

Trading away the coral reefs

by Sue Wells and Elizabeth Wood

Hundreds of tonnes of stony corals are finding their way on to the international market, destined for the marine curio and souvenir trade and a dusty after-life on a mantelpiece. World consumption of corals for this purpose is now estimated at about 2000 tonnes, nearly three-quarters of which is accounted for by the USA. In 1988 imports into the USA were a record 1456 tonnes. The Philippines is the main supplier, despite legislation since 1977 banning collection and exports (apart from a seven-month period in 1986 when the ban was temporarily lifted). In 1987 and 1988, the USA imported over 600 tonnes from this country; not only were these illegal from the Philippine point of view, but they were in contravention of the Lacey Act, which, for listed species (and since 1981 these have included corals), prohibits import into the USA of wildlife illegally collected or exported from its country of origin.

In recent years, Belgium, the UK, France and Japan have also imported significant quantities of stony coral from the Philippines. A dealer in the Philippines had no qualms about this, as shown by his letter in 1988 touting for business with UK: 'At this time the export of sea corals is banned by the Philippine Government but still some corals are shipped out. The shipper here will bribe the Fisheries and Customs officials'.

The coral trade is of course not the only pressure on coral reefs. Siltation, sewage pollution, coastal development, damaging fishing methods and recreational activities are all taking a toll. But coral exploitation seems particularly unnecessary. Ornamental corals are sold throughout the world as cheap souvenirs, bought on a whim and discarded as soon as they become dirty. Many of the holiday-makers who buy them are probably unaware that their souvenir is the skeleton of an animal — even less that it actually provides the structural framework of the coral reef that they have just snorkelled over. The individual coral colony may appear relatively unimportant, but the accumulation of corals produces an ecosystem recognized as comparable with tropical rain forests in terms of its diversity and productivity, and of incalculable value to fisheries and tourism.

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This is well appreciated in numerous countries; in some 30 countries, the export of stony corals is now prohibited or controlled. The greatest hypocrisy is perhaps in the USA where legislation protecting the Florida reefs is second to none, and yet the Florida Keys are lined with shops piled high with coral imports from the Third World.

Efforts are now under way to improve enforcement of the Philippine ban. Parties to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) have been requested to inform the CITES Secretariat and the Philippine Management Authority of any permits accompanying coral consignments from the Philippines, as these permits will be illegal, and to reject any applications for import of corals from the Philippines. TRAFFIC (USA) has been pushing for improved enforcement of the Lacey Act in the USA. The US Fish and Wildlife Service has notified all relevant authorities that coral imports from the Philippines are prohibited. In the UK the Marine Conservation Society is lobbying for improved enforcement of CITES regulations and is discouraging the public from buying marine curios through its campaign 'Let Coral Reefs Live'.

Renewed attempts will be made at the October meeting of the Parties to CITES to list all stony corals in Appendix II. Seventeen genera were listed in 1985 but this has caused considerable problems as corals are notoriously difficult to identify. It is essential that the entire group is listed. This will not of course stop the trade, but it will provide a means of monitoring it. Recent country annual reports to CITES have provided valuable information on trade in those genera already listed. One trend that may become an increasing problem in the future is the appearance of new suppliers as controls are exerted on the traditional exporting countries. There has recently been a notable increase in exports from Indonesia; US imports from this country have risen from a negligible amount in the early 1980s to nearly 480 tonnes in 1988. As yet we have no information on which reefs are being exploited for this purpose in Indonesia. Other major suppliers now include Malaysia, Fiji and New Caledonia.

Although corals are slow growing, it should

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eventually be possible to devise strategies for exploiting corals in a sustainable way. However, the study of corals is a recent branch of science and there is still comparatively little information available on coral life cycles and biology. For example, the synchronized spawning on one night of the year of at least half the corals on the Great Barrier Reef in Australia, which is one of the most remarkable phenomena in the biology of corals, was only discovered as recently as 1982. Until we have the data for determining sustainable yields, it is essential to monitor and control coral exploitation through any mechanism available.

Further information on the coral and shell trade is available in a report produced by the Marine Conservation Society with the financial support of WWF-UK: *The Marine Curio Trade: Conservation Issues* by Elizabeth M. Wood and Susan M. Wells. Available from MCS, 9 Gloucester Road, Ross-on-Wye, Herefordshire HR9 5BU.

Logging banned in Thailand by Stephen Elliott

The Government of Thailand has taken a momentous step forward to conserve the country's dwindling forests. On 10 January 1989 the Cabinet passed two decrees, which empowered the Agriculture Ministry to end commercial logging throughout Thailand 'to protect the public interest and prevent natural disasters'.

