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VaraNews

VaraNews is published by Varanix©, the Varanid Information eXchange, dedicated to the responsible captive care of monitor lizards through education and the open exchange of all information pertaining to Varanidae

General Info

Thanks again to Dr. Uwe Krebs for giving the Varanix logo a "new, improved" monitor.

Species Resource Panel

Letters and phone calls are frequently received requesting information about a particular species. I am, however, only comfortable fielding questions "on-the-fly" about Nile monitors and regrettably do not have the time to claw through reference material in order to ensure accurate responses about other species.

If you have knowledge and experience with a species and would be willing to directly field questions from members, please let Varanix know. Include your address and/or phone number, which will appear in each issue. (See **Species Resource Panel**, page 7.)

You may, of course, offer these services for more than one species.

Membership Roster

There have been numerous new memberships and inquiries, for the most part due to the recent release of 3 monitor-related publications in which Varanix was mentioned. Publication of the membership list will be delayed until next issue in order to include as many newcomers as possible.

Publications

This is where books, magazines, newsletter articles, etc. of interest to Varanix members will be discussed. If you know of any good publications, send in the title, author, publisher and publication date/issue. Comments on its focus and usefulness are most welcome.

A common complaint among varanophiles is the lack of readily attainable, published material with a focus on monitor lizards. Typically, general lizard books include a few token pages on monitors with sketchy information about the few species mentioned.

Within the last year, several quality works have been published, each addressing a different niche in the varanid world. Each is briefly mentioned here; see the accompanying insert for more details:

Giant Lizards (1992) by Robert Sprackland includes a 90+ page chapter on the family Varanidae. In addition to discussion of general captive reptile husbandry, the author pays special attention to the special considerations demanded by the "giants", headlined by the monitor lizards and including tegus, Heloderma, agamids, iguanids and skinks.

A profile on each species is accompanied by several color photos, most original, many be the author.

TFH Publications, One TFH Plaza, Neptune City, NJ 07753

The General Care and Maintenance of Savannah Monitors (1992) is a 50-page hands-on, captive care reference by Michael Balsai. Beginning with background and general information on *V. exanthematicus*, the author takes a step-by-step look at the important aspects of captive husbandry and how to deal with them. Black and white photos of the Savannah monitor appear throughout the booklet, accompanied by those of other species.

Advanced Vivarium Systems, Lakeside, CA 92040

The Complete Guide to Keeping Monitors (1992) "is a nice booklet for those new to the hobby and should reduce early mortality of captive monitors. [Mark Miller, VaraNews 2(2):6]

The Reptile News Press, 17603 E. Tennessee Dr., Aurora, CO 80017.

Mertensiella #2: Advances in monitor research (1991). The event that spawned Mertensiella #2 was a conference devoted to monitor research attended by "monitor research specialists". This 268-page collection of 21 papers (in English) is a compilation of the majority of those presented at the "First Multidisiplinary World Conference on Monitor Lizards". If you've ever seen a bibliography on monitor-related literature, you will recognize most, if not all, of the authors.

Wolfgang Bischoff, Museum Alexander Koenig, Adenauerallé 150-164, 5300 Bonn 1, Germany. Price: $25, (includes surface mail). Add $10 for air mail.

Tips & Tricks

How are you dealing with the environmental necessities of captive care for your varanid? This is where you can share helpful hints on topics such as feeding, heating, water systems, habitat design and maintenance with the readership.

If I'm bitten, how can I get the monitor to let go?

I have heard/read several answers to this question:

• *Submerge the animal's head in water.* I tried this once... for 15 minutes. Monitors can hold their breath much longer than I can stand to have them clamped onto my finger.

• *Set the animal down allowing it to "sense freedom" and it will let go and run.* Maybe, but I haven't found this to be a good bet. On the contrary, most monitors I've encountered will thrash and twist, which means I'm doing all I can to keep them steady while in their grasp.

A recent experience in which I found my fingertip in the grip of a sick Savannah monitor's jaws gave me the *opportunity* to try the latest suggestion: a drop of rubbing alcohol placed on the monitor's gums. While this display of reflex and alertness (obviously not on my part!) was a positive sign the patient was on the road to recovery, I was jsut as thrilled with the success of the drop-of-alcohol trick.

