WORLD TRADE IN CROCODILIAN SKINS, 2000-2002

Prepared as part of the International
Alligator and Crocodile Trade Study

by

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Introduction

UNEP-WCMC has previously produced ten reports for the International Alligator and Crocodile Trade Study (IACTS) that have examined the international trade in crocodilian skins from 1980 to 2001. As in the previous reports, the data used in this report have been obtained from the *CITES Trade Database* that UNEP-WCMC maintains on behalf of the CITES Secretariat, with additional information provided by the Crocodile Farmers Association of Zimbabwe. The present report is intended to update these reports by detailed analysis of information for the years up to 2002. It also attempts to identify problem areas and to recommend, where possible, workable solutions.

As in the IACTS reports for 2002 and 2003, this report presents information on trade levels in classic skins (alligators and true crocodiles) and caimans and also trade in other products such as live animals and meat.

Methods

This report is based on an analysis of the annual reports submitted by the Parties to CITES for all years up to 2002. A list of annual reports for 2000-2002 that had been received at UNEP-WCMC at the time of writing is given in Table 1. In order to be comparable with previous IACTS reports, all trade in whole skins and sides of crocodilian species has been analysed with two sides being considered to be equivalent to one skin. Trade in skins reported in units of weight, area, length or sub-units such as 'tails' has been mainly excluded. Wherever possible, data reported by the producer countries have been used in preference to that reported by importing countries because small differences in the manner of reporting, or the time lag between export and import, may lead to double-counting and an overestimation of trade volume. However where producer countries have failed to submit annual report data on exports of crocodilians, importers' data have been used. Many of the transactions have been analysed at the export permit level. As with previous reports that covered the years 1995-2001, re-export trade has not been included in the estimation of annual production.

Limitations of data

Late submission, or complete failure to submit CITES annual reports continues to be the biggest problem in conducting trade studies using CITES annual report data. However, as a result of measures taken by the CITES Standing Committee (see IACTS 2002 report), many Parties have now provided their missing reports and in addition, UNEP-WCMC has access to the export permits routinely sent by several Parties to the CITES Secretariat. However Japan, a major importer of crocodilian skins, has failed to report trade occurring later than 2000. This singular omission has particularly affected the estimation of the caiman trade from Bolivia, Colombia, Paraguay and Venezuela, major exporters that have also failed to submit reports in recent years.

As noted in previous IACTS reports, a further problem with annual reports is the basis on which they are compiled. CITES Notification to the Parties No. 2002/022 of 9 April 2002 states that "As far as possible, the data in the report should record the actual trade that took place, i.e. the quantity of specimens that entered or left the country. If it is not possible to report the actual exports and re-exports, the data on such trade should come from each permit and certificate issued. The report should state clearly whether the data used for the records of imports and exports/re-exports are based on permits/certificates issued or on actual trade." However, reporting simply on the basis of permits issued may lead to considerable overestimates of trade volume as permits are frequently issued for quantities in excess of those actually traded and indeed, some of the permits may not even be used. Despite frequent reminders from the

CITES Secretariat, the majority of Parties still fail to provide any details concerning the basis on which their annual reports are compiled.

Most CITES annual reports are compiled on a shipment by shipment basis and many include the exporters' permit numbers. This allows for very accurate cross-checking of data, particularly where an export may be reported in one year and the import of the same shipment reported the following year, and enables potential reporting or typographical errors to be traced. In recent years, only Switzerland and Liechtenstein have failed to report in this way, however for the year 2000 only, France also reported compiled data. It should be noted that these two countries are significant importers of crocodilian skins.

All annual reports for the years up to 2002 should have been submitted by 31 October 2003 but, at the time of writing (May 2004), several reports that might contain important data have still not been received by the CITES Secretariat. These include Bolivia (2002), Colombia (2002), Guatemala (2001 and 2002), Malawi (2000 and 2002), Nicaragua (2001), Panama (2002), Paraguay (2001 and 2002), Uganda (2002), Venezuela (2001 and 2002) and Zambia (2000) amongst the producer countries, and Japan (2001 and 2002) as a major consumer. The potential effect of such omissions has been commented upon during the analysis.

Table 1. CITES annual reports for 2000-2002 available for analysis

Country	2000	2001	2002
Antigua and Barbuda	*	*	–
Argentina	*	*	*
Australia	*	*	*
Austria	*	*	*
Azerbaijan	*	*	*
Bahamas	*	*	*
Bangladesh	*	*	*
Barbados	*	*	*
Belarus	–	–	*
Belgium	*	*	*
Belize	*	*	*
Benin	*	*	*
Bolivia	*	*	–
Botswana	*	*	*
Brazil	*	*	*
Brunei Darussalam	*	*	*
Bulgaria	*	*	*
Burkina Faso	*	*	–
Cambodia	*	*	*
Cameroon	*	*	*
Canada	–	*	part
Chad	*	*	–
Chile	*	*	*
China	*	*	*
Colombia	*	*	–
Comores	*	*	–
Congo	*	*	*
Costa Rica	*	*	–
Côte d'Ivoire	*	*	*
Croatia	*	–	–
Cuba	*	*	*

Country	2000	2001	2002
Cyprus	*	*	–
Czech Republic	*	*	*
Democratic Republic of the Congo	*	*	*
Denmark	*	*	*
Dominica	*	*	–
Dominican Republic	*	*	*
Ecuador	part	*	–
Egypt	*	*	*
El Salvador	*	*	*
Equatorial Guinea	*	–	–
Eritrea	*	–	*
Estonia	*	*	*
Ethiopia	*	*	*
Finland	*	*	*
France	*	*	*
Gabon	*	*	*
Gambia	*	–	–
Georgia	*	*	*
Germany	*	*	*
Ghana	*	*	*
Greece	*	*	*
Guatemala	*	–	–
Guinea	*	*	*
Guyana	*	*	*
Honduras	*	*	–
Hong Kong, SAR	*	*	*
Hungary	*	*	*
India	*	*	*
Indonesia	*	*	*
Iran	*	*	*
Ireland (non-Party)	*	*	*
Israel	*	*	*
Italy	*	*	*
Jamaica	*	*	*
Japan	*	–	–
Jordan	*	*	*
Kazakhstan	*	*	*
Kenya	*	*	*
Latvia	*	*	*
Liechtenstein	*	*	*
Luxembourg	*	*	*
Macao, SAR	*	*	*
Macedonia	–	*	*
Madagascar	*	*	*
Malawi	–	*	–
Malaysia	*	*	*
Mali	*	*	–
Malta	*	*	*
Mauritius	*	*	–
Mexico	*	*	*
Monaco	–	*	*
Mongolia	*	*	–

Country	2000	2001	2002
Morocco	*	*	*
Mozambique	*	*	*
Myanmar	*	*	*
Namibia	*	*	*
Nepal	*	*	*
Netherlands	*	*	*
New Caledonia	*	*	*
New Zealand	*	*	*
Nicaragua	*	–	*
Niger	*	*	–
Nigeria	–	–	*
Norway	*	*	*
Pakistan	*	*	–
Panama	*	*	–
Papua New Guinea	*	*	*
Paraguay	*	–	–
Peru	*	*	*
Philippines	*	*	*
Poland	*	*	*
Portugal	*	*	*
Qatar	–	*	*
Republic of Korea	*	*	*
Romania	*	*	*
Russian Federation	*	*	–
Rwanda	*	*	*
Saint Kitts and Nevis	*	*	–
Saint Lucia	*	*	*
Saint Vincent and the Grenadines	*	–	–
Saudi Arabia	*	–	–
Senegal	*	*	*
Serbia and Montenegro			*
Seychelles	–	*	*
Sierra Leone	*	–	–
Singapore	*	*	*
Slovakia	*	*	*
Slovenia	*	–	–
South Africa	*	*	*
Spain	*	*	*
Sri Lanka	*	*	*
Sudan	*	*	*
Suriname	*	*	*
Swaziland	*	*	–
Sweden	*	*	*
Switzerland	*	*	*
Thailand	*	*	*
Togo	–	*	*
Trinidad and Tobago	*	*	*
Tunisia	*	*	*
Turkey	*	*	*
Uganda	*	*	–
United Arab Emirates	*	*	*
United Kingdom	*	*	*

Country	2000	2001	2002
United Republic of Tanzania	*	*	*
United States of America	*	*	*
Uruguay	*	*	*
Uzbekistan	*	*	–
Vanuatu	*	*	*
Venezuela	*	–	–
Viet Nam	*	*	*
Yemen	*	*	*
Zambia	–	*	*
Zimbabwe	*	*	*

* = report available; – = report not received; part = partial report; no symbol denotes country not party to CITES

The accuracy of the data provided in CITES annual reports is yet another limitation. In previous IACTS reports it has been noted that alligator skins had been reported as live animals, skin pieces such as back strips, necks, flanks and tails have been reported as whole skins and, in the case of the Zimbabwe annual reports, mixed shipments of belly skins, hornbacks and backskins on multiple permits have been confused to the extent that the reported exports on those permits were overestimated by 450 per cent. Possibly the greatest cause of confusion are ”backskins” that are frequently reported simply as “skins”. Considerable effort has been put in during the compilation of this report to clear up these inconsistencies by close cross matching of imports with the original export permit information and the results are discussed in the various species accounts.

Species accounts

Crocodylus acutus American Crocodile

Two shipments, each of 50 skins from captive-bred animals, were exported from Colombia to France in 2001. This was the first recorded trade in this species since 1989 and was reported by both importer and exporter. No further trade was reported as occurring in 2002. Colombia has two farms registered with CITES for production of this species.

