committees will prepare conservation plans for the most endangered plants.

The Center for Plant Conservation, Fall 1988, 1–3.

Two listed plants

An evergreen shrub from Puerto Rico, Daphnopsis hellerana, which is known from only two populations of about seven plants each near San Juan, was listed as Endangered by the US in June 1988. At the same time the US also listed the Cumberland sandwort Arenaria cumberlandensis as En-112

dangered. This herbaceous perennial grows at four sites in Tennessee and at one in Kentucky, where it is threatened by hikers and loggers.

Endangered Species Technical Bulletin, June-July 1988, 1.

Central America

El Salvador's new conservation

Fourteen new wildlife areas are being set aside for conservation under land reform programmes in El Salvador. The IUCN is taking part in a government programme to place many of these areas under the management of ngos, co-operatives and local municipalities.

IUCN Tropical Forest Programme Newsletter, November 1988, 2.

Legacy of a hurricane

Hurricane Gilbert, which struck the Caribbean in September, did most damage in Jamaica and the Yucatan Peninsula of Mexico. In Jamaica the destruction of forest is likely to have brought some of the island's endemic birds closer to extinction. In Yucatan an estimated 3000 flamingos were killed, 15,000 hatching sea turtles were lost and forests and barrier islands were damaged. At Rio Lagartos Wildlife Refuge, the only nesting site for the Caribbean flamingo in Mexico, nine new channels formed by the hurricane have caused significant reductions in the hypersaline conditions needed by flamingos for feeding and breeding. World Birdwatch, July-December 1988, 1, 11; ICBP Pan American Bulletin. October 1988, 2.

South America

Venezuela's new parks

Venezuela created two new national parks in May 1988. Santos Luzardo

These Venezuelan stamps can be ordered from Stuart D. Strahl, Fundacion para la Defensa de la Naturaleza, Apartado 70376, Caracas 1071-A, Venezuela, for US\$4.00 a sheet of 10 (two of each). Proceeds will help conservation work.



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covers 5844 sq km along the Orinoco River in the state of Apure and has a rich avifauna and threatened amphibians and reptiles. The other, Guaramacal is situated at 1500–3200 m in the Andes.

CNPPA Newsletter, July/August/September 1988, 2.

Marine mammal society in Ecuador

The Fundacion Ecuatoriana para el Estudio de Mamiferos Marinos has been formed to promote the scientific study and conservation of whales, dolphins and manatees, and to help develop awareness of marine mammal issues in Ecuador. The Foundation's President is Ms Mariuxi Prieto, FEEM, Casilla 6637, Guayaquil, Ecuador.

Seed balls for Brazil

Brazilian Scientists intend to drop millions of gelatine balls loaded with seeds of tropical plants from the skies over the deforested slopes above the industrial town of Cubatao in the state of Sao Paulo in an emergency exercise to prevent landslides. Each ball will carry about 10 seeds and is heavy enough not to be blown off course. The exercise was due to start in December, dropping about 500 kg of gelatine balls over an area of 10 sq km. In 1989 the team hopes to cover a further 50 sq km of land, perhaps using nutrient-enriched balls to give the seeds a better start.

New Scientist, 26 November 1988, 33.

Specialists discuss plight of parrots

At the end of October specialists met in Brazil to discuss parrot conservation in the Neotropics. As many as 45 of the 145 species involved are in danger of extinction. Spix's macaw Cyanopsitta spixii, from north-east Brazil, is almost certainly extinct in the wild and its fate depends on the co-operation of the six people around the world who hold the last 16 captive. Habitat destruction and trade are the major problems. Argentina is the heaviest exporter (over 175,000 a year) followed by Guyana, Uruguay and Peru, but tens of thousands of parrots are smuggled out illegally, many dying in tran-Briefly

sit. The meeting approved an action plan, which will attempt to save all Neotropical parrots from extinction. In Suriname a quota system has been established to allow parrot exports to continue on a sustainable basis while providing revenue, some of which will be used for conservation purposes. ICBP, 10 November 1988.

