



IZE Asia



Newsletter of the Asian Regional Network
of the Association of International Zoo Educators -- ARNIZE

Dr. Ulysses S. Seal, 1929 - 2003, was -- without question -- the best teacher I ever met. He died a few days ago, of cancer, a few months later than he wanted to. He was prepared. He started preparing years before he knew he would leave the planet early, because he wanted to insure that the valuable work of the Conservation Breeding Specialist Group IUCN SSC would go on at a respectable pace and quality. By "preparing" I mean that he began empowering members of CBSG very aggressively, so that they would be in a position to conduct CBSG activities themselves. That involved teaching them all of his considerable skills, or trying to. These involved not only the possession of knowledge and facts, but skills in



U.S. Seal, 1929 - 2003

introductory material given verbally but the bulk of which would be working groups, interactive discussions, scientific problems solving using tools such as VORTEX population modelling and the IUCN Red List Criteria.

He taught by encouraging people to try and come to a consensus on a problem which involved dozens or hundreds of stakeholders. He taught by encouraging people to cooperate with one another, to coordinate the various steps to be taken to solve problems and then to collaborate, sharing knowledge, energy and resources.

Ulie designed and conducted many different kinds of training workshops and by attending those, many people learned to be trainers. He believed in strategic planning for future activity and got people together for strategic futures workshops for CBSG, for zoo conservation and for any professional group activity.

The first time I attended a CBSG meeting, in Copenhagen, in about

1990, there was an Education Working Group and from that time, Ulie was always trying to get a genuine CBSG Education working group going for education. He was not satisfied with that aspect of CBSG work, perhaps because the workshops CBSG generated -- the P.H.V.A.s and C.A.M.P.s, etc. themselves generated the very best information extant on a particular species or taxon group, and this information was not used as efficiently or effectively as it could be. He was grateful and appreciative of any activity in this regard, but felt that the surface has not been scratched.



Everyone's opinion goes up on the flip chart

Ulie was very interested in zoo educators, in particular, for we hold such incredible resources -- a captive audience of millions, living animals that people can see and smell and hear, and a mandate to reflect the primary purpose of their employer the zoo, that is, conservation of wildlife.

Ulie invited IZE President to be a member of the CBSG Steering Committee about 8 years ago and attended a complete IZE meeting in Taipei. He wanted very much for CBSG and IZE to collaborate very actively.

I can honour his memory by myself teaching people how they can do this, as education has always been part of the CBSG workshops we conducted in India and later South Asia. I had



Sakkarbaug Zoo, India

innovation, problem-solving, conflict resolution, facilitation of groups, and teaching. He taught everybody with a rich variety of methods but rarely by what we consider traditional teaching. He had no patience with scientific conferences where one sits and listens to dozens of prepared lectures, delivered without interruptions and followed by a few argumentative questions.

Ulie taught by interacting with people, not by lecturing. He liked workshops, where there might be a bit of



written an article about this in IZE Journal, Vol. 29, Pages 61-66. The day he died I gave a presentation in Indonesia on how to use C.A.M.P. and P.H.V.A. output in a zoo education programme and this lecture has been written up in this issue.



Conservation Tools Training, Wildlife Institute, India

Ulie's teaching was effective because he was a good listener. He paid attention to what people said and could ask them questions that got right to the heart of their issues. He always set up his projects and events so that people got to use what he conveyed to them in some active manner. Even if it was a group of people very new to his methods and material, he could find a way for them to put together whatever they knew and thought into a useful Report. In 2002, Ulie attended one of ZOO's events which involved a zoo meeting, a CBSG meeting and a zoo education training workshop. Most of the participants were pretty new to conservation but by the time Ulie finished with them, they seemed to know quite a lot. He used flip charts to record everything everyone said and asked questions relative to conservation which everyone could answer about their own country. After collecting information he encouraged them to suggest things that they could do in their own situation to bring about change. The participants were delighted -- for most of them, it was the first time anyone had taken them seriously and conveyed confidence that they could make a difference.

This was one of Ulie's greatest assets -- his positive attitude and confidence in people. He believed in them and communicated that belief and confidence, and thereby made them confident in themselves. He got immense creativity out of people and incredible work, by challenging them to do more and better for the cause of

conservation. He taught all his students to study, read, observe and then trust themselves.



Zoo Ed. Training in Kathmandu Zoo, Nepal

CBSG has a Steering Committee of which I have been a member for several years. One of the benefits of the membership was that we got these incredibly heavy briefing books from time to time with reports, letters, articles, about conservation issues and all manner of other subjects.



With Indians at WAZA meeting, South Africa

Ulie shared the creme of his voluminous reading ... whenever an article impressed him, he included it in the briefing book. I learned so many things from these articles. Some of them were about management, some about innovation, all about transcending one's limits in some way. My thinking was transformed several times a year by these articles.

Ulie attended what might have been the first conference to call itself confidently "The Role of Zoos in Wildlife Management". This was in Sakkarbaug Zoo in 1988. There was some tension because the forest department didn't want Ulie to "take the meeting" as was his usual mode of operation and he did not have the stage much of the time. He was patient with this and listened to a lot of pretty lame papers before his special lecture was scheduled. Before he began, he leaned over to me and said

"I'm going to burn their brains a little bit". And then he proceeded to do that. At least it burned MY brain. He gave the best presentation I ever heard about small population biology and how zoos do not just have a role, but are absolutely crucial to strengthening or restoring small populations to prevent extinction. That single lecture kept me going at least five years.

He learned almost a year ago that he had cancer and devoted himself to treatment as aggressively as he tackled anything. He purchased several months of life in which he could settle his personal affairs and watch with great pride and interest as his students in CBSG proceeded to make a transition to life without Ulie. He wanted us to select a new Chairman to suggest to IUCN before his death and he was very pleased and happy with Dr. Bob Lacy as our choice. One meets many people who are expert and who have achieved something in life. However one rarely meets a person who has been so totally selfless with his knowledge. Ulie created a second string of command who already know that their job is to create a third. CBSG activities never stopped during his illness or even his death.



Asian conservation workshop, Thailand

As zoo educators we can learn much from Ulie's great generosity and tolerance. His complete lack of reticence in spreading knowledge insured that he touched hundreds and maybe thousands of individuals, leaving them empowered to do something they couldn't do before, and -- more important -- willing to share that knowledge with others.

- Sally Walker



COUNTRY REPORTS ZOO EDUCATION IN ASIA



Asia -- a world in itself ...

Taiwan

Taipei Zoo Education activities

On September 18, 2002 the Taipei Zoo conducted a Workshop for the conservation staff of Taipei City Government.

During the same period, on weekends from September 14 to October 5, we ran a biodiversity workshop for kindergarden school teachers and teaching material development

Every Saturday from September to December 1992 - Exploring Rainforest Family groups can use a learning sheet and interpretive stands to explore rainforest.

Oct. 30, Nov. 13, Nov. 20, 1992 Workshop for primary school teachers. The workshop focused on abandoned pet issue, correct attitude and skills toward keeping pets.

Dec. 22, 1992 Christmas activity. The activity focused on saving water and energy through animal stars announcement of Taipei Zoo.

Jan 20-24, 1993 Winter camp for family group. The camp tells people how rainforest relates to our daily life.

Submitted by LiYi Cheng, Head of Education, Education Department, Taipei Zoo

Hong Kong

Theory says that a giant meteor collision caused the extinction of dinosaurs 65 million years ago, but now we are the cause of the extinction of nearly 50% of the world's flora and fauna. Ocean Park's recently renovated exhibit, "Dinosaur Now and Then," displays not only the life-like dinosaur

models, but also the precious and highly endangered Chinese animals



Conservation Cave



Conservation Cave component touch-screen program



Conservation Cave component -- turtle hologram unit

like Giant Salamanders, and Chinese Alligators. An interactive Conservation Cave exhibit was built to encourage visitors to participate in wildlife conservation whilst graphics throughout the exhibit provide interesting and entertaining information about these precious animals. Topics cover Asian turtle crisis and HK gov't TV ad on CITES protection in HK.

Submitted by Shirley Wong, Assistant Education Manager, Ocean Park Corporation, Aberdeen, Hong Kong.