Translation

The following article originally appeared in German in Salamandra Vol. 21:2/3, 1985. The original title, *Notizen zur Brutbiologie des Gelbwarans Varanus (Empagusia) flavescens im Zoo Rotterdam*, was translated by Margaret Berker and edited by Ennis Berker, Ph.D. The author, Gerard Visser, kindly made final corrections before approving the work.

Notes on the breeding biology of the Yellow monitor *Varanus* (*Empagusia*) *flavescens* (Hardwicke & Gray, 1827) in the Rotterdam Zoo. (Sauria: Varanidae), G. J. Visser

Abstract

For the first time, breeding of the yellow monitor *V. flavescens* is reported. As it seemed that the animals were unable to hatch on their own, some eggs were opened. They contained fully developed young animals, some of which had recently died. We succeeded in keeping one animal alive for a short time. The incubation period can only be estimated as no spontaneous hatching took place. It comes to 149 to 155 days at 30C (86F).

Because few studies conducted in the field are available about *V. flavescens*, it seems that this monitor has a strictly restricted time period for reproduction, namely the months of June and July. This time period corresponds to the onset of monsoon season in India. It also seems that this species does not prefer very dry areas like the Thar desert, but clearly chooses areas with plenty of water.

Introduction

Description. *Varanus flavescens*, the yellow monitor, is a rather small but stocky monitor and reaches a total length of about 1 meter. The general appearance of this Asiatic species strongly calls to mind the monitor of Africa, *V. exanthematicus*. Mertens (1942,1959a) was of the opinion that *V. flavescens* represents the original form within this subgenus. The opinion that *V. flavescens* and *V. exanthematicus* represent the subgenus *Empagusia* has only recently been firmly rejected. According to morphological examinations of the hemipenis (Böhme 1982, Branch 1982) *flavescens* and *exanthematicus* cannot belong to.the same subgenus. Both authors so state the examinations by King & King (1975) as well as Holmes et al. (1975).

Distribution. The area where the yellow monitor is found reaches from Pakistan in the west to Bengal in the east. Sind (Pakistan) represents the western limit of their habitat (Mertens 1959b). Further, animals of this species were captured in the Indian province of Bihar and in Gordon Hill, also in India (Mertens, 1959b), as well as Kharagpur, West Bengal, (Sights, 1949), while d'Abreu (1932) reports that specimens have been collected in Patna (Bihar, India) and Parbatipur (Bengal).

Habitat. As with *V. exanthematicus*, *V. flavescens* was considered to be an inhabitant of hot dry areas. On the other hand, Sights (1949) found a female yellow monitor in a completely different habitat of which he gave the following description:

"The terrain is predominantly flat, covered with rice paddies and occasional waterholes which are surrounded by heavy vegetation in the form of bamboo thickets, low shrubs and tall trees. The ground in some areas is quite sandy while around the rice paddies it is clayey. Near Gharbetta is a relatively large tributary of the Ganges. Sixteen miles northwest of Kharagpur, near Dudkhundi, there are some low hills covered with open woodland and some rock outcroppings. The surrounding rice paddies are replaced by rather dense bush at a distance of about one mile from the base of the hills. Otherwise, the topography is relatively constant. The streams and creeks are open and meandering."

The presence of rice fields, ponds, brooks and rivers presents a definite contrast to what is otherwise considered the typical habitat of *V. flavescens*. For instance, Rotter (1963) is of the opinion that the yellow monitor populates the same hot dry habitat as *V. griseus* and *V. exanthematicus*. However, at the same time Rotter points out that *V. flavescens* shows

a certain preference for water, which is supported (and for which Rotter also gives examples) by the fact that both specimens at the Rotterdam Zoo lie submerged in the water containers in the terrarium for hours. The *V. exanthematicus* cared for in the Zoo never have and never do show this behavior.