Crocodylus johnsoni Australian Freshwater Crocodile

Figure 1. Australian exports of *Crocodylus johnsoni* 1987 - 2002

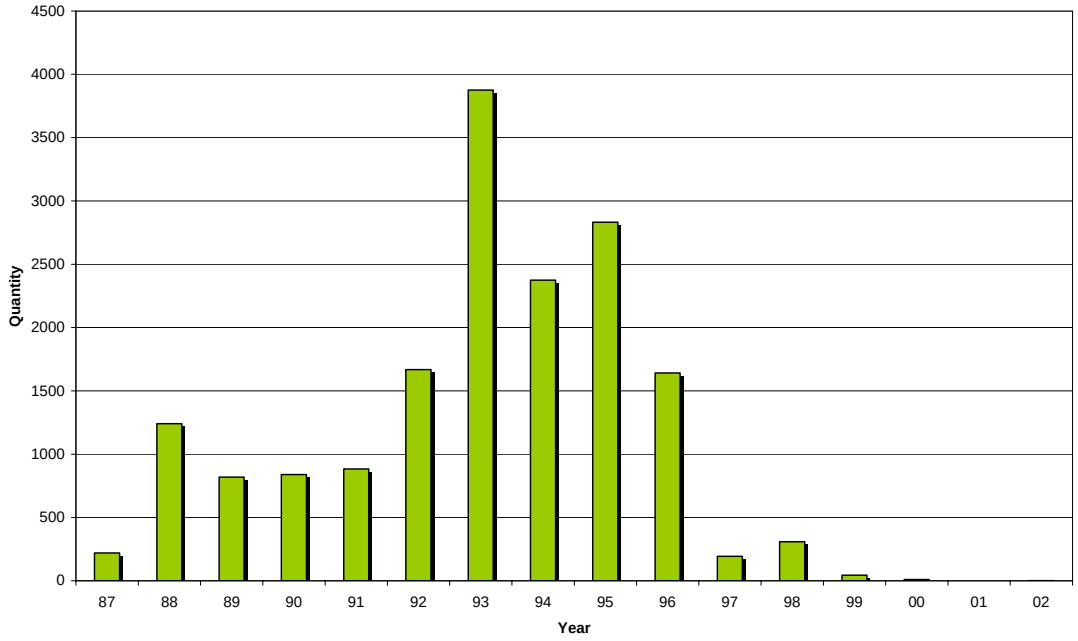


Figure 1 shows that exports from Australia peaked at 3875 in 1993, remained high between 1994 and 1996 but have since fallen to insignificant levels. No trade in skins of this species was reported in 2001 and only two, exported to Japan, in 2002.

Crocodylus moreletii Morelet's Crocodile

Mexico has three captive-breeding operations for this species registered with the CITES Secretariat. Exports began in 1997 with 146 skins going to France, Italy and Panama. This was followed by 193 skins in 1998 and just two in 1999. In 2000 exports increased to 1228 skins and further to 3643 in 2001. This was followed by a decrease to 1588 skins in 2002. Mexico appears to report on the basis of permits issued and reported imports by Italy suggest that the figure for 2001 may have been overstated by about 350 skins. Japan and Italy were the main importers between 2000 and 2002 with lesser quantities going to Germany and Spain.

Crocodylus niloticus Nile Crocodile

The major analysis of the data for this species, based on available permit numbers, that was initiated with the IACTS 2002 report has continued with the aim of eliminating misinterpretation caused by the variety of terms used to describe the skins. For the purposes of this report, bellies, skins and hornbacks have been treated as representing entire skins.

Exporters

1. Range States

Botswana: although Botswana reported exports of over 9000 skins between 1992 and 1994, there were no commercial exports of skins between 1997 and 2000, nor in 2002. South Africa reported importing 152 skins from captive-bred individuals in 2001.

Central African Republic: imports of 961 skins reported by France in 2002 were the result of typographic errors in the French annual report.. Examination of the permit numbers showed that the real exporter was South Africa.

Congo: as previously noted in the IACTS report 2002, small numbers of skins were exported to France during the 1980s but there have been no commercial exports reported since 1989.

Ethiopia: this country is an intermittent exporter. In 2000 a total of 930 skins were exported of which the majority (926) went to Singapore. Only 42 were reported as exports in 2001 (20 to Japan and 22 to the United Kingdom) and another 59 to United Kingdom in 2002; however, the United Kingdom reported no imports in 2001 and 203 in 2002. Ethiopia's crocodile breeding operation is not currently registered with the CITES Secretariat.

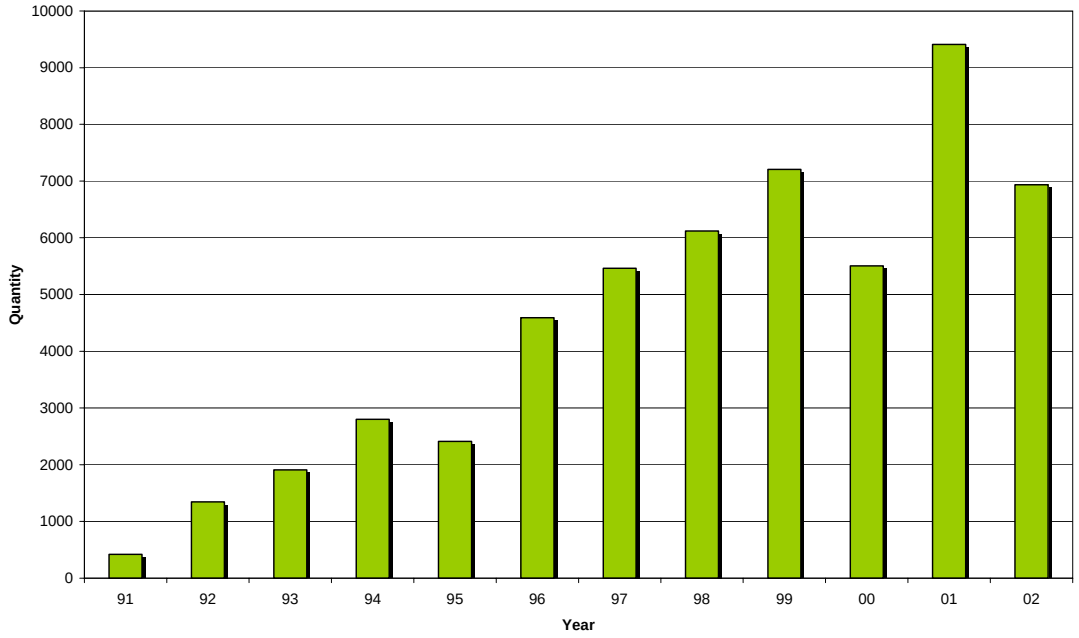
Guinea: as previously noted in IACTS reports, Guinea has not reported exporting skins since 1991, nor have there been any reported imports from that country. Spain reported seizing 100 skins from Guinea in 1995.

Kenya: in 2000 Kenya reported exporting 1500 belly skins to France and 1960 belly skins to Singapore. They also reported exporting 2350 'hornbacks' to Singapore that were reported by the importer as 'back skins'. More recent information from Kenya has confirmed that they were indeed backskins and not hornbacks. For the purposes of this report we have assumed that Kenya is incorrectly reporting back skins as hornbacks. In 2001 Kenya reported exporting 4250 skins - 2350 to Singapore, 400 to Italy and 1500 to France. The shipments to Italy and Singapore corresponded exactly with the imports reported by those countries however France reported importing only 963 skins. Cross matching of export permit numbers would suggest that Kenya reports on the basis of permits issued and that the real quantity involved was that reported by France, giving a total of 3713 skins for the year. In 2002 Kenya reported exporting 2400 skins, the majority (1700) to Singapore.

Liberia: a few commercial exports to France, amounting to almost 1500 skins, were reported between 1981 and 1984 but none since.

Madagascar: in 2000 Madagascar reported exporting 6606 skins of ranched or captive-bred origin, mostly to France and Italy but with 1100 skins going to Singapore. This shipment was not confirmed by the Singapore reports for either 2000 or 2001 so it is likely that the transaction did not take place and the figure has been discounted from the analysis. Madagascar reported exporting 9408 skins in 2001, all but eight of which went to France and Italy. Five hundred of the skins were reported to be of wild origin, in line with the quota for that country. The quota for ranched skins was 7600 so it appears that Madagascar may have exceeded the qota in that year, but import data from France and Italy gives a total of exactly 7600 suggesting that, as in 2000, not all of the reported exports actually occurred. However, reported imports by Italy for 2002 exceed Madagascar's reported exports to that country for that year and an examination of export permit numbers shows that some at least were issued in 2001. In 2002 exports fell to 6936 skins and once again, 500 were reported to be from the wild. Figure 2 shows exports of skins from Madagascar and indicates a steady growth of exports up to 1999, since which time the trade appears to be fluctuating around the annual quota figure of 7600 skins from ranched animals and 500 skins from nuisance animals (2000 and 2001 only).

Figure 2. Exports of *Crocodylus niloticus* skins from Madagascar 1991 - 2002



Malawi: Malawi failed to provide a report for 2000 and the only reported imports were by France - 200 skins of wild origin. In 2001 Malawi reported exporting a total of 1256 skins, all but 92 of which were of farmed origin, mostly to Japan and Mexico. France reported importing a further 160 skins but the Malawi export permit number would suggest the original date of export as being in 2000, thus making the total figure for that year to be 360. No report has been submitted by Malawi for 2002 and the only reported import to date was of 60 skins reported by Singapore. Malawi has already submitted a report for 2003 indicating exports of 301 skins.

Mozambique: In 2000 Mozambique reported exporting 468 skins to Singapore and 250 to the United States of America, all from ranched animals. The annual reports of the importing countries confirmed these amounts. Mozambique reported exporting a further 477 skins to Singapore in 2001; this too was confirmed by the importer. Exports in 2002 fell to 293 with all but one skin going to Spain and the 2003 report has already been received from Mozambique indicating a significant increase in exports in that year.

Namibia: 100 skins were reported as exports in 2000, all reported to be from captive-bred stock. South Africa was the reported destination of all but 50 of these. No further trade has been reported for 2001 or 2002. Namibia has one crocodile ranching operation registered with the CITES Secretariat.

Nigeria: as noted in previous IACTS reports, Italy reported importing 10,304 skins from Nigeria in 1981 and a further nine in 1983. No further commercial shipments have been reported although seizures of items from tourists returning from that country occur regularly.

Somalia: as noted in the IACTS report for 2003, a total of 2189 skins were reported as imports by Italy and Japan in 1980 and 1981 but no further commercial shipments have been reported since.

