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VaraNews

— Varanews is the newsletter of Varanix™, the Varanid Information eXchange.
Varanix was founded to help promote responsible captive care of monitor lizards through education and the open exchange of information.

General Info

Speakers at Ecology of Varanids Symposium, 2nd World Congress of Herpetology

Dennis King sent in a partial list of topics scheduled for this event in Australia at year's end (not all titles were available at publication time):

- Energetics of several species of varanids (ranging in size from *V. gouldii* to *V. caudolineatus*) in the laboratory
- Ratiotracking and field energetics of *V. gouldii* and *V. panoptes* on the floodplain east of Darwin
- Australia breeding behaviour and energetics os *V. rosenbergi*
- Sperm morphology as a taxonomic tool for varanids
- Home range, activity pattern and thermoregulation in the perentie (*V. giganteus)*
- *V. albigularis* ecology in Nambia
- Thermal ecology of adult and juvenile Komodo dragons, *V. komodensis*
- Daily activity patterns, temperature regulation and behavioural aspects of *V. salvator* in captivity
- Economic use and some biologic parameters of heavily exploited populations of the Nile monitor *(V. niloticus)*
- The captive breeding of *V. acanthurus*
- Observations on the habitat selection of water monitors *(V. salvator)*
- Kinematics of throat extension of *V. griseus* in throat display

Questions for your response...

By coincidence, several requests were received about using earthworms as part of a monitor's diet. What are the concerns and what precautions can be taken? Can parasite-free colonies be raised?

(Editor's note: I imagine people using worm bins to "recycle" kitchen scraps are looking forward to your answers... I am.)

Tegus

A handful of members have requested information about tegus. Some time ago an offer was extended to include articles in these pages. An updated offer is being extended to the Tupinambian brethren: Tegu articles will be accommodated as an insert in Varanews. On the premise that articles will be submitted, an editor is also needed.

Future Articles

- Michael Balsai discusses subcutaneous abcesses which can affect the savannah monitor. (Previously announced for this issue, more information became available shortly before publication.)
- Michael McCoid offers some data on the reproductive output in captive and wild mangrove monitors, *V. indicus.*

AAZPA Communiqué, March 1993

Cape Monitors Hatch at Hogle Zoo, K. Davidson

"Utah's Hogle Zoo recently reported the successful reproduction of the Cape, or Bosc's monitor *(V. exanthematicus albigularis)*. In December 1992, following 140-151 days of incubation, 9 monitors hatched from the original 30 eggs laid. The eggs were artificially incubated on vermiculite with temperatures ranging from 28-29C. This is believed to be the first time this species has been bred outside of its native country of South Africa. The offspring are doing well."

Monitoring Medicine

This information is not a substitute for training and years of experience. Always work with someone qualified in the medical treatment of monitors.

Nematode in Green Tree Monitor Identified

Varanews 2(6) and 3(1) reported on a "noodle" parasite found in *V. prasinus*. Zuzana Kukol sent in the results of an examination of the specimen by Patricia Pilitt, a Zoologist with the USDA Biosystematic Parasitology Laboratory:

"We have examined the specimen from the Green Tree monitor, *V. prasinus,* that you sent. It is a spirurid nematode in the subfamily Dicheilonematinae. We believe it belongs to the genus *Hastospiculum*. This genus is a parasite of reptiles while other genera within the subfamily are parasites of birds.

Not much is known about the life cycle of this parasite in lizards. In birds, a species of the similar genus *(Diplotriaena)* develop in grasshoppers. I suspect that an arthropod, probably an insect, is the intermediate host for *Hastospiculum* and may have been used to feed the lizards."

The nematode specimen examined was filled with larvated eggs which resulted in the "noodle" appearance [Varanews 2(6):1]. Exact species identificationof this parasite can only be determined by male characteristics.