The decrees amended the 1941 Forestry Act and the 1961 National Parks Act, allowing timber concessions to be declared national parks or wildlife sanctuaries, which automatically nullified logging contracts in those areas. Four days after the decrees became law, Agriculture Minister Lt Col Sanan Kachomprasart cancelled 276 logging concessions covering 155,404 sq km, about 30 per cent of Thailand's land area. Timber companies were ordered to stop all logging immediately and remove their equipment from the forests.

No time limit has been set for the ban. According to the Prime Minister Gen. Chatichai Choonhavan, the ban is 'forever, as long as this Government

remains'. A future Government would have to change the law before logging could resume.

Although the decrees became effective in January, they had to be debated retrospectively in Parliament. The first, enabling the Agriculture Ministry to revoke logging concessions, was discussed on 4 May in a live television debate lasting 10 hours. It was passed by 218 votes to 91. The second decree, enabling logging concessions to be declared national parks or wildlife sanctuaries, was passed by parliament on 10 May by 152 votes to 58.

The ban came just two months after disastrous floods swept through southern Thailand, killing 430 people and causing damage worth £140 million. Logging was widely blamed as a primary cause for the heavy loss of life. The Agriculture Minister said that the disaster was due to deforestation 'on a massive scale'. Piles of logs, awaiting transportation to saw-mills, were carried downhill by the deluge and totally destroyed three villages.

A public outcry following the tragedy prompted the Government to reconsider its logging policy.

Since 1960 logging has been carried out by timber companies under concession agreements granted by the Forestry Department. A major problem was that concessions were often used as a front for illegal logging. Instead of selective logging, concessionaires often clear-felled forests and failed to replant with seedlings. Deputy Interior Minister Trairong Suwannakhiri said that there were 'illegal logging activities in virtually all concessions'.

At first the Cabinet were cautious about unilaterally revoking logging concessions. They feared that timber companies would sue the Forestry Department for breach of contract. Last year a logging firm challenged the Forestry Department in the Judicial Court when its concession in Khlong Phraya Wildlife Sanctuary was cancelled. The firm claimed that the concession had been granted before the area had been declared a wildlife sanctuary. The company won its case, effectively opening the way for logging in 68 old concessions in national parks or wildlife sanctuaries. Soon after the verdict, timber companies began work in 24 such 'protected' areas.

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The new amendments to the law should enable the Forestry Department to avoid such legal problems in the future.

The Government has yet to count the cost of the logging ban. It will lose an estimated £12 million per year in royalties and has promised to pay compensation to timber companies affected by the ban. The exact amount of compensation has yet to be decided, but it will cover severance pay for workers laid off and loss of capital investment. Loss of expected profits, however, will not be compensated. Timber company managers estimate that about 200,000 workers will lose their jobs.

After the logging ban was announced, timber prices in Bangkok trebled. The Government hopes to bring down the price of wood and avoid a shortage by importing timber from neighbouring countries, effectively 'exporting' the deforestation problem.

Thailand currently imports 750,000 cubic metres of wood per year. This is expected to rise to 2.7 million cubic metres valued at £220 million over the next year, with an estimated half coming from Burma. To encourage timber imports, the Government has reduced the import tax on logs from 7 per cent to 1 per cent.

However, as neighbouring countries take steps to protect their own forests, timber imports may be difficult to procure. Laos, for example, has banned the export of logs to encourage its own wood-processing industry. Most timber concessions owned by Thai companies in Burma are in territory controlled by Karen rebels. Gen. Bo Mya of the Karen National Union (KNU) has stated that Karen rebels will prevent the movement of logs by Thai merchants unless the KNU also receives the same royalties as offered to the Burmese Government.

Clearly, much more wood will have to come from plantations, but Thailand has a poor record of reforestation. Since 1961 only 4200 sq km of plantations have been established—an area equal to only one year's deforestation. Recent attempts to grow large scale monocultures of eucalyptus have met with strong public opposition.

Proper enforcement of the logging ban will also

be expensive. The Forestry Department planned to form 222 new forest protection units to patrol the closed concession areas and equip them with 907 radios, 135 vehicles, 6 aeroplanes, 10 helicopters and 920 guns. The Prime Minister said 'it is worth paying any sum to protect the remaining forests'. But when the Agriculture Minister asked the Cabinet for £32 million to fund the forestry protection programme, only £5 million were allocated. Only 110 new forestry protection units will be formed this year and the acquisition of aircraft will have to wait until the 1990 budget. In the mean time the military will carry out the bulk of forestry protection duties.