South Africa: reported exports of 29,698 skins for commercial purposes in 2000, 33,335 in 2001 and 45,755 in 2002 indicating a steady expansion of the trade. Almost all of the skins were reported to be from captive-bred animals. The figure for the most recent year may be adjusted downwards in the future as South Africa reports on the basis of permits issued rather than actual trade. However, each annual report notes which permits have been replaced and the data in the CITES Trade Database are amended accordingly. It should be noted that South Africa is also a major re-exporter of skins produced in Zambia and Zimbabwe.

Sudan: the only recorded commercial trade was in 1992 when Egypt reported importing 7900 skins. However, there have been no records of re-exports of Sudanese crocodile skins by Egypt and it seems likely that they may have actually been skins of Nile monitor, *Varanus niloticus*, and misreported by Egypt.

Togo: as noted in the IACTS report for 2003, no trade in skins has been reported since the early 1980s when 6377 were exported to France between 1982 and 1983.

Uganda: The first trade since 1994 began in 2000 with the reported import of 508 skins by Italy. Of these, eight were from ranched animals, 300 from animals bred in captivity and 200 from the wild. The Uganda report for that year showed exports to Italy of 200 skins from wild animals and 200 from captive-bred animals. In 2001 Uganda reported exporting 900 skins, again to Italy, and again with the trade being confirmed by the importer. Uganda reported that 600 of the skins were from captive-bred animals and 300 of wild origin whereas Italy reported them all as captive-bred. Although Uganda has not yet submitted a report for 2002, the sole importer for the previous two years, Italy, only reported imports of two skins.

United Republic of Tanzania: commercial exports increased steadily between 1997, when Tanzania reported exporting 275 skins, and 2001 when 1498 were reported being exported. Reported exports for 2002 fell to 516 however there is a possibility that the trade was underreported by Tanzania for this year. All skins were from wild-collected animals. In 2000 France was the destination of 52 per cent of the skins, Singapore for 23 per cent, with the remainder going to South Africa and Zimbabwe. The following year Singapore accounted for 74 per cent of the trade with the rest going to France, and in 2002 Singapore was the sole importer. Singapore reported imports of 1135 skins in 2002, including 11 shipments not reported as exports by Tanzania. A further two shipments were reported by Tanzania but

not by Singapore so it is possible the real trade amounted to 1259 skins. It should be noted that Tanzania claims to report actual exports while Singapore reports on the basis of permits issued.

Zambia: no report was submitted by Zambia for 2000 so the figure of 19,906 skins for that year, the majority coming from ranching operations, has been derived from data reported by the importing countries less the shipments known to have been exported by Zambia in 1999. The 2001 report of Zambia showed commercial exports of 20,887 skins mostly (76 per cent) to Singapore, Japan (13 per cent) and South Africa (10 per cent). In 2002, Zambia reported exports of 22,259 skins, 61 per cent going to Singapore, 36 per cent to Japan and only three per cent going to South Africa. Zambia did not report the source of the skins but all of the importing countries reported them as coming from ranching operations.

Zimbabwe: this country continues to be an enigma despite access to data reported by the Zimbabwe CITES Management Authority, importer's data and information kindly provided by the Crocodile Farmers Association of Zimbabwe (CFAZ). Previous IACTS reports have noted problems with teminology, e.g. back skins being recorded as whole skins, and with multiple reporting of permits. Considerable crossmatching of data has been carried out by UNEP-WCMC to try to remove, or reduce the effects of these anomalies, so that the data presented are as realistic as possible. For 2000 the CITES data reported by the importing countries amounted to some 74,567 skins, compared to 82,168 reported by CFAZ. The Zimbabwe CITES annual report only showed 49,970 skins, clearly an underestimate.. In 2001 CFAZ reported exporting 76,656 skins while the CITES annual report only showed 60,200. Importing countries reported 59,096 but didn't include data for Japan whereas the Zimbabwe annual report did include exports to Japan so would appear to have underrecorded the trade once again.

All available data for Zimbabwe's exports of whole skins in 2002 are shown in Table 2 which is annotated to show whether the information was reported by CFAZ, the CITES M.A. or the importing country. Entries where all three agencies have reported the data are shown in bold (in the absence of the 2002 report from Japan the data are highlighted if the data are reported by both CFAZ and the CITES M.A.).

Table 2. Zimbabwe data for 2002

Commodity	Quantity	Importer	Permit no.	CFAZ	CITES M.A.	Importer
belly	**3543**	**SG**	**52376**	**Y**	**Y**	**Y**
hornback	**4**	**SG**	**52376**	**Y**	**Y**	**Y**
belly	**1593**	**FR**	**52377**	**Y**	**Y**	**Y**
belly	577	JP	52378	Y	N	
hornback	110	JP	52392	Y	N	
belly	**4635**	**SG**	**52393**	**Y**	**Y**	**Y**
hornback	**60**	**SG**	**52393**	**Y**	**Y**	**Y**
belly	623	JP	52395	Y	N	
belly	2108	FR	52396	Y	N	Y
belly	**1780**	**SG**	**52397**	**Y**	**Y**	**Y**
hornback	**300**	**SG**	**52397**	**Y**	**Y**	**Y**
belly	**500**	**FR**	**52398**	**Y**	**Y**	**Y**
skin	1100	TH	52399	N	Y	Y
belly	1538	FR	52409	Y	N	Y
belly	2472	SG	52412	Y	N	Y
hornback	50	SG	52412	Y	N	Y
skin	550	TH	52413	N (see note 1)	Y	Y

Commodity	Quantity	Importer	Permit no.	CFAZ	CITES M.A.	Importer
skin	500	FR	52415	N	N	Y
belly	**1630**	**FR**	**52418**	**Y**	**Y**	**Y**
belly	**5555**	**SG**	**52419**	**Y**	**Y**	**Y**
hornback	**430**	**SG**	**52419**	**Y**	**Y**	**Y**
belly	**600**	**JP**	**52420**	**Y**	**Y**	
belly	**520**	**JP**	**52421**	**Y**	**Y**	
hornback	**201**	**TH**	**52427**	**Y**	**Y**	**Y**
hornback	**2000**	**TH**	**52428**	**Y**	**Y**	**Y**
belly	**500**	**FR**	**52430**	**Y**	**Y**	**Y**
belly	500	FR	52431	N (see note 2)	N	N
belly	**2104**	**SG**	**52431**	**Y**	**Y**	**Y**
hornback	**2804**	**SG**	**52431**	**Y**	**Y**	**Y**
belly	3260	SG	52433	Y	N	Y
hornback	85	SG	52433	Y	N	Y
belly	1270	FR	52434	Y	N	N (see note 3)
hornback	1000	SG	52442	Y	N	Y
belly	568	JP	52443	Y	N	
belly	**568**	**JP**	**52444**	**Y**	**Y**	
belly	**1882**	**FR**	**52445**	**Y**	**Y**	**Y**
belly	**2083**	**SG**	**52446**	**Y**	**Y**	**Y**
hornback	**1158**	**SG**	**52446**	**Y**	**Y**	**Y**
belly	38	GB	52452	Y	N	N (see note 4)
Belly	1	US	52464	Y	N	N
belly	**3363**	**SG**	**52465**	**Y**	**Y**	**Y**
hornback	**1442**	**SG**	**52465**	**Y**	**Y**	**Y**
belly	**2189**	**FR**	**52466**	**Y**	**Y**	**Y**
hornback	**2**	**FR**	**52466**	**Y**	**Y**	**Y**
belly	**1578**	**JP**	**52467**	**Y**	**Y**	
belly	200	TH	52482	Y	N	Y
belly	6	GB	52486	Y	N	N (see note 4)
belly	**1431**	**SG**	**52488**	**Y**	**Y**	**Y**
hornback	**154**	**SG**	**52488**	**Y**	**Y**	**Y**
belly	537	FR	52489	Y	N	Y
hornback	**1500**	**SG**	**52499**	**Y**	**Y**	**Y**
hornback	500	SG	52501	Y	Y	N
belly	**595**	**JP**	**52505**	**Y**	**Y**	
belly	**317**	**JP**	**52506**	**Y**	**Y**	
belly	**944**	**SG**	**52507**	**Y**	**Y**	**Y**
hornback	**35**	**SG**	**52507**	**Y**	**Y**	**Y**
belly	1	US	52509	Y	N	N
belly	**1004**	**JP**	**52518**	**Y**	**Y**	
belly	**1369**	**HK**	**52519**	**Y (see note 5)**	**Y**	**Y**
hornback	**630**	**HK**	**52519**	**Y (see note 5)**	**Y**	**Y**
hornback	**450**	**JP**	**52520**	**Y**	**Y**	
skin	295	JP	52542	N	Y	
skin	2626	SG	52543	N	Y	N
skin	496	FR	52544	N	Y	N
skin	500	DK	52545	N	Y	N
hornback	1500	TH	52546	Y	N	N
hornback	**1500**	**TH**	**52547**	**Y**	**Y**	**Y**