Species of *Hastospiculum* listed as parasites in monitors include: *H. macrophallos* and *H. varanus* in the water monitor, *V. salvator* and *H. spinigerum* in the yellow monitor, *V. flavescens.*

Assoc. of Reptilian & Amphibian Veterinarians 2(2)

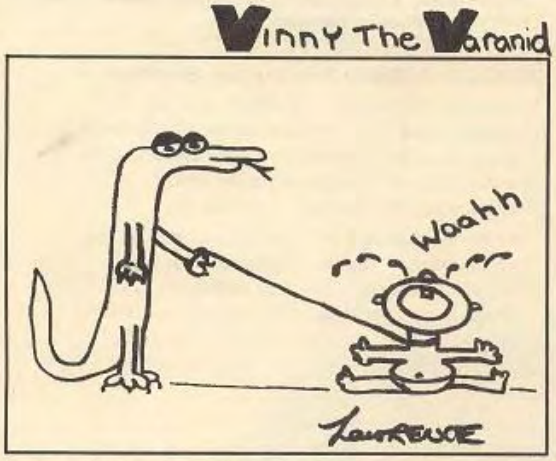
From the section "In My Experience":

Michael Corwin, DVM, reports on the treatment of parasites in savannah monitors, *V. exanthematicus.* Dr. Corwin has used oxfendazole at 75 mg/kg orally injected into a mouse and fed to the infected monitor every 72 hours for 3 treatments. He adds that sulfadimethoxine has been effective in the treatment of coccidial infections.

Dr. Corwin has not found Ivermectin effective against nematodes in savannah monitors, citing several recent cases of hookworm infestations going unaffected following treatment.

Thomas Ryan, DVM, treated a savannah monitor diagnosed as having a *Dermatophilus* infection, or cutaneous streptotrichosis, on the hind legs. Once the lesions were removed and the lab report confirmed the diagnosis, subcutaneous injections (SQ) of ampicillin (10mg/kg) were given twice a day for 1 week and five injections of amikacin (2.5 mg/kg) administered every third day. The monitor was also bathed in a dilute betadine solution the color of weak tea. Dr. Ryan recommended the owner buy a thermometer and humidity gauge to monitor conditions in the tank and provide a water bowl which could not be spilled or tipped over. This had occurred on a regular basis resulting in excessive moisture for a savannah monitor.

The lesions have not reoccurred since June 1990.



To be perfectly honest, Vinny had intended on buying a baby chimp. He changed his mind, however, and purchased a juvenile *Homo sapien* upon hearing how most have a tendency of becoming "dog" tame.

Publications

If you know of any good books, magazines, newsletter articles, etc., send in the title, author, publisher and publication date/ issue. Comments on the material's focus and usefulness are most welcome.

TRAFFIC Bulletin 13(2):61-67, 1992

Observations on Wildlife Trade in Vietnam, Edmond Bradley Martin

"Wild animals and their products are widely available in markets throughout Vietnam, especially in Ho Chi Minh City (formerly Saigon). In 1989, the Ministry of Forestry brought in a regulation prohibiting killing and trade in certain animal species, but this is not enforced."

This report details the findings of a survey conducted by the author to "carry out a study of the wildlife products offered for retail sale". Two visits were made to Ho Chi Minh City, one in March 1990 and the second in January 1991. The article focuses on the various factors contributing to the potential extermination (in the wild) of the animals in this region of southeast Asia.

The survey listed items found in souvenir and medicine shops along with the live animal trade. Among the sad list of "souvenirs" offered the tourist, stuffed monitors could be had for $37. Water and Bengal monitors are sold live, for use as both food and medicine, or already butchered. Cost per kilogram: $4.

Also reported in this issue was the seizure of 18 Desert monitors, *Varanus griseus* (Appendix I), by customs officials at Düsseldorf Airport in August 1992.

The Vivarium 4(3):19-22, Nov/Dec 1992

Monitors and the Rotterdam Zoo, Gerard Visser

The author begins with an overview of the monitor family before moving on to notes on the White-throated, or Cape, monitor *(V. albigularis)* and the yellow monitor *(V. flavescens).* Discussion of each includes distribution, habitat, caging, diet and activity, and reproduction. Five color photos accompany the article *(acanthurus, prasinus, varius, albigularis, flavescens).*

A pair of adult White-throated monitors were kept in a 16x6.3x7ft (5x2.5x2.8 m) enclosure set on a cement slab covered with a thin layer of sand. Furnishings included a tree, rocks, artificial palm trees and a small pool kept at 75 F (25 C). Daytime temperature ranged from 75-86F (25-30C); nighttime above 68F (20C). Diet included day-old chicks, rats, mice, and

an egg & meat mixture supplemented with vitamins/minerals. The monitors were usually fed twice per week with occasional two week "fasts" to prevent obesity.

