

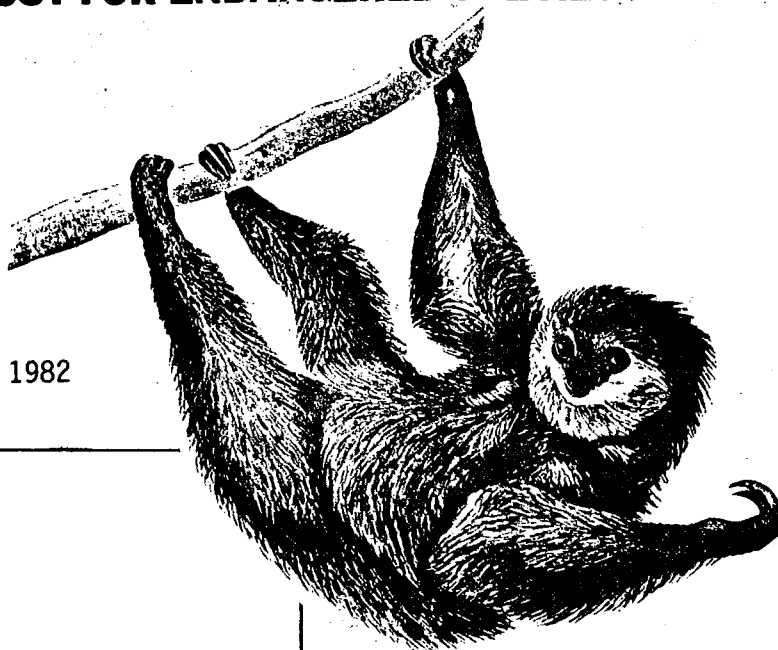


# TRAFFIC BULLETIN

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## New Secretary-General for CITES

Following the departure from the CITES Secretariat last year of Peter Sand to become Assistant Director-General of IUCN, Jaques Berney (Executive Secretary) has been Acting Secretary-General. After a lengthy selection and recruitment process, the name of the new Secretary-General of CITES was announced on 22 March 1982 - Eugene Lapointe from Canada, who took up his duties from 15 April 1982. Mr Lapointe was formerly legal officer with the Canadian Department of Industry, Trade and Commerce in Ottawa where, since 1974, he was responsible for CITES enforcement matters.

## ... and staff changes at WTMU

Chris Huxley joined WTMU on 10 May as head of the Unit, in effect filling the position which had been vacant for more than a year, since the departure of John Burton. Chris, whom a number of readers will know personally, has wide experience of CITES matters and wildlife trade in general. Previous to his appointment to WTMU he spent five months with the CITES Secretariat in Switzerland and three months in eight African countries on a WWF/IUCN CITES contract. Before that he spent some years in Hong Kong where he was responsible for CITES enforcement.

Readers of this Bulletin will be disappointed to hear of the departure of Clare McCormack. The present standard and style of the Bulletin owe much to Clare's initiative and enthusiasm. She is much missed by the staff of WTMU. However, we welcome Kim Lochen to WTMU; Kim takes over responsibility for the production of the Bulletin.

## \* Animals Seized At Gatwick

On 15 May 1982, two pygmy marmosets Cebuella pygmaea, four tamarins, one baby red-billed (or red-backed) toucan Ramphastidae spp., and three acuchi Myoprocta pratti, were discovered in a hidden compartment of a crate containing wild birds which were being shipped under licence via Gatwick from Ecuador to Belgium. The tamarins, first thought to be moustached tamarins Saguinus mystax are now believed to be juvenile male black-mantled tamarins Saguinus nigricollis, although this is not yet certain. The primates, which had been confined to a space just  $3\frac{1}{2} \times 2\frac{1}{2} \times 27$  inches, are now recovering in Edinburgh Zoo though one tamarin died soon after its arrival at the zoo. The importer, a Mr Frank Vercammen from Belgium, states that he had received permission from the Belgian government, but UK Customs officials are planning to initiate an international prosecution.

Source: The Mail on Sunday (16.5.82)  
RSPCA

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## Malawi Accedes to CITES

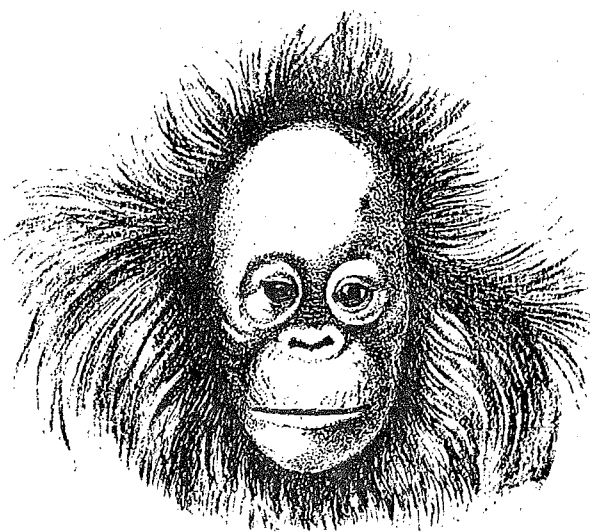
On 5 February 1982, Malawi acceded to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, thus becoming the 77th member country. Malawi's accession becomes effective as of 6 May 1982.

## Argentina Protects its Cats

Argentina has banned exports of all skins of all indigenous Argentinian felids, excluding the puma, Felis concolor. This ban came into effect from 12 Jan 1982 according to a notification from the CITES Secretariat dated 22 March 1982. The ban also covers hunting and trading of the maned wolf Chrysocyon brachyurus.

## \* Taiwan Seizes Smuggled Orang-utans

Five orang-utans (Pongo pygmaeus), one gibbon (Hylobates sp.) and a bear (probably Helarctos malayanus) were recently seized by Taiwanese customs officials. According to Taiwan's Central Daily News (22.2.82), they had been smuggled out of Indonesia by Taiwanese seamen. Yet according to an American conservationist, the designation of Indonesia as a health risk area by WHO, meant that the animals could be destroyed for health reasons. If they passed quarantine requirements, said the Daily News (23.2.82), they would be sent to zoos. The concerned American has been campaigning for the animals to be rehabilitated in Indonesia, but WTMU has yet to receive news of his success.



## Apology

We apologise for the omission of the date and number in our last issue, headlined CITES Appendices. This should have been Vol. III No. 6.

# Aspects of the Shell Trade in the Philippines

by Susan M Wells

The Philippines is currently a major supplier of several different types of shells and shellcraft. For many years collectors have sought Philippine shells and the archipelago is well known for the richness of its marine mollusc fauna which includes a number of rare and highly valuable species. Recently the shellcraft industry has expanded enormously; this has been encouraged by the government since it provides employment for large numbers of people.