Indonesia

The Taman Safari, Bogor, Indonesia, and PKBSI, the Indonesian Zoo Association organised a one-day zoo educator training course in connection with a CBSG, Indonesia meeting held the previous day covering 21-22 March 03. Sally Walker, invited for the CBSG meeting, was asked to run the one-day training. This gave participants of the SEAZA/ARNIZE Zoo Educator Training held in 2001 in Singapore a chance to meet with Sally again and also become updated in some educational activities held in other parts of the world.

There were eight zoos represented and 22 participants, many of them staff from Taman Safari itself. Sally presented one long presentation and three short modules interspersed with discussions. There were also demonstration activities to explain how participants could use packets provided by Z.O.O. as models to create their own materials and to conduct lively education events.

Recommendations were made by the educators for their association to follow up, e.g.1. that PKBSI contract for an education protocol or guidelines to be



drawn up for educating the public about the seven "keystone" species selected by PKBSI member zoos; 2. that a long course on conservation education be organised along the lines of the Singapore Zoo Ed. course for Indonesian zoos, NGO, forest rangers and others associated with education; 3. that PKBSI endorse the principle that Indonesian zoos should make every effort to create more awareness of Indonesia's own unique wildlife so that public attention is not always obsessed with animals from other continents.

Participating zoos in the workshop were.

1. Ta Mau Zoo
2. Ragunan Zoological Park
3. Surabaya Zoological Garden
4. Bandung Zoo
5. Tulakhom International Zoo
6. Vientiane Zoological Gardens
7. Zoo Melaka
8. Taiping Zoo
9. Malabon Zoo and Aquarium
10. Chiang Mai Zoo
11. Khao Kheow Open Zoo
12. Cuc Phung National Park
13. Saigon Zoo and Botanical Garden
14. Taman Safari
15. Bird Park Taman Mini
16. Yayasan Margasatwa Tamansari

After her return to India, Sally sent all participants copies of the Zoo Ed. book, the Report of the Singapore course and a selection of educational packets and guidelines.

Contributed by ZOO/CBSG, S.Asia

India

New Delhi, Animal Welfare Fortnightly at National Zoological Park -- India celebrates Animal Welfare Fortnightly from about 14-31 January every year. This year National Zoo conducted four programmes: Welfare of Dailylife wildlife, Zoo Ethics Day, Keeper's orientation programme and Teacher's orientation programme.

A programme on Dailylife Wildlife was organised in which 60 students and 2 teachers participated. After the zoo visit, packets specially made for the purpose by Zoo Outreach Organisation were distributed. Dr. A.K. Malhotra, Curator gave a talk on Dailylife Wildlife and its importance. The children were asked to paste their

photograph on the Identity card given in the packets and also wear their masks.

Activities: Some practical activities on animal welfare were conducted. Some of the children wearing masks were caged and were asked to enact like animals, and some like hooligans who teased the animals. The children who posed as animals were asked to explain their feelings later. Ms. Shikha Nalin, Education Asstt. explained why they should not tease animals in the zoo. A game on food web was also played.

Invertebrate album: The children then made the invertebrate album using the contents of their packets. In the end the students and teachers thanked the zoo authorities and appreciated their efforts.

Zoo Ethics Day - 16 January 2003

About 60 children, between 8-9 years of age from Apeejay School, Pitampura were invited on this day. Ms. Shikha Nalin explained the harmful effects of teasing and feeding animals and about the provisions of the Wildlife Protection Act. The Director addressed the children and made them tie a rakhi to one another and to the officers of the Park along with their teachers pledging to conserve wildlife.

Rally: The children were asked to paste their photographs on the I-card. The Director, flagged off the rally and the whole atmosphere echoed with the sounds of "Jeevan Daan, Badhaye Maan". So people were forced to turn around to have a look at the small children carrying placards and wearing Zoo Patrol badges supplied by Z.O.O.. It was a wonderful experience and everyone loved it. The teachers and the children appreciated the programme and thanked the zoo authorities.

Contributed by A.K. Malhotra, Curator of Education, National Zoo, New Delhi.



India

Udaipur Zoo, Rajasthan, Wildlife Week

Teacher Training Workshop -- On the first day of Wildlife Week (1.10.2002), a Teacher Training Workshop was held in which 24 participants took part. Dr. R.K. Tanwar, Professor, Veterinary College, Bikaner headed the workshop. The teachers were given a lecture on wildlife welfare and resource materials were distributed.

'Dare to Care for Bears' -- On the fifth day of Wildlife Week (5.10.2002) a drawing competition for students up to IV standard was organized. A 'Dare to Care for Bears' programme was also organized in which 184 children took part. Resource materials were distributed to the children. Several games were organised and the children took an oath to save bears and other animals also. Prizes were given to the winners who were awarded with a certificate and trophies for playing in the "Dare to Care for Bears" game.

Contributed by B. Singh, Udaipur Zoo, Udaipur.



India

Orissa, Nandankanan Zoo Conservation Education Programme

Nandankanan Zoo celebrated Wildlife Week, Children's Day and Zoo week with a difference. It was not limited to the routine competitions like banner, essay, debate or drawing. The celebration was with the children who interacted, played games, appreciated and became aware about conservation. The Zoo Awareness Centre was upgraded with posters, graphs, drawings depicting the rich biodiversity of our nation. The educative posters designed by Centre for Environment Education gave insight to the protected areas of our



country, the tiger reserves in different states and pavilions centre of biodiversity while posters depicting corals of India, Marine turtles of India, Dolphins of India, Whales of India and King fishers of Bhitarkanika spoke about the rich marine biodiversity of the country.



But what was most appreciated by the children were the kits provided by Zoo Outreach Organisation, Coimbatore. During the year 2002, four hundred kits were received from the Zoo Outreach Organisation based on three themes, namely "Dare to Care for Bears", "Against Animal Trade" and "Just Bats about Bats". All the 3 themed packets are professionally designed and were appreciated by the students. The role of bats in controlling mosquito population was revealing to many and the facts that bats can only do good and no Indian bats are vampires was realised with awe. This opportunity made the students aware about conservation of wildlife, during their visit to the zoo. Everybody appreciated the role of zoos in species conservation and education to visitors.



Training Programme

A teachers training programme was conducted on 21 December 2002 where 34 teachers from 25 schools had participated as part of cultural education and CCRT's role held in Nandankanan High School. A total of 246 students and 67 teachers have participated in the education programme from October - December and forester trainees of various cadres too have appreciated the programmes. The zoo had trained 142 professional forest officials during August to December, 2002. during Wildlife Week celebrations. *Contributed by Manoj Mahapatra, Nandankanan Zoo, Bhubaneswar, Orissa.*

India

Kamala Nehru Zoo, Ahmedabad celebrated Animal Welfare Fortnight from 14th January to 30th January and allowed children up to the age of 12 years free entry. A total of 7313 children visited the zoo. At the same time, teachers from Ahmedabad Municipal Corporation School Board were invited for training. In this training, different aspects of wildlife management, zoo management, feeding, sanitation, treatment, research, education, enclosure design, Wildlife Protection Act, Central Zoo Authority etc. were covered. The Veterinary Officer,



Inspector and Head Animal Keepers took the teachers on a zoo visit and briefed them about the animals on different aspects. The teachers were then taken to the zoo hospital and education / interpretation hall where they were offered tea/coffee with light breakfast and a videoshow. There was a discussion about the Wildlife Protection Act, Central Zoo Authority and other managerial/administrative aspects.

We used the materials sent by Zoo Outreach Organisation (Z.O.O.) for this training and a press note was also given with the name of Z.O.O.. The teachers appreciated the programme and said that though they had been visiting the zoo since childhood, they became aware about the science and functions of the zoo only now. Many officers of the Municipal Corporation requested the Municipal Commissioner to run such types of teacher trainings for all the teachers of Ahmedabad. So we are planning to conduct special teachers training programmes depending on the availability of funds. We are thankful to Z.O.O. for providing literature for both the programmes.

Submitted by Dr. R.K. Sahu, Ahmedabad Zoo, Gujarat

India

Gwalior, Madhya Pradesh

Education Programme on Bats: An education programme on bats was conducted at Amrita Public School, Gwalior on 17.01.2003. More than 100 students of upto 8th class interacted and 50 bat kits were distributed. A field trip to nearby tree where Indian Flying Fox roosts, was also organised. An article containing information on bats in Hindi was also distributed among students and teachers. I hope to organise many more such education programme on any theme put forward by Zoo Outreach Organisation in future.