Forest cover has dwindled from 53 per cent of Thailand's area in 1961 to just 17 per cent today. The logging ban comes none too soon if the Government is to achieve its stated policy to increase this figure to 40 per cent.

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National parks in the Algerian Sahara by K. de Smet

In 1972 the Algerian Ministry of Culture protected the Tamrit Plateau near Djanet in the Tassili Mountains, as the Tassili National Park, to preserve the famous rock paintings and the relict Mediterranean flora, especially the endemic *Cupressus dupreziana*. At the same time all hunting was forbidden and now Barbary sheep *Ammotragus lervia* and rock hyrax *Procaud capensis* are very common again. In 1986 this park was extended to 80,000 sq km with a 34,000 sq km buffer zone (including the whole Erg Admer). In 1987 a second national park was declared covering the central Ahaggar and all surrounding tassilis (mountains) and desert with a total area of 450,000 sq km.

This means that all the mountains of the Central Sahara (Tassili n' Ajjer, Ahaggar and Air) are now protected areas. This is very important because it will probably save the Saharan cheetah *Acinonyx jubatus*, the addax *Addax nasomaculatus*, dama gazelle *Gazella dama* and the endemic fauna of the permanent waterholes (gueltas) in these mountains.

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A significant amount of rain in the last two years should result in a high survival rate for the offspring of gazelles (dorcas, dama and dune), 'wild' donkeys and Barbary sheep, and consequently there should be no food shortage for the big predators (cheetah, caracal and perhaps wild dog).

Tourism is given more attention and has become the main source of income for the whole region. Recognizing this, both Algerian parks see maintaining the abundance of wildlife as essential; they are trying to stop illegal killings by an information campaign and by setting up control posts in the parks. After some complaints about off-road pursuit of gazelles, the tourist agencies will be more rigorously controlled, too, and wood-cutting in the most visited places is prohibited now.

In the Ahaggar National Park a fauna and flora research unit has been set up and a mammal and bird survey is under way. Foreign observers are kindly requested to communicate their observations to the park, because even for big mammals there are still a lot of problems, even at species level: the foxes (*Vulpes ruppelli*, *Vulpes pallida*, a small fennec in the mountains) and cats (*Felis lybica*, *Felis chaus*, *Felis margarita*) are poorly known and in the Tassili n'Ajjer some Touareg claim that there is a second big cat, fiercer than cheetah.

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Kaziranga's calamity — a new threat to the Indian rhino

by Esmond Bradley Martin and Lucy Vigne

Wildlife personnel in Assam must be congratulated on their efforts to curb rhino poaching. In 1982, political disturbances had resulted in a partial breakdown of law and order, and well-organized gangs of poachers carrying automatic rifles invaded the parks and reserves. Out of Assam's rhino population of about 1300, an average of 57 were killed annually from 1982 to 1986. In 1987, however, only 41 rhinos were poached in Assam (P.C. Das, pers. comm.). In Kaziranga National Park, where about 1100

Indian rhinos live (over 80 per cent of the world's total population), only 24 were poached in 1987 as opposed to 41 the previous year.

This encouraging decline in poaching is due partly to efforts of dedicated managerial staff over the past few years. It is also due to a scheme set up by the Central Government of India in April 1986 to assist Assam by allocating 50 million rupees for rhino conservation over a period of several years. To date (31 March 1989) the Central Government has given Assam 25,400,000 rupees for the rhinos, which is being used for arms, ammunition, roads, bridges, vehicles, wildlife equipment and construction of anti-poaching camps, as well as for recurrent expenditure.

Due to this concerted effort, the picture for Assam's rhinos became very promising. Then came the 1988 monsoon. Kaziranga National Park's 430 sq km lie in the flood plains of the Brahmaputra River and during the annual monsoon, the river floods 70 to 80 per cent of the park. This event plays a vital role, increasing the soil's fertility and thus allowing a very high biomass potential, as well as weeding out weak animals and so maintaining healthy populations. Normally, during the floods, animals climb on to low hillocks for a day or so until the flood water subsides; rhinos, buffaloes and elephants are not much affected. The flood levels, however, have recently been increasing, and in 1988, the highest floods ever were recorded, according to the Chief Conservator of Forests and Wildlife, Assam (Roy, 1988). The 1988 flooding caused the death of at least 38 rhinos, including 23 calves. During the peak flood level, many rhinos were dislodged from the raised ground; some calves, older and weaker animals drowned while swimming in the deep, swirling water in search of shelter. Some female rhinos with calves would not try to swim for food knowing that their calves would invariably follow and be washed away by the strong current or drown. They were stranded on hillocks for several days waiting for the water to recede, and together, they starved to death.