The capiz shell industry and trade in giant clams were discussed in Vol. III No. 6 of the TRAFFIC Bulletin. This article looks at other aspects of the trade, continuing the report of a visit to the Philippines in June 1981.

## ORNAMENTAL MARINE SHELLS

Exports of 'ornamental shells' from the Philippines have risen rapidly over the last decade, from just under 1,500 tonnes in 1970 to over 3,000 tonnes in 1979 (Wells, 1981). About 50% are destined for the US, the rest for Italy, Spain, the UK, the Netherlands, Hong Kong and a large number of other countries. US imports of marine shells from the Philippines averaged about 500 tonnes during the 1960s but increased over the 1970s to nearly 2,000 tonnes in 1979. Fishery statistics for the Philippines for 1979 indicate that 1,605 tonnes of ornamental shells and 1,685 tonnes of miscellaneous shells were collected.

The centre of the ornamental shell trade, like the coral trade, is Cebu in the Visayas, although many firms also have warehouses or head offices in Manila. Zamboanga in the south is the second major centre but shells are collected from numerous other areas around the coast and retailed in a number of towns. Most shells collected are destined for export although a small proportion is sold locally to tourists, mainly Japanese and Americans. The Philippine people themselves are becoming increasingly interested in this resource, both from the aesthetic point of view and as an investment; a number now hold valuable collections. Most of the dealers are primarily exporters, their premises consisting of an office, display room and warehouses; a few have retail shops for tourists. Although in Cebu and Manila business seemed to be good, in Zamboanga at least three dealers had closed down or gone bankrupt in 1981. This was said to be a result of the coral ban (see TRAFFIC Bulletin, Vol. III No. 5) which had affected exports of shells as well.

The route from collector to final consumer is complex and, as for corals, involves large numbers of middlemen. Collectors tend to deal in both corals and shells, sometimes as a side-line to fishing, but they are increasingly turning to collecting full-time since this now provides a better source of income. A few of the larger exporters have their own boats which go round the villages or barrios buying up shells. Other dealers send out buyers, but in many cases the collectors themselves take shells to the dealers. Some dealers export non-Philippine shells obtained through exchanges with foreign dealers.

Prices have tended to rise as dealers compete with each other to attract local collectors by offering higher prices. Many of the collectors are now aware of the value of different species on the world market and have also learnt to identify the specimens they find. The large number of potential

higher prices on the overseas market and "bargains" are now hard to find. Even so, there may be up to a 50% difference in price in different parts of the country (Leechman, 1981a). Another factor contributing to high prices is the number of middlemen involved, since the exporter may be as much as fifth in line.

Foreign buyers, such as Americans and Japanese usually visit the dealers at least once a year, although rising air fares and hotel rates are said to be curtailing this (Leechman, 1981b). From the orders which are sent in, the dealers instruct the collectors as to which species are in demand. One complaint which was regularly voiced was that overseas buyers frequently failed to pay, a factor which contributes to the riskiness of the business. Other factors said to have contributed to high prices include inflation, the Muslim troubles in Mindanao and the fact that some species are becoming genuinely difficult to find.

Most collecting is carried out in the summer months when conditions are good. The shells are stockpiled and the time-consuming process of cleaning and processing continues throughout the year. The cleaning may be carried out either by the collectors or at the exporter's warehouse. The shells are generally soaked in an acid such as hydrochloric, unless they have a glossy surface in which case they are washed in water once the meat has been removed or allowed to rot. They are then brushed or scraped to remove any calcareous growth. Some specimens, especially those destined for Europe, are polished and then may be recorded as shellcraft, for customs purposes. Consignments may be sent out as often as four times a week from the larger exporters.

Dealers were reluctant to reveal where particular species came from but it was clear that, although different species were abundant in different areas, shells are collected throughout much of the Philippines. Most dealers reported the Western Visayas, the Sulu Sea and Palawan as their main sources. The Sulu Archipelago probably also sees considerable trade between Sabah and the Philippines, since there are strong ethnic links between the people of these areas.

A huge number of species are involved in the ornamental shell trade and it was impossible in the time available and with the reluctance of many of the dealers to talk, to get any real impression of which species were being collected in greatest quantities. A market study of the Philippine shell trade being carried out by the University of the Philippines may go some way to answering some of these questions. In order to obtain some idea of species involved, six price lists were analysed for the species which were being offered most commonly. The most popular are the large, colourful, glossy species such as tritons, clams, murex, etc., and well over 200 species are involved. A few of the popular species are discussed below.

Giant helmet shells *Cassis cornuta*, were seen in very large numbers (including many specimens 12" or more long) at several dealers' premises in both Cebu and Zamboanga and were said to be heavily in demand and still easy to obtain. Helmet shells are found in sandy areas in both shallow and deep water and prey on echinoids. Two dealers said that they obtained them from the Sulu Sea; Cebu, Bantayan and Masbate were also mentioned as sources. Prices varied from US\$0.5 for a 3-5" shell to over US\$6 for a shell 12" or longer.

The Giant Triton, *Charonia tritonis*, was seen at most dealers and was on five of the six price lists analysed. Although one dealer mentioned that this species could be obtained from Mactan and Bohol waters, most said that they now had to go to out-

and the Sulu Sea were mentioned several times as sources as well as Palawan, Samar and Bicol. Two dealers mentioned that large specimens were particularly difficult to find, and another that the species is scarce overall. Prices ranged from US\$5 for specimens under 10" to US\$20 or more for specimens larger than 14". There have been other reports of overcollection of the giant triton, particularly in Australia where it has been suggested that this is one of the factors contributing to the population explosion of the crown-of-thorns starfish, Acanthaster planci; the triton is known to be a predator on this and other echinoderms.

Volutes tend to fetch high prices since they are moderately rare and have fairly restricted ranges. Cymbiola imperialis and Voluta aulica were often seen in dealers' warehouses. The former was reported to have become rarer and was said to be available only from Zamboanga. In 1978 it was worth between US\$5 and US\$10 (Wagner and Abbott, 1978), depending on quality, although the 1981 price lists were asking only US\$2-6 for it. V. aulica is endemic to the Southern Philippines and in 1978 was worth US\$40-60. It was advertised in 1981 price lists for between US\$15 and US\$150 and up to US\$5,000 for a sinistral (i.e. left-handed spiralling) specimen.

