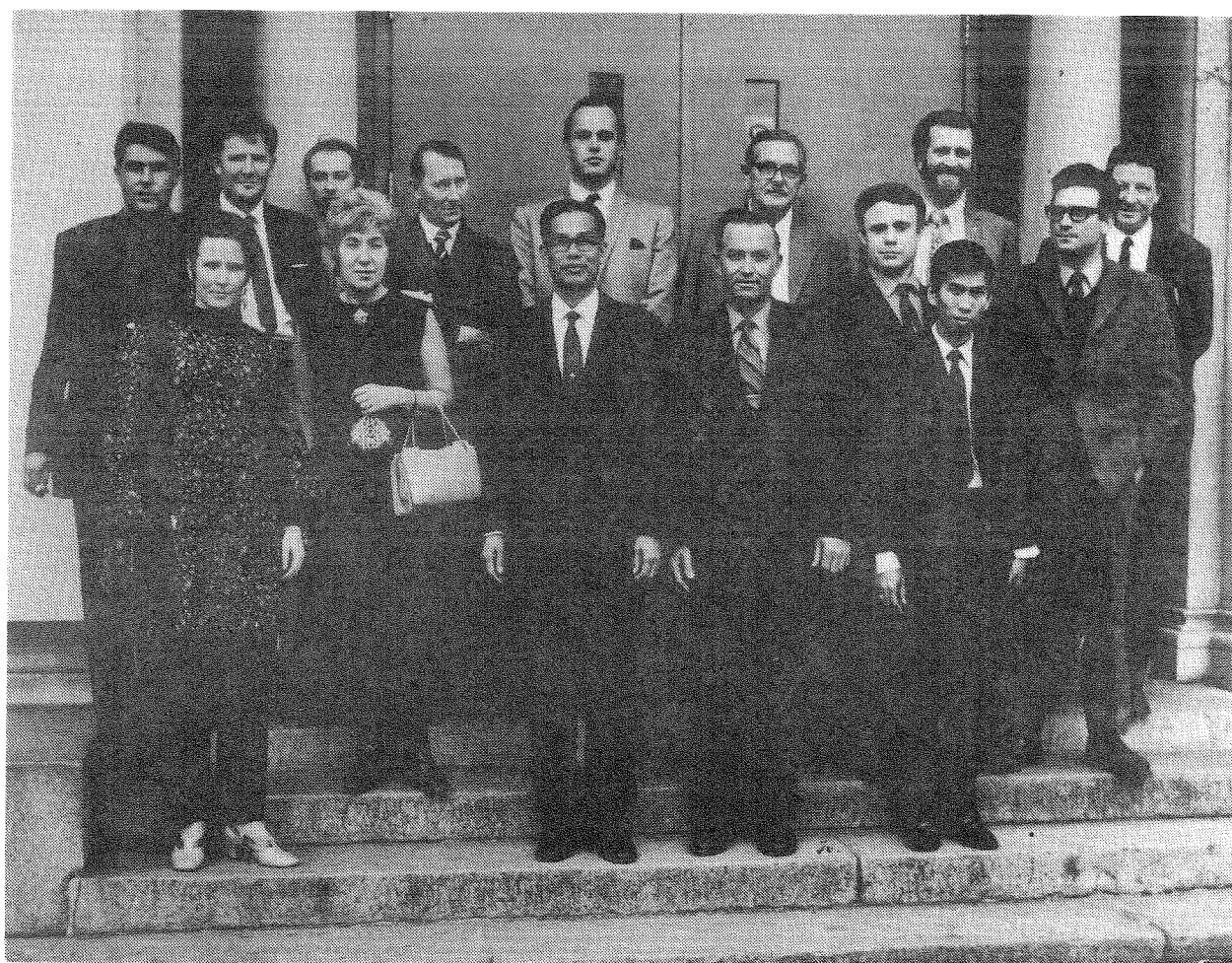


# **CROCODILE SPECIALIST GROUP**

## **NEWSLETTER**

VOLUME 9 ■ APRIL 1990 - JUNE 1990



IUCN - World Conservation Union ■ Species Survival Commission

# CROCODILE SPECIALIST GROUP

## NEWSLETTER

VOLUME 9 No. 2  
APRIL 1990 - JUNE 1990

IUCN - World Conservation Union

Species Survival Commission

Prof. Harry Messel, Chairman  
IUCN Crocodile Specialist Group  
School of Physics  
University of Sydney  
Sydney NSW 2006  
Australia

EDITORIAL OFFICE:  
Prof. F. Wayne King, Deputy Chairman  
Florida Museum of Natural History  
Gainesville, Florida 32611, U.S.A.

COVER PHOTO: Participants in the 1st  
Working Meeting of the CSG in New York  
City in 1971 (see p. 14). NYZS photo.

## PATRONS

The following individuals, companies, and organizations have become Patrons of the CSG by contributing more than U.S. \$200.00 funding during the past 12 months. The funds donated have been deposited in the University of Florida Foundation, Inc., and are being used to support the CSG program:

Mainland Holdings Ltd., Lae, Papua New Guinea.

Jacques Lewkowicz, Société Nouvelle France Croco, Paris, France.

Yoichi Takehara, Horiuchi Trading Co., Tokyo, Japan.

Ken Ogiso, Stock Kojima, Tokyo, Japan.

Philippe Roggwiler, Tanneries des Cuirs d'Indochine et de Madagascar, Paris, France.

World Wildlife Fund / USA, Washington, D.C., U.S.A.

Sharon R. F. King, Gainesville, Florida, U.S.A.

Walter Herd, Offenbach (Main), Federal Republic of Germany.

Koh Chon Tong, Heng Long Leather Co. Pte. Ltd., Singapore, Singapore.

Noboru Ishii, Takara Tsusho Co. Ltd., Tokyo, Japan.

Toshio Yamanaka, Yamatoshi Hikaku C. Ltd., Tokyo, Japan.

Prof. F. Wayne King, Florida Museum of Natural History, Gainesville, Florida, U.S.A.

John Bache, Crocodile Farms (NT) Pty. Ltd., Winnellie, Northern Territory, Australia.

Harry Freeman, Hartleys Creek Crocodile Farm, Queensland, Australia.

JLIA 'CITES' Promotion Committee, Tokyo, Japan.

Dr. I. Lehr Brisbin, Savannah River Ecology Laboratory, Aiken, South Carolina, U.S.A.

John Hannon, Lagoon Crocodile Holdings Ltd., Darwin, Northern Territory, Australia.

Leo Venturin, Letaba Crocodile Farm, Darwin, Northern Territory, Australia.

Tom E. Crutchfield, Herpetofauna Inc., Bushnell, Florida, U.S.A.

IUCN-World Conservation Union, Gland, Switzerland.

Prof. Harry Messel, School of Physics, University of Sydney, Sydney, Australia.

Robert and Ellen Young, Classic Skins, Thonotosassa, Florida, U.S.A.

Terry Cullen, Cullen Vivarium, Milwaukee Wisconsin, U.S.A.

David B. Haire, III, American Tanning & Leather Co., Griffin, Georgia, U.S.A.

## CSG STEERING COMMITTEE

MINUTES OF THE 3RD MEETING OF THE  
IUCN/SSC CROCODILE SPECIALIST GROUP  
STEERING COMMITTEE - 22 APRIL 1990  
FLORIDA MUSEUM OF NATURAL HISTORY  
GAINESVILLE, FLORIDA, U.S.A.

Present: Harry Messel, Olivier Behra, Dennis David, Ginette Hemley, Jon Hutton, Dietrich Jelden, Ted Joanen, Wayne King, Val Lance, Richard Luxmoore, Andres Seijas, Kevin van Jaarsveldt, Brian Vernon, Juan Villalba-Macias, Grahame Webb, Toshio Yamanaka, and Obdulio Menghi (CITES observer). Jack Cox, Philip Hall, Martin Holland, Noburu Ishii, and Perran Ross (observers)

The CSG Chairman, Prof. Harry Messel opened the meeting at 08:10.

**EXECUTIVE OFFICER.** The Chairman announced the appointment of an Executive Officer to the CSG and introduced Dr. James Perran Ross who has been invited to fill the position. The Chairman explained that in view of the large and increasing size of the Group and the increasing complexity of operations, that the burden of day to day operations had become excessive upon the Chairman and Deputy Chairman. Dr. Ross comes to the Group with an extensive background in international conservation activities and has been active in the SSC since 1978. It is expected that with Perran as a full time Executive Officer the functioning of the Group in its new, decentralized regional form would be facilitated. The Chairman also noted that the commitment to a full time paid staff position posed the need for continuing and increased fundraising to support the CSG.

**SSC/IUCN STEERING COMMITTEE.** The Chairman reported on the recent SSC Steering Committee meeting at which extensive revisions in the statutes governing the SSC and its

specialist groups were proposed. These proposed changes are modelled along the lines of the revised structure of the CSG and will be passed to the IUCN Council for approval and final ratification at the full IUCN meeting scheduled for November 1990. The Chairman reported on those changes as they may affect the CSG. It is proposed that all specialist groups have a single class of member eliminating previous distinctions between membership categories (corresponding members, etc.). All members also will be full members of the SSC, a privilege presently restricted to Group Chairmen. Members will be chosen at the discretion of the Group Chairmen and approved by the SSC Chairman. However the SSC Chairman will be able to delegate the approval and appointment of Group members to the Group Chairmen. Membership of all groups is automatically dissolved and reconstituted every three years at the IUCN General Assembly. All levels of the SSC including Group Chairmen and members will now receive written terms of reference.