Commodity	Quantity	Importer	Permit no.	CFAZ	CITES M.A.	Importer
belly	1500	TH	52548	Y	N	N
belly	14	ZA	52549	Y	N	N
hornback	4	ZA	52549	Y	N	N
belly	**1500**	**FR**	**52550**	**Y**	**Y**	**Y**
belly	**100**	**TH**	**52553**	**Y**	**Y**	**Y**
hornback	**1500**	**TH**	**52553**	**Y**	**Y**	**Y**
belly	**600**	**FR**	**52554**	**Y**	**Y**	**Y**
skin	700	DK	52559	N	Y	N
belly	558	DK	52565	N	Y	N
belly	**500**	**FR**	**53985**	**Y**	**Y**	**Y**
belly	**10**	**HK**	**53986**	**Y**	**Y**	**Y**
hornback	**500**	**US**	**54225**	**Y**	**Y**	**Y**
hornback	500	US	54226	Y	N	Y
hornback	150	US	54289	N	Y	N
belly	50	US	54289	N	Y	N
belly	250	JP	54290	N	Y	N
belly	50	US	54330	Y	N	Y
belly	**980**	**JP**	**54364**	**Y**	**Y**	
belly	562	JP	54409	Y	N	
hornback	500	US	54487	Y	N	Y
hornback	500	US	54715	N	Y (see note 6)	N
hornback	**500**	**US**	**54716**	**Y**	**Y**	**Y**
hornback	**40**	**US**	**96018**	**Y**	**Y**	**Y**
belly	**5**	**US**	**96325**	**Y**	**Y**	**Y**
belly	1	CY	129707	Y	N	Y
belly	1	LB	129729	Y	N	
belly	1	LB	129730	Y	N	
belly	6	IT	132225	Y	N	N
hornback	**50**	**US**	**147962**	**Y**	**Y**	**Y**
belly	43	US	188103	Y	Y	N
belly	82	US	188133	Y	Y	N
belly	34	US	188195	Y	Y	N
hornback	6	SG	188277	Y	N	Y
hornback	2	US	188301	Y	N	N
hornback	200	US	188301	Y	N	N
hornback	**20**	**US**	**188529**	**Y**	**Y**	**Y**
belly	**100**	**US**	**188530**	**Y**	**Y**	**Y**
belly	**40**	**US**	**188531**	**Y**	**Y**	**Y**
belly	**92**	**US**	**188566**	**Y**	**Y**	**Y**
belly	**54**	**US**	**188567**	**Y**	**Y**	**Y**
hornback	**40**	**US**	**188580**	**Y**	**Y**	**Y**
hornback	**77**	**US**	**188581**	**Y**	**Y**	**Y**
belly	3	US	188587	Y	N	Y
belly	**6**	**KR**	**188601**	**Y**	**Y**	**Y**
belly	**33**	**US**	**188676**	**Y**	**Y**	**Y**
belly	**10**	**US**	**188782**	**Y**	**Y**	**Y**
belly	**1**	**KR**	**188786**	**Y**	**Y**	**Y**
belly	**1**	**JP**	**188789**	**Y**	**Y**	
hornback	**1**	**JP**	**188789**	**Y**	**Y**	
belly	50	KR	188859	Y	N	N

Commodity	Quantity	Importer	Permit no.	CFAZ	CITES M.A.	Importer
belly	2	KR	188875	Y	N	N
hornback	1	KR	188875	Y	N	N
hornback	**200**	**US**	**188939**	**Y**	**Y**	**Y**
hornback	2	CN	205051	Y	Y (see note 7)	N
belly	1	CN	205051	Y	Y (see note 7)	N
hornback	5	HK	205052	Y	N	N
hornback	1	HK	205053	Y	N	N
belly	4	HK	205053	Y	N	N

Notes:
1. Reported by CFAZ as 15,000 backskins going to Japan.
2. Duplicate permit number reported by CFAZ. May correspond with #52415.
3. France imported the skins from Switzerland.
4. UK reported re-exports of leather goods citing this number as country of origin permit number so import probably occurred.
5. Importer was Singapore, not Hong Kong.
6. Possibly the skins reported by importer and CFAZ on permit 54487.
7. CITES M.A. reported the destination as Singapore.

Analysis of the data in Table 2 indicates that CFAZ reported exporting 79,932 skins whereas the CITES M.A. only recorded 68,350. The total reported by the importing countries amounted to 69,075 but again the imports by Japan, possibly more than 9000 skins, were not recorded. For the purposes of this study the data from CFAZ has been used for the period 2000-2002. The chief importer, taking just over 50 per cent of the skins was Singapore. Twenty per cent went to France and the other significant importers were Japan, Thailand and the United States of America.

2. Other countries

Brazil: reported exporting 1477 skins in 2000, all but 10 going to the United States of America. In 2001 exports amounted to just 50 skins going to Italy and there was no reported trade for 2002.

Israel: Israel reported exporting 1611 skins to France in 2000, however only 811 of these were confirmed by France and were imported in 2001. In 2001 Israel reported exporting 5298 skins, again to France, but analysis of the French annual report discloses that Israel did not differentiate between skins and back strips and the real quantity exported was 2289 skins. Israel reported exporting 699 skins to France in 2002, a figure confirmed by the importer.

Mauritius: reported exporting 30 skins to Zimbabwe in 2000 and a further 93, all but one to Zimbabwe, in 2001. No report has been received from Mauritius for 2002.

Table 3. Reported trade in *Crocodylus niloticus* skins, 1997-2002

Country	1997	1998	1999	2000	2001	2002
Botswana	337	0	0	0	152	0
Brazil	1	2082	720	1477	50	0
Ethiopia	0	0	0	926	42	203
Israel	0	0	552*	811*	2289*	699
Kenya	1445	400	3350	3460	3713*	2400
Madagascar	5464	6520	7207	5506	9408	6936
Malawi	600*	200*	170	360*	1256	60*
Mauritius	48	59	266	30	93	0
Mozambique	1430	810	813	718	477	293
Namibia	120	53	115	100	0	0
South Africa	13,573	8863	27,641	29,968	33,335	45,755
Uganda	0	0	0	508*	900	2*
U.R.Tanzania	275	777	827	1302	1498	1259*
Zambia	12,238*	14,299	23,448	19,906*	20,887	22,259
Zimbabwe	54,037 (46,456♦)	45,654 (40,720♦)	68,230 (63,064♦)	74,567* (82,168♦)	59,096* (76,657♦)	69,075* (79,932♦)
Total	89,568	79,717	133,339	147,240	150,757	159,798

Key: * Figure derived from import data ♦ Data supplied by CFAZ

Crocodylus novaeguineae novaeguineae New Guinea Crocodile

Table 4 shows the total number of skins of this species exported by the main producers, Indonesia and Papua New Guinea, between 1996 and 2002.

Indonesia: exports in 2000 amounted to 7215 skins, all reported as ranched, and increased to 9946 skins in 2001. This figure increased again in 2002 to 11,951 with 90 per cent for both 2001 and 2002 coming from ranched stock. The main destinations for all three years were Japan and Singapore.

Papua New Guinea: in 2000 Papua New Guinea reported exporting 16,018 skins and a further 20,688 in 2001. In 2002 exports fell slightly to 18,798 skins. The majority of the skins were exported to Japan with smaller quantities being imported by Australia and Singapore. In 2000 wild-collected skins accounted for 83 per cent of the production, increasing to 93 per cent in 2001 and virtually 100 per cent in 2002.

Table 4. Reported trade in *Crocodylus novaeguineae novaeguineae* skins, 1996-2002

Country	1996	1997	1998	1999	2000	2001	2002
Indonesia	0	100	8506	6574	7215	9946	11,951
Papua New Guinea	14,234	32,912	16,985	15,617	16,018	20,688	18,798
Total	14,234	33,012	25,491	22,191	23,233	30,634	30,749

Crocodylus porosus Saltwater Crocodile

Australia: exports of 13,296 skins were reported in 2000 and decreased to 11,849 in 2001. This decline continued in 2002 with only 7205 being reported as exports by Australia. Import country data suggested this last figure should have been higher and it is known that there were severe problems with new computer software used to produce the Australian report. Close examination of both importer and exporter data suggest the real figure to be in the region of 10,423. The destinations were mainly France, Italy, Japan and Singapore with smaller quantities going to Austria, Spain and the United States of America. Sixty-six percent of the skins were from farms and the remainder from ranching operations.

Indonesia: exports of 3172 skins and 1500 backskins to Japan and Singapore were reported in 2000 and 3456 skins to the same destinations in 2000. A further 3277 skins were exported in 2002, again mainly to Japan and Singapore but with smaller quantities going to the Republic of Korea and Italy. Whereas the majority of skins exported in 2000 and 2001 were reported as coming from ranching operations, in 2002 most were reported to be bred in captivity.

Malaysia: exports of 397 skins were reported by Malaysia in 2000, 375 in 2001 and 122 in 2002 however the sole importer, Singapore, reported importing 459 in 2000, 675 in 2001 and 662 in 2002. It would appear that Malaysia currently has difficulty in collecting the available data which may be the result of having three separate CITES Management Authorities responsible for Peninsular Malaysia, Sabah and Sarawak respectively.

Papua New Guinea reported exporting 8336 skins in 2000, a further 10,676 in 2001 and a slightly reduced quantity, 9332, in 2002. The proportion of wild-sourced skins was 35 per cent in 1997 but has remained between 21 per cent and 27 per cent in subsequent years, being 25 per cent in 2002. It is worth noting that the source was reported as captive breeding in 1997, 1998, 1999 and 2002 but as ranching in 2000 and 2001.

Singapore reported commercial exports of 438 skins from registered captive-breeding operations in 2000, 762 in 2001 and 584 in 2001, the main importer being Japan.

Thailand: reported exporting 440 skins to Japan in 1997 and 60 skins to the Republic of Korea in 1999. UNEP-WCMC has recently received Thailand's annual reports covering the period 2000-2002 which show an export of 805 skins to Japan in 2001.

Table 5. Reported trade in *Crocodylus porosus* skins, 1997-2002

Country	1997	1998	1999	2000	2001	2002
Australia	8777	9896	5048	13,296	11,849	10,423
Indonesia	150	3141	1087	3172	3397	3277
Malaysia	120*	320*	320*	559*	675*	662*
Papua New Guinea	8771	10,255	9396	8336	10,676	9332
Singapore	296	211	60	438	762	584
Thailand	440	300	60	0	805	0
Total	18,554	24,123	15,971	25,791	28,164	24,278

Key: * Figure derived from import data

Crocodylus rhombifer Cuban Crocodile

No trade has been reported for this species since 1998.

Crocodylus siamensis Siamese Crocodile

Cambodia: Singapore reported importing 30 skins from Cambodia in 2001, the first reported trade involving that country. The skins were subsequently re-exported to Japan in 2002. It should be noted that Cambodia has six crocodile farms registered with the CITES Secretariat for the commercial production of this species.

Thailand: has 17 crocodile farms registered with the CITES Secretariat for commercial production. Reported exports were 5459 skins in 1999, 2417 in 2000, 4392 in 2001 and 3580 in 2002. The main importers were Japan and the Republic of Korea, although in 2001 2311 skins were reported as being exported to Italy. Other countries to which a few hundred skins have been exported were China, Germany, Hong Kong, Singapore and South Africa.

Crocodylus siamensis/porosus Crocodile Hybrid

No international trade in skins of this hybrid species has been reported since 1995 when Thailand exported 250 to Singapore, however Thailand does export meat and a small quantity of manufactured items annually.

Osteolaemus tetraspis West African Dwarf Crocodile

There is no international trade in skins of this Appendix-I species, however seizures of small numbers of manufactured items, mainly emanating from Nigeria, are reported annually. Unfortunately very few of these seizures are reported to species level so it is impossible to estimate the scale of the problem, or even if it is this species that is involved.