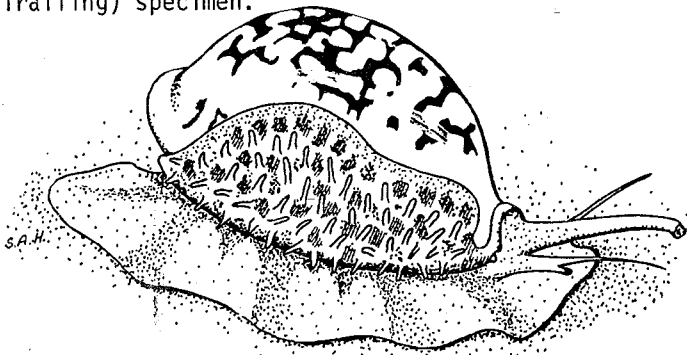


Illustration by Sarah Anne Hughes

#### RARE OR SPECIMEN SHELLS

The Philippines has long been famous for its rare shells, the most well known of which are almost certainly the Golden Cowrie, Cypraea aurantium and the Glory-of-the-Sea cone, Conus gloriamaris. For many such species, their rarity is mainly due to the fact that they are deep sea species, generally occurring in waters about 200m deep. With the discovery of new collecting methods, which in fact are very simple, they are being found in ever increasing numbers.

Rare shells currently being collected in the Philippines include (Berdach, J. pers. comm; Zambo and Lopez, 1976):

Siquijor	<u>Cypraea valentina</u> , <u>C. leucodon</u> , <u>Conus gloriamaris</u> , <u>C. kentoki</u> , <u>Latiaxis</u> spp.
Balicasag	<u>Cypraea guttata</u> , <u>Conus kimioi</u> , <u>C. duvaseli</u> , <u>C. gloriamaris</u> , <u>C. kenoshitai</u> , <u>C. bullatus</u> , <u>C.</u> <u>neptunus</u> , <u>Latiaxis</u> spp., <u>Murex</u> <u>aculeatus</u> , <u>M. superbus</u>
Samar(Guinan)	<u>Cypraea aurantium</u>
Bohol	<u>Conus kenoshitai</u> , <u>Murex</u> <u>alabaster</u>
Balut I.	<u>Murex superbus</u> , <u>M. orchidfloris</u> , <u>M. miyokoeae</u> , <u>Conus excelsus</u>
Mactan	<u>Conus pertusus</u> , <u>C. circumcissus</u> , <u>C. bullatus</u> , <u>C. auricornus</u> , <u>C.</u> <u>gloriamaris</u> , <u>Murex elongatus</u> <u>M.</u> <u>triqueter</u> , <u>M. pellucidus</u> , <u>M.</u> <u>aculeatus</u> , <u>M. sauli</u> ; occasion-

Mactan, and in particular the area around Punta Engana has become famous for its rare shells and a chapel has been erected, decorated with shells, in thanksgiving for the new found wealth of the fishermen. In at least one village, fishing has been abandoned since shells provide a better income.

Cypraea aurantium is mainly found off Eastern Samar and prices have remained fairly high because of its aesthetic appeal and popularity. Golden cowries are reported to be found occasionally off Punta Engana, and an American buyer who was organising a container shipment of shells to Miami was overheard in a dealer's shop ordering 40 golden cowries. He maintained that he had bought 20 specimens that morning from fishermen who came to his hotel. The Curator of Molluscs at the National Museum said that at the height of the glut 20-30 specimens were being obtained in a season in the Philippines but that this had now dropped to 10 and there were fears that populations were being depleted. Immature specimens are increasingly being collected since juveniles can fetch as much as P400 (US\$57). Some dealers have asked the fishermen to leave immatures if they find them but not surprisingly this has had little effect since they know that the next fisherman to find the specimen will almost certainly take it.

Cowries in general are still fetching high prices, sometimes as much as US\$7,000. On Siquijor, a C. leucodon found at Larena fetched P20,000 (US\$3,000) in 1981 and a smaller one from Bohol sold for P15,000 (US\$2,000).

In contrast, the prices of cone shells are said to be dropping. One dealer reckoned he had lost a considerable sum of money on a specimen for which he had paid P21,000 (US\$3,000) and which he now thought was valued at P3,000 (US\$400). Conus gloriamaris seems to be particularly abundant at the moment and was said to be available all round Cebu, where prices had reportedly dropped to about US\$200. At Mactan, small specimens collected locally were on sale for US\$70, and on Siquijor and Balicasag islands the local fishermen were willing to sell specimens for P200-300 (US\$30-45), presumably the lowest prices they could expect from the Cebu dealers.

Prior to 1970, rare shells were being collected in the Philippines by skin diving to a depth of about 25m. After 1976, a new method was developed which although inefficient, spread throughout much of the country. Nylon nets, 100-400m long and about 4m wide, are let down unbaited to a depth of about 100m, weighted with lead balls along one side and floats along the other. These are left overnight and pulled up the following morning, lifted from the weighted side so that the buoyancy of the floats on the other side creates a kind of bag. Many shells never reach the surface and fishermen speak of seeing valuable specimens fall out as the net comes to the surface. Under good conditions, as many as 100 nets were being set each night off Mactan in 1976 (Zambo and Lopez, 1976). This method has also been used off Punta Engana using a 1.5m x 50m net lowered to a depth of 60m (Dan, 1978). On some occasions, fishermen leave living specimens in the sea until a buyer comes, in order to keep them in top condition.

At Lomangcapan Pt., Siquijor I. (off Negros Oriental) in June 1981 nets were being put down to 80m for three days, based on a method in use in Bohol. As in other areas, it was a hit-and-miss method and sometimes only two shells of any value were brought up in a month, although one of the collectors had a number of shells including a Conus gloriamaris found the previous day. Collectors on Balicasag island reckoned that they found shells of value every week. A Conus neptunus worth US\$30, a number of rare Murex and some Latiaxis (a deep sea

Balicasag fishermen put nets down in the deep water channel between Balicasag and Panglao Island. Ordinary fishing canoes have been converted for deep sea shell collecting by the addition of a spool to the prow around which the rope for the net is wound. About 12 boats were seen going out. On this particular island the village seemed to be fairly dependent on shell collecting. Most villagers are squatters, and the few barren acres of the island are government land, unfit for any kind of agricultural activity. The surrounding reefs however are extremely rich in fish.

#### LAND SNAILS

Recently considerable interest has been shown by shell collectors in land snail shells which have appeared in shell shops in the US and Europe in increasing numbers, many originating from the Philippines (see TRAFFIC Bulletin, Vol. III No. 2). Unfortunately very few people in the Philippines, including the dealers, could provide any information on these shells although it is well known that Philippine rainforests once harboured large numbers of endemic land snails. About 1,200 species have been described (Faustino, 1930), but dealers have great difficulty identifying them and many more are probably undescribed and unknown to science. Many are likely to become extinct as a result of the extensive and rapid deforestation taking place in the Philippines.

