

CROCODILE SPECIALIST GROUP

NEWSLETTER

VOLUME 18 No. 1 ■ January 1999 - March 1999



IUCN - World Conservation Union ■ Species Survival Commission

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IUCN--The World Conservation Union
Species Survival Commission

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COVER PHOTO: Chinese alligator, *Alligator
sinensis*, adult breeding stock, Anhui Research
Center of Chinese Alligator Reproduction, China.
T. Weigman photo.

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EDITORIAL

**A NEW CSG INITIATIVE IN SUSTAINABLE
USE AND MARKET DRIVEN
CONSERVATION.** The panel discussion on trade
issues held at the 14th Working Meeting of the

CSG in Singapore opened up new ground for the
activities of the CSG. Following on from
initiatives raised at the Steering Committee
meeting earlier the group decided to pursue the
options for becoming more directly active in
promoting crocodilian conservation in the
commercial marketplace.

During the Trade meeting many members rose
to speak to this need and a very wide diversity of
possibilities and views were aired. In response the
CSG Chairman established a working group to
address this issue more in depth.

That working group held its first meeting on
the afternoon of Friday 17 July following official
closure of the meeting and discussed three
background documents which all approached the
topic with a similar perspective. Common
elements in this discussion were that the CSG
could and should try to adopt a more active posture
in promoting the conservation benefits of
sustainable use of crocodilians.

To do so could benefit both the conservation
programs which have become based on economic
benefits of trade and the CSG itself through the
potentially large fundraising possibilities that are
associated with commercial promotion and
endorsement. At the same time the bulk of
members and the task force recognized that there
are numerous pitfalls and complexities to such a
direction. Detailed discussions were begun on the
very diverse ways in which the Group could be
active. An important topic of conversation was
how to protect the CSG from unscrupulous
exploitation by commercial elements. A core
element in the discussion is the development of
effective promotional activities and how this might
be achieved.

The working group has continued its
discussions through early 1999 and focused on a
number of preliminary activities. Among these are
the role CSG might play in collection and
distribution of trade information; feasibility of a
global program to counter negative publicity for
crocodilian products; trade endorsements and
'green' labeling possibilities; potential for large
scale funding from international donor sources;
the linkage of funds obtained from commercial
activities with the conservation of non-commercial
species and an analysis of the possible detriments
to the proposed program.

In its preliminary conclusions the working
group has agreed to try to evaluate the costs and
benefits of an active program of promotion by
CSG as well as the form such a program might

take. A work plan to achieve this is underway and the working Group will be reporting back to the Chairman, the Steering Committee, and eventually to the general membership, with their conclusions and proposals.— Perran Ross, *Editor and Executive Officer, CSG.*

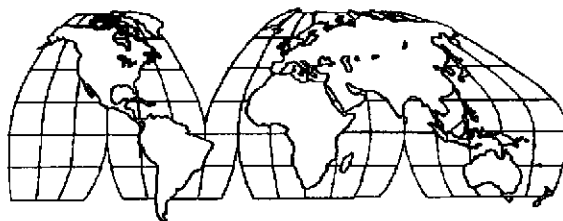
NEWSLETTER SUBSCRIPTION RENEWAL. You will all have noticed the 'get tough' policy on newsletter renewals that arrived on the yellow sheet with your last Newsletter. Respond! or this is your last newsletter (unless you are a patron or a CSG member). This was in part necessary to purge our mail list of uninterested, deceased, jailed and other missing subscribers but also in partial response to the funding crisis discussed in the last issue. We just cannot afford to provide the Newsletter to people who do not actively want it.

The response so far has been pretty good. Mailing of the Newsletter was delayed until the first week of March and by 1 April I have received 100 responses (from 978 sent out). Of these 36 sent \$40, 3 sent a larger donation (\$100-\$240) and 61 asked for a renewal without a donation. This overall rate of return is higher than previous subscription renewals. Records from 1992-1997 indicate between 45 and 70 returns in the first month with returns peaking about 3 months after the initial appeal, usually after the next Newsletter and reminder go out (*note in proof 156 responses at 15 April*). The ratio of \$40 donors to free renewals (36%) is a little low. It has run around 50% in previous years, but this might be expected in the current conditions of 'respond or else'.

I have automatically renewed all CSG members (365), all patrons and donors, a selection of libraries, international institutions and other 'courtesy' subscriptions and recent contributors to the Newsletter, so that the mailing list for this issue stands at 698. I will be sending a postcard reminder to all subscribers not already responded or renewed (easy with the computer data base, and quite cheap). If you are member or donor your subscription has been renewed, but I would still love to hear from you regarding current address, and a donation if you can manage it. If you hear of others complaining, 'where's my newsletter' all it takes is one quick response each year and subscriptions will be renewed. I think at the end of this exercise we will have a trim mailing list that really gets the Newsletter to crocodilian specialists and conservation interests, and we will have some useful additional revenue to support the

newsletter production. Thanks to all of you who have already responded. — Perran Ross, *Executive Officer CSG.*

AREA REPORTS



Africa

South Africa

NEW WATER SCHEME TO PROTECT PEOPLE FROM CROCS. A water supply scheme to address the plight of women facing crocodile attacks when fetching water from the Nyalazi River in KwaZulu-Natal was officially opened by Water Affairs and Forestry Minister Kader Asmal in February. The 1.3 million Rand project, a mobile water treatment plant, was set up near the river, and pumps water to five reservoirs in the Nkundusi area near Mtubatuba. In a statement in Pretoria the Water Affairs and Forestry Department said at least 16 people, mostly women, had been killed by crocodiles while collecting water from the Nyalazi River over the past 15 years.

Mr. Asmal said he was shocked and angry upon learning of the plight of the Nkundusi community, describing the situation as inhumane and morally wrong. The community started receiving purified water as a result of the scheme by the end of November 1997. The department was also busy setting up a R73 million community water supply scheme at Hluhluwe. On completion, it would provide water to about 160,000 people, including the Nkundusi community. — *From AFRICAN NATIONAL CONGRESS DAILY BRIEFING, 19 February 1999, submitted by Kenney Krysko Wildlife Ecology and Conservation and Florida Museum of Natural History Division of Herpetology, University of Florida, Gainesville FL USA.*

ST. LUCIA CROCS UNDER THREAT. CSG member Dr. Alison Leslie has warned that alien plants could lead to the demise of Zululand's crocodile population. Dr. Leslie reported the results of her three year study of crocodiles to the KwaZulu-Natal (KZN) Nature Conservation Services earlier this year. The alien plant *Chromolaena* shades nesting sites influencing incubation temperature of crocodile nests. This results in cooler nests with reduced hatch success and more female hatchlings. *Chromolaena's* extensive root system also gets in the way of the female crocodiles nest construction. She was accompanied by Australian crocodile biologist Mark Read, who gave a presentation on crocodile management issues in Australia noting the similarity of crocodile-human conflicts in Australia and South Africa.

Dr. Leslie's research, which was initially reported in the 13th Working Meeting Proceedings, has revealed that St. Lucia crocodiles eat primarily fish. She estimates that the Lake system of 350 square km has about 800 mature male and female crocodiles. The Nile crocodile faces a bleak future in South Africa outside protected areas. Habitat destruction, poaching, incompatibility with livestock production and competition with people for resources adversely affects existing populations. Even in protected areas the crocs face problems such as the mysterious die-off in the Olifants river reported by D. G. J. Swanepoel.