The criteria and procedures for appointing members were described (see NEWSLETTER Vol. 8, April - June, for a full account of present SSC procedure). Suitably qualified potential Group members will be identified by the appropriate Vice Chairmen, and their particulars, including detailed address and contact information, forwarded to the Group Chairman. The Chairman will then write directly to approved candidates, on behalf of the Chairman of SSC, inviting them to serve. This letter constitutes the only valid appointment of a Group member. When acceptance has been received the particulars of each member will be forwarded to the SSC for final approval and inclusion in a proposed directory of all SSC Group members. This directory will be widely distributed and serve as a valuable source book for expertise in conservation.

Prof. Messel noted that the new single category of membership would, if approved by IUCN, supersede the previous structure of the CSG (see NEWSLETTER vol. 8 Oct.-Dec 1989, p. 2). He reminded the committee that the regional Vice Chairmen of the CSG were responsible for the identification and solicitation of Group members for him to appoint.

Debate followed on the difficulties experienced by some regional Vice Chairmen in identifying and proposing Group members. Three sorts of difficulty were discussed.

Vice Chairmen were uncertain how inclusive to be in identifying members when the criteria for membership and the final size of the CSG were still poorly defined. They were concerned that they could be accused of bias by everyone in their region who they did not invite onto the Group. Finally some concern was expressed that there were individuals who might be useful members of the CSG but whom it would not be appropriate to have as full members of SSC. The Chairman reiterated that he had delegated responsibility for resolving this issue to the Vice Chairmen. After extensive discussion of these points the matter was put aside until later in the meeting while a task Group of Jon Hutton, Grahame Webb, Kevin van Jaarsveldt and Richard Luxmoore developed a solution.

Upon return to this issue late in the afternoon a consensus emerged as follows: Criteria for Group membership should be modelled on the SSC criteria;

A Group shall consist of individuals chosen because of their competence to assist in a groups work. No members shall be appointed who have not declared their willingness to serve and their ability to devote sufficient time to such service.

The size of the Group was expected to increase to around 200-300 members and regional Vice Chairmen should propose a number of members appropriate to the tasks and problems of their region and their ability to maintain communication. The improved support from the new Executive Officer was expected to facilitate this.

A standardized format to record names, addresses and detailed contact information would be developed and used by Chairmen.

The Steering Committee of the CSG would review proposed members and jointly forward names for the approval of the Chairman. The next review will take place at the CSG Steering Committee meeting proposed for Perth, Australia, on 27 November 1990 just prior to the IUCN General Assembly beginning 28 November.

Many individuals who were active in crocodile activities could remain in correspondence with the Vice Chairmen and receive the NEWSLETTER without being members on the basis that they provide information for the NEWSLETTER at least once a year.

**REGIONAL REPORTS.** Reports from the regional Vice Chairmen are summarized here.

Africa. -- J.M. Hutton and O. Behra. In September 1989 Kevin van Jaarsveldt moved to Vice Chairman of Trade and Jon Hutton took over as Vice Chairman of the African region with Olivier Behra as Deputy.

The new Vice Chairman has reviewed the members and correspondents of the region, producing a list and proposing some new members who have been invited to become members by the CSG Chairman. The Vice Chairman has maintained a balance within the region between active researchers and those with purely commercial interests.

Jon and Olivier both attended the CITES meeting in Lausanne Switzerland. Olivier represented FAO and the French government. Jon attended as a consultant to the CITES Secretariat, presenting a comprehensive report and recommendations on crocodile management in Botswana, Kenya, Madagascar, Malawi, Mozambique, Tanzania and Zambia. Jon also assisted Ethiopia with their quota proposal for the Nile crocodile and Olivier assisted Madagascar. Olivier convened a meeting of West African countries to discuss conservation and utilization of crocodiles and the prospects and priorities for funding.

The CITES meeting was relatively successful for African crocodile management. Botswana, Malawi, Mozambique, and Zambia demonstrated adequate management programs and their Nile crocodile populations were transferred to Appendix II under resolution Conf. 3.15 on ranching, and Ethiopia obtained the quota it requested. However proposals from the Congo, Kenya, Madagascar and Tanzania were not accepted as presented. The Parties to CITES approved modified quotas and the problems with their crocodile management will be reviewed again at the 1992 CITES assembly.

Following the CITES meeting Jon has continued his work in Zimbabwe and assisted wildlife departments in Kenya and Tanzania with crocodile management in early 1990. He has also visited both new crocodile farms in Mozambique and two farms in Zambia. The next activities of the Group in the African region will be to prioritize conservation and management projects and obtain funding for their implementation before the next CITES meeting in 1992.

Olivier has taken up a post with FAO assisting with development of crocodile ranching and farming in Madagascar. He reported that the initiation of the project was delayed by FAO so that he missed the croc nesting season and the project will terminate before the next nesting season. As a result the proposed survey work will be incomplete. He has therefore been active assisting private individuals who want to start farms. Olivier described the urgent need for a follow up on this project after September 1990. Other examples from Somalia, Ethiopia and Peru were discussed where FAO had apparently failed to take timely account of advice from the CSG. After discussion Jon Hutton and Olivier Behra were asked to draft letters for the Chairman's signature to FAO and to IUCN to try and remedy the problem.

Western Asia. -- Dr. Lala A.K. Singh (A report from Rom Whitaker was printed in the last NEWSLETTER).

Work related to to wildlife research, management planning, education and interpretation have kept me full up to my neck but the rest of the space up to my nose has been occupied by crocodile work as follows:

Highlight the multidisciplinary benefits that have accrued from India's crocodile management program. This aspect is now increasingly realised by international groups concerned with chelonians, dolphins, wetlands and zoos advocating captive breeding.

Develop and finalize an Action Plan for crocodilian management at the national level in India and at the State level in Orissa where the project had started.

Attend to questions raised by peoples representatives at the State Governments General Assembly.

Keep the crocodile management program in the national scenario by publication to improve crocodile management and highlight the benefit of the croc project to rural folk and teaching classes for professional trainees, range officers, forest guards and foresters from outside institutions.

Advising the Gharial Research and Conservation unit at Tikerpada in selection of alternative release sites for Mahanadi in Orissa. Conducting a survey of Mahanadi, including the Hirakud reservoir and proposing to Madhya Pradesh a survey to confirm the report that gharial still occur there. Work in Orissa is

supported by the Chief Wildlife Warden and carried out in collaboration with the wildlife wardens of Satkoshia Gorge Sanctuary and Debrigarh Sanctuary.

Mugger management in the Similipal Tiger Reserve (with the field director of the STR). Improving captive husbandry, preventing nutritional deficiencies, selecting new sites for rehabilitation, release and monitoring. Two papers are in preparation.

Time to time advice to the Govt. of India research project on Mugger at Kurukshetra University, Haryana.

Ongoing research: a) territory occupation of mugger in relation to phases of breeding (to highlight the type of spacio- temporal control measures management should impose on human activities in a croc sanctuary), b) growth and survival of young muggers in a large breeding enclosure and its comparison to results from normal captive breeding (to fix quota for return to wild when commercial harvest of eggs from the wild will commence). c) sex ratios of muggers when eggs are incubated under two conditions of crude temperatures (i) artificial shade and (ii) as is where is in the breeding pen (to help commercial farmers in future meet their requirements for male and female production without costly incubators). All these projects have begun since February-March 1988.

Eastern Asia, Australia and Oceania. -- Grahame Webb. The Regional Vice Chairman reported that this Group's membership was still being developed pending the resolution of the problems of nominating members described above. It was noted that this region is particularly large, diverse and plagued with problems of communication and crocodilian management. Brian Vernon was introduced as the region's Deputy and reported on recent actions in Papua- New Guinea (PNG) to interdict the passage of illegal skins of *C. novaeguineae* from Irian Jaya via PNG to Singapore. Brian reported that the PNG authorities has acted vigorously to prosecute this trade as it was seen as detrimental to crocodile management development in both PNG and Indonesia.

Jack Cox confirmed that this illegal trade in skins was recognized in Indonesia as a problem and although policing the border between PNG and Irian Jaya was difficult, Indonesia was attempting to control illegal trade and had made



significance advances. The Steering Committee discussed the focal position of Singapore, which, with its current CITES reservation on *C. porosus*, was a major center for the illegal trade. Harry Messel reported that he had visited Singapore several times to address the problem and a recent development was a change in the position of the Singapore Crocodile Farmers Association, which no longer opposes the lifting of the reservation. Richard Luxmoore pointed out that because of the reservation there was in fact no strictly legal prohibition of trade into Singapore but the Group agreed that in view of the detrimental effect on other countries management program, pressure should be brought to bear on this issue. The most effective approach may be through each country's internal controls and laws.

Jack Cox and Ginette Hemley were asked to draft letters for the Chairman to authorities in PNG and Indonesia to express the CSG's concern about illegal trade with Singapore and to support their internal efforts to bring this trade under control.

Additional letters will be drafted from the Chairman to Queensland congratulating them on strengthening their program by appointing Dr. A.C. Abercrombie\* as head of croc research, and to Northern Territory encouraging them to maintain crocodile research programs as a necessary component of management and ranching. Grahame Webb reported that as commercial croc use came on-line in the Northern Territory there seemed to be trend to question the value of continued research based on the misconception that no more research was needed. A letter to the N.T. authorities congratulating them for their past endeavours but encouraging them to maintain a strong research program would be appropriate.

Europe. -- Dietrich Jelden. Activities to date concentrated on coordinating European Community (EC) politics concerning crocodilian conservation, seeking finances for crocodilian projects and constituting the regional membership. At the regular meetings of CITES scientific and management authorities of the EC states it was agreed in principle to support the position that the Crocodile Specialist Group regional Vice Chairmen had formulated on

\* Dr. Abercrombie later declined the appointment.

crocodilian proposals submitted to the 7th CITES meeting. Dietrich was very active at the CITES meeting and, speaking on behalf of the EC was able to make important contributions to better management of crocodilians under the convention. Among other actions, the EC agreed to ban the import of live animals and skins of *Caiman crocodilus* from Bolivia. "Internationaler Reptiliederverband" in Offenbach, FRG, had raised DM 10,000 for a survey in Tanzania and the German Ministry of the Environment is prepared to contribute 10,000 DM to the World Conservation Monitoring Center (WCMC) for revision of the DIRECTORY OF CROCODILIAN FARMING OPERATIONS.