Submitted by Dr. Rajiv Saxena, M-853, Darpan Colony, Thatipur, Gwalior 474 911, Madhya Pradesh.

India

Trivandrum, Kerala, ZOOWATCH



Public Education Programme for AWF

Zoowatch was founded in September 1993 with the sole aim of improving living conditions for captive wildlife in Thiruvananthapuram Zoo. Although we are also involved in other environmental and animal welfare causes, our primary focus remains the welfare of captive wildlife. Zoowatch conducts public education programmes on weekends and on holidays.

On January 25 2003, Zoowatch conducted a public education programme on Welfare of Dailylife Wildlife for Animal Welfare Fortnight from 14-28 January 2003 at Thiruvananthapuram Zoo. With the materials donated by Z.O.O., we prepared posters and collected information from various articles in Zoos' Print. Several members of Zoowatch and also the Thiruvananthapuram Zoo participated.



The programme was from 10.30am-4.00pm. The visitors of the Zoo stopped to listen to our explanations and were interested to see the touch table we had set up. Several nature clubs and many school teachers showed interest in acquiring similar materials for their educational activities and quite a few packets were given to them along with the address of Zoo Outreach Organisation. Shri. Pushpkumar from Central Zoo Authority also visited the Zoo the same day. He also recommended a bimonthly public education programme along these lines but suggested that we rotate location and topics among the different enclosures of the Zoo for greater impact.

The four aims of the ZOOWATCH public education programmes are:

1. List the wildlife that we come across in our daily lives
2. Stress their importance for us
3. Explain the need to respect these small but not insignificant creatures
4. Emphasize the need to respect the dignity and right to life of all animals

The materials used in this public education programme have been donated by Zoo Outreach Organisation and sponsored by the Animal Welfare Board of India and the Universities Federation for Animal Welfare UFAW
Submitted by Latha Thampi, Founder, ZOO WATCH,

Trivandrum. Kerala.

India

Madras Croc Bank Trust

Teacher Training Workshop : As part of the ongoing Environment Education programme of Madras Crocodile Bank Trust (MCBT), a one-day Teachers Training Workshop for primary school teachers was organized on 11th September, 2002. This programme was conducted to create awareness about general environment as well as role of reptiles in nature. School-teachers play an important role in environment education and create the much-needed awareness on reptile protection and conservation.

The workshop commenced with an introduction of MCBT and its activities followed by a slide-illustrated talk on "neighborhood biodiversity". The teachers were then taken around the crocodile bank to give exposure to various reptiles in the enclosures and their management. A question and answer session followed where in the queries raised by the participants were explained and cleared many misconceptions connected with reptiles including snakes and lizards. The post lunch session started with a demonstration on nature games like Web of Life, Memory Game, Who Am I ?, etc. A creative session on preparation of low cost teaching aids followed next. In this session the teachers prepared flip charts and eco-friendly carry bags.

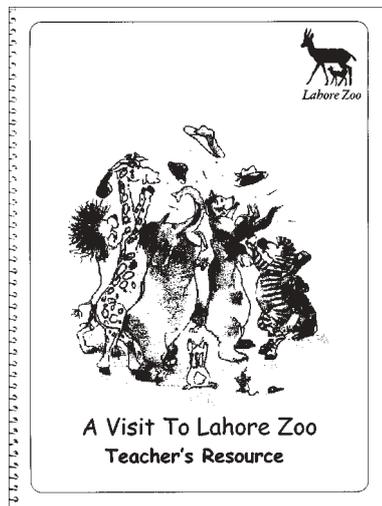
A Wildlife Welfare Teacher Training Programme kit prepared by Zoo Outreach Organisation, India was distributed to the participants. The teachers were also explained how to communicate the values of kindness to animals to children in their daily life. As the workshop was conducted in vernacular, the contents of the booklet – Guidelines to teachers along with the follow-up methodology were also explained. In order to use innovation communication techniques the teachers were taken to the newly launched puppet theatre at MCBT. Some of the teachers prepared stories based on environment and related topics. These stories were enacted using glove and rod puppets in the form of puppet shows. The teachers also gave a presentation on the use of the workshop input in their regular curriculum in their respective schools. The workshop concluded with an interactive session using a live juvenile crocodile. Participation certificates were distributed to all the 32 teachers from Panchayat Union Elementary School who participated in the workshop.



Lahore Zoo, Pakistan -- Education Programme

Uzma Khan *

The Lahore Zoo attracts a lot of visitors, mainly because of its central location in the city. Approximately 2.5 million visitors come to the zoo annually, including about 1,400 schools.



Zoos are living resources that provide invaluable opportunity for biodiversity education. Considering this, WWF – Pakistan launched a pioneering *Zoo Education Programme* at the Lahore Zoo in 1998. This programme was initiated with the collaboration of the Beaconhouse School System, which is the most prestigious private school chain of the country. The programme was

initially sponsored for the period of two years, during the time a full time education officer was appointed at the Zoo and educational material was developed, targeting the age-group of 8-16 years students. This education material consisted of a small booklet with 20 worksheets in both English and Urdu languages to cater to a broader range of students. Additionally a teachers' resource manual was also produced to support the accompanying teachers in assisting the students. This material was provided free of cost along with a guided tour of the zoo by the education officer.

Additional activities of the Education Programme were supported by other sponsors, for example *Malee Simpran (Pvt) Limited* sponsored the animal information boards. So far WWF-Pakistan has been able to complete the bilingual sign-boards for the mammalian species and funding for birds and reptiles was also recently agreed by the same sponsor.

There has been a lot of development in the Education Programme and different approaches have been successfully employed to enhance and strengthen the programme and encourage the active participation of more organised groups. Apart from the guided tours, presentations are given regularly at various schools. To make these presentations more effective, stuffed animal toys are used, resultantly such events become very interactive and interesting for the primary level students and even for the reception group. As a follow-up, colouring sheets are given to the students, and for that we have developed a colouring sheet of the African animals which students label after the presentation and then colour them later in the class.



In order to take a more focused approach towards the zoo guided tours and presentations, different topics are now offered to the school groups and teachers can choose from them. In this way they can select an area that complements their school curriculum. The topics offered include: Animal adaptation (mammals), Animal adaptations (birds), Primates are Us, The Killers (predators), The Rough Crawlers (reptiles), Animal communication, Social behaviour of animals and the Lahore Zoo Outreach Programme. In the Lahore Zoo Outreach Programme, an *in situ* conservation initiative for rescuing the stranded Indus dolphins is discussed. In this discussion the ecological significance of the species and adaptations are highlighted using the Indus dolphin replica, this replica was produced using a dead specimen found in the canal along the Indus River. As the project does not have funding to produce more education material, therefore, worksheets complementing the discussed topic are being produced using PageMaker software. We provide teachers with this material which can be photocopied and completed as a follow up activity back in the school.

Guidelines for the teachers are also produced. This is like a small handy card consisting of dos and don'ts. This card on its one side guides teachers about the students behaviour at the zoo and on the other side indicates the things to look for in an enclosure and generally in the animals regarding their features and



Uzma Khan, WWF & Lahore Zoo

* Director of Education, Lahore Zoo, Pakistan



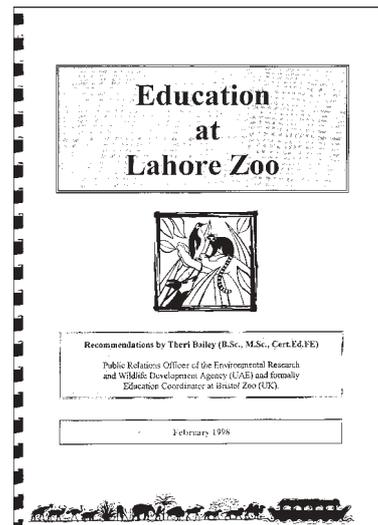
behaviour patterns. Moreover, we are developing postcards for the visitors correlated with a factsheet of their favourite zoo animal for some additional information.

