Current Events

The original concept behind Varanix was to help herpetologists worldwide provide the best possible captive environment for their monitors. A lot of planning and reorganization has gone into how we hope to best fulfill this goal. What follows are some of the conclusions, methods, and projects underway. Let us know if you have questions or see any projects that interest you.

- Komodo Dragon Report Kit: We're putting together a basic kit to send in response to requests from grade school kids doing reports on Varanus komodoensis. It will include a list of resources, reprints, and original material. Help wanted.

- Newsletter species section: In each issue of Varanix, we would like to include a section of facts, figures, and anecdotes for each of the more commonly kept monitors. We are looking for people to prepare these regular columns on one (or more) species.

- Monitors and the laws: Help wanted compiling & maintaining a list of state and local laws governing monitors.

- You'll be seeing regular mention of email, internet, etc. A major part of Varanix restructuring has been integrating technology that saves time and expense in managing and communicating information about monitors. There are some tremendous benefits for the labor-intensive tasks associated with administration and newsletter production. Correspondence is one of the best examples: email is dozens times faster than letter mail, not to mention cheaper. As mail volume increases, the time and cost savings become quite significant, resources better spent on other projects.

- If you're online: When possible, please use email for correspondence. Article submissions may also be sent as attachments. If you have access to email, but are unfamiliar with it, we'll be glad to help.

Varanix is available in Adobe Acrobat format. See inside front cover for more details.

Please forward any monitor-related message threads, articles, etc. you find for possible inclusion in Varanix. [Please include the source(s) so we can obtain permission to publish the material.]

- If you're not online, but you're interested in a basic explanation about the Internet/Web, send a self-addressed stamped envelope to Varanix and ask for a copy of the Practical Information Bulletin on the Internet and Small Business. The document includes basic explanations, case histories and real world uses of different aspects of the net, online services, etc.

Newsletter Content

What do you want to read about? Better still, you are invited to share your personal experiences and observations in these pages. Even a few paragraphs on behavior you observed, or a husbandry tip, is significant.

Mark Bayless has assembled a wealth of varanid-related literature and will continue reporting on findings of interest covering a broad range of topics. He is also beginning to network Varanix with Australian, Dutch, German and Russian varanid societies.

My contribution in upcoming issues will report on Varanus niloticus living outdoors. Topics include habitat design, materials and construction tips, planting, feeding, and behavior observations.

There's more to talk about, but there's more to do first.

Greg Necerie, Editor
Inquiries, Correspondence

- Letters to Varanix often contain information of general interest to Varanex readership. Please indicate if you do not want to be quoted or have your correspondence reprinted in part or otherwise. (The author will always be contacted prior to publication of questionable or controversial topics.)
- Requests for personal responses must be accompanied by a self-addressed stamped envelope and will be handled as time allows.

Submissions for Publication

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- Computer files preferred: PC/Mac. Typed or handwritten submissions are, of course, most welcome.
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- Indicate any special conditions of publication, such as withholding mention of name or creating a source.

Graphics & Illustrations
- 35mm slides/negatives, prints, illustrations
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- All materials should be labelled with appropriate copyright name and phone/address.
- Include photo captions

Email submissions
- Prior to sending files, please contact us via email for file prep guidelines, etc. Subject: submissions

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CONTACTING VARANIX

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Memberships, Back Issue orders:
Varanix
8726 S. Sepulveda Blvd. #243
Los Angeles, CA 90045 USA
Make check or postal money order in US funds to Varanix

Inquiries, Correspondence, Submissions:
Mark Bayless
c/o 1678 Shattuck Ave.
Berkeley, CA 94709 USA
email: varanews@aol.com

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Articles appearing in Varanex represent the opinions of the respective authors. Though best efforts are made to ensure accuracy of contents, the reader must recognize that much of
the information is based on individual personal experiences and therefore difficult to verify.