Crocodiles are a keystone species in the St. Lucia system because they control the fish population. Crocodiles also clean up the system, for instance removing dead hippos. Proposals to manage the crocodile population include controlling fish numbers and angling and controlling poaching. The issue of crocodiles has become prominent following the recent death of a teenager in the Umfolozi river. Removing crocodiles from the system is not the solution as another large male will quickly fill the niche. The solution is education. Dr. Leslie believes the incident, which occurred during the day, was probably a territorial attack. Dr. Leslie is now at University of Stellenbosch where she is conducting studies on effects of contaminants on crocodile eggs.

In response to her report KZN Conservation Services (formerly Natal Parks Board) have initiated alien plant removal programs and reduced egg collection. They have closed a hiking trail that led through some breeding areas and intend to increase game guard patrols. In addition, a Nile crocodile Action Plan Group has

been established within the Parks Service to continue management and conservation activities for crocodiles. — from *THE ZULULAND OBSERVER* 29 January 1999 and correspondence submitted by Alison Leslie, Stellenbosch University, P.O. Box 6084 Uniedal, 7612, Stellenbosch, South Africa.

Tanzania

CSG ADVISORY MISSION TO TANZANIA. In October 1998, Dr. Richard Fergusson, CSG Vice Chairman for Africa, visited Tanzania to provide technical assistance to the Wildlife Division of the Ministry of Natural Resources and Tourism, Tanzania's CITES Management Authority. The technical visit was funded by the German Aid Mission GTZ following discussions between the CSG, the Tanzanian Authority, CITES Secretariat and GTZ earlier in the year.

During his visit, Richard presented a brief seminar of crocodilian management, focussing specifically on the issues raised by the need to control problem crocodiles near human habitation centers, and describing the various solutions adopted by other countries with this problem. A general background to the management of wild harvests was also presented and discussed. From these discussions Dr. Ferguson was able to advise on the format and content of a draft proposal in preparation by Tanzania to propose downlisting its Nile crocodile population to Appendix II of CITES.

A series of new regulations and management structures have been proposed to address the need to harvest wild crocodiles in Tanzania. Following examples of successful wild harvest in other countries such as Papua New Guinea, USA and Venezuela, a series of control measures are proposed. These include restricting problem crocodile harvest from the wild to areas of human occupation and excluding National Parks and Game Reserves from this program; minimum size limits (3m length or 60 cm belly width); restricted seasons (July-September); and an area by area quota system based on surveys in each area and designating a small proportion of the largest crocs for harvest. This will be supported by a surveillance and record keeping system to identify critical areas where crocs are a problem and a program of supervision, skin tagging and harvest reporting.

This draft program is still under development by the Wildlife Division. Crocodile ranching in Tanzania remains poorly developed and there are still difficulties to overcome regarding channeling benefits of crocodile use to local communities and developing alternatives to crocodile removal to minimize human and stock loss and damage to fishing nets. However, with continuing assistance from CSG members, the Wildlife Division hopes to refine the new program, integrate it into the existing crocodile and wildlife management policy and present a proposal incorporating these elements to the next CITES COP. - *from CITES reports and draft proposal, Tanzania Wildlife Division, Dar as Salaam, Tanzania & Richard Fergusson, PO box HG Highlands, Harare, Zimbabwe.*

East Asia, Oceania & Australia

Australia

IUCN AND AUSSIES TUSSLE OVER KAKADU MINING. IUCN Director General David McDowell has rejected claims by Australia's Environment Minister, Senator Robert Hill, that Australia is being singled out over the issue of commercial mining activities in the Kakadu World Heritage site in Northern Territory.

Kakadu National Park is inscribed on the World Heritage List for both natural and cultural values. A central finding of the 1998 UNESCO Commission, in which IUCN participated as a technical advisory body, was that actual and potential threats exist to both the natural and cultural values of Kakadu, primarily arising from the proposal to develop the Jabiluka uranium mine.

The impacts of mining and other activities in or around World Heritage sites have been of concern to the IUCN membership and to many State Parties to the World heritage Convention for many years. IUCN has frequently taken a stand in relation to mining proposals – as it has with other development activities – where they are likely to result in damaging impact on the values for which the site was inscribed. A recent IUCN report provided an objective statistical record of human impacts on sites. In previous action the UNESCO

World Heritage Committee placed Yellowstone Park, USA on the list of World Heritage sites in danger due to threats from a proposed gold mine adjacent to the Park. The US government subsequently stopped the development.

Kakadu includes extensive wetland systems supporting populations of saltwater and Johnson's crocodile. – *adapted from IUCN Press release 21 January 1999. Submitted by Rene Honegger, Zoo Zurich, Zurichbergstrasse 221, CH-8044, Switzerland.*

Vietnam

SIAMESE CROCODILE INTRODUCTION PROPOSED. Information received from Mr. Phan Viet Lam, Chief Curator of the Saigon Zoo, indicates that a project to re-introduce Siamese crocodiles to the coastal district of Can Gio near Ho Chi Minh city and to the Nam Cat Tien National Park is under development. Siamese crocodiles, known as freshwater crocodiles in Vietnam to differentiate them from *Crocodylus porosus*, are thought to have been extirpated from these areas.

The project will benefit from genetic analyses proposed by Jacob Gratten of University of Queensland that will be able to use microsatellite DNA analysis to identify any hybrid Cuban crocodile or saltwater crocodile in the proposed release stock. Joseph visited Vietnam in March to obtain tissue specimens. Tissue was collected from five specimens of pure Vietnamese *C. siamensis* stock originally obtained from Nam Cat Tien area and presently held in private facility of Mr. Pham Van Muoi in Ho Chi Minh City. A collaborative project is now under discussion to ensure that animals re-introduced from the wild are the purest available stock. – *From correspondence, Jacob Gratten, Department of Zoology, University of Queensland, Australia & Phan Viet Lam, Chief Curator, Saigon Zoo, Ho Chi Minh City, Vietnam.*

China

ALLIGATOR SINENSIS IN THE PET TRADE. At the 14th Working Meeting of the Crocodile Specialist Group in Singapore, 1998, economic and management strategies to assist Anhui Regional Centre for Chinese Alligator Research (ARCCAR) to preserve the remaining habitat of the critically

endangered Chinese alligator (*Alligator sinensis*) were discussed. The possibility of selling or auctioning some of the extensive captive population of *A. sinensis* into the private and pet market was raised, which was part of China's proposal at the 1992 CITES meeting in Kyoto, where registration of the farm was approved.

The direct sale by ARCCAR of captive-bred *A. sinensis* is already under way. A total of 61 hatchlings of 22-23 cm total length have so far been sold to Rene Hedegaard (Director, Danish Crocodile Exhibition) and Tim Wiegmann (Chairman, AG Krokodile) and a larger number of these animals are now kept by members of the German herpetoculture group "AG Krokodile" – a special interest branch of the Deutschen Gesellschaft für Herpetologie und Terrarienkunde (DGHT).

Prices paid were US\$20 per centimeter (approx. US\$450 per hatchling) plus a 7% resource management and consulting service fee. This has provided income for ARCCAR of over US\$29,000. Whilst illegally obtained *A. sinensis* are still reported available on the black market, ARCCAR's positive action should see the large demand for captive alligators satisfied by cheaper, legally produced animals with profits going back into wild alligator conservation.

AG Krokodile is starting to promote the idea of Chinese alligator leather products as a means of helping raise funds for the wild Chinese alligator populations. However, there still seems to be a general lack of awareness by the public in Germany about the concept of sustainable use, despite many excellent German publications and symposia on the subject. To address this problem, AG Krokodile is planning an exhibition on sustainable use of crocodile leather, together with a series of posters clearly explaining the concept and its role in conservation.