An accidental heating failure resulting in 41-47F (15-18C) temperatures for an eight day period may have induced copulation in January 1979. Thirty-two eggs were laid five weeks later. Incubated at 86F (30C) and 100% humidity, eight eggs hatched successfully. Juveniles were fed small grasshoppers, pinkies and locusts, supplemented with vitamins/minerals.

A breeding pair of yellow monitors was housed in a 19x8x9 ft (6x2.5x2.8 m) enclosure equipped and maintained similarly to that previously described. The monitors became active soon after the lights were turned on at 7h30. The yellow monitors exhibited a fairly regular behavior of one hour's activity in the morning and then a couple of hours before lights were turned off at 18h00 (6 PM).

Rotterdam Zoo currently keeps the Lace monitor, *V. varius*, and the ridge-, or spiny-, tailed monitor, *V. acanthurus*. These monitors are all captive-bred, the Lace monitor by Hans-Georg Horn and the ridge-tailed monitors are 2nd generation from the successful Frankfurt Zoo breeding program. Third generation captive *V. acanthurus* were produced in 1992.

Lights on, Light off

On page 10 of the same issue, Tim Colvin describes and diagrams a simple way to control daytime and nighttime devices using an electric relay with 2 sets of contacts and a single photocell. For example, heating pads can be turned on when the lights go off.

Reproductive Notes

Reproductive Notes on the Black Roughneck Monitor Lizard *(Varanus rudicollis* GRAY, 1845)

Mark K. Bayless

The black roughneck, or Harlequin, monitor was initially discovered by John E. Gray (1800 - 1875) in 1845. Almost a century and a half later, there is still relatively little known of this specie's natural history, its native habitat and reproduction behavior.

V. rudicollis home range includes Burma, Indonesia, Malaya, Philippines, Sumatra and Thailand. This species is arboreal and primarily insectivorous feeding upon termites, beetles and possibly worms (Abdul, pers. comm.; Sprackland). As with most varanids, they also enjoy bird eggs.* Living in primary and secondary forest, the roughneck comes into less contact with people than other monitors. There is only one recorded case when they have been encountered by rangers in Malaysia (Abdul; pers. comm.). Destruction of their native habitat appears to be the greatest threat to their survival in the wild.

The reproductive behavior of the roughneck monitor is unknown in its native habitat. In captivity, there have been a handful of recorded reproductive events. The Fort Worth Zoo (FWZ) had a single female lay clutches of eggs from 1984 to 1991, of which only one from a May 1988 clutch was fertile. Eggs were laid in July 1986, November 1986, August 1987, December 1987, and June 1991 and were deposited in various locations, including the water, a hollow log, and on the floor of the exhibit where the female covered the eggs with gravel (Mehaffey, pers. comm., May 1988). The diameter of the eggs ranged 47.8-52.3 mm.

The sole fertile egg was incubated at a temperature of 28-32 C (+/- 1C) with humidity kept at 80-90%. After 193 days, the egg was opened to find a fully formed neonate with a malformed spinal column.

Known for their extensive experience in the captive reproduction of monitor lizards, H.-G. Horn and G. Visser offer most of the information in the following table:

***Varanus rudicollis* Reproductive Events**

Date	Clutch Size	Incubation Time (days)	Egg Dimensions LxW (mm)	Information Source
Dec 92	6	15	60 x 36	Bayless/EBV
1984-1991	1	193	50 x —	Mehaffey/FWZ
- -	4	—	58 x 32	Horn/Visser '91
- -	16(5)	—	—	Horn/Visser '91
Jan 81	13(5)	180-184	—	Horn/Petters

The six eggs laid at the East Bay Vivarium (EBV) in Berkeley, CA were deposited by a 40.6 cm SVL (+ 83.8 cm tail) housed in an enclosure 5x4x7ft, kept at a temperature range between 82-90F. She was housed with two other females of similar size. The eggs were kept at 85% humidity in a 1:1 water/vermiculite mixture. After 15 days of incubation, only two of the six appeared good. A few days later, these last two spoiled as well.

In 1981, a wild-caught female laid 13 eggs. The 5 viable eggs were kept at 28-30C (+/- 1C) and were sprayed daily maintaining 100% humidity. After 180-184 days, five hatchlings emerged from their eggs. Their length ranged between 23.8-28cm and weight was between 19.4-21.6 g. There is not much data available on the hatchlings.

I wish to extend my thanks to Doug Mehaffey and Jasmi Bin Abdul and the staff of the East Bay Vivarium for their help in preparation of this article.