According to Sharma (1981) regarding monitors in a typical desert area in India, the Thar desert in the northeastern part of the country, only *V. bengalensis* and *V. griseus* are found. (According to Mertens (1954), in this part of the distribution area of *V. griseus* we deal with the subspecies *V. griseus koniecznyi*). From these observations we can conclude that within the area where *V. flavescens* are found, they are not present in very dry areas, but the dry areas are inhabited by other monitor species like *bengalensis* and *griseus*, and *V. flavescens* is considered more than was formerly believed to be tied to the presence of water.

Feeding, care and observations in captivity

There is very little known about the way of life of the yellow monitor in the wild as no such studies have been undertaken. One can generally assume that its lifestyle does not differ too much from that of *V. exanthematicus*. The species is active only during the day. Activity is often interrupted by fairly long rest periods. For instance, one sees the animals in captivity commonly lying for several hours in the water container, with only the head sticking up above the surface. In the wild, food consists of insects, amphibians, reptiles, small birds and mammals as well as eggs and carcasses. One may assume that in places where the lizard lives near water, probably crustaceans and perhaps also fish are part of its food supply.

The breeding pair at the Rotterdam Zoo were kept in an enclosure measuring 6.0 x 2.5 x 2.8 m (19.7 x 8.2 x 9.2 ft) [L x W x H] with a window on the narrow side (2.5 m) used for public viewing. The concrete floor is covered with a 10 cm sand layer which is replaced 2 to 3 times a year. This terrarium is placed in a heated inner room in the terrarium house. Two 250-watt electric (radiant) heaters warm up the enclosure. The heaters are turned on between 7:30 a.m. and 6:00 p.m. A heating pad measuring 1.0 x .5 meters is located under the surface layer of sand and provides additional heat. Only two 60-watt fluorescent lights are used for lighting. During the day, the air temperature reaches 24 - 30 C (75 - 86 F); under the heaters the temperature may reach 45C (113F). During the night the temperature would decrease to 20 C (68 F).

The enclosure was outfitted with a water container, where the animals completely submerge themselves, and some diagonally placed climbing devices, which the yellow monitors were never seen to be using. A few large natural stones, under which the monitors dug burrows for themselves, and a few artificial plants completed the inventory of the terrarium.

Twice a week the lizards received young rats, grown mice, day old chicks and a mix consisting of ground meat and eggs that had been prepared with a mixture of vitamins and mineral salts.

Shortly after the lights are turned on in the morning, the monitors appear from their hiding places and are active for about 30 minutes. Usually they wander around in the enclosure and warm themselves for a little while under the heaters. Then they rest for longer or shorter periods under or behind the rocks, or lie in the water for several hours. Most of the time, a second more active period occurs in the afternoon between 4:00 and 4:30 p.m.

Reproductive activities and laying of eggs.

When the Zoo received the monitors on August 28, 1982, they were about 3.5 years old. This is based on the former owner's statement that they had been imported in the beginning of 1979, having been captured in the wild as newly hatched. This person had also observed copulation and one production of eggs in July 1982, but unfortunately the male ate the eggs.

In the Rotterdam Zoo, reproductive activities were first observed on June 20, 1983. True copulation took place June 25 and July 16 the same year. Further copulation may have taken place as further reproductive attempts could be observed on June 27 and July 4 and 6. During these instances, the female evaded the male's attempts and ran away and hid in the rocks. The reproductive activities usually took place between 8:30 and 11:00 a.m. There was one exception from this rule observed on July 6, 1983, when the male chased the female in the afternoon about 4:30 p.m. Eggs were finally laid July 21.

The occurrence of reproductive activities during June and July coincides with the beginning of the monsoon season in India. These rainy periods occur in June until October after a long dry period when a large part of India takes on a desert-like appearance. The temperatures are very high in April and May and remain in this range into the first rainy months (Foekema, 1978).

One animal that was caught by Sights (1949) July 4, 1945 contained about 30 eggs.

It seems therefore that the yellow monitor's reproductive activities and egg laying take place primarily in June and July, which seems to be related to the humid season in India. This would also explain why Sharma (1981) does not mention any appearance of the yellow monitor in the Thar desert in the northwest of India. In this, the driest area of India, there is less than 500 mm (20 in) of rainfall per year (Foekema, 1978).

