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Notes and News

On 26th October last year a calf was born to one of the Society's Arabian orvx in the Phoenix Zoo, Arizona. It was named Ian, after Major Ian Grimwood, chief game warden of Kenva, who led the FPS expedition in

1962 (described in ORYX Vol. VI. December 1962) to A Calf for the capture a breeding nucleus of these animals which are on Arabian Oryx the verge of extinction. Three were caught, and it is

hoped in due course to restore a herd to the wild. The calf's mother is Edith, the only female caught by the expedition, and the father Tomatum, called after one of the expedition's Arab guides. The herd at the Phoenix Zoo now numbers six, five of which belong to the Society. In addition to the three captured and the calf, one female was presented to the Society by the Ruler of Kuwait, and the sixth, a female, belongs to the London Zoo. Photographs appear on Plates 11 and 12. There is a paper on the natural history of the Arabian oryx by D. R. M. Stewart, a member of the FPS expedition, in the Kenva Wildlife fournal, reviewed on page 187.

The FPS has sent a gift of £100 to Mr. Terence Reilly in Swaziland for his enterprising private venture of a game reserve. The wildlife is being fast hunted out of existence in Swaziland, which is a small and poor

A Private

country, with no reserves and no game department. Mr. Reilly, who has been a game ranger, has turned his Game Reserve 1,400 acre farm, M'lilwane, into a reserve in which he in Swaziland has in a very short time collected twelve species of game, including kudu, zebra, waterbuck, blesbok, impala, oribi,

serval, and genet, and game-fenced the whole estate (at great cost). He hopes in time to make it a microcosm of Swaziland wildlife. He has government permission to capture what game he wants, which he does by an immobilization technique, and he has made the shocking discovery that 40 per cent of the game he catches is already wounded, either by gunshot or snares. His chief difficulties are financial, and in order to interest the public and get some necessary money he has built a rest camp for sixteen people and welcomes a small number of visitors. His other great problem

Orvx

is space, but with the aid of Mrs. Hilda Stevenson-Hamilton, widow of Colonel Stevenson-Hamilton, he hopes to raise the money to buy an adjoining property of 2,000 acres to the north and another smaller one to the west.

A Private Member's bill to control the importation of rare animals into Great Britain, promoted by the FPS and sponsored by Miss Harvie Anderson, M.P., was read for the first time in the House of Commons

Controlling Imports

on 11th December last, and will come up for second reading on 10th April. The Bill was prepared by the **Rare Animal** Society, in consultation with the International Council for Bird Preservation, the Universities Federation for

Animal Welfare, the London Zoo, the RSPCA, the Nature Conservancy, and with the advice of H.M. Customs and Excise, the Board of Trade, and the Home Office. It arose out of a resolution passed at the 1960 IUCN conference at Warsaw, which urged "all governments who do not yet restrict the importation of rare animals, to do so now and thereby support the efforts of other countries to preserve animals in danger of extermination ".

A symposium on how zoos can help in the conservation of wild life will be held at the London Zoo between 23rd and 25th June. Subjects to be discussed include the breeding of rare species in captivity, conservation

Zoos and Wild Life

education in zoos, and the import, export and transport of zoo animals. Delegates will be limited to about forty. but a larger number will be able to attend as observers. Conservation The meetings will be in the main lecture room at the

Zoo. The sponsoring bodies are IUCN, ICBP, and the International Union of Directors of Zoological Gardens, supported by the FPS, which took a leading part in the discussions which led up to the conference, the World Wildlife Fund, and the American Association of Zoological Parks and Aquaria.

It was only last year that the breeding ground of the Atlantic ridley turtle Lepidochelys kempi, one of the five species of sea turtles, was discovered, although Dr. Archie Carr, of Florida, herpetologist and specialist on

turtles, had been searching for it for eighteen years. The **Turtles'** site is on an almost uninhabited part of the Mexican Gulf Breeding Place coast in the state of Tamaulipas, and it was found when Dr. Henry Hildebrand, of Corpus Christi University, Found