In December 1989 a memorandum and questionnaire was sent to 36 potential Group members in Europe soliciting information and names of potential members. Thirteen replies had been received to date including information on planned Nile crocodile farms in Portugal, laboratory research in progress and conservation initiatives undertaken. Deitrich felt that further development of membership was needed and a complete Group would be assembled by late this year.

Deitrich has also been involved with providing technical advice to correspondents, including background information for the producers of a planned German TV documentary on crocodile farming in the Philippines and Thailand.

In response to a question about the function of the European region, which has no wild crocodile populations, Dietrich pointed out that the political and financial influence of Europe both as a market and for conservation was very important.

Latin America and the Caribbean. -- Juan Villalba. Argentina: The status of *C. c. yacare* and *C. latirostris* is being investigated with support from CITES, the National Directorate of Wildlife and the Estaban Astory Foundation.

Uruguay: An experimental program in farming *C. latirostris* is being undertaken by the Instituto Nacional de Pesca.

Paraguay, Bolivia and Brazil: We are awaiting the results of the first phase of "Project Caiman" on the taxonomic situation of Caimans in these three countries. In Brazil the second phase (population studies) is about to begin. A recent proposal to raise *C. crocodilus* was evaluated by Norman Scott. In Bolivia the initiation of the

second phase has been delayed according to the resolution [Doc 6.19 and 6.20 - Ottawa 1987]. In Brazil the CSG should establish its position on the introduction of Nile crocodiles.

Peru: The Secretariat of CITES has officially solicited the government to establish a population study of crocodilians.

Colombia: The management authority will begin the export of ranched skins prior to but contingent upon the initiation of a population study financed by CITES.

Venezuela: MARNR, with the cooperation of CITES, hopes to begin a re-evaluation of the situation with *Caiman*, focussing upon a management plan. A program of reintroduction of *C. intermedius* sponsored by NGO's and CITES has begun (see report below).

Guyana: The population studies have been finalized and pertinent recommendations have been forwarded to the government. This has resulted in a government request for consultations on farming.

Panama: A population study is about to be initiated with the collaboration of the management authority to develop regulations relative to farming.

Costa Rica: The CITES Secretariat has approved for support a program proposed by the Universidad Nacional de Costa Rica that includes the local management authority as a co-respondent.

Honduras: The population study is being finished and the CITES Secretariat will shortly consider the recommendations.

Nicaragua and Guatemala: Both countries have officially requested population studies of crocodilians and assistance with financial support and expert assistance.

Belize: An independently funded study is about to begin, carried out by Dr. F. Wayne King in coordination with CITES.

The Regional Vice Chairman asked the Steering Committee for their opinion and, where appropriate, approval, of the following activities proposed for the future:

- A bibliographic list of specialist materials by country.
- A directory of investigators of the region.
- A directory of users of crocodilian resources.

In addition, Deputy Vice Chairman, Andres Eloy Seijas, reports:

Most of my activities as Deputy Vice Chairman have been centered in contacting people involved in management and conservation of crocodilians in the region. Letters explaining the organization of the CSG have been sent to 27 people; 9 government officials, 7 commercial operators, 5 biologists involved with captive rearing, 4 landowners and 2 conservationists. Additional contacts are planned and a funding support plan is being developed.

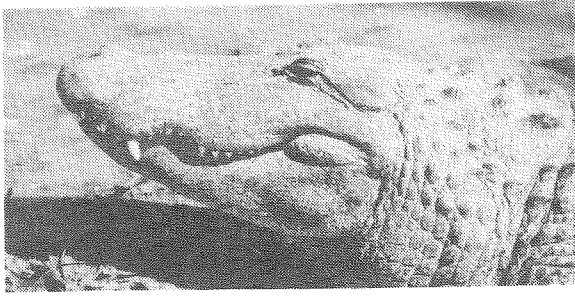
The Deputy V.C. participated in meetings with the Venezuelan Ministry of Environment (MARNR-PROFAUNA) to discuss changes in the management plan for *C. crocodilus* and to prepare an official resolution on the establishment of caiman farms.

Additional activities have been working with FUDENA preparing the "Venezuelan Recovery and Reintroduction Program for the Orinoco Crocodile (*C. intermedius*)", running the Orinoco crocodile rearing facility at UNELLEZ, and conducting surveys of American crocodiles in the Yaracuy river in the Parque Nacional Laguna de Tacarigua.

Following the description of activities by the Regional Vice Chairman and Deputy there was prolonged discussion of the importance of resolving the situation with South American *Caiman*. Many members of the Steering Committee expressed their concern about the destabilizing influence of illegal trade in *Caiman* skins on the international market and the disruptive effect of continued contention about the taxonomic and conservation status of the Yacare caiman. Dr. Obdulio Menghi, observer from CITES, announced that a workshop on the *Caiman* was planned for late 1990 or 1991 but he still sought funding. The Steering Committee expressed the view that this workshop was a priority. Dietrich Jelden was asked to convene an informal workshop at the CSG meeting to bring together the available experts to discuss the taxonomic status of the Yacare.

North America. -- Ted Joanen and Dennis David. A review of the membership list was completed. Candidate nominations were solicited from wildlife agencies in all range states. Names, addresses, telephone and fax numbers were compiled.

Requests for information on alligator farming were received from throughout the U.S., and Central and South America. Literature on



American alligator. W. King photo.

alligator farming and husbandry, and examples of regulations applied in Louisiana and Florida, were provided on request.

The industry was provided assistance in developing marketing programs. A point of sale marketing program was supported and evaluated by the Louisiana Dept. of Wildlife and Fisheries. Efforts to provide ongoing funding are being made.

Because of heightened interest in the aquaculture industry, the Departments of Agriculture in Louisiana and Florida have moved to become involved with the alligator farming industry. Efforts were devoted to encourage Department of Agriculture support of marketing, while retaining oversight of ranching and farming by wildlife agencies. Attendance at legislative committee meetings and industry workshops has helped guide and direct the aquaculture movement. These efforts will be continued and cooperation between wildlife agencies and Departments of Agriculture will be encouraged.

Assistance was provided to the Deputy Chairman, Wayne King, in planning and coordinating the CSG meeting and post meeting field trips. Specialized field training programs were developed for participants from South America and Africa to stay in Florida and Louisiana for two to ten weeks following the meeting.

The commercial development of alligator skins seemed strong with a high demand for skins from France and Japan and an increased interest in "hornback" skins.

**FINANCES.** -- Wayne King. The Deputy Chairman, presented a summary of Group accounts for the period 8 June 1989 - 21 April 1990. Income and donations of \$43,565 and expenditures of \$28,687.06, leaving a current balance of \$14,877.94, were reported. Additional

income was anticipated to be recovered from various activities at the CSG meeting. The accounting system now used allows a clear accounting of income and expense and also allows the tracking of particular donations earmarked for special purposes such as the NEWSLETTER. Dr. King announced that the free mailing privileges currently donated by the Florida Museum of Natural History may be overwhelmed by the large size of present and future mailings and additional income may be needed for mailings. A brief discussion of the possibility of charging a subscription to the NEWSLETTER was held but it was agreed that subscriptions would be impossibly unwieldy to manage and unfair to some members. The NEWSLETTER will continue to be supported by donations and provided free.

The Steering Committee called on the new Executive Officer to prepare a budget plan of anticipated income and expenses for the coming year. The committee also acknowledged the obvious need for continued fundraising if the activities of the Group are to continue to be supported. The issue was raised that the fundraising activities of regional Vice Chairmen for local application and fundraising for general CSG support may compete for the same sources. No resolution was offered.

**MEETING ORGANIZATION.** The organization of the 10th CSG meeting was outlined and the Steering Committee congratulated Dr. King and the local committee for an outstanding job of arranging this meeting. Some members of the committee expressed the view that the schedule was very tight and would leave little time for informal discussions or working meetings. The Steering Committee took under advisement that the schedule for the next meeting should be scrutinized and a balance be sought between presentation of scientific papers, informal discussion and working sessions to develop strategies for crocodile conservation.

**PUBLICATIONS IN PROGRESS.** Current progress in publications was reported. A DRAFT ACTION PLAN had been collated and prepared by John Thorbjarnarson and would be available for review at the present CSG meeting. Members would be able to mark up copies with comments for inclusion in the next draft.

**PROCEEDINGS** of the last CSG meeting were available for distribution at cost during the



meetings. A SPANISH LANGUAGE GUIDE TO FARMING was nearing completion and ready to go to press. Other publications including the MODEL MANAGEMENT PLAN, a DIRECTORY OF CROCODILE FARMS and a SUMMARY MANUAL OF FARMING METHODS were in various stages of preparation and proceeding on schedule. Obdulio Menghi asked if the Spanish farming manual might be best produced after the proposed *Caiman* workshop.

**SCIENCE.** -- Val Lance. Val reported that in addition to responding to correspondence he was involved in the potential for developing reptilian growth hormone (GH) to enhance growth of crocodilians in farms. He reported that mammalian growth hormone had been sequenced and produced in bulk by gene splicing biotechnology but that the current consumer bias against meat grown with hormones has delayed Federal approval of its use in the U.S. Crocodilian GH has been recently sequenced in his lab, in collaboration with Dr. Kawauchi in Japan, and its bulk production is theoretically possible. However, until the situation with mammalian GH was clarified it was unlikely that any pharmaceutical company would risk the necessary investment of \$1 to \$2 million to develop reptilian GH. It is therefore unlikely the reptile GH will be available for commercial use in the near future.