ARCCAR has also taken other steps to raise funds, such as opening the Anhui center to visiting tourists and providing animal exhibits, a petting zoo and souvenir shop. Alligator meat is offered for sale (a few grams of dried meat is reported to cost 20 yuan) together with some leather products (mainly snake) and stuffed hatchling alligators. The potential for "ecotourism" exists, and perhaps some actions will be taken to ensure foreign package tours to the region make their way to Anhui to see the real Chinese dragon. Putting a value on the remaining wild populations and initiating active conservation measures is clearly the highest conservation priority.

These commercial initiatives should be a step in the right direction for the alligators and people in Anhui, and should ensure funding for alligator conservation is available. Information circulating on the Internet suggests that other parties in China are also now permitted to sell *A. sinensis*. Xiaoshan Import/Export Corp and Hangzhou Live Animal Co. both have permits to sell a few second generation animals each year, age unknown, for up to US\$3000/pair. These probably come from Anhui. It is a critical time for conservation of the Chinese alligator, and CSG monitoring of the pet trade may be an important way of helping China deal with this market. -- Adam Britton, *Research Officer, Wildlife Management International, PO Box 530, Darwin, Australia* <abritton@crocodilian.com> & Tim Wiegmann, *Chairman, AG Krokodile, Grossensieker Weg 121, 32584 Loehne, Germany* crocodiles@owl-online.de.



Juvenile Chinese alligators at ARCCAR. T. Wiegman photo.

BIGGEST CROCODILE ZOO IN HAINAN PROVINCE, CHINA. China and Thailand jointly built this biggest crocodile zoo in China called Nan Tai Crocodile Zoo. The zoo has about 358 acres of land which houses more than 3,500 crocodiles. One of them weighs 1.6 ton, claims to be the second biggest crocodile on earth. The zoo is 20 km west of Haikou City, and located on two big man-made lakes, there is an island in the middle of the lake covered with palm trees, golden beaches along the lakes, the lake is surrounded by concrete slope and wire fence.

Chief manager of the zoo, Mr. Chuanye Li said the zoo was invested by Haiquan Yang of Thailand and China, the zoo is to breed and raise crocodiles, manufacture crocodile products and serve as a tourist attraction. All crocodiles were imported from Thailand at the end of last year. 800 of them are female, 2600 are young crocodiles, a few dozens of them are valuable salt water crocodiles which are kept in a special pond. So far approximately 120 million RMB, equivalent to 15 million USD are invested in this farm. Other animals like elephants, tigers would be brought to the zoo in the future. -- Chu Chien Huang, *China* & Bradley Huang, *Atlanta, GA USA*.

Indonesia

SKEPTICISM EXPRESSED ON *TOMISTOMA* ATTACK REPORT. What you have written about the *Tomistoma* attack in Borneo (CSG NEWSLETTER Vol. 17 No. 4.) seems most unlikely. Large *Tomistoma* are reported to occasionally take monkeys and wild pigs, but rarely humans. The only thing I could think of, if there is any truth in the story at all, is that it was a *C. porosus* attack. But a "joint venture" of several individuals is also highly unusual. Either it was one of the famous 'man-eaters' that attacked several people (similar cases have been reported from Sarawak and Sri Lanka, for instance) or one person was attacked and others tried to help him. But six casualties! this is very strange story! Additional corroborating information needs to be obtained on this report and perhaps one should write an article in defense of the poor crocs in Indonesia for one of the major newspapers.

Regarding the distribution of *Tomistoma* in Indonesia, I know of no evidence for its occurrence in Sulawesi. However, there is some anecdotal information that it might have occurred on at least

one of the bigger islands between Java and Sumatra. I will be 'on watch' for further information. -- Prof. Dr. W.R. Erdelen, *Visiting Professor, Dept. of Biology, Institute of Technology, Jl. Ganesha 10, Bandung 40132 Indonesia, E-mail: <erdelen@melsa.net.id>*

Thailand

SOME THOUGHTS ON REINTRODUCTION OF SIAMESE CROCODILES TO THAILAND. The latest issue of the CSG Newsletter provided a good stimulus to contemplate the prospects for reintroduction of the Siamese crocodile *Crocodylus siamensis* in Thailand. Most readers will be aware of the species' deplorable present situation, where only single animals at a few locations represent the species in the wild in Thailand. What a difference a few decades can make. As recently as 1925, Hugh Smith complained in a report on the aquatic resources of Siam of the number of crocodiles impacting freshwater fisheries. He noted that the local people only occasionally caught one for meat, and wondered whether some use could be made of these animals by turning them into leather as had been done elsewhere. His suggestion did not fall on deaf ears, and within decades some populations had been exterminated and the remainder were in steep decline. This prompted one astute businessman to set up a crocodile farm, for which wild animals were collected alive. Buying every captured crocodile in the country and beyond at premium price built up a large founder population with a good genetic base and reduced the chances that competing farms would be established. Consequently, every known wild crocodile was captured and sold, clearly demonstrating Perran Ross's point that captive breeding unlinks the commercial process from the conservation benefits. This risk is relevant to the Cambodian proposal to register captive breeding facilities.

Reintroduction to the wild of Siamese crocodiles to Thailand would reverse this process and return a prestigious and useful species to its appropriate place in the ecosystem, with subsequent possibilities for grass-roots ranching operations, wildlife tours and other possible benefits. But how realistic are the chances of a successful reintroduction? Any reintroduction program hinges on three critical issues: the availability of suitable animals for release, the presence of suitable habitat to release them in to,

and secure protection once released. The first issue is the easiest: a breeding program of pure *C. siamensis* has been maintained at the Samut Prakarn Crocodile Farm and Zoo, and the Crocodile Management Association of Thailand has publicly committed itself to make one percent of hatchlings raised available for re-introduction programs (CSG Newsletter 11 (1):9).

Habitat suitable to support a viable population of Siamese crocodiles is a greater problem. Thailand has a commendable system of protected areas that cover about 12% of the country, but large rivers and wetlands are underrepresented. Most rivers and large wetlands in Thailand are intensively used for fishing, transport and sewage disposal and are closely regulated and managed for irrigation water supply and flood mitigation. Nevertheless, some potential sites remain. Bung Boraped is an artificial shallow, densely vegetated lake of about 50 square km, where one of the last wild populations existed. However, it is intensively used and encroached upon by the people living all around its margin, and full of abandoned monofilament gill nets. Thale Noi is a similar wetland with similar constraints. The Yom river in Mae Yom National park in northern Thailand is another site formerly famous for its crocodiles, and its 42 km of protected river is sufficiently large, undeveloped and well-protected to support a reintroduced population. Unfortunately, this whole river section and further upstream is slated for flooding by the planned Kaeng Sua Ten dam and reservoir. The upper Khwae Yai, flowing inside Thung Yai Naresuan wildlife sanctuary in western Thailand, offers another possible site of reintroduction, and in this case the 100 meter high Srinagarind dam would effectively prevent crocodiles moving downriver into populated areas. Dispersal of crocodiles into the reservoir, where they would come in contact with the scattered fishermen, would be a potential problem.