* These are typically fertile, often partially developed, eggs and offer much more nutritional than the unfertilized eggs found in the food store.

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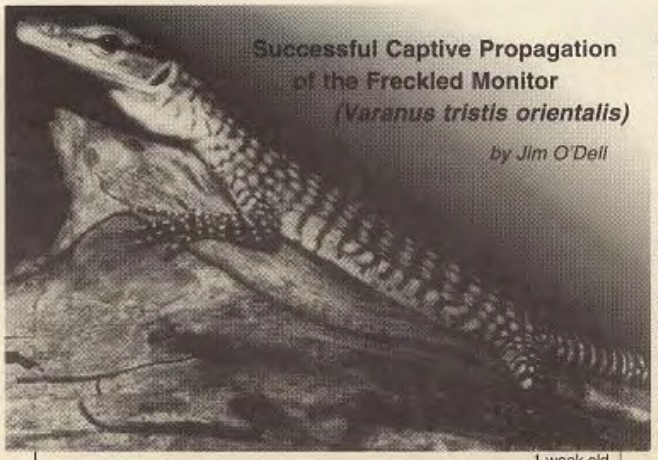

Successful Captive Propagation of the Freckled Monitor *(Varanus tristis orientalis)*

by Jim O'Dell

1 week old

Description

The freckled monitor, *Varanus tristis orientalis*, has a ground color of pale brown to reddish brown with a prominent pattern. Numerous grey white transversely aligned ocelli extend from base of head to base of tail. Top of head paler shade of ground color, spotted to flecked with pale grayish brown. Obscure pale-edged dark streak extends from eye to above ear. Limbs dark brown to black with pale grey to white spots. Base half of tail narrowly banded to variegated with pale pigment. Remainder dark brown to black, without a pattern.

This arboreal monitor is found in subhumid to arid woodlands in northeastern Australia. It is a medium-sized monitor, maximum size of about 24 in (60 cm) TL. When disturbed they retreat into a hollow branch or under loose bark. This monitor also spends a great deal of time on the ground looking for prey, which consists of insects, lizards, and small vertebrates.

Housing

After receiving 2.2 yearling freckled monitors in October 1990, I housed each 12 in (30 cm) lizard in a 29 gallon (104 liter) aquarium. The substrate I choose is small wood chips because they are absorbant, inexpensive and have a nice aesthetic value.

Furnishings consist of water bowl, branches, and PVC pipe. The water bowl is available all the time and is not very big. These monitors have never shown any desire to soak. The branches give them several horizontal perches, as they do like to bask. The PVC pipe proved to be a good hiding place, is easy to clean and comes in many different sizes.

Lighting is provided by a full-spectrum light (GE Chroma 50 F40C50) and an unfiltered black light (GE F40BL). The fixture is suspended 12 in (30 cm) above the aquarium and is accompanied by a 50-watt spot light positioned above a horizontal perch. All lights are controlled by a timer (12 hours on/off).

Ambient temperature is kept between 75 - 85F (22.5 - 27.5C) during the day. The basking spot ranges 90 - 95F (30 - 32.5C), the spot light controlled by a thermostat set at 90F (30C). Night temperatures range between 65 - 80F (18 - 25C).

I did not measure the humidity in the room nor in the aquarium, not feeling there is a particular humidity range in which they need to be maintained. However, I do think it is important to have a definite wet and dry season similar to that found in northern Australia. The room is cooled by an evaporative cooler, which adds moisture to the air. I also mist the cages once a week with lukewarm water in June, July and August. In the winter the room is heated with an electric heater with the thermostat set at 65F (18C) providing dry heat. This provides a cycle similar to that shown in Chart 1.

In July 1991, I moved each male into their own 4 x 2 x 2 ft (120 x 60 x 60cm) wooden cage with a glass door front. The significant difference between the aquarium and the wooden cage is that the latter is equipped with a small exhaust fan to provide adequate ventilation. The fan is controlled by the same timer that controls the lights.

At this time, I started adjusting the light cycle according to the latitude of Townsville, Australia (see Table 1). This ranged from 13 hours in the summer to 11 hours of daylight in the winter.

In January 1992 I moved the 18 in (45cm) long males into a 6 x 4 x 2ft (180 x 120 x 60cm) wooden cage that is divided horizontally. Each of the 6 x 2 x 2ft cages is furnished the same as the original 4 x 2 x 2ft cage. The floor of the top cage is equipped with a 1ft (25cm) square door which can be opened to allow the monitors access to each others cage. I also moved the 16in (40cm) long females into the cages previously occupied by the males.