Jon Hutton asked whether it would be possible for the science Vice Chairman to assemble a comprehensive directory of all active crocodilian researchers. The feasibility of doing this was considered remote and the network of contacts developed by regional Chairman would be, defacto, such a directory.

**TRADE.** -- Kevin van Jaarsveldt. Following the greatly regretted death of Graham Goudie, Kevin has taken over leadership of the Trade Group and continued to develop the Group's membership. Because of the participation in, and close links of this Group to the commercial sector of crocodilian activities the Vice Chairman expected that a large proportion of the CSG funding would result from his activities. Kevin reported that he had obtained commitments for continuing support for the Group from TCIM, Walter Herd, Takara Tsusho and Yamatoshi Hikaku in total of \$12,000 annually on the condition that a proper accounting of the funds be kept and that none of these funds be used for

travel by Group members. An additional \$5,000 was expected on similar terms from another donor. It was hoped that these donations were a model for providing regular income to support the CSG.

The trade subgroup has initiated a number of market studies:

i. International trade reporting format to disseminate current market prices for each species.

ii. A study of the manufacturing situation in Europe and Japan to examine the flow of finished products.

iii. A study on the effects of trade volume in other exotic leathers (ostrich, lizard, snake, sea turtle) on market dynamics of the crocodile leather trade.

Kevin attended the CSG Steering Committee meeting in Lausanne in October 89 and travelled through W. Germany, Italy and U.K. to discuss and initiate the trade group activities described.

The trade group continues to seek a suitable member to report on the situation in South and Central America. He suggested that as the situation there is complex and of great importance to crocodilian conservation it might be advisable to appoint another Deputy Vice Chairman and hoped that contacts made at the CSG meeting would help locate someone to fill this important niche.

Following the Vice Chairman's report the question was posed, "What would be the effect of a complete cessation of trade in crocodilians on their conservation status?" In the discussion the Steering Committee unanimously supported the concept that successful conservation of crocodilians was inextricably linked to their high value in trade. It was cautioned however that all successful sustainable use programs were based on extensive research and protection of wild stocks. It was further recognized that severe problems remain in many regions (see reports above and below) and the curtailment of illegal trade and unsustainable takes for trade required the group's action.

**TRADE MONITORING.** -- Ginette Hemley and Richard Luxmoore. Ginette reported that the TRAFFIC network was strengthening its activities in Europe and new offices were being established in East Africa and S.E. Asia. The actions taken at the recent CITES meeting relaxed many trade restrictions and effectively the crocodile trade was growing and becoming

less restrictive. There was therefore a greatly increased need for monitoring of trade. The TRAFFIC intelligence network was functioning well in providing data on trade.

Particularly urgent problems in poorly monitored and illegal trade were identified in the S.E Asian region and in central South America. Large volumes of illegal skins were thought to be in trade between Indonesia, Thailand, and Singapore. The trade of skins between South American countries was being used to obscure their origins which are in many cases illegal or in excess of national quotas. On a positive note Ginette reported a meeting with the new President of Paraguay and expressed some cautious optimism that the new administration might be induced to begin to bring the illegal trade from that country under control.

The growing export of alligator meat had brought with it increased reports of meat smuggling and smuggling attempts. In response Ted Joanen and Dennis David pointed out that legal production of alligator meat had increased by 3X to 5X in the last couple of years and much if not all the meat in trade was probably from legal sources. This prompted discussion of the difficulties of tracking meat trade after carcasses have been processed and packaged. At some stage the individual carcass tag identification cannot be assigned to every small package and US/FWS cannot adequately track every package. Ted described the interlinked system of licensed processors, bonded and sealed trucks, and reconciling production and export volumes that together provide quite good control of meat trade.

Reports have been received of increased trade in live hatchlings of both alligators and caimans in the international pet trade. A large loophole exists in that trade in live hatchlings from Florida and Louisiana to other U.S. states is not well regulated and live export permits are being obtained from states that are not the original source of the animals. No action was proposed.

Ted Joanen asked if statistics on trade within the U.S. were available and could re-imports be broken down by state of origin of the original skin as there was interest in Louisiana in developing the internal U.S. market for alligator products. TRAFFIC can only provide bulk import /export data and data on domestic production of products, but this should be sufficient for analysis of domestic demand.

Richard Luxmoore gave a detailed exposition on his recent discoveries of the situation in S.E. Asia. He reported that at least 750,000 skins of *Caiman crocodilus* had passed between Thailand and Singapore, and in some cases to Japan, in the last year. It is evident that a huge volume of illegal skins are passing through these channels and these are being processed into abundant poor quality products. These skins are thought to originate in Brazil and Paraguay. Thailand has also been involved in a number of other wildlife trade problems recently. The location of tanning for these skins was unclear but Noboru Ishii reported that there may be sufficient tannery facilities to process this volume in Singapore and that in some other countries the decentralized small scale tanneries made it difficult to estimate capacity. Noboru reported that Japan had been very active in turning back imports from any source that appeared to have improper documentation.

An extensive trade in live specimens within S.E Asia was also reported. Live *C. siamensis* and *C. porosus* were traded from Thailand, Cambodia and Myanmar (Burma) although status and management in those countries was poorly known. The difficulty of conservation in some nations that were voluntarily isolated from international attention was acknowledged. It is hoped that the Action Plan can identify such areas for special attention.

Ginette reported that the US/FWS was reviewing the status of the *C. niloticus*, *C. porosus* and the Yacare caiman under the U.S Endangered Species Act. Australia is providing detailed information on the status and management of *C. porosus* to support this action. Prof. Harry Messel reported that several sources had drawn his attention to a disturbing trade in *C. porosus* skins and meat from Palau in the U.S. Trust Territories in contravention of the U.S. Endangered Species Act. A letter had been sent to John Turner, Director of US/FWS deploring this violation and calling for action.

**IMPORT/EXPORT OF LIVE SPECIMENS.** The recent furor over import of *C. niloticus* into Brazil and concerns about other international transfers of crocodilians outside their range and into the range of other species was discussed. The feasibility of a CSG policy statement condemning such transfers was explored. Issues that emerged were the desire of commercial operators to retain control of particularly valuable species like

the alligator in their country of origin, concern for the possible ecological effects of such introductions and the great sensitivity needed with regard to sovereign rights of nations in this issue. It was conceded to be difficult to separate the activities of commercial farms and the activities of zoos in this regard as both might serve as sources of accidental introduction. The issue of maintaining trade monopolies was deemed to lie with the commercial and national management authorities concerned and not to be an issue the Group need address. The Steering Committee did feel a broad consensus that the ecological effects of introducing crocodilians into the range of other croc species could be profound and very damaging to conservation and management efforts. After a discussion of the constraints that IUCN placed upon specialist groups in the definition of policy matters it was concluded that the most useful response the CSG could make would be to prepare a resolution to be published in the newsletter. Richard Luxmoore undertook to prepare this.

**FINANCIAL SUPPORT FOR TRAVEL.** A letter from Rom Whitaker, Vice Chairman for Western Asia, requesting the CSG to assist third world members to find funds to attend meetings was discussed. The history of this issue was described and discussed and the editorial in the last NEWSLETTER (Vol. 9, Jan-Mar, p. 1) restated.

The CSG Chairman verified that Vice Chairmen could bring this and any other issue in person or by letter to the Group for discussion and the Vice Chairmen were the appropriate route for channelling such concerns from the membership. After discussion of the travel issue the current position of the CSG, not to provide any travel funding, was confirmed. The Steering Committee did express willingness to assist with letters or similar statements that would help individuals to obtain travel funds independently.

**TECHNICAL TRAINING NEEDS ANALYSIS.** Mr. Martin Hollands of the Otley College of Agriculture and Horticulture (U.K.) briefly outlined his ideas on the need to carefully analyze real needs for training prior to beginning training programs and asked for the group's advice on the feasibility of establishing a pilot project for such an analysis. The Steering Committee acknowledged the obvious and pressing need for training for technical and management skills in crocodilian management

and conservation. Ginette Hemley asked whether the Model Management project might include a training component (Yes) and Grahame Webb described an ongoing effort to establish a crocodile research and training center near Darwin. It was clear that perceived needs for training were very different in different regions depending on the level of available skills and education and the activities in progress and needed. There seemed a general consensus that there was continuing need for hands on, apprentice training to secure an adequate supply of field and technical people in addition to existing university training schemes that provide management, administrative and scientific skills.

The Chairman of the CSG invited Mr. Holland to discuss his idea informally, prepare a more focussed proposal and present it to appropriate regional Chairmen for comment.

**PRIORITIZATION OF CROCODILE SURVEYS.** Dietrich Jelden and Jon Hutton described the recent EC release of \$350,000 for crocodile management support and the need for careful prioritization of needs. At very short notice the CITES Secretariat had been able to provide the EC with two high priority projects to fund in Colombia (S.A.) and in Africa. The Steering Committee reviewed a proposed prioritization of African projects designed by Jon Hutton and approved his evaluation that, given the stated objectives and preferences of the donor, funding would be most effective if applied in Kenya, Tanzania, Sudan, Ethiopia, Somalia and Congo. It was stressed that the donor specified support for central African countries where the investment of funds would virtually ensure the success of management programs that were already in development. The funds were therefore not available for basic surveys in areas that are poorly known or without management plans even though such areas may be a priority of the CSG and its Action Plan.

Discussion followed on the general advisability of the CSG reviewing proposals and management plans in their formative stages wherever possible. The specialist groups are designed to provide exactly such review to IUCN and any other organization such as CITES, EC and FAO. While it was evident that this did not always occur, it was expected that with the activities of the regional Vice Chairmen the CSG would be able to function effectively in this matter.

**DATE AND VENUES OF FUTURE MEETINGS.**  
Important events around which CSG activities could be structured are:

SSC meeting, Perth Australia 25-26 Nov 1990; IUCN general assembly, Perth, Australia; 28 Nov-5 Dec 1990; CITES 11th meeting, Japan April 1992.