Alligator mississippiensis American Alligator

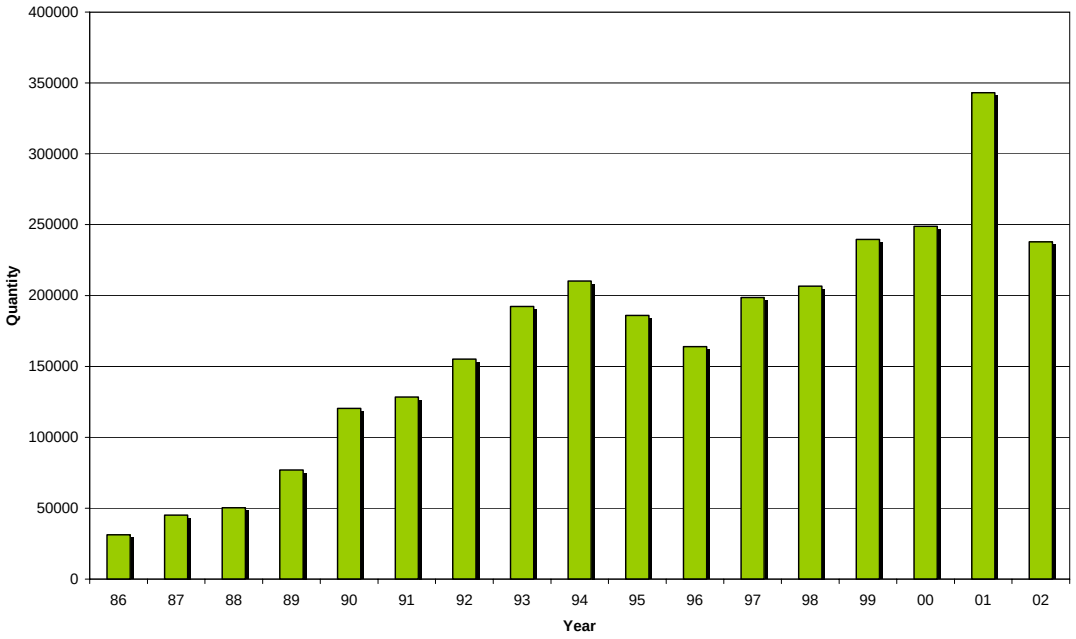
As in the IACTS reports for 1995 onwards, only gross export data reported by the United States of America have been used for this analysis as it has been demonstrated previously that using data reported by importing countries can lead to a significant overestimate of trade volume.

Figure 3 shows reported exports between 1986 and 2002 and indicates a steady increase from around 30,000 skins in 1986 to 210,000 in 1994. Exports then appear to have declined to around 160,000 in 1996 and have then increased steadily to a peak of over 340,000 in 2001. Exports then fell in 2002 to 237,840

Table 6. Exports of *Alligator mississippiensis* reported by USA 1986-2002

1986	1987	1988	1989	1990	1991	1992	1993	1994
31,235	45,177	50,303	76,963	120,419	128,447	155,264	192,286	210,236
1995	1996	1997	1998	1999	2000	2001	2002	
185,929	163,936	198,649	206,620	239,519	248,922	343,110	237,840	

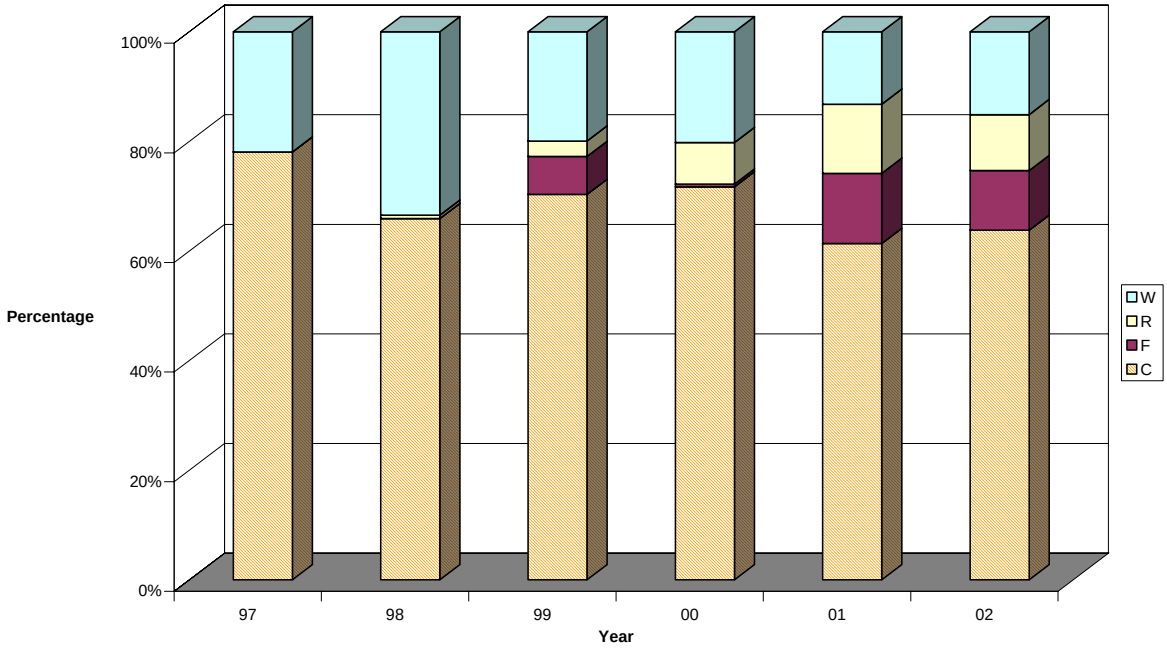
Figure 3. Gross exports of *A. mississippiensis* skins from the United States of America 1986-2001



In 2001 almost 180,000 skins were exported to France while 63,396 went to Italy. Singapore took a further 63,207 and Germany 24,692. These four countries accounted for 95 per cent of the trade in that year. Although exports in 2002 were over 100,000 fewer than in 2001, France continued as the major importer, being the destination of 99,696 skins. Singapore imported a similar number to the previous year, 64,023, while Italy and Germany were the destinations of 42,838 and 23,873 skins respectively. Thus the four countries imported 97 per cent of exports with Singapore becoming proportionally more significant, increasing from 18 to 27 per cent.

It was noted in the IACTS report for 2003 that the compilers of the CITES annual report of the United States of America were probaby using the code 'C' (bred in captivity) for ranched animals rather than the more correct 'R'. Other codes used are 'F' – animals born in captivity, (F1 or subsequent generations) that do not fulfil the definition of 'bred in captivity' in Resolution Conf. 10.16 (Rev.), and 'W' – wild.This appears to have continued in the annual report for 2002 where 64 per cent of exports were reported as coming from captive-bred individuals. A breakdown of the reported source of skins between 1997 and 2002 is shown in Figure 4.

Figure 4. Reported source of alligator skins from the United States of America 1997-2002



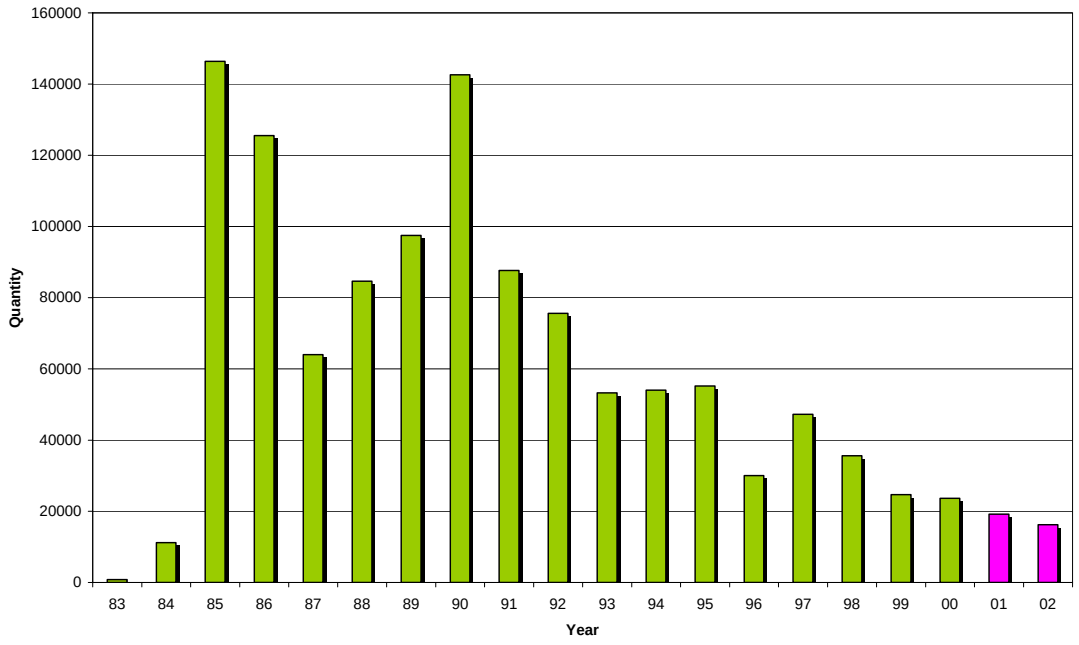
This species is also bred in captivity in Israel who reported exporting 233 skins to France in 2000. Only six skins were exported, again to France, in 2001 and none have been reported subsequently.

Caiman crocodilus crocodilus Spectacled Caiman

Venezuela is the main supplier of skins of this species, almost all from wild-collected animals. Exports peaked in the late 1980s and early 1990s with quantities exceeding 100,000 skins in several years. More recently exports have gradually declined, possibly as a result of the farming of massive numbers of *Caiman crocodilus fuscus* in Colombia, but also because of high taxation of the caiman hunting industry. In 2000 Venezuela reported exports of 23,655, skins mainly to Europe and Japan, but has not submitted annual reports for 2001 and 2002. Data from importing countries give totals of 19,215 in 2001 and 16,220 in 2002 but these will be underestimates as no import information is available from Japan, and Japan's imports from Venezuela show no pattern that would allow a figure to be estimated. The quantity of skins exported annually from Venezuela is shown in Figure 5 below.