The reader is well-advised to evaluate everything heard and read, regardless of the source. Consult as many references as possible and never attempt any husbandry techniques that is
unfamiliar or that you are not confident you are capable of
performing. This is especially true of medical procedures or
when safety (animal, personal and public) is involved. If
you read something in these pages you do not understand,
question, or can add to, you are urged to respond for the
benefit of other readers.

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Editor
Greg Nadero
Managing Editors
Mark Bayless
Michael Balsea
Associate Editors
John Adraina
John Tumipseed

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The Monitors Seen During a Short Trip to Singapore and West Java

Dr. Jon Edwards,
13 Springwood Drive,
Henbury, Bristol,
BS10 7PU England.

John Deas,
23 Cranham Road,
Hendon, Brisol,
BS10 7EE, England.

In late 1991 we spent 3 weeks traveling around Singapore and Western Java. During this time monitors were seen both in the wild and in captivity. Captive animals were seen at three zoos, in the animal markets of Java, and also in an Indonesian animal exporter's facility in Jakarta, Java, where they were being held prior to export.

Singapore

We were very surprised by the numbers of salvator, or water monitors, Varanus salvator, that we saw in Singapore. This species was particularly common in and around the zoo where areas of primary rain forest still remain. In all, we saw 6 specimens within the zoo and at the orchid gardens close to the zoo and 2 specimens in the botanical gardens. It is likely that these specimens were far less timid and used to the presence and noise of tourists. It was interesting to note that two color phases were seen: a black morph living loose within the confines of the zoo, seen sharing an enclosure with red-cased sliders and rhino iguanas, Cnemidophorus cornutus, and the more normally encountered two banded form. We also noted that no large salvator monitors were seen in the wild which might indicate that large monitors avoid heavily populated areas or that larger monitors are killed for their skins.

Salvator monitor skins were very much in evidence in Singapore's plush department stores and the shops attached to the crocodile farms. If the lack of large monitors was indeed due to them being killed for their skins, this is most worrying.

Komodo dragons were also exhibited at the zoo, maintained in a large cage with an outdoor area and an air-conditioned indoor room allowing the animals to escape from the mid-day heat. These monitors appeared, if anything, a little too well cared for and seemed a little overweight in comparison with the animals seen later in the trip at the Ragunan Zoo in Jakarta.

A more detailed account of the other reptiles seen on this trip to Singapore can be found in an earlier article (Edwards and Deas, 1992).

Java, Indonesia

Our stay in Java began with four days in Jakarta, which included visits to the Ragunan Zoo, a reptile exporter's premises and a visit to one of the 'Pasar Burung', or bird markets.

The Ragunan Zoo is about 10 miles from the center of Jakarta. It contains a large collection of birds, mammals and reptiles. The cages, particularly those for the mammals, were unfortunately no where near as well designed or spacious as those seen at the Singapore Zoo. The reptile collection contained a number of rarities, notably an alligator crocodile and a very impressive group of Komodo dragons, V. komodoensis, housed in several large outdoor pits with large mounds of rocks in the middle and a central inner area where they retreated at night. The dragons here were very alert and active, often prowling their enclosure. They appeared far leaner than the animals seen earlier at the Singapore Zoo. This factor could, in part, account for the Ragunan Zoo's success in breeding this species (see: Lilley, 1989).

We also saw a number of wild salvator monitors living in the open grounds of the zoo, particularly around the ponds and moats surrounding many of the cages. We were hoping to see some of the rarer Indonesian monitors kept at the zoo, including the Timor monitor (V. timorensis), green tree monitor (V. prasinus), crocodile monitor (V. salvadorii), and a number of other monitors found in Aru Jaya. Unfortunately, none were on display.
While in Jakarta, we visited two of the city’s bird markets. A number of reptiles were also offered for sale, including some sub-adult salvator monitors which were sold for their meat and skin rather for the pet trade. The animals were held in very small chicken wire cages which were littered with feces and shed skin. We were told by the stall holders that they could obtain many other species of monitor should we want them.