After discussion the following were proposed:

- CSG Steering Committee 27 November, 1990 Perth Western Australia.
- CSG Steering Committee mid to late 1991, Singapore.
- CSG 11th Working Meeting (and Steering Committee) April 1992, Japan in conjunction with CITES.

Following the Steering Committee meeting further discussion with the CITES Secretariat revealed that it was not thought useful to hold specialist Group meetings in conjunction with CITES and that Japan would be very expensive.

A proposal has now been received from the Colombian Export Bank to sponsor and fund the CSG meeting in 1992 in Cartagena, Colombia. A large convention center and \*translation facilities are offered. This proposal is likely to proceed.

**CROCODILE BANK.** A question was posed about the functions, advantages and benefits derived by the CSG from association with and endorsement of crocodile banks. Some caution was expressed about the advisability of the CSG giving endorsements, particularly in regard to commercial activities. However, if crocodile banks are fulfilling a legitimate educational benefit and were truly involved in preservation of species diversity, that moral support, encouragement and practical assistance for their operations could come from the Group.

There being no further business the meeting closed at 17:55. -- J.P. Ross, *Rapporteur*.



**MINUTES OF THE ADDITIONAL MEETING OF  
THE IUCN/SSC CROCODILE SPECIALIST GROUP  
STEERING COMMITTEE - 27 APRIL 1990  
HOLIDAY INN WEST GAINESVILLE, FLORIDA,  
U.S.A.**

Present: Harry Messel, Wayne King, Ginette Hemley, Ted Joanen, Juan Villalba-Macias, Kevin van Jaarsveldt, Jon Hutton, Olivier Behra, Grahame Webb, Brian Vernon, Dietrich Jelden, Andres Seijas, Dennis David, Val Lance, Toshio Yamanaka, Richard Luxmoore, Mark Ferguson, Obdulio Menghi (CITES observer). Noboru Ishii, Perran Ross, Yoichi Takehara (observers).

The CSG Chairman, Prof. Harry Messel, opened the meeting at 13:14 and reported on the action items generated in the preceding Steering Committee meeting that were completed:

- Letter re communications with FAO -- done.
- Letter to PNG re Singapore trade -- done.
- Letter to Queensland -- done.
- Letter and resolution to Indonesia, draft submitted by Jack Cox read and approved.
- Letter to Madagascar, draft from O. Behra read and approved.
- Congratulations to North Territory on research; draft press release prepared by G. Webb read and approved.
- Congratulations to Louisiana on research; Ted Joanen prepared a release patterned after Webbs press release.

**UNIVERSAL TAGGING OF CROCODILE SKINS.** The following resolution was read and approved for publication in the minutes:

**AWARE** that all living species of crocodilians are listed in Appendix I or II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

**CONCERNED** that many species of crocodilians are subject to international trade.

**CONCERNED** that some species are subject to substantial levels of illegal trade.

**AWARE** that the tagging of all crocodilian hides in trade is a fundamental step towards the effective regulation of international trade in crocodilians; and

CONCERNED ALSO of the significant effort that has been made by the Conference of the Parties to CITES to more effectively regulate international trade in crocodilians.

The Steering Committee of the CSG RECOMMENDS that:

1) The Conference of the Parties to CITES resolve to implement at its next meeting, as a matter of urgency, the universal use of non-reusable tags to identify all raw and tanned crocodilian hides entering international trade.

2) Such skin identification tags should comply with the requirements of Resolution Conf. 5.16.

**RESOLUTION ON COMMERCIAL CAPTIVE BREEDING OF SPECIES OUTSIDE THEIR RANGE.** Richard Luxmore introduced a resolution on this issue. The complexity of this issue described in the minutes of the previous meeting were again evident and several changes and amendments were proposed. After extensive discussion, in the absence of any general agreement from the Group, the resolution was not approved and the issue dropped. Members of the Steering Committee are free to reintroduce the issue and draft a resolution at future meetings if they so chose.

**RESOLUTION ON TRADE WITH NON-CITES PARTIES.** Jack Cox and Ginette Hemley introduced a resolution that was approved as follows:

RECOGNIZING that illegal trade threatens the survival of certain populations of crocodilians and seriously undermines efforts of producer countries to manage on a sustainable basis their crocodilian resources;

ACKNOWLEDGING the magnitude of illegal trade in *Crocodylus porosus* and *C. novaeguineae* in the Asian Pacific region and the threat this trade clearly poses to the sustainable management of those species in Indonesia as well as the growing threat to their sustainable management in Papua New Guinea;

CONCERNED about the continuing large scale illegal trade in *Caiman* skins from Central and South America;

CONCERNED that illegal trade often denies full economic benefits of crocodilian resource use to producer countries; and

NOTING that the IUCN/SSC Crocodile Specialist Group has adopted a resolution calling for the Universal Tagging of crocodilian skins;

The IUCN/SSC Crocodile Specialist Group calls upon all CITES parties to:

Prohibit trade in crocodilians and crocodilian products with all countries that are not party to CITES, including those countries that are treated as non parties by maintaining CITES reservations on crocodilian species

Ginette drew the attention of the Group to the continuing problem of Taiwan, which imports alligator meat from the U.S. and cannot join CITES as it is not recognized by the UN.

**WORKSHOP ON YACARE.** Dietrich Jelden described the activities of the workshop and reported that, given the complexity of pending litigation in the U.S. concerning this issue, no substantive discussion could be held.

**EXECUTIVE OFFICER.** Prof. Messel reported that a job description and terms of employment had been successfully negotiated with Perran Ross. In the interim, while the formalities of hiring him were completed, he would assist Wayne on a consultant basis. In response to a question from Kevin van Jaarsveldt about the burden that Perran's expense would place on fundraising, the terms of the agreement were shared with the committee.

**FUNDRAISING.** A brief update on funds collected at the meeting was given. Several thousand dollars in donations were received and a detailed accounting will be available within a week and given to the next Steering Committee meeting.

The possibility of Vice Chairmen receiving a small amount to cover expenses of their activities for CSG was raised. There was no objection in principle but any such allowance and its amount would depend on raising sufficient funds to meet other priorities first. The Executive Officer was instructed to examine this possibility in his budget planning.



The possibility of providing a fax machine to Vice Chairmen who did not have fax access, in order to facilitate their CSG work, was raised. In discussion it was recognized that it would not be possible to routinely provide such equipment to Vice Chairmen. However several indicated that they received adequate support from their work or business and perhaps any available operating funds for Vice Chairmen could be reallocated on a case by case basis to meet such special needs. The Exec. officer suggested that it might be possible to obtain fax machines from businesses as they discarded older models in favor of newer versions and he undertook to explore this possibility.

The Chairman pointed out that generous donations were received from producers in Asia, Australia and South America, but some affluent producers in the U.S. had not yet donated to the group's operating costs. It was pointed out by Ted Joanen that nevertheless these sectors did make substantial material contributions to crocodile research and conservation through intangible donations and other routes. Dennis David reported that alligator farmers in Florida spend more than \$150,000 annually for lobbying and in direct support of programs and are also taxed to support management activities. The Chairman responded that these contributions did not assist the CSG with its expenses.

**CAIMAN ACTIVITIES.** Obdulio Menghi reported on discussions on the *Caiman* situation held during the meetings. He reported that funding for surveys and management assistance would continue to be available and this area was a high priority for CITES. He described some difficulties encountered in the routing and review of a recent survey in Guyana. He proposed to the Steering Committee that he would like the assistance of the CSG in the form of a *Caiman* project review Group who could assist CITES in the review of proposals and reports and generally assist CITES in *Caiman* management. Dr. Menghi proposed Prof. Messel, Prof. King, Juan Villalba-Macias, Dennis David, Grahame Webb, Ginette Hemley, Jon Hutton and Dietrich Jelden as members of the review Group in addition to a representative from the country concerned with any proposal.

He further reported that CITES had established the following priority list for support in South and Central America.

**South America:**

- |                |                             |
|----------------|-----------------------------|
| first priority | - Bolivia, Paraguay, Brazil |
| second         | - Colombia                  |
| third          | - Peru, Argentina           |

**Central America:**

- |        |                         |
|--------|-------------------------|
| first  | - Honduras              |
| second | - Nicaragua             |
| third  | - Panama                |
| fourth | - Guatemala, Costa Rica |

Priorities were determined on the basis of initiated projects that required support to succeed and on volume of trade.

Prof. Messel, Prof. King, Grahame Webb and Jon Hutton endorsed and supported the review committee concept and immediately suggested that CITES establish similar committees of CSG experts for other regions, particularly Africa, Asia and the Southeast Asia/Oceania region. Dr. Menghi proposed to send an official request from CITES to the Chairman of SSC requesting participation of the CSG as outlined above.

**CSG MEETING 1992.** The Chairman reported that the invitation from the Colombian Export Bank to sponsor the next meeting in Cartagena, Colombia, had been provisionally accepted and formal exchange of letters and plans would proceed. He proposed that the meeting be held in May 1992 and be dedicated to the memory of the outstanding Colombian herpetologist and crocodile researcher, Frederico Medem. This proposal was enthusiastically endorsed by the Steering Committee.

Val Lance then presented a proposal for planning and format of the meeting to respond to the very large number of people anticipated (over 500). Val proposed:

- 1) Only invited speakers on current thematic topics would be asked to present keynote talks at the meeting and these would be restricted in number.
- 2) A series of carefully planned action workshops on critical topics would be presented.
- 3) Individual research papers and other information would be presented as posters in a display format.
- 4) Abstracts of all presentations would be required at least two months prior to the meeting for review and publication in a volume available at the meeting.

5) The general level of professionalism of the meeting would be raised with strict adherence to published schedules and high professional quality of presentation.