Six of the dealers I visited exported land snails, often in large quantities, and all appeared to stock similar species. Snails are collected by local people and come from marshes as well as mountain forest habitats. The main sources appear to be Negros, Mindoro, Northern Luzon, Samar, Marinduque, Zambales and Zamboanga. A selection of species involved was identified by the British Museum (Natural History) as consisting of the following:

Helicostyla (Pachysphaera) annulata  
H. (Opalliostylia) leai  
H. florida  
H. (Cochlodryas) polychroa  
H. (Helicostyla) rehbeini  
Cochlostyla (Cochlostyla) marinduquensa  
C. (Cochlostyla) portei  
C. (Hypselostyla) cincta  
C. (Rhymbocochlias) bicolorata  
Chloraea (Chloraea) dryope  
C. (Corasia) aegrotata  
Calocochlia (Calocochlia) dubiosa  
C. (Calocochlia) sp. cf. C. (C) albaiensis  
Hemiplecta sp. cf. H. panavensis  
Amphidromus quadrasi  
Canistrum stabilis  
C. ovoides  
Cyclophorus lingulatus  
Chrysallis (Chrysallis) mindoroensis  
Obba (Obba) moricandi  
Phoenicobius aratus

#### SHELLCRAFT

Shellcraft production has risen dramatically over the last decade as illustrated by the value of US imports from the Philippines which rose from less than US\$1,000,000 in the 1960s to nearly US\$9,000,000 in 1976 (Wells, 1981). The main centres of the trade are Manila and Cebu, but small businesses are found in villages and towns throughout the country, especially on the coast and smaller islands. Most of the shell dealers visited in June 1981 carried on some form of shellcraft trade as a sideline to their business in ornamental shells, and for some dealers it provides most of their income and they have their own factories.

The industry is being encouraged throughout the Philippines by the Natural Resources Management

since shellcraft provides employment for large numbers of people who can work from their homes on a cottage industry basis. The extent to which women and children are involved is striking. In many cases women actually run the businesses, since it is usual for wives to have jobs (most Philippino homes above a certain income have servants). Women and children are responsible for most of the skilled manual labour involved. Children as young as 5 or 6 years old were seen carrying out simple jobs such as threading shells; older children and women dealt with the more complex jobs or handled machinery.

Much of the shellcraft produced is low quality, destined for tourist resorts and souvenir shops in other countries, rather than luxury stores. Handbags, mats, animal figurines, lampshades and jewellery are among the main stock items. Throughout much of the country there was evidence of large numbers of people turning their hand to the shellcraft industry as a result of the increase in demand. In Zamboanga, the shellcraft industry is not doing as well as in Cebu and Manila since firms are badly hampered by regular power cuts, resulting in loss of power for the machinery used for cutting and polishing shells. The local people hope that the new hydro-electric power scheme which is under construction will restore the industry within the next few years.

Bolinao in Pangasinan, Northern Luzon, is a typical example of a small town where shellcraft is an important source of employment for many people. Two barrios which were visited (one in Bolinao and one on the island of Dewey, near Santiago I.) depend almost entirely on shellcraft. The shells are collected along the coast, around Santiago I. and the many other small islands which dot the coast in this area, by pushing a net stretched across a triangular shaped frame through the upper layer of sand and sea grass in shallow water, generally at low tide or at night. Collectors anchor a small raft on which they place a basket for their collection and which can be towed back to the village.

Although the men generally do the collecting, women and children may also be involved collecting specimens from shallow water and rock pools. The shells are separated out from the sand and mud and from other benthic organisms. Although some species are eaten, most of those used in shellcraft are too small to make it worthwhile picking out the meat and so the baskets are left in the sun for 3-5 days for the meat to rot. The shells are then washed and sorted. Cowries and dove shells may be briefly cooked, turning them pale shades of yellow or cream, and some may be put in chlorox to bleach them completely.

Most of the species used for shellcraft are small and occur in shallow water in rock pools and sea grass beds either just below the surface of the sand or on the vegetation. The commonest species used include small cowries, dove shells, olives, small cockles and winkles. The following species were being used in Bolinao and are probably representative of those used throughout the country:

Cypraea annulus  
C. moneta  
C. errones  
C. caputerpentis  
C. helvola  
C. caurica  
Pyrene scripta  
Bulla vernicosa  
Vexillum plicarium  
Oliva carniola  
Strombus urceus  
Nassarius albescens

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Chloraea (Chloraea) dryope  
C. (Corasia) aegrota  
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C. (Calocochlia) sp.cf. C. (C) albaiensis  
Hemiplecta sp.cf. H. panavensis  
Amphidromus quadrasi  
Canistrum stabilis  
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Much of the shellcraft produced is low quality, destined for tourist resorts and souvenir shops in other countries, rather than luxury stores. Handbags, mats, animal figurines, lampshades and jewellery are among the main stock items. Throughout much of the country there was evidence of large numbers of people turning their hand to the shellcraft industry as a result of the increase in demand. In Zamboanga, the shellcraft industry is not doing as well as in Cebu and Manila since firms are badly hampered by regular power cuts, resulting in loss of power for the machinery used for cutting and polishing shells. The local people hope that the new hydro-electric power scheme which is under construction will restore the industry within the next few years.

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Strombus urceus  
Nassarius albescens



At Mactan it is reported that *C. annulus* are taken by the millions for shellcraft, including many juveniles (Zambo and Lopez, 1976). Large numbers of tiger cowries are used to make ornaments such as animal figurines. Broken and sub-quality shells are also used; for example broken conch shell may be used to provide pink colours especially for jewellery. Other colours are obtained by dying clam shell, using the nacreous interiors of the shells to give a glossy surface.

In Bolinao, collectors take their shells directly to the managers of the various small businesses or take them to the Saturday market. Small species are sold by the can, for about P8-12 (US\$1-1.5). *C. caputserpentis* are sold for about 10c each or 5c when they are found in large numbers during the rainy season. There were three firms in Bolinao and a further three family enterprises on the nearby island of Dewey. These all operated in the same way, contracting work out to other villages and providing the raw materials. Workers are paid piece work. At Bolinao many of the workers lived in the fishing barrio just outside the main centre. No one seemed to be aware of quite how much shellcraft was produced but the barrio was clearly given over to the production of shellcraft. Between 15 and 30 shell-covered purses can be made by one woman a day; about 10 years ago when the industry first started, they could get about P6 (US\$1) for such a purse but with the increasing competition, payment had dropped to P2.50 (US\$0.30). Finished articles are taken into Bolinao or the buyers may themselves visit the barrios to buy up stock and put in orders. Most of the Bolinao shellcraft goes to Manila for distribution and export. Towns like this have been visited by staff from the Bureau of Fisheries and Aquatic Resources who have explained to the local people how to set up and run a business, and the types of articles and designs required, in order to encourage the expansion of the cottage industry scheme. On Dewey, about 24 different articles were being produced, the villagers themselves often altering or improving on the designs.