Guyana was the supplier of more than 350,000 skins between 1984 and 1989 but exports dwindled during the 1990s and there are no records of skins being exported between 1998 and 2000. However 395 skins were exported in 2001, to Italy and Mexico, and a further 1000 to Panama in 2002. There were also exports from captive-breeding operations in Brazil that amounted to 6520 skins in 2000 but none subsequently. Colombia also exports small quantities amounting to 8000 in 2000 and 5900 in 2001, however Colombia has not yet submitted their report for 2002.

Figure 5. Exports of *Caiman crocodilus crocodilus* skins from Venezuela 1983-2002



Caiman crocodilus fuscus Brown Caiman

As with *C. crocodilus crocodilus*, the history of the trade in skins of *C. crocodilus fuscus* has been well documented in recent IACTS reports and Colombia remains the major exporter with exports increasing from around 70,000 skins in 1990 to over 820,000 in 2000. In 2001, exports dropped by 125,000 to 698,413, however Colombia has not yet submitted a report for 2002 so the figure of 551,313 for that year is based on reports by importing countries and is almost certainly an underestimate because of the lack of data from Japan. Exports from Colombia between 1990 and 2002 are shown in Figure 6.

Details of the countries reportedly exporting this species from 1994 to 2002 are shown in Table 7.

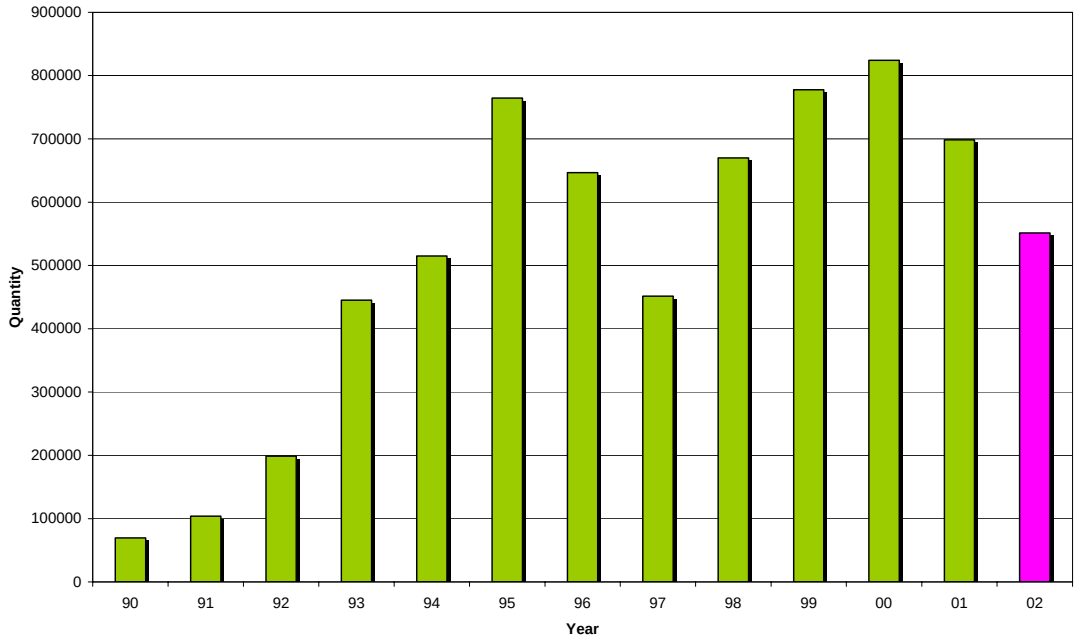
Table 7. Reported trade in *Caiman crocodilus fuscus* skins, 1994-2002

Exporter	1994	1995	1996	1997	1998	1999	2000	2001	2002
Brazil	0	0	0	0	3	0	0	0	0
Colombia	514,792	764,358	646,832	451,307	669,269	777,529	824,303	698,413	551,313*
Costa Rica	0	0	0	0	40	0	0	0	0
Cuba	0	12	302	500	5	2	0	0	0
El Salvador	0	1	0	0	0	0	0	0	0
Guatemala	62	0	0	0	0	0	0	0	0
Honduras	0	2,000	5,656	22,000	18,104	0	0	0	0
Nicaragua	8441	4328	3795	1246	3927	250	6440	0	0
Panama	0	0	0	0	0	10	10,250	11,700	13,298*
Total	523,295	770,609	656,585	475,053	691,348	777,791	840,993	710,113	564,611

Key: * Figure derived from import data.

No exports have been reported from Honduras since 1998 and it seems likely that the reported exports between 1995 and 1997 were in fact re-exports. Nicaraguan production has fluctuated from year to year and exports in 2000 of 6440 went to Panama and Spain. No report was submitted by Nicaragua for 2001 and there were no imports from Nicaragua reported, and no exports of skins were recorded in Nicaragua's 2002 report. Although an important entrepot State, Panama clearly distinguishes between exports and re-exports in its annual report . Exports of 10,250 skins were reported in 2000 and 11,700 in 2001, however in the absence of an annual report from Panama for 2002, the figure for that year has been taken from importers' data.

Figure 6. Exports of *Caiman crocodilus fuscus* from Colombia 1990-2002



Singapore has been the major destination of Colombia's skin production and this trend continued in 2002 with imports of 216,394, a drop of 54,000 over 2001. Most of these skins are then re-exported, particularly to China and the Republic of Korea.

Caiman latirostris Broad-snouted Caiman

The Argentine population of this species was transferred from CITES Appendix I to Appendix II in 1997 and the first skins from ranched animals were reported by Argentina in 2001, a shipment of 88 to Italy. A further 90 skins were exported to Italy in 2002.

Caiman yacare Yacaré

Table 8 shows the fluctuations in exports of *C. yacare* skins from the major producing countries between 1992 and 2002. Trade data for earlier years was presented in IACTS reports 2000 and 2002.

Bolivia: the Bolivian annual report for 2000 contained no records for this species but France reported importing 4116 skins citing an export permit number that would have been issued by Bolivia in that year. For 2001 Bolivia reported exporting 28,170 skins from its quota of 50,000, mainly to Italy but with smaller quantities going to France and Germany. The 2002 Bolivian report has not yet been received by UNEP-WCMC but the major importing countries, Germany, France and Italy show imports of 31018.

Brazil: the United States of America was the destination of nearly all of the 1763 skins exported in 2000 but of only 20 of the 978 skins reported as exports by Brazil in 2001. Italy was the major importer, taking 858. Although Mexico reported importing 2625 skins in 2001 it seems likely that their report was based on permits issued rather than permits used and that the export did not actually take place until 2002. Indeed the total imports reported by Mexico from Brazil in both years combined matches very closely the exports to Mexico reported by Brazil in 2002. In all Brazil reported exports of 6048 skins in 2002, 83

per cent of them to Mexico and most of the remainder to the United States of America, Italy and the Republic of Korea.

Paraguay: regular exports of wild-collected skins have occurred since 1994. Paraguay failed to set a quota in 1999 and no exports took place. For 2000 Paraguay established a quota of 10,000 skins and reported exports of 9750, mostly to Germany (8000) and Spain (1000). No annual report has been received from Paraguay for 2001, nor was a quota established, but Germany, Italy and Mexico report imports of 3792 skins. The quota for 2002 was set at 13,576 skins but again no report has been received from Paraguay. Importing countries, Germany, Italy, Mexico and Spain recorded imports of 8373 skins. It should be noted that the data for 2001 and 2002 may underestimate the trade as no data are available for Japan.

Table 8. Reported trade in *Caiman yacare* skins, 1992-2002

Exporter	1992	1993	1994	1995	1996	1997
Bolivia	0	0	0	0	0	15,961
Brazil	233	7034	43,573	366	536	4961
Paraguay	0	3	5466	17,206	725	503
Total	233	7037	49,039	17,572	1261	21,155

Exporter	1998	1999	2000	2001	2002
Bolivia	1757	0	4116*	28,170	31,018*
Brazil	295	615	1763	978	6048
Paraguay	4445	0	9750	3792*	8373*
Total	6497	615	15,629	32,940	45,439

Key: * Figure derived from import data

Other Species

There has been no reported commerial exports from origin countries between 2000 and 2002 of skins of the following species: *Crocodilus cataphractus, C. intermedius, C. palustris, Alligator sinensis, Melanosuchus niger*, *Paleosuchus palpebrosus*, *P. trigonatus*, *Gavialis gangeticus* or *Tomistoma schlegelii*. The United States of America reported the seizure of one skin of *Crocodylus cataphractus* from France, of unknown origin, in 2000, and Gabon exported one skin, two stuffed specimens and four leather items of that species as personal items to France in 2002.

Trade in Live Animals

As noted in previous IACTS reports, the commercial export of live crocodilians outside of their range States poses a potential threat to the natural biological diversity of the importing countries. The effect these alien animals may have on native populations of crocodilians is inestimable should they establish breeding populations, a serious possibility given suitable environmental conditions and habitat. It has also noted that the continued growth of the crocodilian farming industry would probably mean that such exports would continue for the time being.

Live crocodilians are traded for many reasons. Enthusiasts popularly keep young animals as personal pets; circuses and zoos regularly exhibit such creatures, farms and ranches import animals to supplement their gene pool and some are imported in order to strengthen wild populations. This variety of use, and the limited number of possible purpose codes used in CITES annual reports, means that some conclusions drawn from analysis of CITES data are only tentative. For example, the purpose code 'T' which indicates a commercial transaction would apply equally if the animals were destined for either the pet trade or the farming industry. Below we consider the reported trade on a species by species basis.

Alligator mississippiensis

Israel reported exporting 100 animals to Spain in 2000, another 63 in 2001 and nine in 2002. There were limited exports from the United States of America during the period under study, mostly destined for zoos.

Caiman crocodilus

Guatemala reported exporting 3300 to the United States of America in 2000 when they also reported exporting 50 *C. yacare* to the same destination. No reports have been received from Guatemala subsequently and our analysis suggests that the import of 600 reported by the United States of America in 2001 were two of the shipments exported in 2000.