The Steering Committee endorsed these proposals and Val was nominated, with Mark Ferguson, Wayne King and Perran Ross to immediately form a meeting committee to begin planning the event along the lines described. Wayne King commented that the level of scientific value of this meeting's presentations was very high and some really exciting science and research results had been presented.

Grahame Webb and Jon Hutton asked whether some sort of open plenary session could also be included so that the general membership could be advised of Steering Committee issues and action. The Chairman pointed that there was no requirement or mechanism for democratic procedures in the Group but on an advisory and consultative basis it may be possible. He pointed out that the regional Vice Chairmen were the route for communication and information to and from the membership.

**CITES 1992 MEETING.** The committee inquired what procedures would be used for the CSG to review the resolutions and proposals to come up in the 1992 CITES meeting. Prof. Messel informed the Group that Ms. Amie Brautigan of the Trade Specialist Group would coordinate SSC comment on CITES proposals. Amie was moving to Cambridge, England, and would be near Richard Luxmoore at the WCMC. The opportunity therefore existed for Richard to liaise informally with Amie to ensure timely review. After discussion it was agreed that the CSG in its new regionalized format had a greatly increased ability to provide review of CITES proposals and should formally request SSC to route all crocodilian related proposals via the Chairman to the CSG for review. Ginette Hemley is to draft a letter with this request for Messel.

**INFORMATION FOR THE NEWSLETTER.** Information should be sent as usual to Wayne King's office where it will be handled by the new Executive Officer.

After congratulating Wayne King and all the members of the organizing committee for an extremely successful meeting and thanking Vice

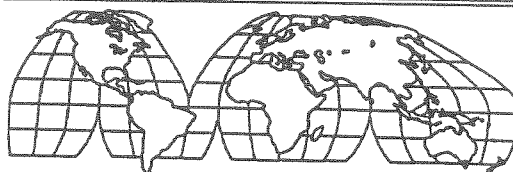
Chairmen for their energy and dedication Prof. Messel closed the meeting at 15:10. -- J. P. Ross, *Rapporteur.*

## CSG 10TH MEETING

The 10th Working meeting of the Crocodile Specialist Group was held in Gainesville, Florida, U.S.A., between April 22 and April 27 1990. This was by far the largest working meeting the Group has had with over 320 participants, 80 presented papers and four workshops. A report of the deliberations of the Steering Committee are presented above and published papers and workshop results will appear in the PROCEEDINGS OF THE 10TH WORKING MEETING, currently in preparation. Availability and price will be announced in a later NEWSLETTER.

A striking contrast is the First Working Meeting of the Group in New York in 1971. Only 15 people participated in that first meeting. They are shown in the photo on the cover, from left to right, A.C. (Tony) Pooley, South Africa; Moira Warland, IUCN Switzerland; Max Downes, Papua New Guinea; Peter Brazaitis, U.S.A.; Claire Hagen, U.S.A.; Angus Bellairs, U.K.; Utai Yongprapakorn, Thailand; Robert Bustard, Australia and U.K.; Robert Chabreck, U.S.A.; Hugh Cott, U.K.; James Powell, U.S.A.; F. Wayne King, U.S.A.; Suphachai Youngprapakorn, Thailand; Rene Honegger, Switzerland; Frederico Medem, Colombia.

## AREA REPORTS



### AFRICA

#### Malawi:

F.X. Mkanda, Kasungu National Park, P.O. Box, 43, Kasungu, Malawi, coordinates wildlife research programs in the Department of National Parks and conducts his own research in ecology, which has led him to work with crocodiles. He reports to us that crocodile ranching in Malawi began in 1984 and another

ranch was established in 1989. The ranches rely on the collection of eggs from the wild. The Dwangura ranch successfully hatches 1700-2000 per year and has an approved export quota of 1600. A breeding stock of 56 females and 4 males is maintained.

## ASIA

### **Bangladesh:**

Romulus Whitaker, Madras Crocodile Bank, Vadanemmeli Village, Mahabalipuram Rd. Tamil Nadu 603-104, India, forwards this report from A. K. Akonda in Bangladesh:

The Crocodilians of Bangladesh include the marsh crocodile or mugger (*C. palustris*) the estuarine crocodile (*C. porosus*) and the Gharial (*Gavialis gangeticus*).

The Marsh crocodile is possibly extinct [in the wild] (Khan 1982-- Wildlife of Bangladesh, a checklist). A few individuals are present in the pond of Khan Jahan Ali Mazar at Baggerhat and breeding activity has been seen in the pond. In the past the species used to occur in almost all the rivers of districts Dhaka, Mymensingh, Syhet Rangpur and Chittagong Hill Tracts.

The estuarine crocodile is present in the Sunderabans. Khan (1982) estimated there to be about 200 individuals. The species has also been reported in the coastal rivers of Barisal and Chittagong, including Chakaria Sundarbans.

Gharial occur in Tista-Nagarbi and Sardah-Godagari (Rajshahi) in Jamuna and Padma respectively. Khan (1982) estimated about 20 individuals in these sites. It was first sighted to breed in the river Padma near Rajshahi in 1970. The population remained there until 1986 when they disappeared from the Bangladesh portion of that river.

No farming or ranching of crocodiles has been started or proposed.

### **India:**

Dr. Lala A. K. Singh submitted the following addenda to his previous regional report:

Mugger. Orissa has become one of the major mugger states. The species now

breeds at at Tikarpada, Ramatirtha and Nandankanan. Releases can continue for a couple of years more.

*C. porosus*: Bhitarkanika Sanctuary, now a proposed National Park, is 672 sq km. To this a portion near Kujanga is being added as Batighar Sanctuary. Final notification of the Park awaited while village shifting etc. was going on.

In view of the varying levels of problem and interest, I have a growing realization that Statewise Work Plans are the real answer for the future. No doubt this will be backed by National policy.

### **Myanmar (Burma)**

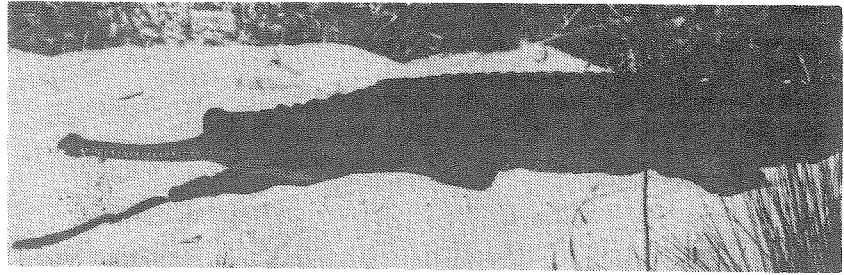
Sheik Abdul Hafeez, Managing Director, Rafada Far East (PTE) Ltd., 05-04 Afro Asia Bldg., 63 Robinson Rd., Singapore, writes that his company has proposed a joint venture with a Myanmar company to develop a crocodile farm on 5 acres, 50 km. from Rangoon.

B.K. Aung Moe, c/o Mr. G.S. Sharma, Sharma House, No 17/21 35th Street, Yangoon (Rangoon), is the new manager of the farm. He writes that after 8 years as a Demonstrator in the Zoology Department at the University of Rangoon he joined the Crocodile Farming Unit of the Myanma Pearl and Fishery Enterprises and submits the following report:

In Myanmar Naing Ghan (Burma) 3 Species, *Crocodylus porosus*, *C. palustris* and *Gavialis gangeticus* are reported but only *C. porosus* has been collected to date. A 1980 survey estimated the standing crop of crocodiles in the Ayeyawaddy [Irrawaddy?] delta at approximately 4000 and noted that the population has been reduced in number over the last 20 years. Large areas of the upper delta that used to have crocodiles now have none or very few. Reasons for the suspected decline are thought to be poaching for export and destruction of nesting habitat. At present the authorities concerned are taking action to keep the stock at a sustainable yield by Legislative measures.

There is one crocodile farm, established in 1978 on a 40 acre campus in Thaketa, Yangoon. A stock of 550 *C. porosus* (including 120 brood stock) are maintained at the farm. The farm was initially stocked with hatchlings obtained in the

Ayeyawaddy delta, either collected from the nest as they hatch or captured from the river at night with a torch. At present the farm is providing its own stock with farm bred hatchlings. Since the breeding techniques were recently practised further improvements in methodology are still needed.



Gharial at the St. Augustine Alligator Farm Breeding Center, Ocala, Florida, U.S.A. W. King photo.

## Nepal:

Appendix to the Summary Report of the Western Asian Region. Tirtha M. Maskey, Department of National Parks and Wildlife Conservation, P.O. Box 860, Barbarmahal, Kathmandu, Nepal:

Right now Nepal does not have any industries based on crocodile products. However, in 1978, Nepal had started a Gharial conservation project at Kasara, Park Headquarters, in the Royal Chitwan National Park. The main purpose of this project was to collect wild eggs, hatch them, rear them till they reach a length of 1.5 m and then release them back into the different river systems of Nepal. So far 394 gharials have been released into the Koshi, Kali Gandaki, Naryani and Babai rivers. The present status of both wild and released gharial is as follows:

River	Wild	Released
Koshi	4	4
Kali Ghandaki	9	32
Narayani	30	65
Karnali	7	-
Babai	7	30
Rapti	2	-
<b>TOTAL</b>	<b>55</b>	<b>131</b>

## Pakistan:

Ashid Ahmad, Wildlife Management Specialist, Pakistan Forest Institute, Peshawar, Pakistan, submitted the following report to Romulus Whitaker:

Marsh crocodiles have a wide distribution range in Pakistan confined within the provinces of Sind and Baluchistan. The Gavial was considered

to be extinct in 1982 in the river Indus which was the only important habitat of the species in Pakistan.

According to my recent observations Marsh crocodiles of Baluchistan are on the decline and the total populatiuon could be less than 100. However in the Sind the Marsh crocodile seems to be increasing and are above 2000 in number although no exact population estimates are available.