Sustainable forest management in Acre

The International Tropical Timber Organization (ITTO), at its meeting in Rio de Janeiro, Brazil in 1988, approved its first project in sustained forest management. The project aims at sustainably managing primary forest of around 1000 sq km in the Brazilian state of Acre and the development of local industries to process timber and other forest resources. WWF-International has contributed funds to the project in the hope that it will be a model for others.

IUCN Tropical Forest Programme Newsletter, November 1988, 4.

Brazil exports logs despite ban

Brazil is continuing to export tropical hardwoods in spite of a presidential moratorium on shipments passed in October 1988. The moratorium is part of a package of measures to protect the environment and was in response to



Spix's macaw—almost certainly extinct in the wild. There are 16 in captivity; this one is at Sao Paulo Zoo in Brazil (A.L. Ramos/WWF).

international uproar over a sharp increase in clearance in the Amazon; some 35,000 sq km of virgin forest were lost in 1988. Brazil had already banned logs unless they were cut from areas to be flooded by dams. Now companies are claiming that their log exports are all from dam sites. In November Japan received the first of a number of huge shipments of logs from Brazil.

Financial Times, 18 November 1988.

Brazilian holocaust

In late 1988 reports from Brazil indicated that an area of Amazonia the size of West Germany had been deliberately destroyed by fire. Eye-witness reports were that the fires were spread across a front some thousands of kilometres long and that northern South America was shrouded in a pall of smoke that could be seen and smelt in Rio de Janeiro several thousand kilometres south. President Sarnev recently announced that his government would try to stop the destruction by ending subsidies on large-scale cattle ranching and banning the export of unprocessed logs. Most environmentalists remain sceptical, however; only days before this announcement he had promised to extend tax benefits for agricultural development in Amazonia, including cattle ranch subsidies, and this is unlikely to be revoked.

TRF Times, Winter 1988, 15-16.

Indian tribes protest against dam

Indian leaders from Brazilian Amazonia are converging on Altamira in the state of Para, north-eastern Brazil, for a demonstration against the destruction of rain forest. The protest is being organized by leaders of the Kayapo tribe, one of the largest remaining groups in Amazonia and by mid-February over 3000 people from 20 tribes were expected to occupy a site proposed for a dam

Friends of the Earth Press Release, 24 January 1989.

Fernando de Noronha a park

On 15 September 1988 the President of Brazil signed a decree establishing the National Marine Park of Fernando

de Noronha, which was first proposed in 1986 by a coalition of local conservationists concerned about tourism development plans (see Oryx, 20, 195). The archipelago, some 320 km off the north-eastern coast of Brazil, comprises several islets and a main island of 17 sq km. Several colonies of seabirds breed there and green turtles Chelonia mydas nest on the beaches. There is also a resident population of spinner dolphins Stenella longirostris. The park protects two-thirds of the main island, all smaller islands, and surrounding waters to a depth of 50 m.

Comitê Pró-Parque Nacional Marinho de Fernando de Noronha, Rua 24 de Outubro, 1000/2301 Porte Alegre RS 90460, Brazil.

Argentine forest to be protected

Some of the last subtropical forests in Misiones province, north-eastern Argentina, is to be protected in a joint effort by the Fundacion Vida Silvestre and the ICBP. The forest, bordering Brazil and Paraguay, contains a wide diversity of species, including approximately 340 birds, 26 of which are considered globally threatened. The Selva Misionera is one of the last refuges of the endangered Brazilian merganser Mergus octosetaceus, which requires clean, fast-flowing streams and undisturbed forest. The ecosystem also contains elements of the Atlantic forest of Brazil, of which less than 1 per cent of the original cover remains. The area to be protected by the new agreement is in the watershed of the Urugua-i River and includes 4000 ha owned by several paper companies, which seem willing to co-operate in the conservation effort.

ICBP Pan American Bulletin, October 1988. 1.