The Lahore Zoo Education Officer has conducted training programme for the staff at Margalla Hills Conservation and Information Centre (MCIC), Islamabad. The MCIC is developed as a part of the WWF-Pakistan Environmental Education Project for the awareness raising about the Margalla Hills' biodiversity and promote wildlife education using the Islamabad Zoo. Additionally, a presentation was organised for the Secretary of Punjab Fisheries, Wildlife, Forestry and Tourism Department and his senior staff including the senior staff of the Zoo. The presentation focused on the need for the zoo legislation and a national zoo association and gave ideas for enclosure designing and zoo education.

A number of veterinary science students come to the Zoo for the support of their research work. However, there is a need to facilitate more animals' or visitors' behaviour research projects. Such work is an essential feature contributing towards the improvement of animal welfare. As an initiative a Lahore University of Management Sciences (LUMS) postgraduate student, who is presently here from Denmark, on a student exchange programme is conducting a survey on the visitors' behaviour at the Zoo through psychographic analysis supported by questionnaires. We hope that gradually we will be able to involve the biological sciences' students in animal behavioural research as well.

The WWF-Pakistan has now engaged interns with the Education Officer that is an important step to build the capacity and therefore enhance the activities at the Zoo. We hope to achieve more this year.

Note: Uzma Khan is Chair of the Education and Welfare Committee of the South Asian Zoo Association for Regional Cooperation, SAZARC.



IUCN CEC News

IUCN CEC stands for the IUCN Commission on Education and Communication. It is one of the seven commissions of IUCN or the World Conservation Union. CEC maintains a list serve with an e-news service and gives periodic updates on education items and opportunities that can be availed. In this issue there were two offerings which might be of interest to our readers, although they were not developed specifically for Asia. They are described below.

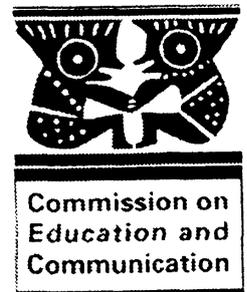
BIODIVERSITY COMMUNICATION MANUALS

You can download communicators manuals (written for USA Canada but useful elsewhere.)
Engaging the Public on biodiversity - A road map for education and communication strategies
www.biodiversityproject.org/roadmap.pdf
Life Nature The Public Making the Connection. A Biodiversity Communication Handbook
www.biodiversityproject.org/handbook.pdf

EARTH DAY

The Earth Day Network is an alliance of 5,000 groups in 184 countries working to promote a healthy environment and a sustainable world. Each year the network uses Earth Day (April 22) to inspire grassroots events and activities in communities around the world which educate, spread awareness and push for tangible change. Their Web site, <http://www.earthday.net/>, provides a wealth of information for educators on broad environmental issues and includes guidance on how to organize an Earth Day activity as well as providing suggestions on how to involve your work, school, community or faith group in environmental protection. This year they will launch a two-year "Water for Life" campaign and they've prepared a package of information for educators with suggestions for action on a local and global scale. Their campaign has considerable relevance to wetlands, so if you did not manage to organise a World Wetlands Day event (and even if you did!) you might want to consider some of their ideas or pass this on to a colleague. Their website has useful materials for educators on many issues and is definitely worth a visit. Report compiled by Sandra Hails, Ramsar Bureau <Hails@ramsar.org>

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Teachers for Tigers Training Workshops for Local School Teachers and Zoo Educators

K. Padma Priya*, A.R. Binu Priya* and B.A. Daniel**

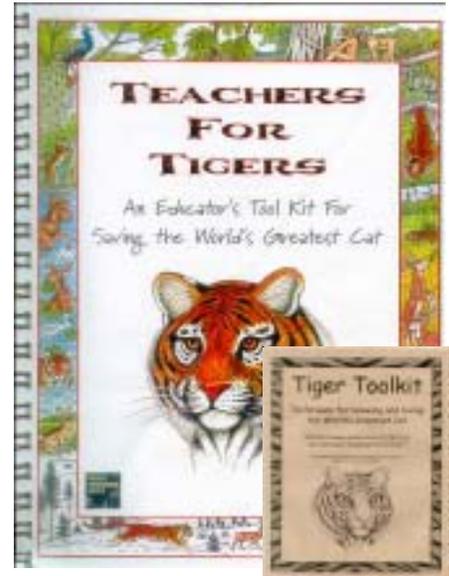
Wildlife Conservation Society (WCS), New York and Zoo Outreach Organisation (Z.O.O.) in India collaborated with the Coimbatore Municipal Corporation and Coimbatore Zoological Park and Arignar Anna Zoological Park, Chennai to conduct two five-day training workshops on conservation education using tigers as the theme at Coimbatore (17-21 Feb 03) and at Chennai (24-28 Feb 03).

All participants received a set of education materials for use in the programme. Wildlife Conservation Society (WCS) at Bronx Zoo brought out a manual for teaching called

Ecology Learning Programme) books entitled *How Nature Works*. The trainees from both workshops also received a "kit" of 7 masks of tiger, tiger cub, their prey species and other predators, 8 flash cards using illustrations produced by WCS, Tiger pledge card along with materials produced by ZOO such as a t-shirt on tigers, a notepad, a pen, two educational packets, ARNIZE newsletter and ZOOS' PRINT magazine and journal.

Coimbatore

The participants were 42 carefully selected teachers from Corporation and private schools in and around



Participants enacting a drama on poaching of tigers

teachers and, in the second workshop, to the educators from zoos, and other conservation organisations.

The topics included were Tiger ranges: Participants were given maps which they had to cut and paste together to learn about the historical and current distribution and subspecies of tigers based on the habitat types.

Characteristics and habits: The concepts of tiger hunting, camouflage, eating, speed etc. were demonstrated through exercises which participants can conduct for their students.

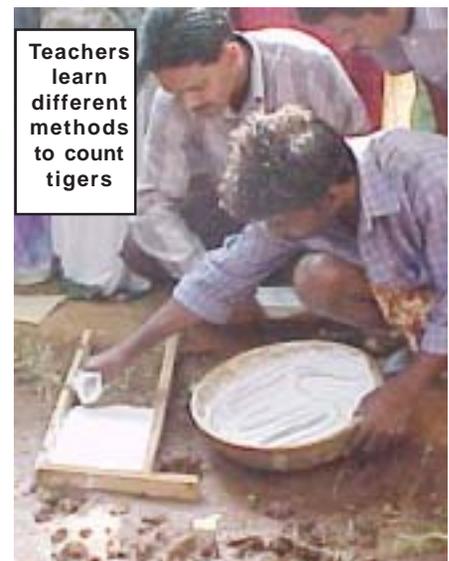
Tiger Timeline: To show the history of

TEACHERS FOR TIGERS designed primarily for educators which is easy-to-use, including attractive graphics for teachers to use in creating exciting, informative and interactive teaching modules about tigers. These manuals are being translated into regional languages.

The techniques were set forth in such a way that the subject can be taught anywhere, with any audience: students, community groups, literate or non-literate persons, children or adults and by any level of teacher, even those without modern conveniences, such as those in very rural areas. WCS also supplied one of Wildlife Conservation Society's excellent H.E.L.P (Habitat

Coimbatore and Rajapalayam. Mr. Tom Naiman and Mrs. Nalini Mohan from WCS, who developed the key resource book, "Teachers for Tigers" conducted the training. This was the first of eight workshops which will be held in different parts of India over a one-year period.

The entire training was based on a Manual called *Teachers for Tigers* produced by Wildlife Conservation Society. The objective of the training was to convey new methods of conveying factual and value-based material to students. The importance of tigers and their conservation provided a theme for a variety of educational methods such as games and activities, many of which were new to the school-



Teachers learn different methods to count tigers

* Research Assistant ** Scientist, Zoo Outreach Organisation



exercise was also used after lunch and during afternoons when some physical activity was required. It would work great with kids as participants were encouraged to growl !