discovered a short film of an arribada—the local name for the turtle nesting aggregations-taken by a Mexican some years ago but never seen by a zoologist. What happens is that each year, at an unpredictable time between April and June, the ridleys come ashore during daylight hours and nest in numbers estimated at 40,000 during a single six-hour period in some one-mile section of the shore. This represents virtually the entire breeding effort of the species, which is known through an extensive range from the Gulf of Mexico to the coasts of Europe; it is perhaps the most concentrated breeding aggregation of any vertebrate animal in the world. Consequently the ridleys are extremely vulnerable. The FPS has written to the Mexican Government urging that this unique breeding colony should be protected. The commercial value of the ridley lies in its eggs and especially its calipee, which is the cartilage of the shell, and the one irreplaceable ingredient of the gourmet's clear "green turtle" soup. Because the calipee can easily be cut out of the turtle with a sharp knife, hunters do not need to carry off the whole heavy body, which means that more turtles can be killed at a time. The price for the dried calipee is high, and buyers no longer distinguish between the various kinds of turtles.

Last November the International Whaling Commission announced that it had proved impossible during the 1963-64 Antarctic whaling season to carry out the agreement that observers should inspect the operations of

Whaling Agreement Hitch

the whaling fleets to ensure that the quotas and the ban on the catching of blue and humpback whales were enforced (ORYX, VII, p. 61). The Russians had informed the Commission that they were unable to make arrangements to get observers on board their whaling fleet before

it sailed from Odessa in mid-October. The position of the blue whales is serious; latest estimates suggest that fewer than 2,000 remain in the world, and perhaps only 650. Last September, at its meeting at Nairobi, IUCN passed a resolution strongly urging the complete protection of the blue whale (which may still be taken between $0-80^{\circ}$ E. and $40-55^{\circ}$ S.) for a period of not less than ten years, with immediate effect, in order to avert the extinction of the species and enable stocks to recover.

The College of African Wildlife Management, the first training school for African game wardens, started last year at Mweka in Tanganyika, near Mount Kilimanjaro, is now well established, under the directorship of

Dr. Hugh Lamprey, formerly chief game biologist in Tanganvika. The twenty-four students, called cadet Training African Game wardens, come mainly from Uganda, Kenya, and Tanganyika, with one each from Nyasaland and the Wardens Cameroon Republic. The aim is to train Africans for responsible posts in game and park departments which to-day are almost entirely filled by Europeans. The need for such training is urgent; Tanganyika for one has set a goal of complete Africanization of its game service by 1966. With buildings and land made available by the Tanganyika Government, and grants from the U.S.A., especially the African Wildlife Leadership Fund (which included a grant from the World Wildlife Fund), the College was officially opened on 23rd July, 1963, by the Tanganyika Minister for Lands, Forests, and Wildlife, Alhaj T. S. Tewa. The College has also received valuable equipment from the West German Government. The political disturbances in January had no effect apart from making it necessary to guard the College armoury for three nights.

The students vary considerably in age, experience, and education. Many had left school at the age of about twenty with a Cambridge School Certificate. Four were old soldiers. Inevitably there were difficulties, and two cadets had to leave after a few months because they were unable to understand enough English. But by December, Dr. Lamprev could write, "I am pleased with the performance of the top seven cadets. It is interesting to note that the best progress had not always been made by those with the best educational background. Some hard work has been put in by some of those with relatively little education and there seems to be a tendency for the education gap to be progressively reduced." The two-year course combines classes in ecology, biology, and so on, with practical training in the field in the basic principles and methods of game management, including anti-poacher patrols, and much time is spent on safari. In October three cadets had a remarkable experience on a line-abreast sweep : they met a group of forty-five lions. "The behaviour of both the cadets and the lions was exemplary," comments Dr. Lamprey.

Thirty-three whooping cranes turned up at their traditional wintering grounds in Aransas National Wildlife Refuge in Texas last November, after the 2,500 mile flight from their nesting grounds in the Northwest

Increase in the Whooping Crane Flock Territories. This was an increase of five birds in the flock, the only wild flock in the world, for only twentyeight birds left in the spring. More important than the actual numbers is the fact that seven of the thirty-three

are young birds of the year. In the previous year no young birds arrived in the north, and this considerable increase gives hope that the whoopers may be able to build up their numbers. Another interesting fact is that when wildlife officials made their customary aerial survey of the cranes' breeding grounds they found only three young birds. Previously their counts have always tallied with the number of birds arriving in Aransas, and because of the size and whiteness of the parent birds, and the open country in which they nest, it is thought very unlikely that they could have been missed on any of the hundreds of square miles surveyed. Is there perhaps another breeding ground to be discovered ?