Australia/Antarctica

New defence against crown of thorns

Australian researchers have found that erecting a 1-m-high fence of 12-mm mesh keeps crown of thoms starfish Acanthaster planci off coral reefs. The starfish are one of the most serious problems for the Great Barrier Reef 114

Marine Park Authority, which manages the 2000 km of reef, and during the past 20 years several outbreaks of the starfish have destroyed parts of the reef, which can take 15 years to recover. The fences can be erected when and where outbreaks are predicted, but they are expensive to install and maintain and would not prevent the larvae of starfish from reinfesting the reef. The authorities have spent A\$3 million on the starfish problem in the last three vears and, although scientists can now predict outbreaks up to three years in advance, there are still many unanswered questions as to their cause. New Scientist, 10 December 1988, 28.

Western swamp turtle's plight

The last wild survivors of the western swamp turtle Pseudemydura umbrina were further endangered in March and April 1988 when habitat was accidentally burnt in two reserves, the Ellen Brook Reserve and Twin Swamps, in Western Australia. The Department of Conservation and Land Management started an eradication programme for foxes and dogs in the two reserves because there would be no cover from these predators when the turtles emerged from aestivation in May or June. Efforts to breed these turtles in captivity are now to be increased using the last 17 captive individuals to establish two colonies in Perth.

IUCN Tortoise and Freshwater Turtle Specialist Group Newsletter, December 1988.

Falklanders petition against whalers

Nearly half the Falkland Islanders signed a petition calling on their Government not to renew licences for squid fishing in the Falklands 150-mile conservation zone unless Japan abandons its plans to continue its scientific whaling in the Antarctic. Although the Falkland Islands Executive Council expressed strong sympathy with the petitioners, it could not support the proposed action because it would not necessarily achieve the desired result, and because it could harm Falklands fishing interests.

Sir Peter Scott in The Times, 10 November 1988; Wildlife Link, 4 January 1988.

French airstrip violates treatu

French scientists have admitted that the work involved in building the airstrip on Dumont d'Urville in Antarctica contravenes the Antarctic Treaty. Under the Treaty heavy machinery and helicopters must not be used near breeding colonies of seabirds and explosions must not be within 270 m. The French conceded that they were not keeping to any of those conditions; construction workers were capturing penguins and confining them to pens while their colonies were blown up and then releasing them. Other birds were kept away with fireworks while their nests were destroyed. The nests of 3300 Adelie penguins Pygoscelis adeliae, 290 Cape petrels Daption capense and 264 snow petrels Pagodroma nivea were being destroyed. The airstrip is being built to service a new base in interior Antarctica. The Guardian, 16 January 1989.

Disastrous oil spill in Antarctica

At the end of January an Argentine ship sank off the western Antarctic Peninsula within 2 km of Litchfield Island Protected Area. Although the ship's main diesel oil storage tanks were not ruptured, hundreds of gallons of oil were pumped out of the bilges as the crew tried to save the ship. Scientists at the US National Science Foundation's Palmer wildlife study station nearby tried to erect oil booms but failed to stop the oil spreading. It was reported that krill were leaping from the water to escape the oil and attracting birds. which were becoming oiled as they tried to feed. Six species of seabirds nest on Litchfield Island and they were nearing the end of the breeding season. with the young about to take to the water for the first time. A US airforce plane was flown to the area on 1 February with oil spill contamination experts and equipment.

The Guardian, 2 February 1989.

Oceania

PNG bans live fauna exports

Papua New Guinea banned the exports of all live fauna including pets on 11 April 1988 and placed a total ban on the commercial collecting of giant clams, Tridacnidae.

Traffic Bulletin, 7 November 1988, 3.

Oryx Vol 23 No 2, April 1989

Samoan Conservation Group

Le Vaomatua (Samoan for tropical rain forest) was set up in 1985 by a group of local residents interested in protecting forests, reefs and marshes in American Samoa. Its members testified in favour of a Samoan national park, which would protect from encroaching development about 33 sq km of beach, coral reef and rain forest on two of Samoa's islands. The forests are the largest remaining in Polynesia and are home to the endangered Samoan flying fox Pteropus samoensis, which the group has adopted as its logo. Legislation to establish the park is in progress. Its members also campaigned against the dredging and construction of a boat harbour in Leone Bay, home to endangered sea turtles and possibly a calving site for humpback whales. The project has now been withdrawn. Further information may be obtained from Le Vaomatua, PO Box B, Pago Pago, American Samoa, 96799. Environment Newsletter, April-June

1988, 7-8; National Parks, November-December 1988, 12-13.