Recently, in the first week of March, one female Gharial was sighted, indicating that although few in number, some Gharial still survive in Sind. Their exact number will be confirmed in 1991.

Skin industry: At the moment there are no plans for establishing an industry based on crocodile skins. However a rural development plan for Rural Sind Arid Zone is being prepared. As a consultant to the plan I have suggested to the concerned agencies that, in view of the potential for such an industry, it should be included. Details for such a a possibility will have to be worked out after the agencies agree to it in principle.

## AUSTRALIA/OCEANIA

### Australia

Harvey Cooper-Preston, P.O. Berimah, NT 0828, Australia, reports:

It is now the wet season with the peak nesting season for *C. porosus* in January. Despite a very "dry" wet season more nests have already been laid than by this time last year. In the Adelaide River the number of nests has increased from 24 last year to 46 this year on the same stretch. We have completed studies on

feeding in wild juvenile *C. porosus* and found that food conversion rates are higher in the wild juveniles than in captives, with animals under 60-70 cm total length eating mostly crabs and prawns and larger animals up to 120cm eating mammals and prawns.

## Indonesia:

Widodo S. Ramono, Direktorat Pelestarian Alam, Jalan.Ir.H. Juanda No. 15, Bogor, Indonesia, writes on behalf of Dr. Effendy Sumardja, Director of Nature Conservation:

Following announcement of the Government of Indonesia's CITES management authority last October, on December 27th 1989 Indonesian Flora - Fauna Trade Association agreed not to export any wild Flora or Fauna products to Singapore. Stronger efforts to suppress smuggling of wildlife have begun, with a special task force established for Irian Jaya. However it remains difficult to control smuggling given the difficult geographical conditions. To assist these efforts of the Indonesian management authority the CSG has been asked to support efforts to stop smuggling and to urge Singapore to lift its CITES reservations on crocodiles.

To extend the development of crocodile management programs assistance with surveys extended to Kalimantan, Sumatra, and Sulawesi are needed. Continuation of funding by the Japanese government of the FAO-PHPA project has not yet materialized and the CSG has been asked to support Indonesia in urging that this funding be made available. The assistance of the CSG to locate experts and funding to extend the crocodile management project in Indonesia is requested.

## Papua New Guinea:

John Mark Genolagani and John M. Wilmot, National Crocodile Management Unit, Department of the Environment and Conservation, Papua New Guinea, followed up the 10th Working meeting with a productive visit to the Rockefeller Wildlife Refuge, Louisiana, U.S.A. While John-Mark and John were at the

meetings, two expatriates were found guilty of illegally trading skins in PNG and were fined PNG K200 each and 95 skins were confiscated. As from 28 May 1990 the Government has banned all crocodile exports to Singapore until its CITES reservation is lifted, as recommended by the CSG meeting.

## SOUTH AMERICA

### Colombia:

Miguel E. Cediél Navarro, Carrera 7a No 124-31, Aptdo Aereo No 100096, Bogota D.E., Colombia, writes that Zoorecol Ltda. began 4 years ago, located near Cartegena, with a stock of 500 "Babillas" (*Caiman crocodilus fuscus*). Problems have been experienced to date with low growth rates and low hatching percentage.

### Venezuela:

Alejandro Carrillo Garcia, Aptdo Postal 3401, Carmelitas, Caracas, Venezuela, reports that the National Farmers Federation of Babas (*Caiman crocodilus*) - FEDENABABA, was officially founded on 11 April 1990 and has been registered at the Ministry of Natural Resources and Environment.

## NORTH AMERICA

### United States

NYZS, CROCODYLIAN RESEARCH AND EDUCATION PROGRAMS AT CENTRAL PARK ZOO. Crocodilian activities were slowed during preparations for the reopening of the zoo in August 1989 but are now again fully underway.

Phase I of the CITES Central South American Caiman Study was completed in October 1989 by the survey team, Peter Brazaitis, Carlos Yamashita, (University of Sao Paulo) and George Rebelo (INPA, Manaus). The official CITES report, available directly from Peter, reports that the field data on distributional relationships and the biochemical systematics sample base will be inconclusive without further field surveys and sampling of the northern Brazilian populations. Funds have been made available for the team to continue this work and many localities in the Amazon drainage have already been surveyed by George Rebelo and Carlos Yamashita.



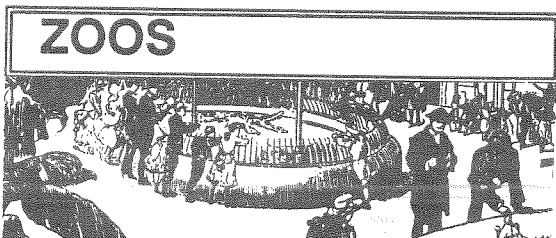
The biochemical systematics study continues at the zoo assisted by Dr. Myrna E. Watanabe, Manhattan College, NY. Samples from hundreds of individuals from numerous localities have been compared using isoelectric focusing techniques and now individuals from selected regions are the subject of DNA comparison. This work is nearing completion supported by the original CITES grant and additional funding of \$6000 from the Madison and de Forest Grant Fund (NYZS). Laboratory facilities have been provided by the Central Park Zoo.

The laboratory is the site of additional studies of hematology, blood parasites and vitamin levels in wild caiman in collaboration with Dr. Jane Huffman, University of East Stroudsburg, Pennsylvania (parasites and pathology), and Dr. Ellen Dierenfeld, New York Zoological Park (vitamin levels).

A three day training seminar on illegal trade in exotic skins and products was given in April 1989 to U.S. Fish and Wildlife Service agents and inspectors. Similar programs are scheduled for New York State Wildlife Officers and for Inspectors of the U.S. Customs Service.

A special exhibit on illegal trade in endangered species was set up at the Zoo in cooperation with U.S. Fish and Wildlife Service accompanied by a special booklet "The Illegal Skin trade." The booklet assists consumers to identify endangered species and illegal products prior to purchase and high demand has necessitated a second printing. The booklet is available from Alison Power, Public Relations Dept. Central Park Zoo, 830 5th Ave, NY, NY 10021 U.S.A.

Central Park Zoo continues to develop as a center for crocodilian research, wildlife law enforcement training and consumer education related to the protection of endangered species.  
--Peter Brazaitis, Central Park Zoo, 830 Fifth Ave, New York, NY 10021, USA.

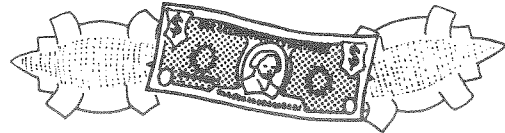


**ZOOS**

ISIS: The International Species Information System has computerized records of over 4200 vertebrate species held in captivity, including

crocodilians. Information is available from 346 zoos in 37 countries and ISIS hopes to make their data base complete. Printed reports or data discs on individual species showing the recorded history in captivity, are available at cost (\$25 US) from ISIS, 12101 Johnny Cake Ridge Rd., Apple Valley, Mn 55124-8199 USA (Fax 612 432 2757). Nathan R. Flesness, *Executive Director ISIS*.

## TRADE



The following prices (in U.S. dollars) paid to hunters, farmers or other producers were reported to the editor since the last issue of the NEWSLETTER appeared. This information is provided as a service to our readers to allow an overview of the world market for crocodilian skins and products. The CSG cannot guarantee the accuracy of the reports submitted to us and makes no endorsement or advertisement of particular sales or prices.

### *Alligator mississippiensis* in Florida U.S.A.:

April 1990 - wet salted belly hides from farm raised alligators = \$7.01 per cm width, all sizes all widths across the board, avg. width 36.4 cm; May 1990 - wet salted belly hides from farm raised alligators = \$7.62 per cm width, all sizes all widths across the board, avg. width 37.0 cm; June 1990 - wet salted belly hides from farm raised alligators = \$7.66 per cm width, avg. width 39.0 cm.

*Crocodylus niloticus* in South Africa: March 1990 hides = \$6.00 - \$6.75 per cm width; tail meat = \$3.56/ kg. (Natal) - \$8.92/ kg. (Cape Province); other meat = \$2.00/kg; adult breeding stock = approx. \$5,000.00 (females), \$3,000.00 (males), \$85.00 (hatchlings). These represent record prices for live *C. niloticus*.

*Crocodylus palustris* in Pakistan, poached skins of immature muggers are reported to sell for \$56.00/square inch in Karachi. [This price is so high as to question its accuracy; trade in such skins is illegal. -- Ed.]

*Caiman crocodilus* in Venezuela: March 1990 small flanks = \$67.00; large flanks = \$106.00.

*Caiman crocodilus* in Colombia: baba hides = approx. \$2.00 per cm.

Walter Herd, Postfach 10 07 29, D-6050 Offenbach (Main) 1, Federal Republic of Germany, provided the following market report on demand for crocodile skins in Germany:

#### BY SPECIES

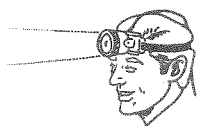
Demand	Supply	
25%	10%	<i>C. porosus</i>
15%	17%	<i>C. novaeguineae</i>
30%	20%	<i>C. niloticus</i>
20%	50%	<i>Alligator</i>
10%	3%	<i>Caiman</i> (mainly flanks)

#### BY SIZE

Demand	Supply	
15%	5%	18 - 24 cm width
45%	84%	25 - 39
10%	5%	40 - 44
10%	3%	45 - 54
10%	3%	55 +

The European market currently has an increased demand for large skins for sportline products.

## PERSONALS



Brint Spencer, General Curator, Beardsley Zoo, 1875 Noble Ave, Bridgeport, CT 06610, U.S.A. is involved in renovating their South American Tropics building to display Broadnouted Caiman.