Bernier and Dorre Islands, in Shark Bay off the coast of Western Australia, are noted for their flourishing populations of rare marsupials. The two most successful of these species are the banded hare-wallaby *Lagostrophus*

An Island Marsupial Problem fasciatus and Lesueur's rat-kangaroo Bettongia lesueuri; but on the mainland the former is possibly extinct and the latter nearly so. What puzzled zoologists, however, was that a third species, the western hare-wallaby Lagorchestes hirsutus which still persists on the mainland,

is less common than either of the other two on the islands. An expedition to the islands by scientists of the Fisheries Department, whose report was recently published as the Department's Fauna Bulletin No. 2, suggests that this may be because the banded hare-wallaby and the rat-kangaroo are gregarious animals of scrub, which on the mainland has been cleared for agriculture, whereas the western hare-wallaby is a solitary animal of open country and can therefore continue to exist in small numbers in the vast areas still available to it in the centre of Australia. The report urges that goats should be removed from Bernier as soon as possible in order to avoid damage to the habitat; that no more alien species should be liberated on either island; and that fire outbreaks should be prevented wherever possible.

The Charles Darwin Research Station, on the Galapagos Islands, was officially dedicated on 21st January, in the presence of four ambassadors, members of the Ecuadorean Government and armed services, officials,

A Ship for Research on the Galapagos International Scientific Project. The station was founded in 1960 and its present Director is the Oxford zoologist, David Snow. The scientific project

began in January, when under the ægis of the University of California, sixty scientists attended at Berkeley, California, for five days of lectures, seminars, films, and exhibits. They then embarked in the Golden Bear for the Galapagos, where they spent five weeks engaged in independent research projects on the islands, returning at the beginning of March to Guavaguil, in Ecuador, for a two-day programme on the theme of "Scientific Conservation and Economic Development of the Galapagos Islands ". This last part of the project was designed particularly to focus public attention in Latin America on the islands and their great scientific importance, and Ecuadorean delegates urged the need for a national park in Galapagos. The results of the project will no doubt be seen in numerous scientific publications which should greatly enrich the literature on the islands. The new research ship, the brigantine *Beagle*, did not arrive in the Galapagos in time for the scientific project as had been hoped, owing to unforeseen delays. The ship was bought and fitted out for the Charles Darwin Research Station with the aid of substantial grants from the World Wildlife Fund and the Gulbenkian Foundation, and will be used to enable the scientists at the station to get about among the islands. She sailed from Plymouth with her volunteer crew of five, captained by Roger Jameson, a few days before Christmas, and was not expected to arrive before April. A picture of the Beagle appears on Plate 13, opposite page 188.

Oliver Milton's first investigations last year into the status of the orangutan and rhinoceros in Sumatra were made in the north of the island, and extracts from his report appear on p. 177. In May and June he made

Tree Felling Drives Out the Rhinos another survey, this time in east Sumatra, opposite Singapore (the smaller shaded area in the map on p. 178). This is where Sumatran rhinos were captured four years before by Ryhiner, Skafte, and others for the zoos at Basel, Bogor, and Copenhagen. He was able to make

two journeys into the interior, one up the Siak river and the other 100 miles to the south, before his survey unfortunately had to be cut short as a result of an accident in which he all but cut off the tips of two fingers. Although accompanied by guides who had been with Skafte and who took him to the places where rhino could be expected, he found no trace of the animals at all, and no evidence of poaching. What they did find was vast areas where the primary forest had been, and was still being, cut down, and many square miles of felled timber. His conclusion was that the rhinos had been driven by the loss of their habitat into remote areas well guarded by the extensive swamp forests in the low lying parts. On these two journeys he found no signs of orang-utans either. Tapir were common, and so were gibbon, sambhur, mouse deer, bear, pig, elephant, and tiger. At Rumbai, the headquarters of the Caltex Pacific Oil Company, whose officers were a great help to Mr. Milton, the tigers were becoming quite a pest. "Hardly a day passed without someone seeing one in the vicinity," he writes. "They entered people's gardens, and just before I left one actually entered a house by the front door, walked through the kitchen where an American lady was peeling potatoes, and then out of the back door. It was apparently searching for a dog which it had been eyeing for several days." The reaction of the American lady can be imagined.