As already mentioned, the female in the Rotterdam Zoo began laying eggs July 21, 1983 about 1:30 p.m. To prevent the male from eating the eggs or disturbing them while moving about, he was immediately removed. At intervals of about 1 hour, eggs were produced one at a time, so that by 5:30 p.m. six eggs had been laid.

At 5:30, the whole terrarium was sprayed with lukewarm water to bring the humidity of the air to a high level for the night. Next morning, only one more egg was found. A total of only seven eggs laid seemed rather low. It is possible, however, that the male ate some eggs before the first ones had been observed, or the female had done so herself. It is also possible that the female was not fully mature, or that the living conditions in captivity were not optimal in spite of all our efforts.

All eggs were lying under or near the heaters. Without any weighing or measuring whatsoever, the eggs were put in an incubator. The only measuring of yellow monitor eggs known were made of eggs laid by a yellow monitor in the Bochum Zoo in Germany (Stirnberg and Horn). On May 3 (!) 10 eggs, 5 of which were deformed, were found in the terrarium. The measurements of these eggs follow in Table 1.

Number	1	2	3	4	5	6*	7*	8*	9*
Weight (in grams)	13.5	10	10	11.8	11	5	6	7.8	6.8
Length (in mm)	38	46	45	48	48	38	38	43	42
Breadth (in mm)	25	23	22	24	20	17	19	19	19

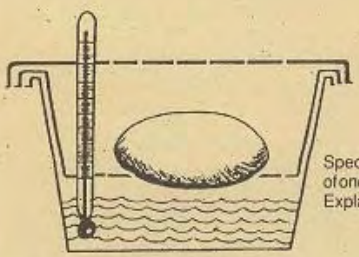
* Eggs 6 - 9 were deformed.

Incubation and Hatching of the Eggs

The eggs were put in an incubator of the type used for premature human infants. This type of incubator has been used successfully in the Rotterdam Zoo to hatch reptile eggs. A damp sand/peat mixture served as the substrate. This mixture was placed in plastic boxes measuring 17 x 13 x 6 cm. Two eggs were put in each box and buried halfway into the substrate. Two holes were made in the top of the plastic box to allow on one hand a certain amount of air circulation and on the other hand to keep the humidity near 100%. The incubator temperature was kept at 30 C as savannah monitor (*V. exanthematicus*) eggs had been hatched at the Rotterdam Zoo (Visser, 1981), as well as in other places (van Duinen, 1983), at this temperature. Also, eggs from other monitors had been hatched under similar temperatures (29 C). (See, for example, Horn & Petters 1982 or Horn 1978.)

On August 26, 1983 an egg had to be removed when on close examination it was found to be infertile. Another one had become discolored and wrinkled. It contained the remains of a small dead embryo. At this time it was decided to continue the incubation of one egg in another incubator without substrate, as we had the impression that the humidity was too low for the eggs.

This incubator consisted of a small round container with a hole cut in the bottom just large enough so the egg could not fall through. This egg holder was put in another wider container with the bottom covered with water. This way the egg could be kept directly over the surface of the water without touching it. Then the new incubator was sealed except for some holes in the cover for air circulation.



Special incubator for hatching of one egg of the yellow monitor. Explanation see text.

On September 13, 1983 another infertile egg had to be removed from the first incubator. From then on there were no more losses to report. The eggs seemed to develop well. In the beginning of December 1983, some fine elongated cracks appeared on the single egg placed over the water and on December 17 milky liquid and foul odor appeared. For this reason it was decided to open the egg. It contained, 149 days after being laid, a fully developed baby monitor 152 mm long that obviously had died recently .

Another egg broke on December 23. It also contained a fully developed dead monitor that had a slightly deformed spinal column. Because of the finding of the two dead monitors, it was believed that their deaths could have been due to exceeding the (unknown) incubation period. So in the rest of the eggs, it was possible the animals were either already dead, or the embryos were not in a position to hatch. Based on these considerations, it seemed advisable to open the remaining eggs.