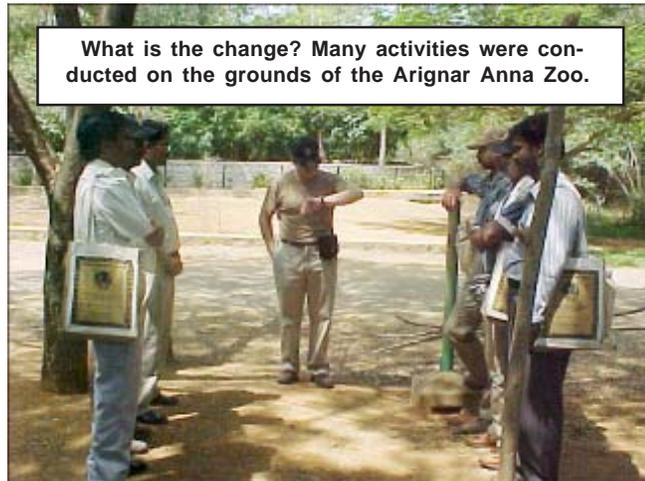
Activity at the Zoo

On the second day, there were more assessment activities and a visit to the zoo. Tom Naiman conducted an activity called “what is the change?” He requested six of the participants to stand in two rows of three facing each other. He gave all six of them 30 seconds time limit to observe all minute details (like standing posture, style, etc) of the one standing opposite to the player. He made them turn around and asked the players to make some changes in them. The player on the opposite side had to identify the change. This exercise demonstrated how to teach keen observation. Animals are adapted according to environment, food habits, and the way they live. The participants filled in an Adaptation Match activity sheet from “How Nature Works” as they observed the birds in the aviary as an exercise to understand the value of animal adaptations. All biotic and abiotic factors are required for animals to live. This concept was demonstrated by a game known as web of life.

One of the very interesting activities of the workshop was mini-dramas. The participants were divided into four groups and each group was given a theme to enact. The themes given were Courtship, Hunting, Parental care and Poaching. This method will help to evaluate the level of

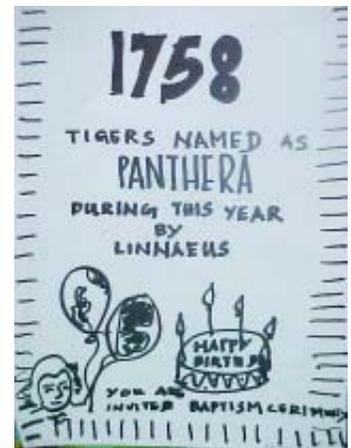


ranges. Once the puzzle was solved, the participants were asked to jot down the list of countries in which tigers were found 100 years ago, the different tiger habitats in Asia and the past and present distribution of subspecies. This simple exercise conveyed a lot of information on past, present and future trends in tiger habitats, subspecies distribution and historic ranges.



Tiger Timeline

Tom assigned each participant a year to make a poster on an event that took place in that year which is of relevance to tigers. After completing the poster each person stuck his/her poster on the wall in chronological order. At the end of it the group discussed the trend of the tigers in the last few centuries.



understanding of the concepts of tiger biology, behaviour and threats faced by tigers in the wild. The groups went through their respective stories in the Tiger manual to select the characters of their story within their group and took about 45 minutes to practice their skit. They utilized masks, and other stationery items to enhance their performance. They also designed accessories such as bird heads, tiger tail, tree etc., required for their play. Everyone enjoyed the session, as there was lot of creativity and action in every group.

From Little Cats to Big Cats is one of the attractive unit to learn more about tigers. Nalini Mohan divided the participants into 10 groups and each group was assigned lessons on body size and weight, jumping, hunting, climbing, camouflage, eating, tail, speed, territoriality and communication. Each group had to teach the lesson assigned to them in an appropriate manner as given in the tiger manual in front of the tiger exhibit. The tiger in the exhibit had a good impact on the exercise. The afternoon session was to learn how tigers are used in culture.

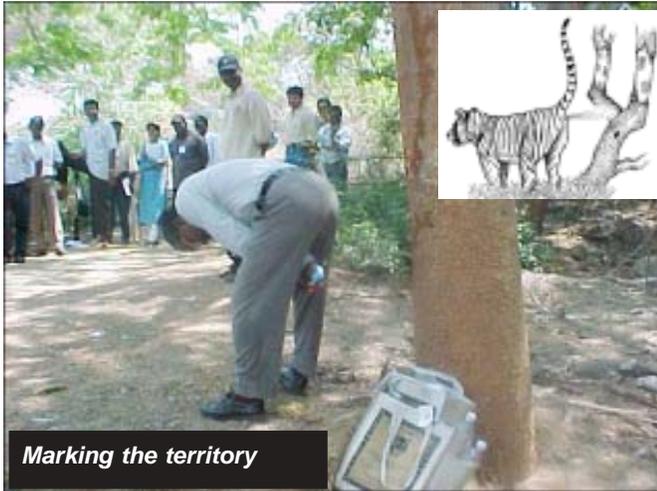
In another activity called tiger range maps, the trainees were divided in to group consisting of 8 members. They were given a set of 12 maps. Out of the 12 maps, 3 sets of 4 maps were to be attached as a puzzle to get current tiger range areas, major tiger habitats of Asia and historic tiger

Tigers in Mythology and Art: The participants were divided into 4 groups. Each group was asked to read a story from the tiger manual and answer the questions given in the manual on how the tiger is depicted in each story. Again the participants were divided into 7 groups and each group was asked to go through one tiger art from the tiger manual. The groups were given 10 minutes to observe and study the picture and then asked to answer the questions in the tiger



manual.

Role play: In the activity called 'role play' the trainees were divided into 8 groups. They were asked to take up the following roles: advertising executives, architects, artists,



biologists, farmers, newspaper reporters, politicians, songwriters. Each group had to work on tigers in their respective roles develop a poster and give a report.

Feeding ecology: In another activity to understand feeding ecology the participants photocopied pictures of prey animals and cut off the tails of each animal. They stuck the tail-less animals on the board and asked the audience to stick the appropriate tail on the tail-less animal. This way one can learn about tiger prey through fun.



Awareness to action: the participants were divided into 3 groups. 1. Pug marks: explained the method in detail as a technique to survey tigers. They also discussed the advantages and disadvantages of this technique. 2. Camera trap: the second group enacted this technique that is used to survey and count tigers. 3. Radio telemetry: The

group members enacted and discussed the technique in detail.

What you can do with the Placard? Sally demonstrated how a placard can be used in education programmes. She asked the trainees to hold the placards up and march across the hall shouting a slogan about tigers and then to stand and make a short pledge to protect tigers.

Pledge: Nalini conducted a session on taking a pledge from the participants on tiger conservation. She asked the participants to take the pledge cards from their bags and asked them to write a pledge. After filling the pledge card each trainee stood up and made his / her pledge in front of others.

Evaluation Activities: Nalini and Tom asked the participants to make a concept map on tigers as they did on the first day. After every individual had finished they gave the participants the concept maps that they had worked on, on the first day and asked them to compare it with the one that they had just made to see the difference in their knowledge on tigers before and after attending the workshop. The participants found it to be a very good form of evaluation.

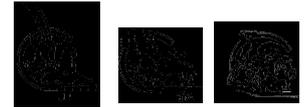
The next workshops will be for teachers in rural areas near



the range of tigers. After India, the workshops will move to South Asian countries with tigers (Nepal, Bangladesh) and to South East Asian tiger states such as Indonesia and Thailand. The workshops are for the purpose of training people to teach and also for identifying participants who will make good trainers. Out of each workshop a couple of participants will be selected to attend the next workshop as a training trainee. Manuals and materials will be made available so that the concept and content of these teaching workshop with tiger education as a theme can spread where they are needed, in the range countries of tigers.



C.B.S.G. P.H.V.A. and C.A.M.P. Workshop publication : BEST Resource Material for Zoo Educators



Background

What is CBSG ?

The Conservation Breeding Specialist Group, C.B.S.G., is the IUCN SSC specialist group which is responsible for interactive conservation management, for coordinating the complex information and actions which are required to shore up small populations, reintroduce or translocate alternative populations, captive or wild and develop management strategies to prevent extinction of species which have fallen to dangerously low numbers. The field of study most closely associated with CBSG is the broad field of conservation biology. However, it is not just the sciences of populations, genetics, or biological processes which are involved in replacing or strengthening declining populations. Many fields and disciplines come into the picture, including the social sciences, as human beings may live in or near the area in question; economics, as the cost of conservation may be more than anyone is able to bear; and politics, for sometimes vested interests do not want a threatened species to remain or return to a particular piece of land.

