

The VIII National Meeting on Iguanas in México, An Overview

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The National Meeting on Iguanas in México has been conducted annually since 1998 as the primary forum for the Technical Consulting Subcommittee for the Conservation, Management, and Sustained Use of Iguanas in México (SCT-Iguanas). SCT-Iguanas is part of a broader national initiative for the recovery of priority species within the country. In addition to iguanas, priorities include crocodiles and sea turtles. Last year, the meeting was held in the city of Lázaro Cardenas in the state of Michoacán, west-central México, and, for the first time, our group was able to attract both authoritative speakers and private companies as sponsors. Pre-event activities included a press con-

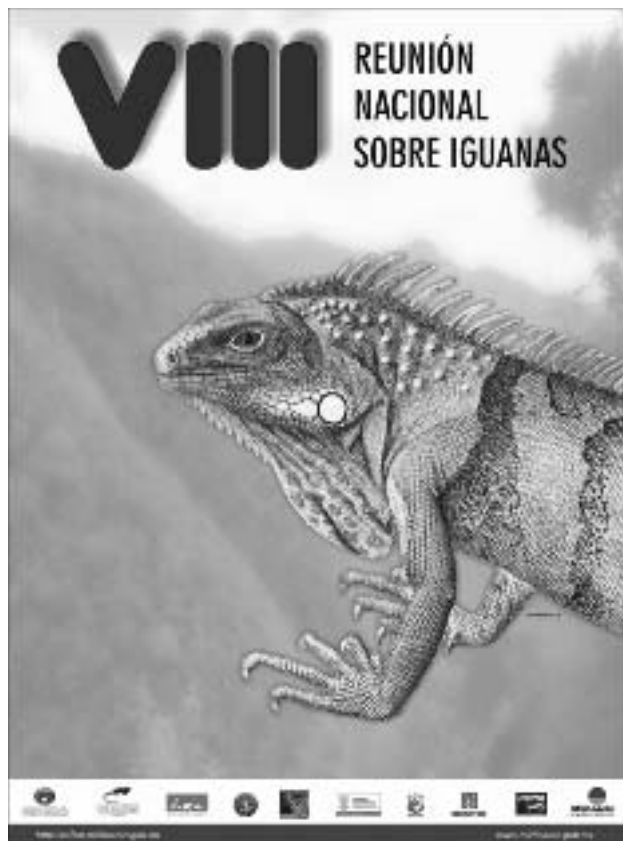
ference with Juan José Reyes, Director of the Forest Commission of the State of Michoacán, Víctor Ricardo Aguilera, Director of the Morelia Zoo in Michoacán, and Víctor Hugo Reynoso, then president of SCT-Iguanas. Reports from the press conference were published in national and local newspapers.

Of major concern is the continued increase in the irrational exploitation of the Pacific Spiny-tailed (Black) Iguana, *Ctenosaura pectinata*, which is used as a traditional food source by Mexicans. This species lacks any formal means of protection, and the need to establish a viable conservation program at the local level is quite urgent. The Balsas depression situated along the border of the Mexican states of Michoacán and Guerrero is one of the larger areas used for illegal hunting and trading of Black Iguanas. This area also is one of the sites with less-developed programs to protect Black Iguanas, in contrast to places like the Isthmus of Tehuantepec in the southern state of Oaxaca, México, where serious conservation efforts were initiated almost 10 years ago. Hunting and trading Black Iguanas is illegal throughout the country. However, without local enforcement, current conservation legislation is largely ignored in many regions.

Local conservation authorities, business people, and academics in Michoacán considered the meeting a good opportunity to raise local interest in iguana conservation. As the event progressed, we found that more people were interested in the captive management of iguanas for profit than in the conservation of the species per se. We also became aware that many more people were interested in farming Green Iguanas for sale as pets than in solving the problem of possible local extirpation of Black Iguanas due to overexploitation. This dichotomy of interests led to some very complicated interactions between presenters and public. In spite of this, the conference was successful. This meeting was also the first time we were able to attract the attention of Central American environmental groups, speaking about similar conservation problems facing their endemic iguanas, as well as people doing iguana research internationally.

The Meeting

The meeting included four main sections: (a) the plenary meeting; (b) the iguana captive management workshop; (c) the Green Iguana commercialization workshop; and (d) technical talks.



Poster promoting the VIII National Meeting on Iguanas in México.