Both contained live baby animals. One was clearly too small, had a curved spinal column and deformed tail. It was euthanized. The egg cord and the remains of yolk sac were wrapped around the second animal. After removing the animal from the egg, it was cleaned and disinfected (Betadine, Murdipharma/ Switzerland) and the yolk sac was removed. The egg cord was also treated with a disinfectant. Then the young animal was put in a small sterile plastic container. The small monitor had a slight spinal deformity which did not seem to

disturb him much as he at first was very active. The next day (Dec 24 1983) he seemed substantially less active and slept all day. To induce the animal to become more active, we woke him up, which took some time. Once awake, the yellow monitor ran around the container for a short time and explored the environment frequently flicking his tongue. The young monitor still did not make any attempt to eat, but it was observed drinking. Unfortunately, the animal died on January 1, 1984. Although all theories on the death of the little yellow monitor must remain pure speculation, there are a few possibilities to consider: the disinfection when the animal was taken from the egg was not complete, the time frame of removal from the egg was too short and should perhaps have been a few days later, or the incubation temperature chosen was too high.

As in all young monitors, the color of the newly hatched yellow monitor was far more colorful than the adult animal. The basic color is a bright yellow and the markings and the top of head are a deep black. This is probably the first picture of a freshly hatched yellow monitor. * The animal had an overall body length 145 mm and a snout-vent length of 66 mm.

Bibliography

d'Abreu, E.A. : Notes on monitor lizards. J. Bombay nat. Hist. Soc. 36(1):269-270.

Böhme, W. (1982): Hemipenis-Morphologie der Squamaten als Spiegel stammesgeschichtlicher Verwandtschaft. Autorreferat Jahrestangung Dt. Ges. Herp. Terrarienk., Frankfurt/M., Sept. 1982.

Branch, W. R., (1982): Hemipeneal Morphology of Playnotan Lizards. J. Herp. Cincinnati, 16(1):16-38.

Van Duinen, J.J. (1983): Varanenkweek in het Noorderdierenpark te Emmen. lacerta, 's-Gravenhage, 42(1):12-14.

Foekema, G.M.M. (1978): Waargenomen amfibieen en reptielen tijdens een vakantie in India. lacerta, 's-Gravenhage 36(10/11):159-171.

Holmes, R.S., M. King & D. King (1975): Phenetic Relationship among Varanid Lizards based upon Comparative Electrophoretic Data and Karyotypic Analyses. Biochem. syst. ecol., Oxford 3:257-262.

Horn, H.-G. (1978): Nachzucht von *Varanus gilleni*. Salamandra, Frankfurt/M., (1):29-32.

Horn, H.-G. & G. Petters (1982): Beiträge zur biologie des Rauhnackenwarans, *Varanus (Dendrovaranus) rudicollis*. Salamandra, Frankfurt/M., 18(1/2):29-40.

King, M. & D. King (1975): Chromosomal Evolution in the Lizard Genus *Varanus* (Reptilia). Aust. J. biol. Sci, Melbourne, 28:89-108.

Mertens, R. (1942): Die Familie der Warane (Varanidae). Abh. Senckenberg. naturforsch. Ges., Frankfurt/M. 466:235-391.

— (1954): Über die Rassen des Wüstenwarans, *Varanus griseus*. Senckenberg. biol., Frankfurt/M., 35(5/6):353-357.

— (1959a): Der Schädel des indischen Gelbwarans, *V. flavescens*. Senckenberg. biol., FrankfurtM., 40(3/4): 113-115.

— (1959b): List der Warane Asiens und der Indo-australischen Inselwelt mit systematischen Bemerkungen. Senckenberg. biol., Frankfurt/M., 40(5/6):221-240.

Rotter, J. (1963): Die Warane (Varanidae). Wittenberg (Ziemsen), 74 S.

Sharma, I.K. (1981): Varanen in de Thar woestijn (India). lacerta, 's-Gravenhage, 39(5):57-58.