The Mekong river forms probably the largest potential reintroduction site, but that size and the numerous settlements along its banks makes it much more difficult to prevent illegal hunting, a challenge that is complicated even further by the fact that the north bank of the river belongs to the Lao P.D.R.. Probably the best reintroduction program would be to augment the few animals thought to remain in the swamp in Ang Runai wildlife sanctuary and in the creek in Pang Sida National Park. The security of the crocs, once released, poses the greatest challenge. Historical accounts by European visitors to Siam marvel at

the apparently peaceful coexistence of humans and freshwater crocodiles. But as crocodiles disappeared from people's immediate surroundings, so did this experience and tolerance. When a few juvenile crocs escaped from a farm in central Thailand during the great flood of 1995, every floating object in the floodwaters anywhere in the country instantly became a lurking killer, and the authorities organized gangs to patrol the river in Bangkok, hundreds of km downstream, with a mandate to shoot any crocodile. These teams were named 'Kraitong gangs' in the popular press, honoring a legendary crocodile-killer. In such a social climate, the idea of purposely releasing crocodiles is likely to meet a public outcry. Yet as long as the crocodiles can not directly reach human settlements, like the individual crocodiles in Ang Runai and Pang Sida, people remain unperturbed, and some even retain pride in the survival of another part of their country's natural heritage, a species even named after it in both English and Latin languages.

In conclusion, re-establishment of the Siamese crocodile in viable populations in the wild represents a serious challenge, but not an impossible one. The animals are available, suitable habitat is available in several separate places, and with an appropriate public relations campaign to generate public pride in the survival of the species and reassurance that the animals are safely confined to a protected area and represent no threat to anyone. It could be done. -- Peter Paul van Dijk, *Biology Department, Science Faculty, Chula longkorn University, Bangkok 10330, Thailand; email <ppvvd@mail.sc.chula.ac.th>.*

West Asia

Iran

A REPORT ON MUGGER FEEDING IN IRAN. During several trips to mugger (*C. palustris*) habitat in the Kaju, Sarbaz and Bahukalat rivers in far eastern Iran I collected fecal samples which were analyzed to reveal feeding habits. These samples and also observations and information from local people give a general idea of the foods used by mugger. One fecal sample was completely composed of beetle elytra and legs. Another contained remains of partially digested fish with the softer parts digested and the hard bony parts remaining. Other samples had the appearance of dry mud and

no prey items could be distinguished. The most important fishes in the habitat are *Cyprinus* and *Periophthalmus*. On one occasion a mugger of about 1.7 m was observed with a 70 cm carp which it brought to a basking site prior to eating it (see photo below). – Asghar Mobaraki, Dept. of Environment, P.O. Box 5181-15875, Tehran, Iran.



Mugger, *C. palustris* with prey (Carp *Cyprinus* sp.). A. Mobaraki Photo.

India

CROCODILE GODS IN GUDJARAT. Harry Andrews provided the following photos of crocodile images worshiped by tribal peoples as 'Mogra-Dev' in the Indian State of Gudjarat. [See CSG Newsletter Vol. 14 (1):6]



Latin America

Venezuela

CONSERVATION INCENTIVES OF CAIMAN HARVEST. In Venezuela, the harvest of spectacled caiman (*Caiman crocodilus*) has generated significant economic benefits for citizens and the government wildlife department. Between 1983 and 1995 more than 1 million caiman were harvested, with an export value in excess of \$US 115 million. Although limited survey data restrict quantitative comparisons, most indications suggest that the harvest has been within sustainable limits. Hunting is conducted on private lands in the central Venezuelan plains where caiman populations benefit from cattle ranching management activities, particularly the construction of dry season water

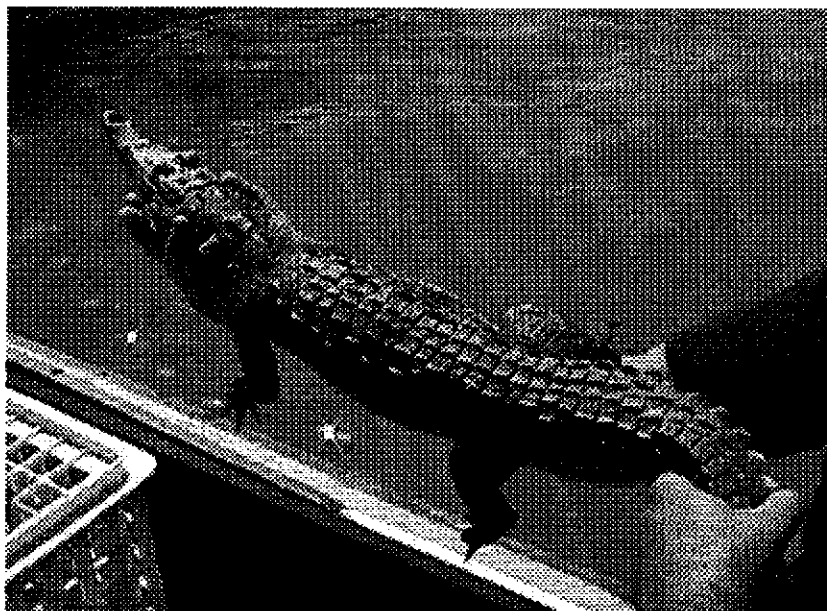
holes. For ranchers, caiman hunting produces a high return on investment, but the overall earnings are small when compared to those produced by cattle. Caiman are mostly a quick and easy source of income that complements cattle ranching, and there is little incentive to actively manage caiman populations. The only evidence that the income from caiman harvests generates economic incentives to protect caiman populations is that landowners sold the skins of caiman illegally hunted in other areas, so as not to reduce their own caiman populations and possibly diminish future hunting quotas. There is no evidence that caiman harvesting generated economic incentives to protect natural habitat, because the caiman benefit from human alteration of savanna habitats associated with the much more economically important cattle ranching activities. Recent changes in how hunting quotas are assigned have reduced economic incentives for landowners to protect caiman populations, but the changes have made the quota setting procedure simpler. One of the greatest

conservation benefits of the program has been its ability to generate operating funds for the traditionally cash-strapped government wildlife agency through a variety of taxes and user fees. Due to a recent government restructuring however, program proceeds will now go to the central treasury and will no longer benefit wildlife management programs.

Earnings from caiman harvest vary according to the geographic region and caiman density and vary from \$US 0.04/ha - \$US 0.45/ha (mean \$US 0.22/ha or \$2,144/ranch/yr). Benefits of cattle ranching are estimated to be 8 to over 100 times greater. The bulk of economic benefits accrue to land owners (24.5%-73%) and tanners (44%-69%) and hunters receive 1.8% - 16%, these estimates varying depending on the basis of raw untanned skins or crust-tanned export skins. The government wildlife agency PROFAUNA has received 3.7%- 6% of the proceeds equal to a mean of \$US 694,199/yr. The program has been greatly affected by changes in world wide demand and price for crocodilian skins and these external factors have greatly scaled back harvest and income of landowners, tanners and the government wildlife agency. - *Extracted from Thorbjarnarson J. & A. Velasco. 1999. Economic incentives for management of Venezuelan caiman. Biological Conservation Vol 13(2):397-406.*

LIBERATION OF AMERICAN CROCODILE (*CROCODYLUS ACUTUS*) IN THE OLIVITOS WILDLIFE REFUGE AND FISHING RESERVE. As an extension of the American crocodile (*Crocodilus acutus*) Conservation Program in Venezuela, that was begun in the early 90s, in 1998 we began to introduce crocodiles in The Olivitos Wildlife Refuge and Fishing Reserve, in Zulia state. In total, 43 crocodiles (locally termed 'cayman') have been liberated, 11 in 1998 and 32 in 1999. The average total length was 111 cm and weight was 9,827 g. All crocs were marked with metallic tags in the back paws and with cuts in the caudal scutes, to allow future monitoring and to evaluate their adaptation in their new habitat. The project

is the responsibility of the Fauna Guards Jesús Cotty and Tulio Gutierrez. These animals are obtained from captive stock at Masaguaral farm, Biological Station Rancho Grande and of the Sur Maracaibo Zoo, Las Delicias and Acuario J. Seijas. -- Alvaro Velasco B. *Dirección General Sectorial de Fauna, Ministerio del Ambiente y de los Recursos Naturales Renovables. Caracas, Venezuela. Email: avelasco@marnr.gov.ve*



Juvenile American crocodile *Crocodylus acutus*, released in Venezuela. A. Velasco photo.