During the plenary talks, the recent transfer of the Priority Species National Committee from SEMARNAT (the Mexican Natural Resources Management Secretary, analogous to the U.S. Fish and Wildlife Service) to the CONANP (National Commission for Protected Areas) was discussed extensively. The iguana group led by Victor Hugo Reynoso and Georgina González-Monfil (Instituto de Biología, UNAM and SCT-Iguanas) clearly argued that this transfer was inappropriate because priority species are already protected within natural reserves, and special programs urgently need to be implemented in non-protected areas, outside the mandate of CONANP. Most of the distributions of listed species of iguanas (including seven species of *Ctenosaura* as well as Green Iguanas) lie in areas vulnerable to exploitation and away from natural reserves, suggesting that a planned strategy carefully implementing sustained-use programs will preserve the species in a wider range of their distributions than a focus on conservation programs in the very limited areas of Natural Reserves. To our surprise, Manelík Olivera and co-workers (CONANP) emphasized that jaguars, Golden Eagles, prairie dogs, and sea turtles deserve urgent attention; whereas the conservation needs of iguanas and 15 other priority species groups are of lesser priority. Needless to say, this led to considerable discussion.

Plenary talks ended with the presentation of Paul House and Vanessa Rodezano (CREA, Honduras) about the conservation status of the Jamo Negro (*Ctenosaura melanosterna*) in Honduras, a problem new to many of us and not previously covered at any of our meetings. This species of Spiny-tailed Iguana has been intensively hunted, almost to the point of extinction. The species, which is endemic to Honduras, has a restricted distribution and has been practically extirpated from the Aguan Valley, where the last remaining very dry tropical rainforest is found. Although this species is considered critically endangered by the IUCN, local conservation efforts are only beginning. Conservation plans include the implementation of a farm for the captive management and release of hatchlings within the 200-ha area of the Centro Regional de Educación Ambiental in Arenal, Honduras.

The second and third meeting sections took place in tandem. During the management workshop, experts in different areas of iguana management and conservation from locations throughout México gave talks on the introduction of captive



JOHN BINNIS, ANIMAL COURTESY OF WEST COAST IGUANA RESEARCH

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farming. These talks have been improved through seven years of Iguana National Meetings, and we now include a broad range of experiences from different farms, pointing out the benefits and shortcomings of the various techniques currently in use. This workshop has become the heart of the Iguana National Meetings. The workshop included talks on the biology and general issues on iguanas, enclosures and facilities, nests and incubation, feeding and growth, diseases and their treatment, and legal issues.

The iguana commercialization workshop led by Víctor Hernández (UMA Los Amatores) attempted to introduce farmers to the Green Iguana pet market. An important issue was the lack of sales due to the increasingly competitive nature of reptilian imports from Central America. The group intended to provide knowledge, techniques for production, administration, use of optimum harvesting ratios for commercialization, quality of specimens, and packing. The workshop also identified national and international markets, and discussed the standardization of the national market to equally benefit farms throughout the country. Four major problems faced by farmers trying to sell their products were identified: Lack of market strategies, paperwork and legal issues, finances, and lack of production volumes. Another issue discussed at the meeting was the importance of lobbying governmental environmental agencies to forbid the sale and importation of iguanas captured in the wild, even if considered legal in their country of origin. Finally, the necessity of forming a National Association of Iguana Farms was mentioned.

The technical talks section included a broad spectrum of iguana-related themes. Silvia Abdala-Romero (Instituto de Investigaciones Antropológicas, UNAM) talked about the importance of iguanas in Mexican culture, showing how iguanas figured in ancient civilizations ranging from Mayans to Aztecs. From post-colonial México to modern times, iguanas are featured in music, dance, paintings, literature, movies, fashion, handicrafts, cooking, festivals, and humor. Abdala-Romero pointed out how indelibly iguanas are imprinted upon our culture, yet sometimes this is less than readily apparent due the influence of the cultural elite on mainstream culture in México.