Guyana reported exporting 8527 animals in 2000, 4161 in 2001 and a further 4289 in 2002, all presumably destined for the pet industry. The main destinations were Europe, Japan and North America.

Suriname regularly exports several hundred wild-caught animals for the pet industry, 258 in 2000 and 94 and 420 in the two subsequent years. As is the case with Guyana, the main destinations have traditionally been Europe, Japan and North America, however in 2002 most of the animals were destined for the Russian Federation.

Venezuela reported exporting 3000 to Thailand and 4500 to Taiwan, Province of China, in 2000, all of ranched stock, but has not submitted any further annual reports. China reported importing 4000 live captive-bred specimens from Thailand in that year but it is not known if they originated in Venezuela and the transaction was not confirmed by the annal reports of Thailand. In 2001 the United States of America reported importing 770 but there have been no further reports of imports from Venezuela subsequently.

Crocodylus mindorensis

In 2002 the Philippines reported exporting six animals to Australia for breeding purposes, their source being listed as 'F'.

Crocodylus moreletii

In 2000 Mexico reported exporting 100 captive-bred animals to Spain and a further 10 to Germany. Four more were reported being exported to Spain in 2001 and five to Canada in 2002.

Crocodylus niloticus

South Africa is the main importer of live specimens of this species, importing from the neighbouring range States notably Botswana, Mozambique and Namibia. Details are shown in Table 9.

Table 9. South Africa's imports of live *Crocodylus niloticus* 1997-2002

	1997	1998	1999	2000	2001	2002
Botswana	1700	2050	3827	3300	3670	720
Mozambique	0	4000	0	49	0	7000
Namibia	800	2150	0	2603	1000	1100
Zimbabwe	0	0	0	0	0	50
Total	2500	8200	3827	5952	4670	8870

Madagascar reported exporting 1260 captive-bred specimens to Morocco in 2000 and Thailand reported importing 100 from Madagascar and 571 from South Africa, also in 2000.

Crocodylus porosus

China was the main destination for this species in 2000 with 65 reported as exports by Malaysia, 210 by Myanmar and 330 by Thailand. In 2001 Singapore reported exporting 299 to Thailand and there has been no further trade reported.

Crocodylus siamensis

China began importing this species from Thailand in 1997 and as shown in Table 10, has probably imported more than 100,000 live specimens in the six-year period to 2002. Imports from Cambodia began in 2000 and over 64,000 were imported over the three-year period to 2002, either directly from Cambodia or via Viet Nam. Cambodia also reported exporting 2000 animals to Thailand in 2000. As noted in the section on skins, Cambodia has six crocodile farms and Thailand 17 registered with the CITES Secretariat for the commercial production of this species

Table 10. China's imports of live *Crocodylus siamensis* 1997-2002

Exporter	1997	1998	1999	2000	2001	2002
Cambodia (direct)	0	0	0	10,000	6272	26,746
Cambodia (viaViet Nam)	0	0	0	3000	10,300	8333
Thailand (direct)	2128	5078	44,622	26,475	12,679	10,148
Thailand (viaViet Nam)	0	0	0	0	500	750
Total	2128	5078	44,622	39,475	29,751	45,977

Palaeosuchus palpebrosus

Guyana has an export quota of 500 live wild specmens annually and reported exporting 441 in 2000, 350 in 2001 and 352 in 2002. The main importing country was the United States of America. with lesser quantities going to Belgium, Canada, Croatia, Germany, Japan, Mexico, Spain, the Republic of Korea and the United Kingdom. The animals all appear to be for the pet industry.

Palaeosuchus trigonatus

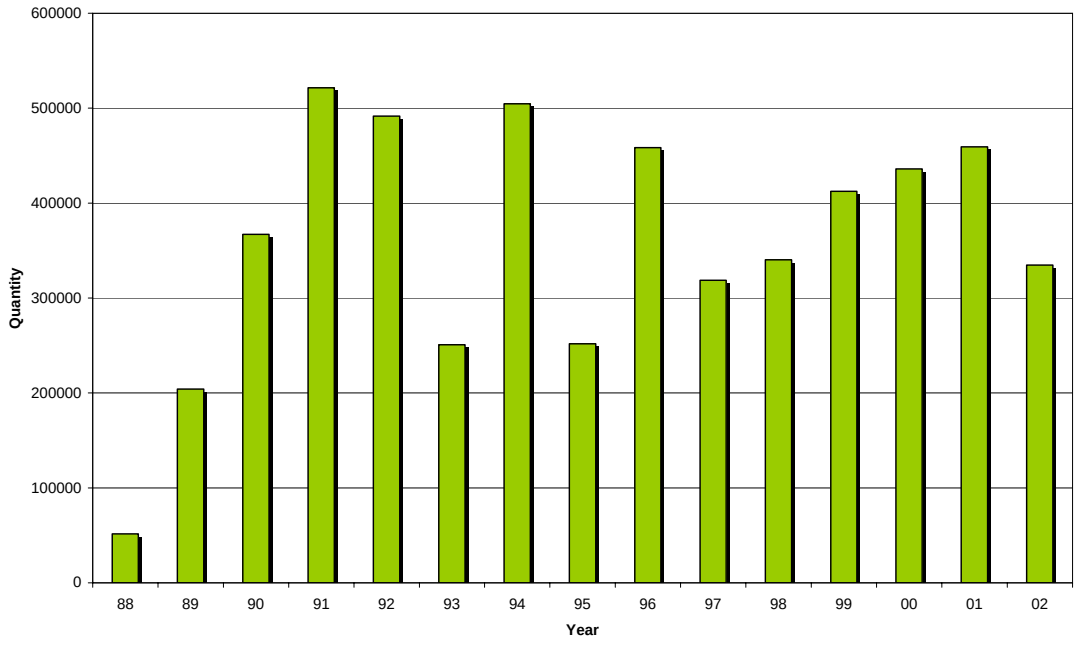
As with *P. palpebrosus*, Guyana has an export quota of 500 live wild specmens annually and reported exports of 288 in 2000, 288 in 2001 and 224 in 2002. The main importing country was the United States of America. with smaller quantities going to Canada, Germany, Japan, Spain and Thailand.

Trade in other by-products

a. Meat

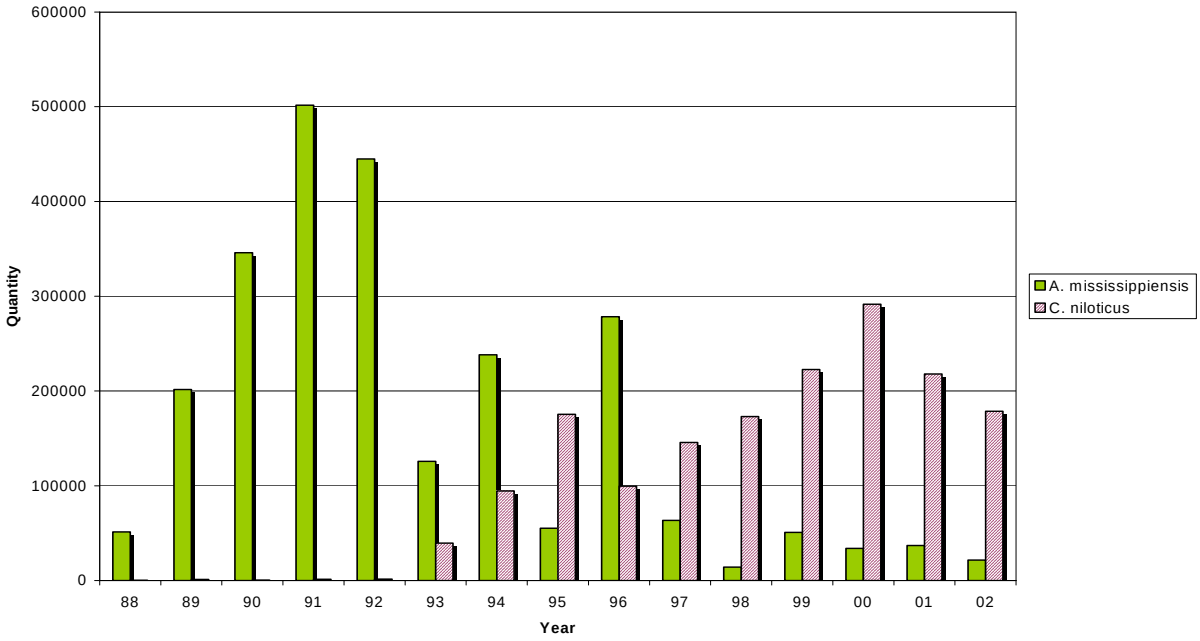
Figure 7 shows total world exports as reported in CITES annual reports from 1988 to 2002 and indicates that over the last 13 years the amount traded globally has averaged almost 400 tonnes yearly and over that period has fluctuated between 250 and 504 tonnes. After a steady year by year increase between 1997 and 2001, trade fell back back in 2002 to the level seen in 1998. Decreases were apparent in all species except for Australian exports of *Crocodylus porosus*. Since 1988 there have been major fluctuations in the countries and species involved. Until 1992 the major supplier was the United States of America exporting *Alligator mississippiensis* meat, particularly to Taiwan, Province of China. Since 1993 however, exports of *Crocodylus niloticus* from South Africa, Zambia and Zimbabwe have increased steadily from less than two tonnes in 1992 to a peak of almost 300 tonnes in 2000. Figure 8 compares the exports from North America with those of Africa.

Figure 7. Global exports of crocodilian meat 1988 – 2002



Exports from Indonesia of meat of both *C. novaeguineae* and *C. porosus* appeared to be increasing up until 2000 however since then the only exports appear to have been 666 kg in 2001 and 628 kg in 2002, both to Hong Kong. Australia's exports of *C. porosus* increased from 53 tonnes in 2000 to 57 tonnes in both 2001 and 2002. Papua New Guinea's exports, which are not usually separated by species increased to 90 tonnes in 2001 but fell back to 45 tonnes in 2002. Thailand is currently the only exporter of *C. siamensis* and reports exports of 13 tonnes in 2000, 56 tonnes in 2001 and 25 tonnes in 2002. Data from importing countries suggest that the figure for 2001 may have been cosiderably less at around 36 tonnes. There have been small exports by Mexico of meat of *C. moreletii* amounting to 432 kg in 2000 and 3550 kg in 2002 but none in 2001. There has apparently been no trade in meat of caiman since 1997.