Dr. U. S. Seal, appointed Chairman of the then Conservation Breeding Specialist Group in 1979, was cognisant of all these complexities and, along with his colleague, Dr. Tom Foose, devoted a great deal of time and energy to developing a set of workshop tools and processes which would help people come together and use their combined knowledge and resources to save declining population. He worked on improving these up to his recent death.

What are P.H.V.A.s and C.A.M.P.s?

The Population and Habitat Viability Assessment Workshop (P.H.V.A.) uses a computer simulation methodology, Population Viability Analysis (P.V.A.) combined with habitat and other information to create a workshop process which incorporated the much wider variety of information required to truly assess the probability of extinction. The P.H.V.A. Workshop has

evolved over the years to incorporate even more variables.

Moreover all C.B.S.G. Workshops depend on a set of Ground Rules which govern participant behaviour and a methodology for preparing for and organising the event to include all stakeholders -- important governmental agencies, NGO's, ecologists, academics, zoos, etc.

Around the same time, Sir Peter Scott, Chair of the Species Survival Commission asked Dr. Seal to develop a methodology for prioritising species for captive breeding, according to its conservation value. Again Seal and Foose went to the drawing board and developed the C.A.M.P Workshop : Conservation Assessment and Management Plan. The CAMP workshop targeted a particular group of species determined either according to their taxonomic classification or some other reason, such as their presence in trade or that they were frequently coming into confiscated status, etc. The C.A.M.P. Workshop depends heavily on field biologists who know the population and distribution of individual species but includes other stakeholders as well. The workshop used the IUCN Red List as a means for ranking the species into Rare, Endangered and Vulnerable and other non-threatened categories.

After conducting several workshops, Seal noted that the Red List categories being used at the time were not adequate for accurately ranking the species. He suggested to the Species Survival Commission that a new methodology be developed using some of the new conservation sciences to create a more accurate method. A new method was created which relies on numerical values which is a great improvement.

The C.A.M.P. workshop output includes assessments of each species and also management recommendations for conservation action based on the threat status of the species and other variables. At both P.H.V.A. and C.A.M.P.

workshops recommendations are formulated by consensus in working groups, sometimes called Special Issue Working groups on any aspect of the recovery process which has emerged as having importance, such as disease aspects, economics, habitat improvement, species protection, or the all important subject of EDUCATION.

Today many such workshops have been conducted and have helped wildlife agencies all over the world formulate management strategies for saving species. C.A.M.P. workshop output is used in some countries' national and state biodiversity strategies (CBD) as well as for determining the disposition of confiscated animals, planning conservation projects, etc.

Documentation / publications

There are two documents associated with CBSG C.A.M.P.s and P.H.V.A.s which are the subject of this article. These are the Briefing Books and Reports of the workshops.

A C.A.M.P. or P.H.V.A. Briefing Book is the compiled historical and contemporary published and unpublished information about the species or taxon group under assessment. Often these briefing books are voluminous and have articles and unpublished information that cannot be found anywhere else, or not without days or weeks of research. These books are given to every participant of a workshop and are also available on sale at the Conservation Breeding Specialist Group office. If your Director or Curator has attended a P.H.V.A. or C.A.M.P. workshop, he will have a copy of this briefing document. With its great wealth of historical and biological information, it can be of immense use in creating an education programme for a species.

That is to say nothing of the Report, which contains the compiled conclusions of the combined knowledge and analysis from 35 - 60 experts who have brought years and days of intense work to the



assessment.

C.A.M.P. Workshops and Education

C.A.M.P. workshops deal with the largest number of species so these will be used in this article how to use the documentation associated with them for education.

First it is not merely that the zoo educator needs C.A.M.P. information to formulate a programme. The C.A.M.P. workshop follow-up itself needs the zoo educator, as well as other education in order to adequately disseminate the results of the workshop in order to bring about change.

The reasons that C.A.M.P. Workshop output is so valuable, is its authenticity and its currency.

C.A.M.P. workshops

1. rely on available information from working field biologists of the region under assessment;
2. provide detailed information on population, distribution, habitat, habit, threats
3. create the most current and accurate information on target species available at the time.

C.A.M.P. Workshop species need zoo educators

C.A.M.P. workshops requires intensive follow up to make recommendations meaningful. Zoo educators, NGO's, academics, volunteers, schools can contribute to this follow up.

Zoos -- with their immense captive audience and living animals -- can play the biggest and possibly the most effective role.

That is why Zoo Outreach Organisation / CBSG, South Asia has developed a **comprehensive education programme** for each taxon group that we assessed using the CAMP Process. Some recent and future examples are bat, primate, amphibian, rodent, reptile

We have also identified a three-tiered target group and a three-phase implementation strategy which are organised in tables in the next columns.

Target Groups for Post-CAMP Education / Awareness / Action Programmes		
Level 1 - Policy	Policy-makers, bureaucrats, professional foresters, wildlife officials, wildlife biologists, academics	CAMP REPORT - variants, from complete report for scientists to salient points for policy makers
Level 2 - layman	Common man, from both urban and rural areas, educated and non-educated, English speaking & vernacular	CAMP information attractively typeset and formulated appropriately for general reading or for use in group activities, Material on special issues in vernacular
Level 3 - students	Young people from 6 - 16	CAMP output information of interest to youngsters and made palatable for different ages. Packets to use in zoo, NGOs, wildlife areas, school, and museums.

3 Stages for Post-CAMP Education / Awareness / Action Programmes		
Stage 1	<ol style="list-style-type: none"> 1. Zoos, museums, conservation NGO's, wildlife agencies, schools, etc. 2. Field biologists and policy makers 	<ul style="list-style-type: none"> • Basic programme materials ... theme based for Bats, Primates, Amphibians, Rodents, Reptiles ... later invertebrates. • Report - full
Stage 2	<ol style="list-style-type: none"> 1. Layman (educated in English. 2. Taxon based "Clubs" 	CAMP summaries Club identity materials; projects, games, etc.
Stage 3	<ol style="list-style-type: none"> 1. Layman (uneducated; non-literate) 2. Layman (educated, non-English speaking) 	Villagers Local elected officials Politicians from scheduled castes

If a country has conducted extensive C.A.M.P. workshops, such as biodiversity strategy workshops, then a very rich load of extremely relevant educational resource material is available. Such material makes it possible to create programme materials sufficient for zoos to plan events for 18 - 24 months in advance.

Even zoos without education officers can still make a Master Plan for education for a long time and carry it out if they are given responsibility for education and a budget to produce some material. Even without material, a very keen educationist could simply use the information to speak with people and carry the message of Critically Endangered species, declining populations and lost biodiversity. The remainder of this article will discuss some of the uses of this information based on the

experience of Zoo Outreach Organisation

Theme based programmes

In South Asian countries the zoos are still in the phase of zoo education where the major focus is signboards and occasional brochures with the bulk of material consisting of dry biological information, such as, longevity, number of offspring, gestation period, etc.

C.A.M.P. workshop briefing material and reports, with their emphasis on conservation information related to particular species and issues can be used to help zoos break out of the "zoology" mode and work with more current issues.

Also, in the last few years, Zoo Outreach Organisation has curtailed simply giving out educational material



to be handed to passers by. We have evolved a system by which zoos and NGOs must commit to conducting a lively programme with a relatively small target group (25-50). ZOO then provides educational packets which contain a variety of items which can be used to teach lessons in an active and memorable style.

Over the years ZOO has conducted education programmes for Manipur brow-antlered deer, Gharial, Asiatic lion, Lion-tailed macaque, and Barasingha, all of which were organised around PHVA workshops. While these programmes were useful, since the zoos had nothing else, they had to be more or less limited to zoos which held those species. This was because zoos are reticent to plan programmes around species that they do not hold and also because the amount of funds at our disposal was very limited.

Since conducting the C.A.M.P. workshops, however, the number and variety of taxa involved is so vast, that every zoo is almost guaranteed to have some species or other. In addition, the workshop material has made it easier to introduce specific issues such as conservation and trade. In future, materials are to be developed on introduced species, sustainable use and other current and pressing topics.