NEW INITIATIVE FOR ORINOCO CROCODILE FUNDING AT PUERTO MIRANDA. A new partnership between Agropecuaria Puerto Miranda, Venezuela and The Tortoise Reserve, USA, is providing additional funds and technical support for the Orinoco crocodile breeding program in Venezuela. Agropecuaria Puerto Miranda is a commercial cattle ranch near San Fernando in South eastern Venezuela. The farm holds one of the largest stocks of captive breeding Orinoco crocodiles and in recent years has become one of the most successful producers of juveniles for the Venezuelan reintroduction program. The farm holds 9 adult males and 11 adult females in four fenced ponds and has facilities for egg incubation and raising hatchlings and juveniles.

The Tortoise Reserve is run by David Lee, an avid herpetologist and well known researcher in Southeastern USA. Tortoise Reserve is a private facility for breeding and maintaining rare turtle

and tortoise species. In their new partnership, Puerto Miranda is raising quantities of *Podocnemis expansa* the giant river turtle and the terrestrial red footed tortoise (*Geochelone carbonaria*). *Podocnemis* are raised for a reintroduction program similar to the Orinoco crocodile and over 10,000 young turtles have been released into the Orinoco river. The turtles are maintained in the same pens as the young crocodiles where they feed on food scraps left by the crocs. *Geochelone* is not an endangered species but has a high value in the US pet market where supplies from legal and sustainable sources are quite limited. Puerto Miranda has acquired breeding stock from captive animals, specimens confiscated from illegal owners etc. so that no wild stock were needed to found the breeding colony. The Tortoise Reserve is importing and marketing Red footed tortoises captive bred at Puerto Miranda and the proceeds are being applied to support all of Puerto Miranda's captive breeding conservation programs. The program is a win-win for all concerned. Puerto Miranda receives greatly needed funds that allow the conservation program to continue along with commercial cattle raising operations. The Tortoise Reserve provides funding support and receives red footed tortoises of known legal origin and good healthy condition. The whole operation receives monthly veterinary inspection and operates under the supervision of Venezuela's wildlife management authority PROFAUNA.

The results of this innovative program are



Aerial view of facilities at Puerto Miranda. Breeding pools center, hatchling pens right, preparation shed and incubator foreground. A. Wisnieski photo.

beginning to be felt. An upgraded incubation facility and technical advice from Dave Lee and from John Thorbjarnarson have allowed Puerto Miranda to improve their breeding success and egg survival. By mid -March this year all the Puerto Miranda females had laid eggs with a total of 411 eggs. Fertility and survival of 330 eggs produced last year are excellent and the same is anticipated for this years hatch. - David S. Lee, *The Tortoise Reserve, P.O. Box 7082, White Lake NC USA* & Manuel Dennis and Pedro Azuaje *Agropecuaria Puerto Miranda, C/O ALMACA, Torre Phelps, piso 14, Plaza Venezuela, Caracas, Venezuela.*

Central America and the Caribbean

Costa Rica

CROCODILE SITUATION DETERIORATES IN TARCOLES RIVER. Following the death of several people by crocodile attack in Costa Rica (CSG Newsletter Vol. 17(3)) random and directed killing and harassment of crocodiles in the Tarcoles River has increased to unacceptable levels. Just over this last Easter week, 5 adult crocodiles (average length 3.5 m) were killed, three decapitated and with the tail removed, one skinned and one killed in a fishing net at the river mouth, all in the Rio Tarcoles National Park. These 5 animals are

among the 12 found dead during this year which makes us fear that a population that was thought to be robust and growing may now be in danger of extinction as the majority of the adults have been killed and nearly all the juveniles

removed. We have also many reports of crocodiles captured and tied up to display to tourists- some of which also die. Our recent monitoring indicates that there are still about 10 individuals of adult size (unknown sex) but all kinds of mortality have accelerated to the point that counts made on one day are of no use by the following day.

Decapitation is a recent development which began last year when someone captured a 4.5 m animal and sold the head. We complained to the authorities but nothing was done and now we see the consequences of this lack of enforcement. Crocodiles are completely protected in Costa Rica but some recent human fatalities have aroused the population against them and appeals to the authorities to enforce the law have been ineffectual.

We cannot comprehend how such a situation can arise in a country that is so proud of its environmental protection and conservation activities, and despite our efforts to improve the image of crocodiles. The situation is approaching an irreversible crisis and urgent action is needed. In response to an appeal from the Costa Rican Association for Crocodilian Investigators (ACIC), CSG Chairman Professor Harry Messel has written directly to the Minister of Environment, Mines and Minerals to request action and mobilized IUCN and other allies in Costa Rica. -- Juan R. Bolaños M., *Presidente ACIC, Proyecto Manejo Cocodrilos y Caimanes, Heredia, Costa Rica.*

North America

USA

SURVIVAL RATES OF FARM-RELEASED MALE AND FEMALE AMERICAN ALLIGATORS. Eggs of the American alligator are collected from the wild on private lands in Louisiana and artificially incubated to produce hatchlings for captive propagation for skins and meat. The number of eggs collected each year has remained fairly stable since 1989, and in 1996, 279,237 eggs were collected and 233,076 young were hatched. State regulations require that a portion of the alligators hatched be released into the wild when they reach a total length of 0.9-1.5 m. In 1996, 40,919 farm-raised (ranch) alligators produced from wild-collected eggs were

released in Louisiana (J. Tarver, 1997, pers. comm.).

The ratio of males to females among farm-raised American alligators released in Louisiana coastal marsh habitat varies from year to year. The alligators have a high mortality rate after being released, and the probability of their being cannibalized by a large alligator is 5 times greater than wild alligators the same size and in the same habitat (Chabreck et al., 1998, *Crocodiles* 14:293-304). However, differences in survival rates of male and female farm-released alligators is unknown. Females are thought to survive at a greater rate than males because subadult females move to secluded marsh areas and avoid predation. Subadult males remain in open-water habitats and have a greater chance of coming in contact with larger alligators.

Survival of farm-released alligators was evaluated in a freshwater marsh in Louisiana on Golden Ranch Plantation (GRP) about 33 km southwest of New Orleans. From 1991 to 1994, 5794 farm-raised alligators were released on the area. Before release, each alligator was marked with one numbered monel web tag in a front foot and one in a hind foot. An annual wild alligator harvest program was conducted on GRP from 1991-1995 by trappers using baited hooks. We examined 746 stomachs (105-184/yr) of harvested alligators ≥ 2.2 m total length for web tags of farm-released alligators that were cannibalized. We used 2X2 contingency tables to test the hypothesis that the proportion of females in the farm-released population did not differ from the proportion of females in the cannibalized population.