Presentations of a more technical nature followed. At this year's meeting, for the first time Spiny-tailed Iguanas were the subject of major concern. Jose Luis Arcos and co-workers (UMAR, Puerto Escondido) correlated changes in the reproductive apparatus with behavior during the reproductive period. Several important reproductive parameters in captive Black Iguanas were compared with values reported in the literature for their wild conspecifics and led him to conclude that normal reproductive behavior is not altered for animals that are managed in captivity. Jose Luis Contreras (UAM-Iztapalapa) and Cesar Casiano (UMA Iguanas, Acapulco) discussed the importance of spontaneous seminal emissions in Green Iguanas to implement artificial insemination techniques for the enhancement of reproductive management in farms. Ruben Castro and Guadalupe Bustos (UAEM, Morelos) presented research showing a lack of clear evidence of rainfall (which influences food availability) affecting reproductive characters such as numbers of eggs, mean volumes of eggs, nest weight, nest total weight, and relative nest mass. Martha Pastrana and co-workers (UMA Los Amatores) presented a new, low-cost rustic facility as a model

for incubating Green Iguana eggs. The four-level wooden incubator is covered with transparent polyethylene and houses foam receptacles with a sand and vermiculite mixture. With no power source, incubation temperatures can reach 35–40 °C and the hatching success rate is 78%. Pilar Rueda and co-workers (Instituto de Biología, UNAM and Colegio de Posgraduados, Texcoco) presented digestibility and growth rates in Black Iguana hatchlings fed commercial chicken and rabbit food. Her research shows that higher food consumption rates, better food conversion, better growth and weight gain were achieved in iguanas raised on rabbit food. Victor Aguirre and co-workers (Plymouth University, UK and Instituto de Biología, UNAM) presented a method to evaluate mortality rates caused by predation in hatchling Black Iguanas using wax models. Wendoli Medina and Víctor Reynoso (Instituto de Biología, UNAM) presented models evaluating population growth in a severely hunted population that could be applied to sustainable harvesting of Black Iguanas in tropical deciduous forest. Eugenia Zarza and co-workers (East Anglia University, UK and Instituto de Biología, UNAM) showed the presence of genetically distinct clades within the distribution of *Ctenosaura pectinata*, indicating that harvesting and releasing iguanas from site to site is not recommended. Gabriela García Besné and co-workers (Instituto de Biología, UNAM and Durrell Wildlife Conservation Trust, UK) discussed the nesting behavior of the threatened Santa Lucia Green Iguana at the only two beaches where this species



JOHN BINNS. ANIMAL COURTESY OF WEST COAST IGUANA RESEARCH

is known to nest. Jorge Morales-Mávil and co-workers (Universidad Veracruzana) presented the role of Green Iguanas in the regeneration of rainforest by comparing the germination success of seeds passing through iguana, toucan, and Spider Monkey guts. Green Iguanas were shown to be the best promoters of seedling growth.

In another set of talks, Juan Antonio Hernández (Mundo Iguana iguana, Tabasco) indicated that illegal trade of juvenile Green Iguanas has decreased significantly in southeastern México; however, most iguanas sold in local pet stores are introduced by traders from México City, Honduras, El Salvador, or Guatemala. He concluded that importation of Green Iguanas into Tabasco is shameful, considering that this species naturally inhabits the area. The last two talks emphasized the importance of the use of new technologies to support conservation efforts. Ubaldo Guzmán (Facultad de Ciencias, UNAM) presented a data base designed to record all known iguana diseases caused by viruses, parasites, or bad management, and their treatments. Silvia Abdalá (Instituto de Investigaciones Antropológicas, UNAM), on the other hand, showed the importance of internet technologies to communicate new findings, share data, provide support, and communicate among iguana groups. She emphasized the need to have a more active web page for SCT-Iguanas.

Technical talks were published in a 108-page volume (plus program and index). The abstracts, available only in Spanish, can be downloaded from www.subcomitedeiguana.org/publicaciones.htm, where abstracts of previous meetings can also be found.

The meeting concluded with a field trip to CICARSA, an iron-manufacturing company that dedicates part of its land for species conservation. This company has been very interested in promoting safe areas for the conservation of Green Iguanas. The field trip was led by experts who attempted to estimate the sizes of iguana populations at some sites.

In 2006, the IX National Meeting on Iguanas will be held in the city of Zihuatanejo in the state of Guerrero from 18–20 May. More information is available on our web page (www.subcomitedeiguana.org) or you may contact José Luis Arcos-García (jarcos@colpos.colpos.mx).



THOMAS WIEWANDT, WILD HORIZONS

A workshop on Green Iguana (*Iguana iguana*) farming included talks on the biology of iguanas, but also addressed enclosures and facilities, nests and incubation, feeding and growth, diseases and their treatment, and legal issues related to farming.