Information provided by C.A.M.P. and Briefing Books and Reports

These documents which we have described are the BEST reference you can use for educational material. Many educationists search the World Wide Web and go to encyclopaedias for facts about species but this is risky. We have found that both the web and much of the printed books available as reference material contain many errors.

Some of the material that you can extract from C.A.M.P. documentation are:

1. the most comprehensive and correct list of species
2. Background information
3. A concise "Problem Statement"
4. Current ecological information
5. Biological information from country specialists

6. Historical studies on taxon
7. Threat status (IUCN) of all species assessed at the regional or national level
8. Recommendations from special issue working groups. (These recommendations might well include those from an Education/Awareness Working Group which would provide even more ideas and information.)

The organisation and conduct of a CAMP workshop and the use of the IUCN Red Lists is interesting in itself and could provide a creative educator with a wealth of activities and games.



Case study – Special Issue working groups for bats in South Asia CAMP

In January 2002, Zoo Outreach Organisation/ CBSG South Asia conducted a regional C.A.M.P. for 123 species of bats of South Asia.

The Special Issue Working Groups which met following the four days of data compilation, correction and assessments were :

1. Field surveys and conservation priorities
2. Legislation and policy
3. Bat Taxonomy

B.A.T.S.



4. Temples, Tourism and Bats
5. Chiroptera Education and Awareness

It is interesting to note that there was at least one education recommendation in every one of those working groups. This case study will focus only on the Education Working Group however. The Summary of the education "problem", recommendations and suggestions even for educational items to produce which follow come verbatim from the CAMP Report.

Report of the Education/ Awareness Working Group at the Bat CAMP

Summary:

Bats have a negative public image as a harmful nuisance, instead of a force for good. One way to change public opinion is to tackle negative attitudes with a variety of educational activities, items and projects targeted towards different age, economic, professional and societal groups.

Items suggested by the working group

- Education packet for school children of different age groups



- Common sheet – generic bat template which could be in local language
- Conservation education film on bats of South Asia to be developed



with international assistance

- Letters in the form of a special appeal after this workshop (official looking) from CSG or CSG South Asia to State forest divisions, department, etc.

Actions required for making educational material

- Collect a list of local “taboos” as opposed to facts about bats and make a detailed scientific sheet on it, e.g. negative, untrue things about bats as opposed to positive and true things.
- Collect information on utility of bats with reference to local people, such as that bats aid in increasing soil fertility
- When bat colonies are recorded in national parks and sanctuaries, these should be mentioned as one of the wild animals of the sanctuary.
- Involving specialists in contributing to the census of national parks and sanctuaries of the forest department
- CCINSA / CSG SA members should contribute photographs for use in educational material to be prepared for use of all.

Reaching wider audience

- Feature articles about bats to the local newspapers
- Developing a poster in national, local language and also a template which can be filled in local language to be used in temples, world heritage sites
- Grass root bat clubs; with associated educational material



- Promoting a biodiversity section at primary level of education
- Zoo Outreach Organization Programmes should provide bat packets for special events (wildlife week, environment day, biodiversity day, animal welfare fortnightly) targeting students and other groups
- schools — Primary and secondary level, Intermediate level, Graduate

level

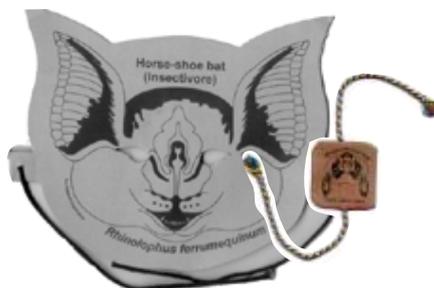
- forest officers
- policy makers (Ministry both Central and State, Forest and Environment officials, Village Panchayat officials
- local people, both rural and urban
- archeology department
- temple authority
- zoo directors
- school teachers
- tourists at archeological sites, NPs and sanctuaries
- Messages and activities related to conservation that can be used for education

Bat colonies identified in school, if any other school can visit the same

- Take the children to nature trails to show bat roosting sites – like children go for bird watching – give information and activities regarding bats
- Encourage good zoos to exhibit bats for education, in appropriate enclosures keeping in mind the welfare of animals

Techniques that can be used in school education

- masks,



- bat friendship bands,
- craft items,
- hand and other types of puppets,
- information on folders having bat shape,
- bat stickers and labels,
- small greeting cards,



- bat badges,
- small projects on bats,
- photographs from bat-researchers,

- generic brochure focused on S.Asia
- These recommendations of the Working group provided excellent ideas for education and also an expert group of people to help implement the programmes. We produced bat packets, as suggested, and the field biologists and taxonomists themselves undertake the organisation of education events and programmes.

Personal Commitments

Moreover, during a “personal commitments” session, the majority of participants in the Bat CAMP committed to public education, e.g. :

- Binu: *I will help create awareness among children*
- Noble: *I will teach villagers the good things about bats*
- Shukkur: *I will talk about bats on radio and TV and in schools*
- Rajashekhar: *I will study C. sphinx and start a Friends of the Bats Club*
- Daniel: *I will help in preparing education materials about bats*
- Azad Ali: *I will conduct awareness camps regarding Pteropus giganteus*
- Tony: *I will donate some educational materials on bats for CCINSA*
- Digana: *I will raise awareness about bats to villagers*
- Gopukumar: *I will write about bats for popular publications*
- Koli: *I will educate children and start a bat club*
- Kumaran: *I will write an article for the press*
- Kranti: *I will expose Taboos on bats and write Newspaper articles.*
- Senacha: *I will write popular articles at Jodhpur for local people*
- Pradhan: *I will work against illegal trade of bats and educate youngsters.*
- Sreepada: *I will educate scientists and other people about bats*
- Sreenivasulu: *I will talk more about bats to the forest department.*
- Korad: *I will continue surveying bats, write in newspaper*
- Adora: *I will educate locals in Meghalaya*

Conclusion:

In addition, it is easier to raise funds for education for these projects due to their being a) recommendations of a CAMP working group; b) having very specific conservation objectives; c). show specific result in a relatively short time. With these funds it is possible to distribute very widely to many organisations and institutions instead of only to a few zoos.



I.Z.E. helps write the World Zoo and Aquarium Conservation Strategy (WZACS) : Chapter 3 Education & Training for Conservation



The first World Zoo Conservation Strategy was brought out by the World Zoo Association and the Conservation Breeding Specialist Group and endorsed by World Wide Fund for Nature, International and The World Conservation Union IUCN in 1993. It was the first time the world's zoos had brought out a document which combined position statement with blueprint and action plan. The Strategy was written by Dr. Bert de Boer, then Director of the European Association of Zoos and Aquaria and sent around for comments to many zoos.

Ten years later, zoos in many parts of the world have outgrown the strategy entirely, many of them having been led in a forward direction by the strategy itself. It was felt that it was time for an update. Not just zoos have evolved but there have been many changes in conservation science and practice since 1993. Aquaria need to be included and a new push given to zoos since the publication of the 1993 document. There is much to share in the zoo community from the last ten years of experience and insight. Finally, in the last ten years, many zoos' focus on *ex situ* conservation has shifted towards trying to contribute to *in situ* conservation.

So the upcoming 2003 Strategy initiative will include Aquaria as well as zoo and will consist of several documents for different target groups, e.g.

1. a "Foundation Document" similar to the first WZCS to describe the philosophy, the backgrounds, and the main conclusions with regard to the potential contributions of the zoo and aquarium communities to conservation.
2. several "Action Plans" to be produced by WAZA, Regional and National Zoo Federations and individual zoos.
3. a "Handbook of practical tools" to provide individual institution (zoo/aquarium) with an extensive set of practical suggestions on how to contribute to conservation.
4. a "Marketing Document" to market the global zoo and aquarium communities' conservation potentials, and to raise funds for these.

The Foundation Document will include 9 chapters and supporting material: Table of Contents, Foreword, Preface, Introduction and Chapters : 1 Integrated Conservation, 2 Support for Wild Populations (and Ecosystems), 3 Education and Training for Conservation, 4 Conservation Research (*in situ* and *ex situ*), 5 Population Management for Conservation, 6 Communication - Marketing and Public Relations for Conservation, 7 Partnerships and Politics, 8 Sustainability, 9 Ethics and Welfare in Conservation. A Conclusion, Acknowledgement and References will follow.