Temporary platforms were built, which rescued a number of animals. But to avoid future catastrophes, Mr Deb Roy proposes to widen and raise the road that runs through the centre of

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The Indian rhino usually enjoys wallowing in water, but in 1988 38 of them died in the catastrophic floods (Esmond Bradley Martin).

Kaziranga, and to raise the higher portions of ground that were flattened by the flood. He also calls for an all-out effort to acquire some high land to the south. And he wants to strengthen, as much as possible, the rescue and relief operations in order to help distressed animals.

It is the cumulative effects of the over-use and abuse of the renewable natural resources in this complex, high rainfall area, that are gradually surfacing, states Mr Deb Roy. And he believes these will no doubt intensify unless an integrated forest policy plus intensive management of the watershed of the Brahmaputra are acted upon immediately, which may be able to head off the danger of recurring extreme floods.

It is not easy to assess the damage done during the 1988 floods. Apart from huge financial losses from destroyed buildings and bridges, and of course from the value of the animals themselves

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(a breeding pair of Indian rhinos alone is worth over US\$ 125,000), the death of 1050 deer, 69 wild boar, three baby elephants, three buffalo calves, two tigers and the 38 rare rhinos themselves is irreversible. As Mr Deb Roy states, the recent high floods are a serious and new threat to the Indian rhino species.

Source

Roy, S. Deb. 1988. Kaziranga National Park, The Problems of Floods, unpubl. 3 pp.

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Major effort to save the tamaraw

A major conservation initiative in the Philippines to protect and breed the endangered tamaraw *Bubalus mindorensis* has received little recogni-

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tion internationally to date. Despite some setbacks a conservation success story is unfolding and it might hold lessons useful to those attempting to save another wild cattle species, the kouprey *Bos sauveli* in Indonesia.

Numbers of tamaraw had been falling since 1900, when there were an estimated 10,000 on Mindoro Island. Despite establishing reserves, banning hunting and the best efforts of conservationists, the tamaraw reached an all-time low of 120 individuals in 1975. The Presidential Committee for the Conservation of the Tamaraw was established to make an all-out effort to save the species. The Tamaraw Conservation Programme was launched in 1979. Currently the project employs 50 field staff and is focusing on maintenance and development of the captive gene pool (there are 13 animals in captivity so far in a 280-ha enclosure), censusing the wild population, research on mortality patterns in the wild, monitoring and protecting the wild population at Mt Iglit and management improvements at Mt Calavite.

The project is also engaged in an anti-logging campaign and is actively working to protect Mt Iglit and Mt Calavite against illegal logging. There is an ongoing public awareness campaign, which includes tamaraw posters, displays and drawing competitions for school children.

In 1987 the population estimate of wild tamaraw had risen to 369 in six areas, the largest group being 145 in the Iglit–Baco–Blue Mountains. This estimate is conservative and was limited due to the inaccessibility of some areas under insurgency control, alteration of tamaraw movement by military and insurgent operations, and the possible influence of logging on tamaraw movements.

The ultimate goal of the project is motivated by economics as well as conservation. The project intends to sell captive, tame tamaraws to zoos throughout the world to expand the captive breeding programme. Profits will be reinvested

in conservation work for the wild tamaraw population in Mts Iglit–Baco National Park and in opening up the park to more visitors.

Source

IUCN/SSC Asian Wild Cattle Specialist Group Newsletter, Spring 1989, 1–4.

Ilin Island cloud rat extinct?

The cloud rat *Crateromys paulus* was described in 1981 by Musser and Gordon on the basis of a single specimen collected in 1953 from Ilin Island, Mindoro Occidental Province, the Philippines. No subsequent records or specimens are known.

A visit to the small (16 km by 6 km) Ilin Island in November 1988 found no evidence of the continued existence of the species. Residents were questioned and shown a photograph of a similar cloud rat but, with the exception of one elderly man who recalled seeing such an animal some 40 years previously, the species was unknown. The natural forest vegetation of the island has been destroyed by human activities. Little is known of the ecology of *C. paulus* or can be inferred from other members of the genus. From its known distribution it was, unlike *G. schadenbergi* of the montane oak and pine forests of North Luzon, an animal of lowland forests.

Investigation of the possible occurrence of *C. paulus* on Mindoro Island was greatly hampered by the unstable political situation. None of the few residents who were questioned recognized the animal. In conclusion, the Ilin Island cloud rat (*Crateromys paulus*) must now be considered extinct, at least within the extent of its known distribution.

Reference

Musser, G.G. and Gordon, L.K. 1981. A new species of *Crateromys* (Muridae) from the Philippines. *J. Mamm.* **62**, 513–525.

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