Figure 8. Comparison of exports of meat of *Alligator mississippiensis* and *Crocodylus niloticus*



b. Teeth

In 2000 Indonesia exported 10,000 *C. novaeguineae* teeth to Singapore, 1500 of which were subsequently re-exported to Japan. However Australia is the most important user of crocodile teeth and between 1999 and 2002 Papua New Guinea reported exporting over 130,000 teeth of *Crocodylus porosus* there. In 2001 and 2002 Singapore imported a total of 30,000 *C. porosus* teeth from Malaysia and in 2002 re-exported them to Australia. Singapore also exported 21,000 *C. porosus* teeth to Australia in 2001. Australia reported exporting 5000 *C. porosus* teeth to Indonesia in 2000 and a further 5000 to the same destination and 16,312 to Papua New Guinea in 2001. Four thousand teeth of Australian origin were reported as re-exports back to Australia by Indonesia in 2000 and a further 2000 in 2002.. Although these two species are the main ones in trade, Zimbabwe reported exporting 200 *C. niloticus* teeth to Mauritius in 2000 and France reported importing 72 from Zimbabwe in 2002.

Declared dollar value

Previous IACTS reports have noted that although CITES annual reports did not usually contain information concerning the value of the trade or of individual shipments, the United States of America had included this information since 1997. It should, however, be made clear that this figure is not necessarily accurate but can used to identify typographic errors in the report, for example where it is suspected that a decimal point has been omitted. There is great fluctuation amongst the reported values as may be expected, as no indication of the size or quality of the skins is provided. Many of the values are nonsensical and may be the result of a typographic error in that field of the report; these have been ignored in the analysis below. Table 11 shows the average declared value per skin (in $US) of exports of *Alligator mississippiensis* and the reported value of re-imports of these skins from Europe, Mexico and Asia after tanning. Although the original value of exports fluctuates from year to year, the value of the re-imports has been considerably higher, as one would expect, between 1997 and 2001. However in 2002 the difference was minimal, only amounting to only $US 7.2 per skin; it is not currently understood why this should be.

Table 11. Reported US dollar value of *Alligator mississippiensis* skins 1997-2002

	1997	1998	1999	2000	2001	2002
Exports from USA	103.7	77.8	97.6	102.9	100.8	101.4
Re-imports by USA	143.0	116.3	140.0	179.4	169.5	108.6

Table 12 compares the reported average value per skin of Colombian *Caiman crocodilus fuscus* imported directly from Colombia and via third countries. The source of re-exported skins varies from year to year but most are imported directly from Colombia or via Singapore. It is interesting to note that the declared value of the direct imports from Colombia increased in both 2001 and 2002, the value of skins from Singapore shows a fairly steady decline.

Table 12. Reported US dollar value of Colombian *Caiman crocodilus fuscus* skins 1997-2002

Exporter/Re-exporter	1997	1998	1999	2000	2001	2002
Colombia	39.3	38.6	39.7	37.4	43.5	50.7
European Community	53.2	81.3	25.2	68.5	24.7	63.8
Mexico	-	-	52.4	43.5	49.1	41.5
Panama	52.0	27.1	-	20.2	59.2	-
Singapore	48.9	48.6	44.7	42.5	43.8	39.9
Switzerland	24.3	-	61.4	28.6	29.5	25.0
Thailand	-	48.6	49.4	45.8	52.2	56.5

Infractions of CITES

As noted in earlier IACTS reports, information on seizures are supposed to be recorded in CITES annual reports but is frequently omitted, perhaps because the relevant authorities involved, i.e. the Customs officers making the seizures and the CITES Management Authorities producing the annual reports seldom liaise closely. Furthermore, the data recorded by Customs rarely allows the goods to be identified at the species level. Most of the seizures that are reported are of tourist items such as dried heads, whole stuffed baby crocodiles, etc. and personal imports of manufactured leather goods. It should be noted that most of the data reflect the diligence of Customs officers inspecting tourist luggage and do not indicate problem areas for the crocodilian industry. In addition, many of the items seized on import are subsequently released to the importer when adequate permits have been obtained.

Between 2000 and 2002 CITES annual reports record the seizure of 129 stuffed crocodiles, 3138 skins, 559 skin pieces, 45 claws, 34 feet and 6914 manufactured items. Of the more significant items, the United States of America reported seizures of 10 back skins of *Crocodylus niloticus* from Zimbabwe and 150 Appendix-I *C. porosus* skins from Singapore in 2000, 2000 skins of *Caiman crocodilus fuscus* from Colombia and a further 399 from Panama in 2001. Spain reported the seizure of 300 skins of *Caiman crocodilus fuscus* from Colombia in 2002. Over the three-year period 37 items of *Osteolaemus tetraspis* were reported as seizures by the United States of America and two by Austria.

Discussion and recommendations

The overall volume of world trade in classic crocodilian skins and caimans from 1996 to 2002 is summarised in Table 13 and based, wherever possible, on country of export data. As in previous years there are uncertainties over the total figures because of the lack of annual report data from certain key countries. We have noted this in previous IACTS reports and this year the main species affected are caiman from South and Central America. There is great uncertainty over the quantity of caiman exported by Bolivia, Colombia, Panama, Paraguay and Venezuela as a result of failure by these countries to submit current annual reports. Normally one can achieve a close estimate of the trade volume by analysis of the data supplied by importing countries however one of the key importers, Japan, has not yet submitted reports for either 2001 or 2002. There was some diversification in the trade in 2001 with two different species entering the market, captive-bred *Crocodylus acutus* from Colombia and *Caiman latirostris* from Argentina. The first exports in recent years of wild *Caiman crocodilus crocodilus* skins from Guyana occurred in 2001 and continued in 2002.

The 38 per cent rise in exports of *Alligator mississippiensis* from the United States of America in 2001 was not sustained the following year and dropped back towards the level seen in the late 1990s. The reason for the rise in 2001 has yet to be determined. Exports of *Crocodylus niloticus* has increased steadily up to 2002 with Madagascar, South Africa, Zambia and Zimbabwe being the main suppliers. *Crocodylus novaeguineae* and *C. porosus* trade appears to be stable and Thailand's exports of *C. siamensis* varies from year to year , appearing to peak in 1999. Trade in caiman skins, particularly *Caiman crocodilus fuscus* from Colombia, peaked in 2000 but has fallen by 30 per cent over the last two years. The reason for this decline is unclear at present but may have been brought about by the massive increase in *Alligator mississippiensis* in 2001. Overall the total number of skins entering international trade in 2001 appears to have been in excess of 1,300,000, just slightly higher than in 2000 but showed an apparent decrease of nearly a quarter of a million skins in 2002. This figure may be adjusted when more annual reports are received. In 2002 classic skins maintained their market share of 42 - 43 per cent achieved in 2001, up from only 32 - 34 per cent of the market in 1999 and 2000.

Table 13. Reported trade in crocodilian skins 1996-2002

Species	1996	1997	1998	1999	2000	2001	2002
Alligator mississippiensis	163,936	198,649	206,620	239,944	249,155	343,116	237,840
Crocodylus acutus	0	0	0	0	0	100	0
C. johnsoni	1641	194	309	45	10	0	2
C. moreletii	20	146	193*	2	1228	3643	1588
C. niloticus	>67,528	89,568	79,717	133,339	147,240	150,757	159,798
C. novaeguineae	14,234	33,012	25,491	22,191	23,233	30,634	30,749
C. porosus	19,651	18,554	24,123	15,971	25,791	28,164	24,278
C. rhombifer	40	0	2	0	0	0	0
C. siamensis	3186	5452	1679	5459	2417	4422	3580
subtotal	270,236	345,575	338,134	416,951	423,283	560,836	457,835

Table 13 continued.

Species	1996	1997	1998	1999	2000	2001	2002
Caiman crocodilus crocodilus	26,346	37,084	35,580	32,571	38,155	25,510*	17,220*
Caiman crocodilus fuscus	656,585	475,053	691,348	777,791	840,993	710,113	564,611*
Caiman latirostris	0	0	0	0	0	88	90
Caiman yacare	1261	21,115	6497	615	15,629	32,940	45,439*
subtotal	684,192	533,252	733,425	810,977	894,777	768,651	627,360
Grand total	954,428	878,827	1,071,559	1,227,928	1,318,060	1,329,487	1,085,195

* = data deficient

There was a significant improvement in one aspect of the reporting of crocodilian trade in 2002 – the submission by Thailand of their annual reports for the period 2000-2002. However this was offset by the absence of a significant number of reports from many of the South and Central American countries and Japan. Switzerland continues to report overall totals rather than on a shipment by shipment basis but are no longer a major direct importer of skins.

We have previously commented upon the importance of export permit numbers for accurate cross matching of shipments. Very few countries have adopted the recommended permit number format that identifies the year of permit issuance (see CITES Resolution Conf. 10.2) and even so, many of the importing countries fail to report the parts of the permit number that identify the exporter and the specific year in which the permit was issued and thus make analysis more difficult than it need be..

Standardisation of the terminology used to describe parts of crocodilian skins has been recommended in the past in order to reduce the danger of double-counting and subsequent overestimation of trade levels. There has been gradual improvement in this area but we continue to recommend this standardisation. Similarly, we urge CITES Parties to pay greater attention to accurate reporting of the source of the material and suggest, for crocodilians, it should be possible for analytical purposes, to combine codes C, D and F to cover farming operations, and O and U to cover unknown source.

We continue to recommend that countries with large-scale farming operations should establish strict monitoring and management programmes for their wild crocodilian populations. Although captive-breeding can alleviate pressure on wild populations it can also remove the incentive to preserve them.

The following recommendations made in previous IACTS reports remain valid:

- It is **recommended** that *the CITES Secretariat and the Chairman of the Standing Committee should contact Parties in June of each year to remind them of their reporting obligations under Article XIII, paragraphs 6 and 7.*

- UNEP-WCMC **recommends** that *Parties adopt the recommendations of Resolution Conf. 10.2 concerning the format of permit numbers as soon as possible*.

- UNEP-WCMC would **recommend** that *wherever possible, Parties report the actual quantities of skins being traded*.

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