Meetings

20th International Ornithological Congress

The 20th International Omithological Congress will take place in Christchurch, New Zealand, on 2-9 December 1990. New Zealand will also host the 20th World Conference of the International Council for Bird Preservation on 21-27 November 1990 and a Pacific Festival of Nature Films on 27 November-1 December 1990. The final circular of the Ornithological Congress, which includes details of all events, will be available from 1 October 1989 from Dr Ben D. Bell, Secretary-General, 20th International Ornithological Congress, School of Biological Sciences, Victoria University of Wellington, PO Box 600, Wellington, New Zealand.

World Conference on Mountain Ungulates

The World Conference on Mountain Ungulates will be held at the University of Camerino, Italy, from 4 to 6 September 1989. It will deal with the biology, management and protection of mountain ungulates, many of which are vulnerable, endangered or rare. The main objective of the conference will be to discuss the World Action Plan for Caprinae, to be prepared on behalf of the IUCN. The meeting is being arranged jointly by IUCN and the University of Camerino. Details from Professor Sandro Lovari, Zoology and Comparative Anatomy, Department of Cell Biology, Via F. Camerini 2, I-62032, Camerino, Italy.

Breeding and conservation of endangered species

The Jersey Wildlife Preservation Trust will be running its 10th Summer School from 22 July to 12 August 1989. There is an intensive course for zoo staff, students and lay people with a strong interest in conservation and/or captive breeding. Course directors include Dr David Chivers, University of Cambridge, and Dr Pat Morris, University of London, both FFPS Council Members. For further information contact: The Summer School Co-ordinator, Jersey Wildlife Preservation Trust, Trinity, Jersey, Channel Islands, British Isles. Closing date for applications is 30 April 1989.

The Conservation of Insects and their Habitats

This two-day symposium organized by the Royal Entomological Society of London will be held on 14-15 September 1989 at Imperial College, London. The emphasis will be on solving problems and reviewing recent initiatives. For the full programme and registration form write to The Registrar, Royal Entomological Society of London, 41 Queens Gate, London SW7 5HU, UK.

People

Professor Vo Quy of Vietnam, who has devoted his life to rehabilitating his country's war-damaged environment and to fostering international co-operation and scientific exchange among all nations, was awarded WWF's Gold Medal on 3 November 1988. Vo Quy is Dean of Biology at the University of Hanoi and Founder-Chairman of Vietnam's Natural Resources and Environmental Protection Centre. He is author of The Birds of Vietnam and co-author of the country's National Conservation Strategy, which mobilized the Vietnamese to plant at least 500 million trees a year. He also initiated the agreement between Laos, Kampuchea and Vietnam that calls for international co-operation in protecting rare and endangered migratory species and the establishment of peace parks on shared borders.

Dr Perez Olindo, Director of Kenya's Wildlife Conservation and Management Department, was awarded the 1988 John Paul Getty Wildlife Conservation Prize. The citation pays tribute to his 'long and distinguished record as a champion of wildlife conservation in Kenya, particularly for the black rhino'.

Dr Martin Holdgate, IUCN's Director General, has been placed on UNEP's Global 500 Roll of Honour for his 'contributing efforts to help protect and improve the environment'.

Dr Russell A. Mittermeier, SSC's Vice-Chairman for Programme Development and Chairman of the Primate Group, has been awarded the San Diego Zoological Society's Conservation Medal for 1988.

Obituaries

Francisco Mendes, a prominent Brazilian environmentalist, was murdered on 22 December 1988, allegedly by local cattle ranchers, at his home in Xapuri, Acre province. Through his efforts to organize and protect rubbertappers he found himself allied with conservationists who wanted to stop destruction of the rain forest for cattle ranching. In 1988 he received the UNEP Global 500 award for his efforts to save the rain forest.

Nature, 5 January 1989, 3.