## DISCUSSION



It is clear that exploitation of and trade in shells play an important role in the current economy of the Philippines, in terms of the employment provided and the income generated from exports. A number of people, however, fear that current levels of exploitation cannot be sustained unless some form of management is introduced. The Curator of Molluscs at the National Museum expressed considerable fears as to the future of the shell trade, and believes it could end in 20 years if controls are not introduced. At least two of the dealers spoken to believe that the shell trade will need to be regulated and thought that some species had been over-collected. Overcollection of giant tritons and volutes was mentioned earlier and clams have been discussed in TRAFFIC Bulletin, Vol. III No. 6. The effect of increased collecting pressure on deep sea species is still unknown since so little is known of their distribution and abundance. However it is possible that populations are being locally over-exploited. For example, in an informal survey of collecting patterns for the rare cowrie *C. guttata* in the Cebu area, fishermen reported that they had to move continually northwards along the coast as their usual collecting spots ceased to yield shells.

Off Mactan, the population of *Murex elongatus* is also said to be depleted. One factor in this species' favour at present is the inefficient fishing method used, but if this were to change much greater numbers might be caught.

Fortunately the importance of the shell trade is appreciated by several organisations. The University of the Philippines is carrying out a market study of the shell trade for the Government, which will describe the structure of the industry, determine the demand for shells, pricing patterns and how these are influenced, evaluate foreign and domestic markets and make recommendations for its future management in the light of resource conservation and foreign exchange generation. A catalogue or inventory will identify the species in greatest demand and distinguish those in danger of stock depletion. 400 questionnaires have been sent out and dealers interviewed in the 3 major shell trade cities:- Cebu, Zamboanga and Manila. The questionnaire will reveal details of species sold, quantities and other information on the trade in so far as the dealers are prepared to provide it. Silliman University expressed interest in setting up a project on rare shells to look at the methods used by fishermen in different areas, monitor the species caught and carry out a survey in some of the known collecting areas using a better method in order to determine population size and distribution.

The difficulty lies in proposing management procedures which can be enforced and which will also be effective, since so little research has been carried out on the effect of exploitation on these species. Quotas and closed seasons would be equally difficult to enforce and would need more research on mollusc reproductive biology and the levels of harvest which could be supported. Sanctuaries could be a more satisfactory way of preserving breeding stocks, although information on how larvae are carried is needed so that reserves are positioned in areas with suitable currents.

The current level of trade in land snail shells probably has little effect on snail populations, the greatest threat being deforestation through logging, 'slash and burn' agriculture and other habitat destruction. Mindoro still has some suitable habitat in its remaining primary forest but this is threatened; species on Romblon, Marinduque and Masbate may be marginally less threatened since these are limestone islands and there is less demand for the land for agriculture. A number of dealers were very interested in these shells and would have been willing to co-operate in arranging visits to areas where they are found. It is recommended that some kind of survey should be carried out in the near future, making use of the knowledge of local people to locate different species, and drawing on the fact that large numbers are now turning up in the trade. One method of obtaining specimens for scientific purposes would be to attempt a 'mopping up' operation in the wake of the logging companies; the snails would be relatively easy to find amongst the fallen vegetation and since they would die anyway, their removal would have little effect on remaining populations. Healthy specimens could even be used to set up captive breeding colonies.

No studies have been carried out on the effect of shell collecting on the species involved in the shellcraft industry. However it has been suggested that the huge exploitation of *Cypraea annulus* at Mactan for this purpose could cause local extinction of this species (Zambo and Lopez, 1976). At Bolinao collectors mentioned that now there were so many people involved, they were having to move further along the coast to find the necessary shells. Large quantities of shells go to waste which seems unnecessary considering the fact that the shellcraft industry can make use of broken and scrap shells.

Furthermore, there is concern that the large nets used may be destroying the sea grass beds and their associated benthic life.

There is little concern over the shellcraft industry at present, since stocks seem adequate but thought should be given to the future survival of the trade. At Bolinao, the local Museum was attempting to instil a strong feeling for conservation into the local community, largely as a result of the efforts of a US Peace Corps Worker. The Curator of the Museum was continuing this work; a science club had been set up and slide shows had been given with speakers coming from Manila. Attempts had been made to explain to shell collectors that the present rate of exploitation and methods in use could well be damaging to the long term survival of the shellcraft industry. The NRMC and the Ministry of Human Settlements are producing an inventory of local handicrafts produced in the Philippines in line with encouraging cottage industries. In theory, they should be interested in ensuring a sustainable yield of the species involved.

## REFERENCES

- Wells, S.M.(1981) International Trade in Ornamental Shells. Conservation Monitoring Centre, Cambridge.
- Leechman, E.G. (1981a). Shell prices going up, up. Hawaiian Shell News XXIX(5) N.S. 257:6.
- Leechman, E.G. (1981b). Travellers Blues. Hawaiian Shell News XXIX(5) N.S. 257:3.
- Wagner, R.J.L. and Abbott, R.T. (1978). Standard Catalog of Shells. 3rd.Ed., American Malacologists Inc., Greenville, Delaware, USA.
- Zambo, E. and Lopez, A.(1976). In Marvellous Magellan Bay. Hawaiian Shell News XXIV(b) N.S. 198:1.
- Dan, D. (1978). Mactan - Shell Capital of the World. Hawaiian Shell News XXVI(II): 10.
- Faustino, L.A. (1930) Summary of Philippine Land Shells. Phil.Journ.Sci. 42(1).

## Rhino Horn Smuggling Operation Uncovered

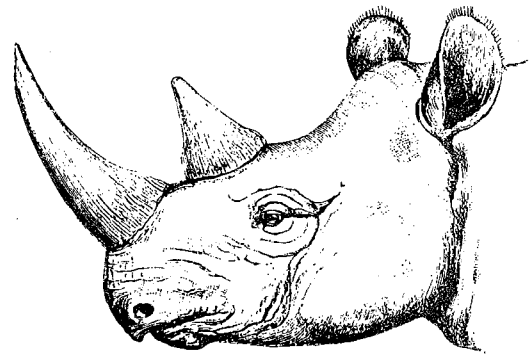
Police investigations are being carried out after reports of a rhino horn smuggling operation from the Hluhluwe and Umfolozi game reserves.

Investigations have been going on for several months since it was discovered that large stocks of rhino horn in the Board's possession were missing.

A spokesman for the Natal Parks Board, when asked what had prompted the investigation, said "We were aware that some trafficking in rhino horn was taking place from Zululand". There has since been an internal investigation but whether an employee is involved is a matter for conjecture and no charges have yet been made. The man in charge of the Natal Parks Board, Mr Dering Stainbank MEC gave the assurance that there would be no cover-up and added that the Committee and Board fully backed the prosecution of anyone involved in the smuggling "no matter who they are". Whether or not a board

employee is involved, it appears that the mastermind behind the operation may well have escaped detection after police investigations into the matter were 'leaked'.