We visited one of Indonesia’s largest reptile exporter’s facility in a suburb of Jakarta. A mind-blowing assortment of reptiles were held here for export to the USA, Japan and Europe. The selection of monitors available was particularly impressive, reportedly having been collected from Sumatra, Kalimantan and Irian Jaya. Several large crocodile monitors, V. salvadorii, were held in large avairy-type enclosures. Most smaller specimens were held in small plastic laundry baskets. We were shown a beautiful hatchling dumerill’s monitor, V. dumerilli, and a number of fabulous blue-tailed monitors, V. kiihlbergi, which we had never seen before nor have seen since. I believe they are occasionally seen in the USA.

We left Jakarta and headed east to Bandung. Situated in the volcanoes and mountains, it was considerably cooler than Jakarta, which is at sea level. We did not see any wild monitors in and around this area and assumed it was probably too cool. A number of specimens were on exhibit at the Bandung Zoo. Unfortunately, the zoo was in a very run down condition, though the reptiles fared somewhat better than many of the other animals. A number of salvator monitors were housed in a large out door pen (photo at right). This surprised us somewhat because of the cool climate; we felt it was too cool for monitors to live outdoors. However, the monitors appeared active and in good health, although we did see their ribs as they spread their wings. Perhaps they are more tolerant of cool conditions than we give them credit for.

We also noticed that some young estuarine crocodiles bred at the zoo three years earlier were considerably smaller than the three-year-old crocs seen in Jakarta and Singapore. This might indicate that although reptiles can survive and breed in these cool conditions they fail to thrive and grow at a far slower rate than their counterparts in warmer climes.

In all, we were pleasantly surprised at how common salvator monitors, V. salvator, were in both Singapore and parts of Java. Unfortunately, the skins of many monitor species (including幅ier and crocodile monitors) were also commonly available in the form of handbags, boots, jackets and wallets in many shops. The numbers of animals slaughtered for this purpose must be huge and almost certainly unsustainable. In comparison, the numbers of animals being exported from this area to herpetologists worldwide is likely to be very small (see: Sprackland, 1986; Edwards & Deas, 1993, for discussion).

Photos by authors.

References


A Varanid Visit to Washington, DC

Article: John Adragna, Mark Bayless
Photos: Antinna Felakoko

We traveled to Washington, DC for a 2-day visit (August 24-25, 1994), to meet Dr. Kevin de Queiroz, Assistant Curator of Reptiles and Amphibians at the Smithsonian Institution, and to visit with Mr. Trooper Walsh, Reptile Keeper at the National Zoo. Our primary reason for the visit was to see the preserved varanid collection at the Smithsonian and the Komodo dragons (Varanus komodoensis) at the Zoo.

We left Staten Island, New York at 5 AM, arrived at Penn Station in Washington, DC at 10:30 AM, and took a taxi the dozen or so blocks to the Smithsonian Institution. At the museum, we met Dr. de Queiroz and he gave us a tour of his department, including the "wet collection" where some 250,000 alcohol-preserved as well as skin specimens are stored for examination. On this day, some workers in the museum were in the process of "topping the bottles", an annual process where all the specimens bottles are topped with alcohol so that none of the specimens desiccate or rot.

Dr. de Queiroz showed us where the Varanus specimens were located. We were primarily interested in the Asian water monitor (V. salvator) and African monitor lizards (V. albigularis, V. similis, and V. niloticus). We then gathered up the specimens we wished to examine, photographed them, and then returned them to the wet collection room. John and Mark wanted to examine all of the V. salvator specimens available for both skin distribution and pattern variances. Antinna was the photographer. Though somewhat surprised we had spent all this money to travel to Washington, DC to take pictures of a bunch of dead lizards, she was a good sport about it never the less. (That way, it did seem a bit crazy.)

At about 1 PM, Chris Nelling arrived, a fellow Varanus member, who was interested in V. indicus.