Approximately one-third of the farm alligators released in 1991, 1992 and 1993 were females, and in 1994 about two-thirds were females. As indicated by tags recovered from stomachs, the proportion of males and females cannibalized did not differ statistically from the proportion of males and females released in 1991, 1992, and 1994. Although only 33.3% of the alligators that were released in 1993 were females, 52.9% of those cannibalized were females. The proportion of the 1993 released females in the cannibalized population was 58.8% greater than the proportion of females in the released population. During all four of the release years, the total mortality rate of farm-released females from predation equaled or exceeded the total mortality rate of farm-released males. Therefore, speculation that the behavior of farm-released females allows them to avoid

predation could not be verified by our study. Because of the high initial loss of farm-released alligators in areas with a large population of wild adults, it appears that few farm-released females survive to the stage where an exodus to secluded habitat would offer protection from predation. - Robert H. Chabreck & Vernon L. Wright, *School of Forestry, Wildlife and Fisheries, Louisiana State University Agricultural Center, Baton Rouge, LA 70803, USA.*

OREGON CROCODILIAN RESCUE PROGRAM. We are a small Reptile Zoo about 20 miles south of Portland, Oregon, USA. We've been here since 1980. In the late 80's when reptiles really started becoming popular they also got popular for "drug" people, thus getting us calls from the police for help with seized crocodilians. Our name just got around from police agencies to federal law enforcement. We started getting a lot of calls for alligator rescues in the early 90s. Most come from California where keeping pet crocodiles is illegal but we've gotten them from a number of other states.

At the moment I have 26 alligators and a half dozen caiman in my legal custody. Ten of them are here and the rest are farmed out to other people. Most recently we received two 'mystery' crocodilians which we suspect are *Paleosuchus* and are trying to identify with help from CSG. Most of the rescues we do are the big aggressive and/or dangerous animals that agencies can't find homes for. In many of the cases we're the last resort and if we cannot take them, the animal is killed. I haven't said no too often in the past but we are at capacity as far as large snakes and crocodilians go. We have a couple of 10 ft male alligators that need to be separated so they take up a lot of space. Other than crocodilians, we have everything from anacondas to reticulated pythons, cobras to rattlesnakes, monitors to iguanas and of course the turtles and tortoises.

We recently applied for our non-profit status. This has been a long time coming but finally we have a dedicated group of reptile "nuts" that believe in the same things I do. Our aim is to build a Reptile House next to the freeway so we can increase foot traffic and attract tourist support. I'd love to have enough free time to travel to see some of the crocodilians in the wild. -- Mary Esther Hart, *Hart's Reptile World Zoo, 11264 S. Macksburg Rd. Canby, OR 97013*

Mexico

PRELIMINARY RECORDS OF *CROCODYLUS ACUTUS* AND *CROCODYLUS MORELETII* ON BAHÍA DE CHETUMAL, QUINTANA ROO, MÉXICO. Little is known about the status of crocodiles in south of the Mexican state of Quintana Roo and in particular on Chetumal Bay area. There are not studies or surveys that allow us to know the current status and distribution of the crocodilians in this area. The Chetumal Bay is an important protected natural area which was declared "Santuario del Manatí" (Manatee Sanctuary) on 16 October 1996. Personal comments of local people, some sightings (capture and marking) and specimens deposited in the Colección Herpetológica of the Museo de Zoología, ECOSUR, Chetumal (ECO-H-CH) indicate that both *C. acutus* and *C. moreletii* inhabit inside and also the surroundings of the Chetumal Bay.

Although local populations of the crocodiles were considerably depleted before the 70's because of hunting it seems that healthy populations are now recovering, specially in the inaccessible sites. Local fisherman Daniel Rovelo has assisted the study observing basking nest and sites and providing juvenile crocodiles caught in his nets which were identified, sexed when possible marked cutting caudal scutes, and released. Since 1990 I have recorded five *C. acutus* (75-137 cm TL) and eight *C. moreletii* (140-160 cm TL). Four of these, 2 *C. acutus* and 2 *C. moreletii* were caught and released alive and the remainder were skeletal or dead specimens and are deposited in our museum. -- José Rogelio Cedeño-Vázquez, *Museo de Zoología, El Colegio de la Frontera Sur, Unidad Chetumal. Apdo. Postal 424, C.P. 77000, Chetumal, Quintana Roo, México. E-mail: rcedev@ecosur-qroo.mx*

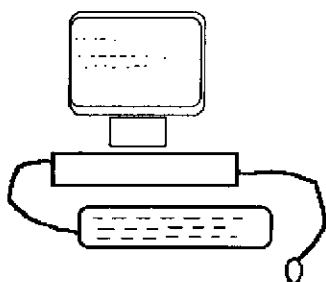
Publications



COLOR ATLAS OF DISEASES OF THE CROCODILE. This beautifully illustrated photographic review of diseases and maladies in crocodiles by Dr. Panya Youngprapakorn and colleagues at the Samutprakan farm was first produced in 1994 and

released at the 12th CSG Working Meeting in Pattaya, Thailand. The Atlas contains nearly 250 color photographs compiled from the extensive records of the Samutprakan farm and illustrates a wide variety of crocodilian afflictions including nutritional deficiencies; metabolic disorders; bacterial, fungal and parasitic diseases; traumatic injuries and congenital abnormalities. A small number of this unique volume 75 PP, hardcover are available at a price of \$US 65 from – Zoo Book Sales, 403 Parkway Ave N. P.O. Box 405, Lanesboro, MN 55949-0405 USA. Fax 1 507 467 8735 E-mail zoobooks@means.net

CSG On Line



Y2K BUGS CSG. Yep, its going to affect us, along with everyone else. I have checked our current software and found that our accounting program (Quicken) and member data base (PCFILE) will become unusable with dates above 1999 and need to be upgraded. Easiest way to do this is to purchase Y2K compliant software and transfer these vital files onto the new programs. In the meantime I am being very diligent about back-ups and paper copies. We are not waiting until December 31 as the magic date of 9 September 1999 (9-9-99) may be the moment when all the computers forget what year it is. I am also checking with our bank and the University accounts to be quite sure we come through the millennial change without problems. – Perran Ross, *Executive Officer*.

CITES WEB PAGE UPDATED. The CITES web page at <http://www.wcmc.org.uk/CITES/> has been upgraded and now has much useful CITES information, including Resolutions, notifications, Appendix listing and a list of Management Authority contacts.

NEW PAGE ON MYSTERY ALLIGATOR DIE-OFFS. Researchers working cooperatively to investigate declines in egg viability and high adult mortality of lakes in central Florida, USA, present provisional results and discussion of the problem at Lake Griffin alligator mortality <http://www.flmnh.ufl.edu/natsci/herpetology/lakes/lakes.htm>

Billy Heinbuch's first crocodile web page features simple, easy to follow introductions and links to other major croc pages. The site is notable for its amusing cartoon crocs and for a compelling statement about sustainable use for croc conservation, check it out at http://members.xoom.com/Gator_dude/Crocsite.htm

TRADE



APPEAL FOR CROCODILE SKIN PRODUCTION DATA. During the 14th Working Meeting of CSG discussion was held on the possibility of obtaining accurate and timely information on crocodilian skin production. Such information might serve to stabilize the international skin trade which would have immediate benefits by stabilizing revenues passed on to crocodilian conservation. At present the only source of skin production estimates is derived from CITES import and export statistics, that are reported to the CITES Secretariat by national management authorities, and compiled and analyzed by the World Conservation Monitoring Center in Cambridge, UK. Because of the source and process, these data are inevitably 2-3 years out of date. A recent comparison of these CITES estimates with estimates of production derived directly from selected source countries indicates that the CITES estimates appear consistently high (Ross, J. P. 1998 Proceedings of the 14th Working Meeting of the CSG, Pp. 243-253.).