Food

Freckled monitors will accept a wide variety of food, including pinky to small mice, pinky rats, crickets, large mealworms and lizards. Some will accept hard-

Chart 1 - Climate (Townsville, Australia)

Townsville (Queensland) 48 ft (15 m) 19°14' S 146°51' E 31 years — AUSTRALIA

Temperature °F					Temperature °C				Relative humidity		Precipitation			
Highest recorded	Average daily max.	Average daily min.	Lowest recorded		Highest recorded	Average daily max.	Average daily min.	Lowest recorded	0900 hours %	1500 hours %	Average monthly in.	Average monthly mm	Average no. days with 0.01 in + (0.25 mm +)	
J 104	87	76	66		40	31	24	19	73	70	10.9	277	15	J
F 110	87	75	65		43	31	24	18	73	68	11.2	285	12	F
M 95	86	73	61		35	30	23	16	71	68	7.2	183	10	M
A 97	84	70	54		36	29	21	12	66	62	3.3	84	6	A
M 90	81	65	48		32	27	18	9	65	60	1.3	33	5	M
J 87	77	61	41		31	25	16	5	66	60	1.4	36	4	J
J 85	75	59	42		29	24	15	6	64	58	0.6	15	3	J
A 89	77	61	45		32	25	16	7	63	59	0.5	13	3	A
S 94	80	66	52		34	27	19	11	63	61	0.7	18	2	S
O 94	83	71	53		34	28	22	12	64	64	1.3	33	4	O
N 101	85	74	63		38	29	23	17	65	66	1.9	48	5	N
D 101	87	76	65		38	31	24	18	70	69	5.4	137	12	D

World Weather Guide

Table 1 - Hours of daylight (Townsville, Australia)

Also from the World Weather Guide are the following hours of daylight per month for the Townsville region. The measurements are made on the 15th of each month at 20° S.

Month	Hours of daylight	Month	Hours of Daylight
Jan	13:16	Jul	11:02
Feb	12:50	Aug	11:21
Mar	12:17	Sep	12:00
Apr	11:42	Oct	12:36
May	11:12	Nov	13:04
Jun	10:56	Dec	13:20

boiled eggs and canned cat and dog food. They are fed every three to four days, every other feeding a mouse or pinky rat. The other feedings consist of one of the other items they accept, usually large mealworms or crickets. Every other feeding I also dust the food items with a multi-vitamin that has calcium and vitamin D3.

I have noticed a reduced appetite during the cooler part of the year, when the lights are on 11 hours per day and the nighttime temperature drops below 70F (21C). They may go as long as seven to ten days without eating, even though the temperature under the spot light during the day remains between 85 - 90F (29 - 32C).

Reproduction

Obviously, successful captive breeding of varanids requires you have a male and a female. This used to be harder to determine than it is now with the tail injection method. Per Dr. James Jarchow, DVM, this method is 90% accurate with varanids of three months to a year in age, and almost 100% accurate with mature varanids. At the age of one to one and one-half years, *V. tristis orientalis* becomes sexually dimorphic. Males have a cluster of scales at the base of the tail forming a wart-like growth while in females the growth is less prominent or absent.

The tail injection method consists of injecting a sterile saline solution at the base of the tail. The hydraulic pressure of the solution in conjunction with pressure applied with a thumb will usually evert the hemipenis on the male of the species. **I recommend having this done by a qualified veterinarian only.** On only one of over twenty occasions when I have used this method was it incorrect. That was with a yearling freckled monitor.

From October 1990 to February 1992 each *V. t. orientalis* was housed separately. In February 1992 a female was moved in with each male in the 6 x 2 x 2ft cages. When they were first introduced, there was little interaction between them. This did not surprise me since I expected them to mate in the fall or early winter, similar to most varanids found in northern Australia.

Later in the month of February I opened the door between the cages. Male combat was observed at this time with the dominant male chasing the other male away from his "companion female". The other female remained in the lower cage with the male going to the upper cage from time to time, only to be chased away again. During this time the dominant male would bite the neck of the female and attempt to mount her. This activity continued vigorously for about a week, while the other female and male remained separated in the lower cage.