We proceeded to hold a mini-varanid meeting right there in the small office. Dr. de Queiroz showed Chris where the specimens of mangrove monitor (V. indicus) and Tanimbar (V. timorensis) specimens were, who then proceeded to photograph the specimens. Having worked up an appetite, we all decided to have lunch at the cafeteria downstairs.

After lunch, it was time to photograph the 40 or so specimens of V. salvator that we had come to see. Mark went to the library and was graciously given permission to browse for any reprints, books, and journals on varanids. John and Antinna continued photographing and labeling wet specimens, a time consuming and tedious task (not to mention the smell, alcohol-soaked fingers). The specimens were in very good condition, despite the fact some were collected a hundred or more years ago. One of the benefits of a collection of well-preserved specimens is the opportunity afforded both amateurs and scholars to perform comparative studies as new discoveries are made, perhaps even identifying a new species (which is not all that uncommon).

It was near 5 PM when we finished our work. We thanked Dr. de Queiroz for his hospitality, kindness and helpfulness and ventured into other parts of the museum, especially the dinosaur and fossil exhibits. Later, we took a taxi to our hotel and reviewed what we had done that day.

Exhausted, we retired to bed around midnight.

The next morning, we took a taxi to the National Zoo and went directly to the Reptile House to ring for Trooper Walsh. We were escorted through concrete corridors and steps and found Trooper in a basement room cleaning up. After introductions, we were shown where, just a day earlier, footage of a "hand-crafted" Komodo dragon nest was shot for a film (Discovery Channel, Fangs: Komodo Dragons). After looking in on three-day-old Komodo dragon hatchlings, we proceeded upstairs to meet Dr. Dale Marcellini, Curator of Reptiles and Amphibians at the National Zoo, along with several other staff members.

Trooper demonstrated how they measure the amount of growth of the Komodo dragon hatchlings by "photocopying" them on the copy machine.

They found this the least stressful manner of recording growth data on the fragile hatchlings.

On to the incubation room, where we were fortunate to witness one hatching piping the shell! A number of juvenile Komodo dragons were housed in a corridor behind the public display. We were able to "meet" a four foot female. Quite tame and very curious about people. She was very inquisitive, coming to Trooper when he opened the enclosure door. We were able to pet and stroke her on the head and body without any display of anxiety or nervousness on her part.

After this excitement, we visited the outdoor enclosure where male and female adults reside in a heated, L-shaped greenhouse. The female was hiding under a log and not visible. The male was resting half-in/half-out of a metal SS...
Trooper gave him another chicken, and it too disappeared. The lizard then became more active, walking into the direct sun rays coming into the enclosure.

We enjoyed watching him for another 30 minutes (in spite of the 100 degree Fahrenheit temperature and 100% humidity in the 6 x 6 foot glass-enclosed staff access cubicle). We thanked Trooper Walsh for the tour and went through the reptile house to see the public exhibits. We left the zoo an hour later for our return to Staten Island, where John and Annitta reside, and Mark was visiting for a week.

gallon drum. Trooper whistled to him a few times. The male was more alert, but did not move. We watched him, maybe five feet away, looking back at us. Trooper got out some dead chickens and whistled again. The 7.5 foot male quickly emerged from his hole and most enthusiastically came over to the glass door. Trooper held up an adult chicken, the male dragon opened his mouth and Trooper dropped the chicken in. The lizard effortlessly swallowed the chicken whole, with room to spare!

It should be no surprise that we enjoyed the visit very much. We learned much and saw many interesting and fascinating things. We would like to extend our appreciation and sincere thanks to Dr. Kevin de Queiroz and Mr. Trooper Walsh for their time, help and generosity. Without their kindness, this article could not have been written. A visit to the Smithsonian Institution and the National Zoo are a must when in the Washington DC area. (However, we do not necessarily recommend an August visit because the heat and humidity can be incredibly oppressive.)
Young Varanus salvator Rescue

Bill Leonard

I would like to share my experiences with a recently "rescued" juvenile *Varanus salvator* to help show the importance of patience and of adapting to your monitor's particular personality traits and psychological state.