A recommendation of the Singapore Meeting was that CSG attempt to obtain and distribute accurate skin production estimates directly from source countries and make these widely available through the Newsletter. The Executive Officer has

therefore requested contacts in skin production countries to send their latest estimates of annual skin production and these will be freely disseminated. To improve compatibility between different producers production estimates should be given in 'whole skin equivalents' (e.g. 2 flanks - 1 whole skin) for a specified 12 month period. Skin production data can be sent to (and available information requested from) -- Dr. J. P. Ross, *Executive Officer, CSG, Florida Museum of Natural History, Gainesville FL USA. Fax 1 352 392 9367 E-mail prosscsg@flmnh.ufl.edu*.

Announcements and Meetings

FIRST ANNOUNCEMENT.

THE 15TH WORKING MEETING OF THE CROCODILE SPECIALIST GROUP WILL BE HELD IN HAVANA, CUBA 15 - 20 JANUARY 2000. THE MEETING WILL BE JOINTLY HOSTED BY THREE GOVERNMENT MINISTRIES INVOLVED IN CROCODILIAN CONSERVATION AND MANAGEMENT, CIENCIAS, TECNOLOGIA Y MEDIO AMBIENTE (SCIENCE, TECHNOLOGY AND ENVIRONMENT) MINISTRY OF AGRICULTURE AND MINISTRY OF INDUSTRIAL FISHERIES. DETAILED PLANNING DISCUSSIONS ARE UNDERWAY AND AN EXCELLENT MEETING IS ANTICIPATED. REGISTRATION MATERIALS, TRAVEL AND VISA INFORMATION AND GENERAL INFORMATION WILL APPEAR IN A LATER NEWSLETTER. THE MEETING HAS BEEN SCHEDULED TO CLOSELY FOLLOW THE PAN-AMERICAN LEATHER FAIR IN MIAMI TO ALLOW NON US PARTICIPANTS TO TAKE ADVANTAGE OF THEIR INTERNATIONAL TRAVEL PLANS. A STEERING COMMITTEE MEETING WILL ALSO BE HELD TO FORMULATE RECOMMENDATIONS ON CITES PROPOSALS

11TH CONFERENCE OF THE PARTIES TO CITES will be held in Nairobi, Kenya 10 - 20 April 2000. Due dates for submission of Appendix listing proposals (150 days prior) is 12 November 1999 and for ranching proposals (330 days prior) 16 May 1999. - *CITES Notification to Parties 1998/55*. [CSG will also hold a Steering Committee meeting in Nairobi to finalize recommendations on crocodilian proposals - Eds.]

IUCN WORLD CONSERVATION CONGRESS will be held in Amman, Jordan, 10 - 17 October 2000. CSG may hold a Steering Committee meeting in association with this Congress.

FOURTH INTERNATIONAL CONGRESS ON WILDLIFE MANAGEMENT IN AMAZONIA AND LATIN AMERICA, will be held 4 - 8 October 1999, Asuncion, Paraguay at the Cultural center of the Central Bank of Paraguay. This important international event, initiated in 1992 summarizes in a few days all the forces applied to faunal conservation in all the Amazon region and beyond. The meeting has been expanded to include material from throughout Latin America, including the southern cone countries and Central America. The meeting is the result of the combined efforts of CITES Paraguay and the Foundation Moises Bertoni. For information and Registration material contact -- *Comision Organizadora, IV Congreso de Manejo de Fauna Amazonica, Fundacion Moises Bertoni, C.C. 714, Asuncion, Paraguay. Tel (595-21) 608 740, 600 855, Fax (595-21) 608 741 e-mail: congreso@fmbert.una.py internet: www.mbertoni.org.py*

COURSE ANNOUNCEMENT: BIOLOGIA Y CONSERVACION DE COCODRILOS. 10 to 21 June 1999. Reserva Ecológica El Edén y Reserva de La Biosfera de Sian Ka'an, Quintana Roo, México. Instructors: Marco A. Lazcano-Barrero- and Gonzalo Merediz Alonso- Amigos de SianKa'an A.C.

Also INTRODUCTION TO TROPICAL FIELD ORNITHOLOGY August 20 through September 20 of 1999 El Eden Ecological Reserve with field trips to Rio Lagartos, Sian Ka'an & Coba. Instructor: Jamie Rotenberg-UCR and

PRINCIPIOS DE MANEJO DE FAUNA APLICADOS A MAMIFEROS SILVESTRES 8 - 16 de November 1999. Reserva Ecológica El Edén, Quintana Roo, México Instructor: Jaime Marcelo Aranda - Instituto de Ecología A. C.

For additional information on these and other courses see our web sites at http://maya.ucr.edu/pril/el_edén/Front.html http://maya.ucr.edu/pril/el_edén/withframe.html or contact us by fax, phone or mail. -- Marco A. Lazcano-Barrero, Director General, Reserva Ecológica el Edén A. C., Apdo. Postal 308 Cancún, Quintana Roo 77500 Tel & Fax (98) 80 50 32 mlazcano@cancun.com.mx

STEERING COMMITTEE

After considering several changes in the locations and responsibilities of CSG Steering Committee members, the Chairman has made the following changes in the Steering Committee:

1) Dennis David has moved to new responsibilities with the Florida Game and Fresh Water Fish Commission, being now responsible for a new program of non-consumptive use on State lands. He has informed the Chairman he wishes to step down as one of the Deputy Vice Chairmen for North America and Professor Messel has appointed Mr. Allen (Woody) Woodward, also of FGFWFC, to that position. Woody is familiar to many of you as a regular attendee of CSG and steering committee meetings. We welcome Woody (contacts as for Dennis, e-mail woody@wrl.gfc.state.fl.us) and offer Dennis best wishes in his new endeavors.

2) Mirna Quero has been Director for Wildlife Management, PROFAUNA for several years and this new position has taken a great deal of her time and energy, preventing her active participation in Steering Committee activities. Prof. Messel has written to Mirna, thanking her for her good work for CSG and assuring her of our continued openness to her direct contact, and replacing her on the Steering Committee with Dr. Luciano Verdade (e-mail lmv@carpa.ciagri.usp.br) Luciano has been active in the southern cone and Brazilian section of CSG for some years, organizing several symposia on *Caiman latirostris* and working closely with the region's Vice Chair Alejandro Larriera. Luciano brings some overdue representation from the Portuguese speaking Brazilian interests of CSG.

3) Marco Pani and Lorraine Collins have been inactive and fallen out of contact and have been removed from the Committee without replacement.

4) Dr. Jim Armstrong has become the ex-officio representative to CSG from CITES.

These changes are reflected in the Steering Committee listings on page 18.

Erratum

CSG NEWSLETTER VOL. 17 No. 4: PAGE 20 referred to a paper by Santaigo Ron. The correct title, authorship and full citation of this paper is Ron S. R., A. Vallejo & E. Asanza. 1998. Human influence on the wariness of *Melanosuchus niger* and *Caiman crocodilus* in Cuyabeno, Ecuador. J. Herp. 32(3):320-324.