By late March, the female in the upper cage had stopped accepting food and appeared gravid. I placed her and a nest box in one of the 4 x 2 x 4ft cages. The nest box was a 3.5 quart (3.43 liter) opaque plastic box with a tight fitting lid. The contents of this box were a layer of damp vermiculite covered by a layer of damp green moss. The entrance into the box is a 12in (30cm) long piece of $1^1/_4$ in PVC pipe. With the entrance on the side and sloping downward from the box, it keeps the contents moist for up to two weeks. Then, if eggs are laid and not discovered for a few days they will not deteriorate due to lack of moisture.

On April 1st inspection of the nest box revealed the vermiculite and moss all mixed together. I discovered six white eggs averaging 1in (25mm) in length and .75in (19mm) across. I removed the eggs and placed them half buried in vermiculite in a plastic butter dish with a lid. The ratio of vermiculite to water, by weight, was 60% vermiculite to 40% water (3 parts vermiculite to 2 parts water). I decided on this ratio from past experience with the Timor monitor, *Varanus timorensis*. At a 50/50 ratio of vermiculite and water, the eggs died before hatching. I believe it was due to too much moisture. In both case, the eggs were incubated at 82-86F (28-30C).

After removing the eggs from the nest box, I kept the female separated from the others

J. O'Dell

2 months old

and fed her as much as she would eat for the next ten days. On April 10th I reintroduced the female to the males and observed the same behavior as before. Four weeks later she again quit accepting food and appeared gravid. I followed the same procedure, except I closed the door between the cages to keep the males apart. On May 14th she laid five more eggs of the same size as before. These were incubated under the same conditions as the first clutch.

Before the reintroduction of the female that had laid eggs to the males, the other female had visible bite marks on the back of her neck and head and also on her side. These bites were causing deep enough wounds to force me to remove her from the cage with the two males. I used a general antiseptic to clean the wounds, which closed in a few days. During one of my examinations of "her", a hemipenis was everted, obviously indicating this one to also be a male. Since the "new" male was smaller than the others, I assumed he had been attacked by one or both of them.

I never observed copulation. I estimate the time from copulation to egg laying to be 30-40 days and incubation time to be 120-165 days, similar to most small to medium size varanids. On July 16th I noticed a small dent in one of the eggs in the first clutch. I added 3cc of water to the vermiculite to avoid the risk of the eggs drying out. Six hours later there was a slit in the egg with the tip of the snout protruding. Over the next four days all of the eggs from the first clutch hatched, producing six healthy hatchlings. They averaged 5in (125mm) TL and 2.25in (56mm) SVL.

On August 26th I noticed a small dent in one of the eggs from the second clutch; the following day three of the other eggs had slits in them with snouts protruding. On August 28th these three emerged and were the same average length as the previous hatchlings. I put a small slit in the egg with the dent to hopefully assist it in hatching. On September 2nd I cut it open to find a dead but fully developed lizard. On September 6th I opened the last egg to find the same thing. I cannot explain why these two went full term only to die, but it was gratifying that overall there was an 82% hatching success rate.

In the first week of November 1992 the female was again introduced with one of the males in a 4 x 2 x 2ft cage. There was no interaction observed for two weeks, so they were separated. On December 2nd the female was put in with the 3 males in the 6 x 2 x 2ft adjoining cages, the access door between them opened. I observed the same behavior as nine months earlier. January 1st 1993 I separated the female from the males, equipping her with a next box. On January 14th she laid 7 eggs of the same size as the previous clutches. At the time of this writing the eggs are incubating under the same conditions and are due to hatch in the first part of May 1993.

Hatchlings

The hatchlings are more brightly colored than the adults. Their background color is black with yellow to white dots. The tail is black with white bands running the length of it. The top of the head is brownish while the rest of the head is yellow. The color and markings change more like that of adults at about six weeks of age when they completely shed for the first time. The yellow coloring of the head remains but fades as they age.

The hatchlings are housed individually in 10 and 29 gallon aquariums furnished as previously described for the yearlings. By having them separate I am able to keep accurate records of when and what they eat. It was not until they were five days old that the hatchlings accepted any food, the first thing being three week old crickets. By the time they were ten days old they were accepting hatchling Mediterranean geckos. Two of the hatchlings would also accept one day old pinky mice. At six weeks, they accepted four and five week old crickets and small lizards. Five hatchlings occasionally accepted pinky mice. They would accept them more regularly if the mice were scented with a lizard. At three months, Dr. Jarchow recommended offering strips of fresh trout, which all readily accepted. After introducing the monitors to the trout, I was able to scent pinky mice with the trout and have them accepted.