The *V. salvator* was found in a pet shop in glazed U-shaped. It had recently been frightened into running headlong into a cage decoration and had spent about a week in the care of a veterinarian to assist the heating of a small gong above the right eye. Although the monitor was tame and fairly alert, it was precariously thin with its hips and spine clearly visible beneath dull, bady skin. There was also no "meat" to the tail; it was simply skin stretched over bone. I was told it was "pickling" as crickets, but nothing else. Despite this, the little monitor (9.5 in. 5% of 17.4 in. 31.7) showed a certain willingness to survive. Having over 20 years experience with reptiles in general, and 10 years with monitors in particular, I decided to pay the money and take my chances.

Sexual Maturation In *Varanus salvator* with Notes on Growth and Reproductive Effort


In this paper, author Harry Andrews, of the Madras Crocodile Bank in India, presents "observations and measurements data of two groups of captive monitor lizards" and relates "these findings to conservation and management programmes based on captive populations of *V. salvator*.

The synopsis: "In captivity, *Varanus salvator* attains sexual maturity when they are just over one metre in total length and 50cm snout-vent-length. Maternity can be attained at the end of two years. Males and females tend to grow throughout the breeding season. Egg-laying seasons are closely synchronized with those in the wild. No significant difference was noticed in clutch and egg sizes of younger females when compared to those of older and larger females."
A Survey of Wildlife Trade in Guangxi and Guangdong, China

is the title of a report appearing in Traffic Bulletin 16(1), March 1996.

Among the statistics, Varanus salvator is unfortunately one of the species most plentifully found in large quantities (p. 9, 12, 13, 14).

Authors Li Wenjun, Todd Fuller and Wang Sung note the significant increase in “the incidence of wildlife trade in southern China”. The report is based on an investigation carried out from June to August 1994.

Water monitors were among the list of species most often confiscated in both regions. During a visit to Nongqiao National Nature Reserve (Liuzhou, Guangxi), the authors saw 60-70 recently confiscated water monitors, having being illegally imported from Vietnam.

In both regions, water monitors were found in local markets, ranging in price from $6 - 12/kg, about $3/1b and less. (Bamboo rats were slightly cheaper at $5 - 7/kg)

Water monitor meat is served in restaurants in both regions.

Guangxi known for its cheaper meat deals.

In addition to the large quantities of V. salvator, V. johorensis (Sepilok monitor) and V. flavescens (yellow monitor) were also seen in large quantities in markets in both regions and moderately seen at frontier trade sites.

TRAFFIC also publishes Species in Danger reports. For more information:

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INDEPENDENT RESEARCH STUDIES

participation requested

breeding activity - I would like to hear from anyone who has observed varanid breeding activity. This is in preparation of a paper. Mark Bayless, 1406 Holly St, Berkeley, CA 94703

indices - Any information provided would be greatly appreciated. On is to improve husbandry & brooding data on margareta monitor. Joel Shriver, 116 Long Pine Dr., Madison Hills, VA 24572

sulfur - I am especially interested in information on and photographs of Sulphur Water Monitor, V. marmorata. Any unusual color-patterned forms known. Goal is to improve husbandry techniques and promote captive reproduction of Asian water monitor lizards. All information will be shared with the reader through Varanews. John Adagia, 16 Milten Avenue, Staten Island, NY 10006

sulfur - Photos & data wanted. Immediate reply to your responses. Neil Moler, 9125 Early Morning Way, Sacramento, CA 95824

VIDEO

Komodo, Gray’s & Bengal Monitors
Dr. Auffenberg describes and contrast the behavioral ecology and feeding strategies of three distinctly different species of monitors - the Komodo of eastern Indonesia, Gray’s monitor of the Philippines, and the Bengal monitor of South Asia. The 60-minute video includes several film sequences of Komodo in the wild and is illustrated with color slides, graphics, and figures.

Contact: Diane Bussack Video Productions, 4400 Elder Rd., Bloomington, IN 47408 USA. (812) 359-8329.