WAZA is determined that the document be more of a genuinely collaborative effort with input from different disciplines and parts of the world in this iteration. Thus there is a Core Group to coordinate the process and a Steering Group, as well as lead authors and specific collaborators.

The Education Chapter is combined with Training but these are to be two distinct subjects expressed as

- " transmitting the message – education
- " transmitting knowledge and experience – training

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Sally Walker, Director, Zoo Outreach Organisation, India – also lead author of WZACS chapter 7 (partnerships and politics); and IZE regional representative for Asia.
Malcolm Whitehead, Education & Visitor Service Manager, The Wetland Centre, Wildfowl & Wetlands Trust, UK.
Coordinator of the WZACS process: Miranda Stevenson
Chair of the steering group: Dr. Jo Gipps, Director, Bristol Zoo Gardens.

The Chapter will be the educational focus on conservation – and the means to change the way people think about how, what you/they do. Education should also involve people's emotions and encourage action. Education in zoos has focussed on their own visitor audience but over the next decade it is likely to also include education as related to people in the range of the species.

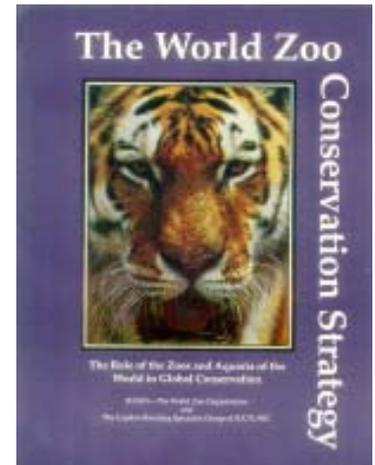
The outline below includes the various elements on the next page. **It is a Draft Outline. If any of you in ARNIZE would like to comment and contribute to this important chapter, you may write to Steve Woollard, Education Officer at Bristol Zoo at <woollard@bristolzoo.org.uk>**



Elements of Education Chapter *

Education

- .. biotematic exhibitions in zoos
- .. education should induce a feeling of wonderment, by using emotional as well as cognitive gains
- .. education programmes, integrated education (ref C1)
- .. education covers: 1. education of visitors; 2. education of non visitors; 3. training of zoo staff; 4. training in range countries
- .. the systematic exchange of information – information for dissemination
- .. the integrated approach (ref C1)
- .. there is an overlap – and always will be – between communication and education – the word education may be a barrier that gets in the way of the message, and the text needs to be written in a way that all readers can understand.
- .. education must be a part of interpretation and of exhibit design
- .. all programmes should be inspirational (Brookfield's use of the evolution of zoos model to describe other aspects of zoos)
- .. inspire action in visitors
- .. *in situ* conservation education programme should be in every zoo education programme
- .. education should be focused on changing human behaviour
- .. it should also explain the socio-economic value to animals
- .. the human value of wildlife and natural resources
- .. the moral responsibility for conservation education
- .. promote the diversity of species, especially invertebrates
- .. stress the importance of the ecosystem
- .. education programmes can bridge the gap between zoos and urban populations – e.g. create passion
- .. education should promote running businesses as green institutions (cross ref to sustainability)
- .. promote good welfare to the public (cross ref. to ethics and welfare)
- .. education must be evaluated



Training

Zoos should encourage more technology training and transfer of skills

Current trends:

- .. is for more training
- .. the developing part of the world is generating its own training programmes

General:

- .. it would be useful if this document could be used to encourage governments to get the message that training should be increased and enhanced
- .. training should be as broad as possible, e.g. PHVA processes, red lists etc. Training is not just zoo people training other zoo people, it also involves a cross relation of skills
- .. management training
- .. following through i.e. do not lose touch with trainees
- .. evaluation of training is essential
- .. linkage
- .. field techniques training

*** This is a Draft Outline. If any of you in ARNIZE would like to comment and contribute to this important chapter, you may write to Steve Wollard, Education Officer at Bristol Zoo at <woollard@bristolzoo.org.uk>**



Ecotourism, Conservation and Local People

Dr. Rajiv Saxena*

Introduction: Since the term ecotourism was coined in 1987, the various definitions reflect different views and clearly indicate different priorities. Conservationists stress educating people about environmental problems and thereby raising awareness. Social workers emphasize the need for benefits to local people. Tour operators want to attract as many people as possible irrespective of its effect on wilderness.

Epler Wood (1996) defines ecotourism as "responsible travel to natural areas that conserves the environment and sustains the well-being of local people. "As many governments and tour operators have a tendency to label almost any type of environmentally - related tourism as ecotourism, an International Seminar held in Chiang Mai, Thailand utilized the following definition:

"Purposeful travel to natural areas to understand the culture and history of the environment, taking care not to alter the integrity of the ecosystem, while producing economic opportunities that make conservation of natural resources beneficial to local people" (Bornemeier *et al.* 1997).

These two definitions when expanded include following basic principles of ecotourism:

1. Educate the traveller to avoid negative impacts on the natural sites.
2. Ensure the participation of local people at all stages of ecotourism planning, implementation and evaluation in order to bring economic benefits to local communities.
3. Acknowledge the ecotourism development as national strategy and direct the revenue to the management of protected areas.
4. Frame policies and legislation to clarify authority and responsibility of various stake-holders in ecotourism.
5. Ensure that a higher percentage of revenue is retained in the host country in case of international tourist as locally owned facilities and services are more important.
6. Continue research for environmentally friendly ways of conducting ecotourism business and develop infrastructure in harmony with the environment.

It can be seen therefore, that ecotourism should result in continuously attracting visitors, yielding revenue for conservation besides profiting tourism industry and enhancing living standards of local people.

Ecotourists: Ecotourists like adventure-tourists are segments of natural tourists. They like to visit natural sites and meet indigenous people living in their traditional life style. Otherwise there are no fundamental differences between ecotourists and normal tourists. An ecotourist may be normal tourist as well and a normal tourist may like to visit natural sites also.

Local People: Dasmann (1976) coined the term "ecosystem people " for local communities. Ecosystem people largely live within the limits of their local ecosystems and most importantly, have to face the consequences if these areas are degraded. The relocation of local people for dams or after notifying a protected area in India is a controversial issue. Sometimes the same conservationists

have different views on these two issues. They oppose construction of big dams on the pretext that a large number of people will have to be displaced and at the same time support the relocation of people from inside the protected areas. Ecotourism must envisage the participation of local people in the management of a natural site by using their knowledge and man power.

Conservationists: Conservationists generally oppose ecotourism on the following grounds:

1. Ecotourists disturb fragile ecosystems. This is a problem for both conservationists and tourism industry, as once degraded, it will not be attractive to future tourists.
2. Nature is to be saved for posterity. It is not to allow the present population to see, enjoy and understand the natural wealth arguing that it is being done for next generation. This has created a powerful lobby which is counterproductive for conservation, especially when those advocate for this theory, consider themselves privileged to go anywhere and see anything.
3. Ecotourism tends to corrupt the traditional lifestyle of local inhabitants mainly dependent on surrounding natural resources.

Ideal Ecological Site: An ideal ecological site should have the following basic ingredients:

1. The site should be set in nature. It may be snow clad or rocky mountains, desert, sea, river or forest. Ecotourists appreciate if it has cultural or historical value also.
2. Tour operators and guides should be good interpreters of nature and able to communicate conservation value of the site as true ecotourists wish to learn about the nature and culture of the region.
3. Local people's participation is mutually beneficial for them and tourism industry. Services provided by them may include food, accomodation and cultural programmes. This will bring monetary benefits for locals and give various interesting things to ecotourists.
4. Facilities are needed for study and research so that assessment of impact of tourism on nature can be made from time to time and suitable modification be made in tourism plan for the site. Other points like tourists' flow, impact susceptibility, education activity and possibility of ecotourism diversification can be considered while modifying the plan.
5. For every viable ecotourism site, stringent rules for disposal of waste material, consumption of water and other energy sources, as well as, to prevent damage to nature must be clearly laid out.
6. In case of any conflict between conservation and tourism, the priority should go to conservation as in case of tourist inflow exceeds that of the carrying capacity of the natural site, may it be a mountain trek or a national park.

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