In a report from eastern Madagascar at the end of last year, Dr. J. J. Petter says that the only hope of saving the few remaining aye aye, *Daubentonia* madagascariensis, one of the island's rare species of lemur, is to capture and

Desperate Position of the Aye Aye

transfer them to a small island where they can be protected. Their habitat in the coastal forest, to which they appear to be confined, has been almost completely destroyed, and in five years he thinks that none will remain. The small group of aye aye, which it had been

hoped to protect in a small reserve, had been reduced to two animals, and they are doomed. Driven out of the forest, they raid the villagers' crops and are killed. The Survival Service Commission, at its meeting in January, gave special attention to the serious situation in Madagascar, as reported on p. 159.

The latest annual report of the Kenya Game Department (1962) pinpoints some of the problems that have emerged as a result of the conversion of over a million acres of European farm land, on much of which game had

Settlements near the Aberdares

been conserved, into smallholdings for settling landless Africans. In some cases attempts have been made to remove the more valuable wild animals, such as Kenya's only herds of Thomas's kob of some 500 animals. Much more difficult is the problem of the small settlements on

the edge of the forest reserves. Where formerly the farmers could leave a pastoral strip as a sort of buffer between the game and the sown crops, now, on the flanks of the Aberdares and the slopes of Mount Kenya, the small settlements come right to the edge of the forest, and form a positive attraction to the wild animals, "literally baiting them out of their sanctuary" as the report describes it. There are no funds for the construction of game-proof fences or ditches along the forest edge, or to supply extra wardens. Conversely, with the settlements so close to the forest and the two national parks they contain, there has been a marked increase in poaching. The value of helicopters to the game department's capture unit was proved when they had the help of the 8th Independent Recce Flight of

the Army Air Corps. Not only was it possible from a helicopter to spot rhinoceros in the thickets of the lava flows or in the swamps in which they take refuge when heavily persecuted, but by skilful flying they could be driven out into open country and there darted from the air, when it is merely a matter of watching them till they go down and then calling up by wireless the lorry which is to take them away. This method was used to capture Gertie, the famous rhino of Amboseli, who had had an eve gouged out during an argument with another rhinoceros. The capture team was called in and rendered her unconscious by means of a dart; the veterinary officer removed the eyeball altogether, and within twenty-four hours Gertie had completely recovered.

The first legally enforceable close seasons for four kinds of wild deer in England and Wales, under the Deer Act, 1963, of which the FPS was one of the sponsors, came into force on 1st March. This close season protects

for British Deer

hinds of red and sika deer and does of fallow and roe **Close Seasons** deer until 31st October, the period in which they are either in an advanced stage of pregnancy or are suckling their calves or fawns. Red and sika stags and fallow

bucks are separately protected by a close season from 1st May to 31st July, during the period when, if they are disturbed, they can sustain painful damage to the highly sensitive "velvet" covering their growing horns. The Forestry Commission has in fact been operating a close season for all roe deer on its own lands in England and Wales, and for roe does in Scotland, where there is no legal close season for roe (the Deer Act does not apply in Scotland). Since 1st March this year the Commission has been applying to both bucks and does in Scotland the close seasons they have been using in England and Wales: 1st March to 31st October for does, and 1st October to 30th April for bucks.

Fire control is still the greatest problem to be solved in the Kafue National Park, says the Northern Rhodesia Game and Fisheries annual report for 1962. In an effort to cope with it a new policy was tried out. The more

Burning in the Kafue Park

valuable habitats were protected as usual by graded firebreaks combined with early burning, and all survived the year without serious damage. In addition early burning was carried out where possible on east-west watersheds, to divide the park into large blocks which could contain

a fire starting in any one of them. The new plan was only partially successful, however, and the bulk of the park again suffered its usual fate of being almost completely burnt out from north to south. But from the experience gained a modified form of the same policy is being tried which it is hoped will be more successful. The report comments that it is extremely difficult to achieve a continuous and effective fire-break by early burning alone over vast tracts of country with varying conditions. Several times late fires from beyond the park burnt over the previously burnt firebreaks, thus destroying a protected block. In addition to the poachers' fires, a visitor caused one fire, a careless game guard another which continued for a month; lightning started two fires, and "a wandering lunatic " started a blaze on the southern boundary which eventually burnt its way north almost to Ngoma despite efforts to control it. A visitor's cigarette dropped from the Ngoma tree look-out started a fire which threatened the camp and was only stopped on the lawns, and a school party started another which burnt out much of the surroundings of the camp and the fringe of the relic Baikiaea forest. "The problem," concludes the report, "appears insoluble without adequate funds or fire-fighting equipment."