At four weeks of age, two from the second clutch died, with no confirmation of the cause. After consultation with the veterinarian, I believe the deaths to be due to some deficiency caused by the two clutches being laid so close together and the female not being provided with all the vitamin supplements necessary to replenish her system.

Conclusions

I attribute this successful propagation of *V. tristis orientalis* to several key factors:

1. The change in nighttime temperature
2. The change in the photo cycle
3. Providing a temperature gradient
4. Simulating dry and wet seasons
5. Use of multiple males
6. Starting with captive hatched yearlings (healthier, less stressed than wild-caught animals)

I realize the last one is hard to come by, but hopefully in the near future captive bred varanids will become a common occurrence.

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Species Resource Panel

These individuals have volunteered to field specie-specific questions. In the case of a panel member returning a phone call, you are asked to pay for the call.

- Savannah (*exanthematicus*), White-throated (*albigularis*)
  Mark Bayless, 1406 Holly St., Berkeley, CA 94703
- Dumeril (*dumerilii*)
  Mike Fost, Zoo Atlanta, Reptile Dept, 800 Cherokee Ave. SE
  Atlanta, GA 30315-1440 (404) 624-5618 (daytime EST)
- Nile (*niloticus*)
  Greg Naclerio, <Varanix address to left>
- Yellow (*flavescens*)
  Ennis Berker, 9603 Woodlawn Dr., Portage MI 49002
- Mangrove (*indicus*)
  Joel Shaner, 110 Long Pine Dr., Madison Hts., VA 24572
- Timor (*timorensis*)
  Scott Stahl, DVM, 4001 Legato Rd., Fairfax, VA 22033 (703) 591-3304

Monitor Rescue Program (MRP)

This volunteer-sponsored program was established to place unwanted monitors in the permanent homes of experienced varanophiles. For a copy of the program description, send a legal-size SASE to Varanix, attn: Monitor Rescue Program.

All other questions should be directed to the MRP Administrator:

Wanda Olson (408) 274 9020, (408) 274 2555
4099 Timberline Dr.
San Jose CA 95121

In these pages...

Articles appearing in Varanews represent the opinions and experiences of the respective authors. Though best efforts are made to insure accuracy of contents, the reader must recognize that the majority of available 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 technique that is unfamiliar or you are not confident you are capable of performing. ***This is especially true of medical procedures or when safety (monitor, 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.

Reprinting parts of Varanews...

The contents of Varanews may be reproduced for inclusion in the newsletters of herpetological societies with the following provisions: the material is reproduced without change, appropriate credits are given, and a copy of the publication is sent to Varanix.

When reprinting parts of this newsletter, you are requested to maintain the original context. This is especially important when the topic includes discussion of unfortunate experiences or how not to do something. (Taken out of context, a "how-not-to-do" may be interpreted as a "how-to-do".)

When submitting part of Varanews for reprint in another publication, please include a copy of this page.

A primary function of the Varanid Information eXchange is to build a collective knowledge base that will serve to further our understanding of Varanidae. The goal of these efforts is to improve their chances of survival, both in captivity and in the wild.

Ads / Notices

Reasonable-length line ads are free and should relate to the audience of this newsletter. Notices will be included as space allows. Varanix is not responsible for the quality of merchandise advertised and reserves the right to refuse any ad deemed inappropriate. You are encouraged to inform Varanix of your satisfaction/dissatisfaction with a product or service. Your comments will remain confidential.

Varanix Coffee Mugs: One side is the original Varanix logo in black & green. The other side has the species text piece shown below. $5.95 per cup. S&H: Add $3.50 for the first cup and $1.50 for each additional cup. Please allow 3 weeks for delivery. (Shipping rates are for US & Canada only.)

komodoensismertensiprasinusvariusexanthematicuspanoptes
rudicollisindicusglauertisalvadoriikordensismitchelli
acanthurusprimordiusdumerilliflavescensrosenbergi
timorensisbrevicaudagiganteusgloboparmaspenceri
albigulariscaudolineatusniloticusolivaceusgriseus
tristiskingorumeentirenexgouldiisalvatoreremiusgilleni
karlschmidtiocellatusnebulosustorritbengalensispunctatus

§ PUBLICATIONS §

Write or call for a free booklist from the following vendors unless otherwise noted.