Peter Crawshaw, C.P. No 5, Foz do Iguaçu, PR 85980, Brazil, reports:

Although presently working with carnivorous mammals I continue my interest in crocodilians. Local informants report small populations of *Caiman* (either *yacare* or *latirostris*) scattered along the Iguaçu River and I found tracks of a huge (> 3 m) *latirostris* in 1987. I plan to do some surveys along the rivers in the Park once my studies of ocelots and crab eating foxes are established.

My caiman ecology paper is still in preparation for HERPETOGICA and a paper on effects of hunting on nesting behaviour should appear this year in

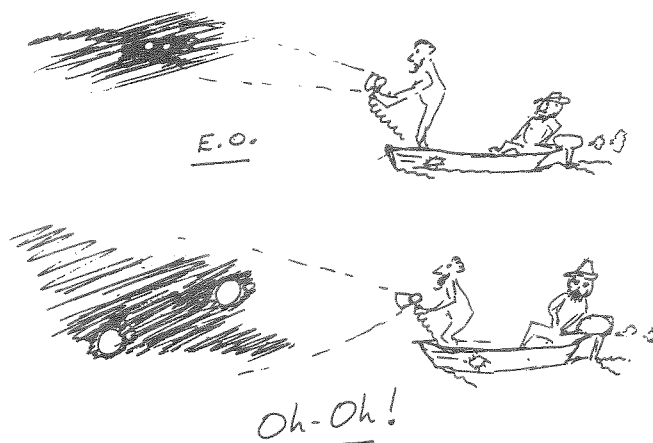
Robinson and Redford's 'NEOTROPICAL WILDLIFE: USE AND CONSERVATION', Univ. of Chicago Press.

Lehr Brisbin, Savannah River Ecology Lab, P.O. Drawer E., Aiken, SC 29801, U.S.A., reports that he was recently promoted to the rank of senior ecologist at the University of Georgia and has been named a member of the IUCN/ICBP New World Heron Group and a member of the SSC Pigs and Peccaries Specialist Group, whose newsletter he edits. Lehr continues to maintain a collection of captive alligators first used as hatchlings by Mark Staton in his nutritional studies. These gators are still strong and vigorous after 43 months on a diet of commercial dry ration exclusively.

Maria del C. Munoz, Fundo Pecuario Masaguaral, Apt. 39, Calabozo 2312-A, Guarico, Venezeula, writes that:

...37 young *Crocodylus intermedius* were born in May 1990. One showed difficulty absorbing the umbilical mass but the remainder are in perfect health. The Group is hoping to report further successful births in the future.

Goran E.D. Blomberg, 304 Milford Street, East Lansing, MI 48823, U.S.A., defended his thesis in mid May and is now tying up "umpteenth loose ends" to finish his disseration on the Botswana croc population model that he presented at the 5th working meeting. He reports that "The end of too many years as a professional student will be most welcome."



## CORRECTION

In the last issue of the NEWSLETTER (vol. 9, Jan.-April 1990) the following photo credits inadvertently were left off:

Front cover: *Caiman latirostris* by Lic. Angel Alberto Yanosky.

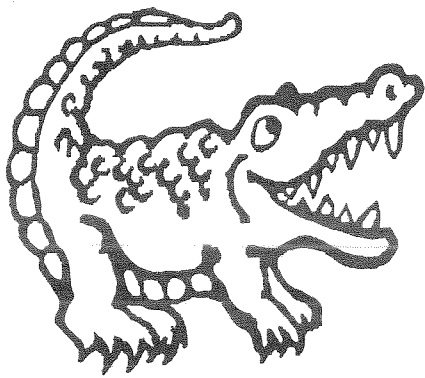
Page 13: *Caiman crocodilus* ssp. by George Henrique Rebelo.

Pages 17-18: Oasis Ranch *Caiman crocodilus* management program by Leonor Baez de Azpúrua and Leonardo Michangeli.

**EDITORIAL POLICY** - The newsletter must contain interesting and timely, not outdated, information. All news on crocodilian conservation, research, management, captive propagation, trade, laws and regulations is welcome. If you wonder why news from your area is not reported, it is because you have not sent it in. Whenever possible, the information will be published as submitted over the author's name and mailing address. Even if the editor has to extract information bit by bit from correspondence or other works, the revised news items will be attributed to the source whenever possible. The information in the newsletter should be accurate, but time constraints prevent independent verification of every item. If inaccuracies do appear in the newsletter, please call them to the attention of the editor so 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.



Down on the farm.



## Steering Committee of the Crocodile Specialist Group

For further information on the CSG and its programs, on crocodile conservation, biology, management, farming, ranching, or trade, contact the appropriate officer on the Steering Committee:

**Chairman:** Prof. Harry Messel, School of Physics, University of Sydney, NSW 2006, Australia. Tel: (61) (2) 692 3383. Fax: (61) (2) 660 2903.  
**Deputy Chairman:** Prof. F. Wayne King, Florida Museum of Natural History, Gainesville, FL 32611, U.S.A. Tel: (1) (904) 392 1721. Fax: (1) (904) 392 9367.

**Africa:** Vice Chairman: Dr. Jon Hutton, 16 Cambridge Ave., Highlands, Harare, Zimbabwe. Tel: (263) (4) 739 163. Fax: (263) (4) 708 554. Deputy Vice Chairman: Olivier Behra, Project TCP/MAG/8954, c/o FAO Rep, BP 3971, Antananarivo, Madagascar. Tel: (261)(2) 28831. WWF Fax: (261)(2) 33986.

**Eastern Asia, Australia and Oceania:** Vice Chairman: Dr. Grahame J.W. Webb, P.O. Box 38151, Winnellie, NT 5789, Australia. Tel: (61) (89) 221 355. Fax: (61) (89) 470 678. Deputy Vice Chairman: Brian Vernon, Mainland Holdings Pty. Ltd., P.O. Box 196, Lae, Papua New Guinea. Tel: (675) 42 3510. Fax: (675) 42 1471.

**Western Asia:** Vice Chairman: Romulus Whitaker, Madras Crocodile Bank, Vadanemmel Village, Mahabalipuram Road, Perur PO, Tamil Nadu, 603 104 India. Deputy Vice Chairman: Dr. Lala A.K. Singh, Project Tiger, Similipal Tiger Reserve, Khairi-Jashipur, Orissa, India 757091.

**Europe:** Vice Chairman: Dr. Dietrich Jelden, Ernährung und Forstwirtschaft, Postfach 18 02 03, 6000 Frankfurt am Main 1, Federal Republic of Germany Tel: (49) (69) 156 4930. Fax: (49) (69) 156 4445.

**Latin America and the Caribbean:** Vice Chairman: Juan Villalba-Macias, TRAFFIC (Sudamerica), Carlos Roxlo 1496/301, Montevideo, Uruguay. Tel: (598) (2) 493 384. Fax: (598) (2) 237 070. Deputy Vice Chairman: Andres Eloy Seijas, UNELLEZ, Mesa de Cavaca, Guanare, Portuguesa, Venezuela. Tel: (58) (57) 68006. ext. 271.

**North America:** Vice Chairman: Ted Joanen, Louisiana Wildlife and Fisheries Commission, Rt. 1, Box 20-B, Grand Chenier, LA 70643, U.S.A. Tel: (1) (318) 538 2165. Fax: (1) (318) 491 2595. Deputy Vice Chairman:

Dennis David, Game & Fresh Water Fish Commission Research Lab, 4005 S. Main Street, Gainesville, FL 32611, U.S.A. Tel: (1) (904) 336 2230. Fax: (1) (904) 376 5359.

**Science:** Vice Chairman: Prof. Mark W.J. Ferguson, Dept. Cell & Structural Biology, Coupland III Building, University of Manchester, Manchester, M13 9PL, United Kingdom. Tel: (44) (61) 275 6775. Fax: (44) (61) 275 6776. Deputy Vice Chairman: Dr. Valentine A. Lance, San Diego Zoo, P.O. Box 551, San Diego, CA 92112, U.S.A. Tel: (1) (619) 557 3944. Fax: (1) (619) 231 0249.

**Trade:** Vice Chairman: Kevin van Jaarsveldt, P.O. Box 129, Chiredzi, Zimbabwe. Tel: (263) (4) 708 836. Fax: (263) (31) 2782. Deputy Vice Chairman: Philippe Roggwiler, Tanneries des Cuirs d'Indochine et de Madagascar 59 Rue du Fauberg St. Martin, 75010 Paris, France. Tel: (33) (1) 4203 2680. Fax: (33) (1) 4238 3855. Deputy Vice Chairman: Toshio Yamanaka, President, Yamatoshi Hikaku Co. Ltd., 12-50, Ueno-Kouen, Taito-Ku, Tokyo 110, JAPAN. Tel: (81) (3) 824 1571. Fax: (81) (3) 823 1972.

**Trade Monitoring:** Vice Chairman: Ginette Hemley, TRAFFIC USA, 1250 24th Street NW, Washington, D.C. 20037, U.S.A. Tel: (1) (202) 293-4800. Fax: (1) (202) 293-9345. Deputy Vice Chairman: Richard Luxmoore, World Conservation Monitoring Centre, 219C Huntington Road, Cambridge CB3 0DL, U.K. Tel: (44) (223) 277 314. Fax: (44) (223) 277 136.

**IUCN Species Survival Commission:** Chairman: Dr. George Rabb, Chicago Zoological Society, Golf Road, Brookfield, IL 60513, U.S.A. Tel: (1) (708) 485 0263. Fax: (1) (708) 485 3532. Deputy Chairman: Grenville Lucas, The Herbarium, Royal Botanic Garden, Kew, Richmond, Surrey TW9 3AB, United Kingdom. Tel: (44) (1) 940 1171 Fax: (44) (1) 948 0819.

**CITES Observer:** Dr. Obdulio Menghi, Scientific Coordinator, CITES Secretariat, Case postale 78, CH-1000 Lausanne 9, Switzerland. Tel: (41) (21) 200 081. Fax: (41) (21) 200 084.