Meanwhile, a game guard is standing trial on charges of shooting four rhino and five buffalo in the Hluhluwe Game Reserve. During the trial it was revealed that the horn had been cut from the rhino and two were given to one Mary Xulu, who in a separate trial was fined R250 (or six months imprisonment) with an additional R250 (or six months imprisonment) for her dealings with rhino horn. This is the first evidence of poaching in rhino horn in Zululand. With prices for rhino horn having risen about 2000 per cent over the last 5 years in the Far and Middle East, poaching has become a highly lucrative business and poachers much more daring and aggressive in their methods. Armed not only with traditional weapons, gangs of poachers are now accompanied by packs of dogs and frequently use firearms to attack armed guards. It was recently reported that poachers in Zambia, Tanzania and Uganda were using AK-47 assault rifles and even RPG-7 rockets to slaughter the rhino.



Source: Natal Daily News & Natal Mercury.

## UK Acts for Tortoise Welfare

Anyone in the UK purchasing a 'pet' tortoise of European origin will in future have to sign an undertaking to look after it properly. This Direction has been made by the Secretary of State for the Environment in exercise of his powers under Section 6 of the Endangered Species (Import & Export) Act 1976. A purchaser must undertake to keep the animals at a specified address where they may be inspected at any time by the Department of the Environment and where the accommodation is of a suitable size and temperature. These last requirements, together with details of food to be supplied, are specified in the document which the purchaser must sign. Anyone convicted of breaking the terms of this Direction is liable to a fine not exceeding £400.



## Japanese Timber Imports

Relatively little has been published in the conservation press concerning the species of timber involved in trade and their countries of origin. Such data are often difficult to obtain since a large number of dealers are involved and they rarely divulge their sources, for commercial reasons. A recent paper, Browne (1980), which gives a list of Bark and Ambrosia Beetles collected at Japanese ports, also gives data on the tree species involved, together with the countries of origin, and the table below summarises this information.

Millettia stuhlmanii  
Guibourtia ehie  
Tieghemella africana  
Tieghemella sp.  
Pinus insularis  
Dipterocarpus

Tectona grandis  
Agathis sp.

Agathis philippinensis  
Santiria  
Alstoria

Diospyros

Red Chacata  
Cyathea sp.  
Pinus sp.  
Intsia sp.  
Pterocarpus

Dalbergia sp.  
Shorea sp.

Nauclea sp.  
Triplochiton scleroxylon  
Antiaris africana  
Copaifera

Paulownia  
Anisoptera glabra  
Rubber wood

Dyera  
Pterocymbium  
Carpinus betulus  
Alnus  
Pinus radiata

Khaya  
Copaifera

Mimusops djave

Anisoptera  
Gardenia  
Afromosja  
Pinus merkusii

Sandal wood

Tanzania  
Ivory Coast  
Congo  
Cameroon  
Vietnam  
Cambodia  
Sumatra &  
Mentawai Is.  
Philippines  
Thailand  
Borneo  
Moluccas  
Philippines  
Borneo  
Sumatra &  
Mentawai Is.  
Celebes  
Celebes  
Java  
Mozambique  
Formosa  
Vietnam  
Thailand  
Sumatra  
Thailand  
Gabon  
Cameroon  
India  
Philippines  
Borneo  
Moluccas  
Celebes  
Sumatra &  
Mentawai Is.  
Borneo  
Ivory Coast  
Ghana  
Gabon  
Cameroon  
China  
Cambodia  
Malaya  
Singapore  
Sumatra  
New Britain  
Iran  
Iran  
New Zealand  
Chile  
Africa  
Africa  
Cameroon  
Gabon  
Africa  
Ivory Coast  
Cameroon  
Congo  
Thailand  
Thailand  
Congo  
Sumatra &  
Mentawai Is.  
Java  
Mozambique  
Tanzania

Pometia  
Diospyros  
Palaquium

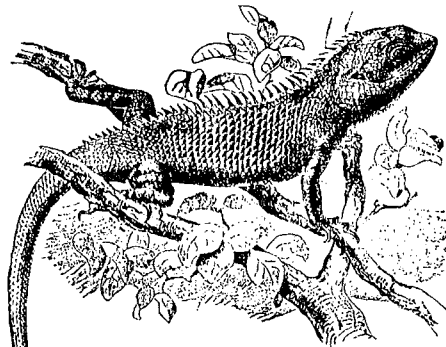
Cratozylon

Unident.

Pterocymbium  
Dillenia

Borneo  
Celebes  
Celebes  
New Guinea  
Sumatra &  
Mentawai Is.  
Malaya  
Ceylon  
Solomon Is.  
New Guinea  
New Britain  
Borneo  
Liberia  
Formosa  
Cameroon  
Ivory Coast  
New Britain  
Solomon Is.

Reference: Browne, F.G. 1980, Bark Beetles and Ambrosia Beetles (Coleoptera, Scolytidae and Platypodidae) Intercepted at Japanese Ports, with descriptions of new species. Kontyu, Vol. 48, 370-389, 482-500.



## Lizard Skin Smuggling Foiled

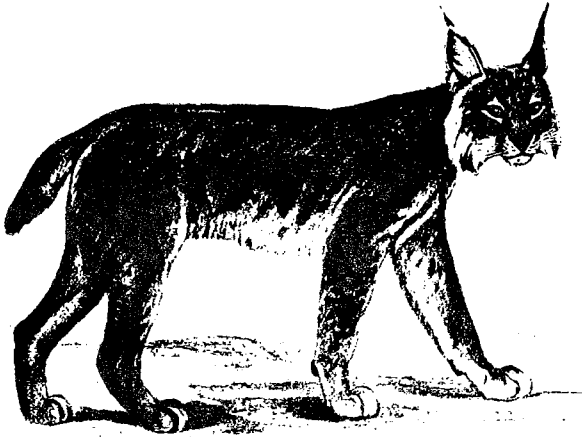
An attempt at smuggling lizard skin worth 1½ crore taka (approx. US\$558,000) out of Khulna District, Bangladesh has been foiled. The haul, stowed on a private ship, was detected (and apparently seized) by a duty officer on 11 January '82. It is believed that the Clearing Officer of the exporter - Wheat bran export - and some customs officials were involved. On 16 February '82, another 2,200 lizard skins were seized in the same area.

Source: Bull. Soc. for Conservation of Nature and Environment No. 5., 1982.

## Zambia Bans Ivory and Rhino Horn Exports

On 23 January 1982, the Government of Zambia prohibited the hunting of elephant and rhinoceros under the National Parks and Wildlife Act (Elephant and Rhinoceros) Regulations 1982. The Regulations also revoked immediately all outstanding hunting licences and prohibited the non-governmental export of elephant ivory, except manufactured articles, and the import, export or possession of rhinoceros horn in any shape or form.