The Guide to Keeping Monitors. $5.99. The Reptile News Press, 17603 E. Tennessee Dr., Aurora, CO 80017. (303) 751-6923.

"This is a nice booklet for those new to the hobby and should reduce early mortality of captive monitors." [Mark Miller, Varanews 2(2)]

Herpetology Books - Paul Gritis, 1731 W. Market #12, Bethehem, PA 18018 USA (215) 867-9723

Herpetological Booksellers, P.O. Box 1906, Palm City, FL 34990-1906.

Mertensiella #2: Advances in Monitor Research This collection of papers (in English) by monitor research experts was presented at the First Multidisciplinary World Conference on Monitors in 1989. Price: $25 (includes surface mail); add $10 for air mail.
Wolfgang Bischoff, Museum Alex. Koenig, Adenaueralle 150-164, 5300 Bonn 1, Germany.

§ ANACONDA TO ZOOXANTHELLA §

I'm working on a study of the African monitors *V. exanthematicus* & *V. albigularis* to improve husbandry techniques. Mark Bayless (address, page 7)

HerpNet is an electronic forum that allows anyone with an interest in reptiles/amphibians to participate in a network of professional & amateur herpetologists, veterinarians, etc. HerpNet can be accessed at any modem speed. (215) 464-3562. Settings: N-8-1-F

Membership renewal is due if the mailing label says:
EXPIRES 3(2)
Please note that renewals are tracked by the Volume(Issue) of Varanews and not by date. Also, no other reminders are sent due to the time and expense involved in doing so.

Blue Ridge Herp Society, P.O. Box 727, Brookneal VA 24528.

Investor, partner for reptile zoo and ranch in Las Vegas, NV. Bob F. Pierson. (702) 457-4747

§ FOR SALE §

2.1 captive-bred freckled monitors *(V. tritis orientalis)*, 6 months old, eating pinky mice, 7 - 9 in. TL. $4500 for the group. Will consider trades for varanids listed in my wanted ad below. Jim. (602) 649-1399

§ WANTED §

Information on *V. dumerili* or *V. rudicollis*. Mike Fost, Zoo Atlanta Reptile House, 800 Cherokee Ave., SE, Atlanta GA 30315-1440. (404) 987-3933

Captive hatched and/or raised varanids. Preferred age is hatchling to sub-adult. Wish list includes: Desert, *(griseus)*, Yellow *(flavescens)*, Bengal *(bengalensis)*, White-throated *(albigularis)* and most Australian varanids. Jim O'Dell. (602) 649-1399

Female black roughneck; female red tegu. Joshua Cushner, 7301 Fountain Ave., Los Angeles, CA 90046.

One each, *V. salvator* and *V. rudicollis*. Very young or captive raised only. Wayne Palmer, P.O. Box 2781, Eugene, OR 97402. (503) 683-6019

Female *V. salvator nuchalis*. Steve Blain (415) 468 0578

Young *V. salvator*, captive-raised preferred Thomas Covington. 2601 John B Dennis Hwy #110, Kingsport, TN 37660. (615) 288-4549.

Varanix
8726D S. Sepulveda Bl. #243
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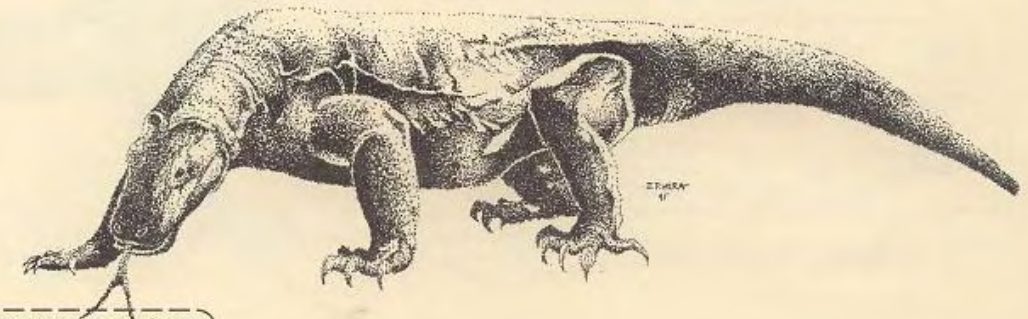
USA

gratis

Mark Bayless
1406 Holly St.
Berkeley, CA 94703



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