REQUESTS



ATTENTION ALL LATIN AMERICAN CROCODILE BIOLOGISTS: Hello again to all of you! While I met many of you at the CSG Latin American Regional Meeting in Villahermosa, I was not yet in a position to start coordinating samples. I am now at the University of Miami and I ask that anyone interested in having their crocodiles genotyped (genetically characterized) to please contact me. I am specifically interested in *Crocodylus acutus*, however I would also like to hear from individuals who are working with *C. rhombifer*, *C. moreletii*, and *C. intermedius*. The end result of this project will be a phylogeny of the New World *Crocodylus* and a detailed population level analysis of *C. acutus*. These data will provide the framework for regional population studies and may allow us to move toward resolving issues of paternity and hybridization.

Anyone interested in sending samples to be included in this project can contact me by any of the following methods -- Jenna McKnight Forstner, Department of Biology, P.O. Box, University of Miami, Coral Gables FL USA. E-mail: jenna@fig.cox.miami.edu or forstner@prodigy.net phone: (305) 284-4493, fax: (305) 284-3930.

Personals



Bill Magnusson,
School of
Australian
Environmental
Studies, Griffith
University, Nathan

Qld 4111, Australia, will spend a year doing a post doc (that he describes as the 'geriatric variety') until January 2000 after which he will return to INPA, Brazil. One of his goals is to write a book on Brazilian caimans in Portuguese.

David Deitz, OMS Inc., 81 Hartwell Ave, Lexington Ma 02173 USA, maintains his interest in crocodilians after more than 20 years in the medical field. Dave is author of an early study of survival and behavior of hatchling alligators in Florida.

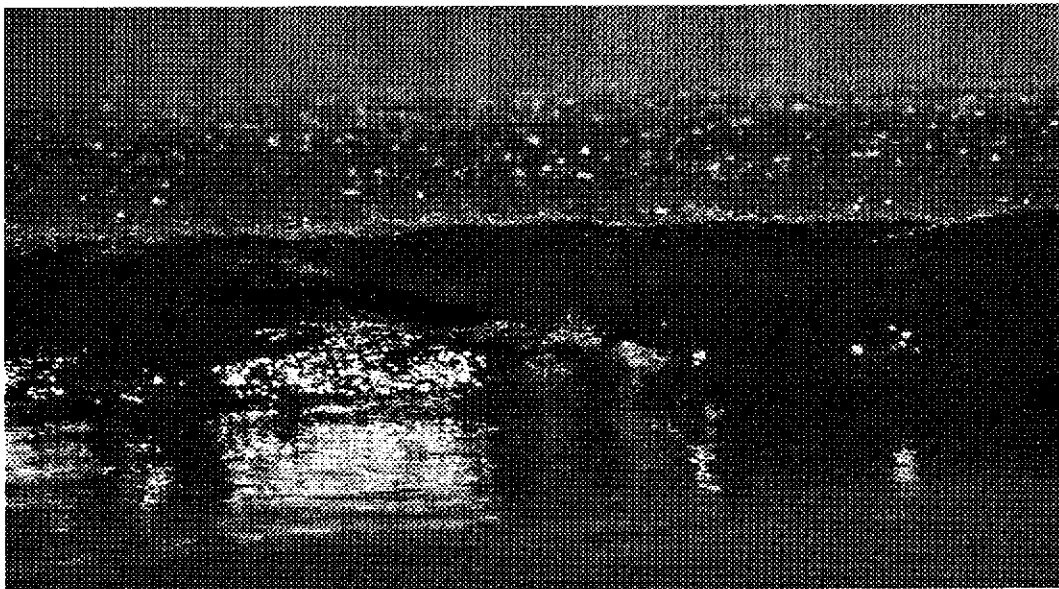
Alvaro Velasco, PROFAUNA, Torre Sur, piso 6 CSB, Caracas 1010, Venezuela Phone 582 408 1175, Fax 582 484 9946 announces his new office address.

PROCEEDINGS OF THE 14TH WORKING MEETING OF THE CSG, Singapore July 1998, can still be ordered and prepaid at \$40.00 US each. Second printing is scheduled for later this month. Send order and payment to - Dr. J. P. Ross, CSG Executive Officer, Florida Museum of Natural History, Box 117800, Gainesville FL 32611 USA.

EDITORIAL POLICY - The newsletter must contain interesting and timely information. All news on crocodilian conservation, research, management, captive propagation, trade, laws and regulations is welcome. Photographs and other graphic materials are particularly welcome. Information is usually published, as submitted, over the author's name and mailing address. The editors also extract material from correspondence or other sources and these items are attributed to the source. The information in the newsletter should be accurate, but time constraints prevent independent verification of every item. If inaccuracies do appear, please call them to the attention of the editors so that corrections can be published in later issues. The opinions expressed herein are those of the individuals identified and, unless specifically indicated as such, are not the opinions of the CSG, the SSC, or the IUCN-World Conservation Union.

SURFING CRAZE SPREADS. Like so many surfing fad's, it began in Australia (See CSG Newsletter Vol. 15 (4) pg 12.), but now its spreading around the world. Crocs have now taken up surfing on Costa Rica's trendy west coast.

Well, it made a great lead line, but actually John Thorbjarnarson reports that the approximately 8 foot long American crocodile he photographed in the surf at Playa Naranja, in Santa Rosa National Park, appeared cold, disoriented and tired and was being pushed in repeatedly by the waves. [But gosh, every surfer has felt like that after a long day shooting the curls!- Eds.]— *report and photo from John Thorbjarnarson, Wildlife Conservation Society, New York, USA.*



Steering Committee of the Crocodile Specialist Group

Chairman: Professor Harry Messel, School of Physics, University of Sydney, Australia.
For further information on the CSG and its programs, on crocodile conservation, biology, management, farming, ranching, or trade, contact the Executive Officer or Regional Vice Chairmen:

Deputy Chairmen (New World): Prof. F. Wayne King, Florida Museum of Natural History, Gainesville, FL 32611, USA. Tel: (1) 352 392 1721 Fax: (1) 352 392 9367. <kaiman@flmnh.ufl.edu>

(Old World) Dr. Dietrich Jelden, Bundesamt für Naturschutz, Konstantin Str. 110, D-53179 Bonn, Federal Republic of Germany. Tel: (49) 228 954 3435 Fax: (49) 228 954 3470 E-mail <JeldenD@bfn.de>

Africa: Vice Chairman: Dr. Richard Fergusson CFAZ, P.O. Box H G 11, Highlands, Harare, Zimbabwe. Tel: (263) 473 9163 Fax: (263) 473 1719. Deputy Vice Chairman: Olivier Behra, Lot 1 BG, 24 Isoraka, Antananarivo, Madagascar. Tel: 261 20 22 29503 Fax: 261 20 22 29519. E-mail <univers.tropical@simicro.mg>

Eastern Asia, Australia and Oceania: Vice Chairman: Dr. Grahame J.W. Webb, P.O. Box 530, Sanderson, NT 0812, Australia. Tel: (618) 8 992 4500 Fax: (618) 8 947 0678. E-mail <gwebb@wmi.com.au>. Dr. Robert Jenkins, Australian National Parks & Wildlife, Australia. Mr. Paul Stobbs, Mainland Holdings, Papua New Guinea. Koh Chon Tong, Heng Long Leather Co., Singapore. Dr. Yono C. Raharjo, Research Institute Animal Production, Indonesia. Dr. Parntep Ratanakorn, Faculty of Veterinary Science, Mahidol University, Thailand. Dr. Choo Hoo Giam, Singapore.

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