## Canadian Fur Auction Results



Nearly 21,500 Lynx (*Felis lynx*) skins have been offered for auction by Hudson's Bay Co., in Toronto, Canada since September last year. At auction they fetched a top price of CA\$450 in September '81, rising to CA\$820 in February '82, but falling to CA\$610 in April '82. From April '81 to April '82, Hudson's Bay Co., Toronto, appears to have held only three auctions of wild animal skins; the results were published in Fur Review and for selected species are reproduced below.

It may seem strange that the auction at which most lynx skins were offered is also that at which they achieved the highest price. Other species also achieved their highest at this auction, in February 1982. The reason for this is that most of the European buyers are in Canada and the USA at that time of year, generally to attend the mink auctions in New York and Seattle; thus competition is at its peak. (H. Dwan, pers. comm.).

		Number			Av. price			Top price		
					\$			\$		
		Sept 81	Feb 82	Apr 82	Sept 81	Feb 82	Apr 82	Sept 81	Feb 82	Apr 82
Raccoon	<i>Procyon lotor</i>	22,649	300,596	206,139	15.95	34.13	-	70.00	124.00	100.00
Bobcat	<i>Felis rufa</i>	987	1,594	583	99.11	195.91	-	260.00	320.00	280.00
Otter	<i>Lutra canadensis</i>	2,038	5,650	2,793	41.21	54.35	50.52	122.00	148.00	142.00
Wild Mink	<i>Mustela vison</i>	8,285	70,537	21,311	16.53	34.83	-	40.00	120.00	60.00
Fisher	<i>Martes pennanti</i>	208	6,473	2,297	113.70	194.27	-	200.00	550.00	395.00
Opossum	<i>Didelphis marsupialis</i>	191,909	67,853	61,473	w/drawn	6.35	-	-	17.00	12.00
Badger	<i>Taxidea taxus</i>	3,016	9,167	6,492	w/drawn	43.56	-	-	190.00	220.00
Squirrel	<i>Sciurus carolinensis</i>	8,714	133,289	37,051	1.14	1.70	1.96	1.84	2.40	2.26
Lynx	<i>Felis lynx</i>	650	13,499	7,344	257.44	344.01	-	450.00	820.00	610.00
Coyote	<i>Canis latrans</i>	8,063	56,501	63,440	28.78	75.27	-	142.00	360.00	270.00
Grey Wolf	<i>Canis lupus</i>	439	805	647	113.03	143.09	-	300.00	500.00	330.00
Wolverine	<i>Gulo gulo</i>	20	155	100	84.00	220.42	157.97	245.00	390.00	255.00
Red fox	<i>Vulpes vulpes</i>	1,413	56,050	33,670	60.42	69.72	-	116.00	184.00	138.00
Grey fox	<i>Vulpes cinereoargenteus</i>	5,190	6,914	5,721	34.97	-	-	60.00	70.00	56.00
Baum Marten	<i>Martes martes</i>	1,686	42,671	-	30.18	38.13	-	64.00	152.00	-
Polar Bear	<i>Thalarctos maritimus</i>	169	-	142	1,180.77	-	w/drawn	-	-	-

## \* UK Prosecution Success

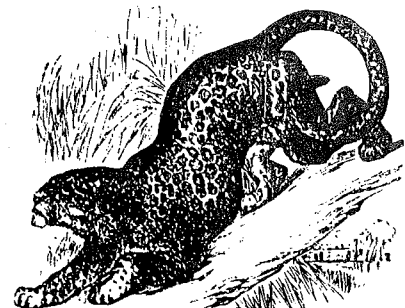
### Wildlife Act Inspector for UK

The UK government recently appointed a Wildlife Act Inspector to help enforce the bird protection laws under the Wildlife and Countryside Act 1981. This is a new position and the inspector, Colin McKelvie, who takes up his post on 1 June 1982, is responsible to the Department of the Environment, although he will be based with the British Field Sports Society (BFSS). Mr McKelvie was formerly Development Officer for the British Association for Shooting & Conservation and the Ulster Game & Wildfowl Society. His professional background, together with the decision that the post should be administrated by the BFSS has caused concern among some conservationists. According to a report in 'New Scientist' (22 April 1982), the Department of the Environment sees the inspector's role as "educative rather than punitive". Mr McKelvie will be liaising with falconers, aviculturists and taxidermists and investigating cases where the law has been broken.

PCAP (Protection & Conservation of Animals & Plantlife) have succeeded in their private prosecution against Raimond furs of Manchester (see TRAFFIC Bulletin, Vol. III No. 6), who were charged with having an illegally obtained leopard skin coat for sale, contrary to the Endangered Species Act 1976. The firm was fined £750 which is the largest fine that has been imposed under the 1976 Act.

After the hearing, Mr Daniel Lindsay, PCAP's European Secretary, said that his 5,000 members in Britain were planning a national campaign to halt the sale of all coats made from endangered animals.

Source: The Guardian (21.4.82)



## Wildlife Protection in Brunei

The 'Borneo Bulletin' of 31 October 1981 reports that "a new law, designed to protect Brunei's wildlife, has come into force following approval from His Highness the Sultan". The "new law" is in fact the Wildlife Protection Enactment which was originally drafted and published in 1978. The Act makes provisions for wildlife sanctuaries and prohibits the hunting, killing and capturing of protected animal species. No person may sell, offer for sale or have in his or her possession any protected animal or trophy or flesh thereof, except under licence. The export of protected species is also prohibited except under licence from the game authorities. Tough penalties of up to one year's imprisonment and a fine of \$2000 may be imposed on offenders. The following 34 taxa are scheduled as protected:

### MAMMALS

Nycticebus coucang  
Tarsius bancanus  
Nasalis larvatus  
Pongo pygmaeus  
Neofelis nebulosa  
Dugong dugon  
Dicerorhinus sumatrensis

Slow loris  
 Western tarsier  
 Proboscis monkey  
 Orang-utan  
 Clouded leopard  
 Dugong  
 Sumatran rhinoceros



### BIRDS

Bubulcus (ibis) coromandus  
Egretta sacra

Ciconia (episcopus) stormi  
Leptoptilos javanicus

Haliaeetus leucogaster

Ichthyophaga ichthyaetus

Lophura bulweri  
Polyplectron malacense

Argusianus argus grayi

Sterna sumatrana  
Sterna anaetheta  
Ducula bicolor

Pelargopsis capensis fraseri

Halcyon coromanda minor  
Halcyon pileata

Berenicornis comatus

Anorrhinus galeritus

Aceros leucocephalus corrugatus  
 (= A. (Rhyticeros) corrugatus)  
Aceros (Rhyticeros) undulatus  
Anthraceros malayanus  
Anthraceros coronatus