The Wilpattu National Park in Ceylon has been conducting experiments with fertilizers with a view to improving the game pastures. Twelve plots, each 20 feet square, were treated with nitrogen (sulphate of ammonia),

Fertilizing the Game Pastures phosphorus (phosphate), and potassium (muriate of potash 60 per cent), at 3, 2, and $\frac{1}{2}$ lb. respectively. There was an almost immediate response to the nitrogen, the vegetation becoming much darker, and six months later a response to the phosphorus began to show. All the

phosphorus-treated plots became greener, and showed a much quicker recovery from drought, both grasses and herbs being at least twice the size of those in the other plots. General development and flowering were much advanced, and the plant density in the plots was more than double that of the controls, despite the fact that they were much more heavily grazed, deer, hares, and buffalo showing strong preference for the treated plots. The experiments have been continued with larger plots, and the preliminary conclusions are that "the more valuable fodder plants are favoured by manuring on these extremely poor ' pittanis ', which normally only carry a starvation vegetation ". It is hoped that selected grazing grounds in the park could eventually be greatly improved in this way for the benefit of all the herbivores, including elephant.

A striking example of the effects of pesticides on bird life is reported in the New Hampshire Audubon Quarterly, from the U.S.A. Last spring several members of the Dartmouth College staff studied the bird popula-

DDT Sprays Decimate the Birds

tions of areas sprayed with DDT in Hanover, N.H., compared with unsprayed areas in Norwich. Residents co-operated in reporting dead or dying birds. The elms of Hanover, including those on the Dartmouth campus, had been sprayed with more than 1,200 lb. of DDT on

the nights of 15th to 18th April in an attempt to control the spread of Dutch elm disease. During the eight days preceding spraying five dead birds were recovered from Hanover and one from Norwich. After 16th April, 140 dead birds were recovered from Hanover and eight from Norwich. Many of the pre-spray and Norwich birds showed signs of accidental death, while most Hanover birds after spraying were fresh specimens showing no signs of death by violence. The number of dead or dying birds diminished during early June. Of greatest significance was the observation of thirty-six birds, all from Hanover, prior to death. All these birds showed loss of co-ordination, tremors, and convulsions, and all but one died within two hours; a song sparrow survived for twelve hours. The symptoms were significant because they were identical with those

described in other studies where birds were known to have died of acute DDT poisoning, and analysis had shown that they contained more than a lethal dose of DDT. There were thirty-three different species among the 140 dead Hanover birds, including ground, bark, and tree-top feeders : they included fifty-five robins, fifteen chipping sparrows, and ten myrtle warblers. Many species affected were not present in Hanover on the spray dates. Population studies comparing designated areas in Hanover and Norwich produced some pertinent observations. By early June, Hanover areas showed that 70 to 79 per cent of the robins present four to six weeks before had disappeared; in Norwich only a small reduction was noted. During the nesting season some decline is to be expected, since birds sitting on nests would not be noted. At the same time, the ratio of total individuals of all species, Hanover: Norwich, declined from 1.5:1 in mid-April to 0.5:1 by 1st June. In other words, while in April there were 50 per cent more birds in Hanover areas than in Norwich, on 1st June there were 50 per cent fewer.

Thirteen species of game new to the parks of Uganda are certainly to be found, and seven others probably, in the new national park, the Kidepo, which was declared in March, 1962, but is not yet open to visitors. The

A New in Uganda

thirteen include cheetah, klipspringer, zebra, and bateared fox, and among the seven are aardwolf, caracal, and National Park greater kudu. The new park, which covers 486 square miles, is in north-west Karamoja on the Sudan border.