Buceros rhinoceros borneoensis

Cattle egret  
 Eastern reef heron  
 Storm's stork  
 Lesser adjutant stork  
 White-bellied sea eagle  
 Grey-headed fishing eagle  
 Bulwer's pheasant  
 Malaysian peacock-pheasant  
 Great argus pheasant  
 Black-naped tern  
 Bridled tern  
 Pied imperial pigeon  
 Stork-billed kingfisher  
 Ruddy kingfisher  
 Black-capped kingfisher  
 Long-crested hornbill  
 Bushy-crested hornbill

Wrinkled hornbill  
 Wreathed hornbill  
 Black hornbill  
 Malabar pied hornbill  
 Rhinoceros hornbill  
 Helmeted hornbill

### REPTILES

Chelonia mydas  
Eretmochelys imbricata  
Dermochelys coriacea  
Lanthonotus borneensis

Green turtle  
 Hawksbill turtle  
 Leatherback turtle  
 Earless monitor lizard

In addition, the export of "deer, bears and apes and monkeys" is forbidden except under licence.

## Proposed Penguin Slaughter

An Argentinian/Japanese firm, Hinode Penguin Co., has put forward a proposal for a two-year pilot project, which would involve the killing of 100,000 magellanic penguins (Spheniscus magellanicus).

No commercial use has been found for their rubbery, oily flesh and short, greasy feathers, but the company believes the penguin's skin to be suitable for the manufacture of gloves, and its oil, which they claim to be rich in essential amino acids, ideal for producing protein for animal food and maybe for the manufacture of protein for humans.

Hinode company officials reportedly told Argentine government officials that they already have authorization to capture 48,000 penguins per season for two seasons, killing them by clubbing to avoid damaging the skin, a method the company claims to be the most painless and humane possible.

In 1974 the Argentine government issued a decree protecting penguins from being killed for either commerce or sport. Since Argentina is inhabited by millions of penguins, this protection is significant for the world population of these birds. However, if the slaughter of penguins would serve some essential purpose, the ban can be temporarily lifted to allow exploitation. The success of this may determine whether the decree should be abandoned or modified.

At a meeting in early March with the governor of Chubut Province, an area especially abundant in penguins, Hinode Penguin Co. officials argued that this project would be of great value to the province and nation. They claim the greatest benefit would come from the oil because of its particular amino acid content. Argentine environmentalists say the oil is of no greater value than that from traditional sources.

In a report to the Chubut officials, Hinode executives maintained that the slaughter "will regulate the uncontrolled expansion and growth of penguins, which is progressing because of the gradual reduction and disappearance of seals". However, as Adelino Narosky, a noted Argentine conservationist points out, the disappearance of seals off Santa Cruz, for example, is only a reflection on what happened when 'people were allowed to kill seals for supposedly limited commercial purposes'. Now the same thing may happen to the local penguins.

There are many who oppose the penguin slaughter and point out that it is the very existence of these beguiling creatures that attracts tourists to an area which is economically very poor.

## The Golden Dragon Fish

Arowana fish, or Asian bony-tongues (*Scleropages formosus*) were first successfully cultivated in captivity last November, in Singapore, according to the Straits Times (19.2.82). This breakthrough (attempts started in 1927) was made by the Primary Production Department at the Sembawang Freshwater Fisheries Laboratory. Head of the Laboratory, Mr George Tay Seng Hock said they had twenty-eight fry. They used the silver variety of the species because it is the least valuable. The Straits Times reported its value as Singapore \$400-500, compared with \$2000-3000 for golden and \$5000-7000 for red arowana.

One month after the Straits Times (S.T.) report, thieves in Singapore stole about \$12,300 of fish from the Green Sea Aquarium there, including 23 golden arowana. According to the S.T., these alone were worth \$700 to \$1500 each. Unfortunately these figures fit neither the estimated total value of stolen fish nor the previous figure reported for the value of golden arowana. However, the story does indicate that this species is thought to be worth the risk of robbery.

A Singapore newspaper report (Sin Chew Jit Poh, 24.1.82) noted that golden arowana of the highest quality can fetch up to \$8500, but normally range from \$400 to \$6500, depending on colour and size (see TRAFFIC Bulletin, Vol. III No. 5 p57). Silver specimens, it said, ranged from \$25 to \$300 in value.

In summary, if press reports can be relied upon, silver arowana may fetch \$25-500 and golden arowana \$400-8500. Red arowana are put at \$5000-7000 and are supposedly more valuable than golden specimens, so probably this is the middle of the range; there is some evidence, however, that they are merely a particularly dark gold in colour. Some dealers say that the colour depends on the food that is being eaten.

Such high values for a fish, even one up to one metre long and weighing 7.5kg suggests that it has some prestige value. The Sin Chew Jit Poh article supports this, reporting that the golden dragon fish (i.e. golden arowana) is said to be eaten by the Chinese Emperors and if you are lucky the fish you rear will become brighter and deeper gold in colour so that "the status of the golden dragon fish has become legendary. Many people believe (it)...will bring good luck and prosperity." Significantly, this paper also reports a shortage of supply of golden arowana this year, and a price increase of \$1000-2000 a fish since 1981.

*Scleropages formosus* is in fact an IUCN Red Data Book (Vulnerable) and CITES Appendix I species. Recent research, however, indicates that it is more widespread and may be less uncommon than had been thought. However, the true status and the extent of fishing for food and the aquarium fish trade seem still to be uncertain.

## Monkeys Seized at FRG Border

On February 26 '82, two Dutch citizens were caught attempting to smuggle 23 baby monkeys (*Saimiri* spp., *Cercocebus* spp., *Cebus* spp., *Cercopithecus* spp.) into the Federal Republic of Germany. Two of the monkeys, which had been packed in 3 sacks, had already died.

The commercial value of the animals, which had been imported from Antwerp, amounted to approximately DM40,000.

Source: FRG Management Authority



## ☆Stop Press☆

Two days after the entry into force of CITES in Austria, the Austrian Management Authority seized ten Chimpanzees *Pan troglodytes* and one Pygmy chimpanzee *Pan paniscus*. Nine of these animals came from Zaire and were accompanied by health certificates only, when seized at Vienna airport as a result of information passed on by the CITES Secretariat. Unfortunately, five chimps have died, but the others are thought to be in a satisfactory condition.

Since the chimp seizure, the Austrian Management Authority has also seized eleven Peregrine falcons *Falco peregrinus* being imported from Italy.

We are pleased to report that TRAFFIC (Japan) has now become officially established. Details on this from the WWF News Release will be published in our next Bulletin.



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