John Savidge, scientific officer to the Uganda National Parks, who has recently conducted an ecological survey there, writes about it in the annual report for 1962-63. The Kidepo basin lies at an altitude of between 3,000 and 4,000 feet ; the hills which encircle it reach 6,000 feet and Morongole Mountain 9,000 feet. "With this abrupt change in altitude," he writes, " go marked changes in rainfall, soils, and vegetation. This variety is reflected by the contrasting plains and mountain scenery and in the spectacular spectrum of wild life." The most widespread and numerous species is Jackson's hartebeest. There are very few black rhino, which, he says, are threatened with extermination by poaching. The main problem of the area is its remoteness—it is 500 miles from Kampala but there is one airstrip and a number of good airfield sites in the park.

The latest caribou problem, that of radioactive contamination of the caribou in Canada, Alaska, Scandinavia, and the U.S.S.R., was raised last year in the U.S. Senate by Alaska's Senator E. L. Bartlett, and the U.S.

Research on Radioactive Caribou

Public Health Service has made an initial grant of \$100,000 to the Arctic Health Research Center at Anchorage, Alaska, to start a permanent research programme. The problem which was described in ORYX, April, 1963, was raised by Dr. William O. Pruitt, Jr.,

who worked with the Canadian Wildlife Service in the intensive study of barren-ground caribou started a few years ago, in an article in The Beaver. Both caribou and reindeer are " hot spots " in terms of contamination with radioactive material, primarily strontium-90 and cesium-137, the source

of which is "undoubtedly atmospheric nuclear explosions". One of the main caribou foods are lichens, which get their nutrients from the air, from a kind of natural fall-out. Before 1945 it was a harmless one. Unfortunately, lichens are so efficient at retaining natural fall-out that they also retain virtually 100 per cent of the radioactive particles that have been falling on them since 1945, and because of their slow growth, says Dr. Pruitt, they will probably remain "hot" for many years. The caribou is the base of the food chain in the north-lichen/caribou/carnivore/man-and the small amount of data available, mainly from Alaska and Sweden, suggests that people who eat much caribou meat do indeed have higher whole-body radiation counts than those who do not

The Chief Game Warden of Uganda, Mr. J. D. Tennant, last year sent his warmest thanks to the World Wildlife Fund for its help, a f.20,000 grant, in saving the last white rhinoceroses there-fewer than 100 animals.

Guards Stop the Poachers

Thanks to the grant it was possible to appoint a game warden, investigation officer, and rhino guards, and their presence in the Ajai's Sanctuary area, where there are between fifty and sixty rhino, was completely effective in stopping the poaching there. After the patrols started

there was only one serious poaching incident, when four men were arrested and later sentenced for tracking a rhino, and no rhino were killed. The Investigation Officer covered a great deal of ground on the illegal trophy pipeline between Uganda and Mombasa, and brought two cases to the courts in Kenya, in one of which, involving rhino horn, the offenders were imprisoned for four and five years respectively. In the Lomunga Game Reserve, however, the position is less satisfactory. Two rhinos were killed there last summer, one by a gang of forty to fifty poachers, and only twenty remain, scattered over 600 square miles, which it is impossible to patrol effectively with the men available. It is planned to move as many as possible to the safety of the Murchison Falls National Park. One of the most encouraging aspects of the situation is that the Uganda Government now considers the survival of the white rhino in Uganda a matter of national and worldwide importance, and funds have been voted to carry on the work started by the World Wildlife Fund grant.

In October, 1963, Mr. W. D. Haacke, of the Transvaal Museum, Pretoria, collected, with great difficulty and after many unsuccessful attempts, the first two complete specimens of the golden mole Eremitalpa granti nami-

Caught

bensis in the Namib Desert, which stretches north from **Two Namib** the Orange River into Angola. This golden mole was Golden Moles first described by Bauer and Niethammer in 1959 from fractured skulls found in owl pellets. It seems, says Mr. Haacke, " to be confined to the shifting and semi-

stable sand dunes of the central and southern Namib Desert, of which the major part is restricted area as it falls within the Diamond areas Nos. 1 and 2. Because of their inhospitable environment and their occurrence in a prohibited area, the only real dangers to these secretive animals are their normal predators, mainly owls and to a lesser extent snakes and possibly jackals. They might fall prey to these while moving about on the surface."