Sights, W.P. (1949): Annotated list of reptiles taken in Western Bengal. Herpetologica, Chicago, 5(4):81-853

Visser, G. J. (1981): Breeding the White-throated Monitor, *Varanus exanthematicus albigularis* at Rotterdam Zoo., Int. Zoo Yb., London, 21:87-91.

The author invites discussion with any owners of legal yellow monitors; see page 7, **Species Resource Panel**.

* Unfortunately, the original photo could not be reproduced here. Four color photos of *V. flavescens* appear on pages 79-81 of Robert Sprackland's new book, *Giant Lizards*.

Monitor-ing Medicine

This section is provided to help the varanophile understand the medical aspects of captive husbandry. What you learn here will hopefully help you work more actively with a qualified veterinarian or experienced herpetoculturist when encountering medical problems. You are invited to send in your questions and to respond to questions posted in this section.

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

Scott Stahl, DVM of Pender Veterinary Clinic has responds to the following questions:

I am about to acquire a new animal. What should I do regarding quarantine, medical exams, etc.?

As a veterinarian I am somewhat biased, but I believe each newly acquired animal should have a complete physical exam by a veterinarian who is experienced with that particular species (that is, will know what is normal for that animal). The exam should include an evaluation of the eyes, nares, oral cavity, abdomen, skin, musculo-skeletal system, and a weight check. A fecal exam or colonic wash may also be performed. A colonic wash means flushing saline into the colon with a catheter, withdrawing the contents and examining them for parasites.

Other diagnostics may be recommended, depending on the history of the animal or findings during the physical exam. I would then recommend quarantining the animal, keeping good records of feeding, defecating, and any weight changes. Each new animal should be kept in a separate enclosure with separate water bowls, cage furnishings, etc.

New animals should be quarantined (kept isolated with separate cages, bowls and cage furniture) for a minimum of 60-90 days, preferably longer. If animals of the same species are acquired as a group, it may be okay to keep them together throughout the quarantine process. Of course, a particular animal that is doing poorly should be separated for close observation.

The longer the animal is isolated, the greater the chance we have to identify a problem. During quarantine, a complete physical exam and one or more fecal exams should be performed. Sometimes we may elect to deworm the animal, especially if it's a recent import, and then follow-up with another deworming in 2 weeks. One more fecal exam should be performed 3 weeks or later to ensure that all parasites have been eliminated.

The deworming protocols for reptiles are empirical (most are extrapolated from dog and cat dosing

regimens), so it may not always be possible to eliminate the organisms with these protocols. Remember, many worms are intermittent egg shedders, so the fecal may be negative at any given point, but the animal may still have parasites. To ensure a true parasite-free animal, several "negative" samples are needed.

Another routine test that I recommend is a periodic weight check, especially for new acquisitions. It is not critical that the scale be extremely accurate, just accurate enough to indicate trends. Animals that are consistently losing weight may have a medical problem or need some husbandry adjustment. Weigh-ins can be an important part of the herpetoculturists record keeping system.

For example, I recently was presented with a long-term captive Savannah monitor, *V. exanthematicus*, that the owner had purchased as a juvenile and raised to an adult. The animal was severely emaciated and was presented for anorexia. The lizard had been eating adult mice regularly, but later would only take pinkies. Eventually, it refused all rodents and would only eat crickets, which were previously given as treats along with its staple rodent diet.

At that point the owner had noticed an obvious weight loss problem. He tried a pet store bottle of "magic" appetite stimulant, which only delayed a diagnosis, and later brought the animal in for an examination. After a thorough investigation, a diagnosis of severe sand impaction was made; X-rays revealed a large volume of sand in the colon. The decision was made to proceed with surgery. The sand was removed and the animal recovered from the anesthesia. Although the surgery was successful, the animal died several days later. The monitor had just become too debilitated to survive the events even with aggressive supportive care.

The point I'm trying to make here is that if the owner had weighed the animal periodically, he probably would have detected the problem earlier. Perhaps then we could have successfully treated the animal. Monthly, quarterly or even annually weighing animals may help to detect an early problem. Sometimes animals may continue to eat regularly and still lose weight.

Only when an animal is vivacious and is feeding and defecating regularly should it be considered for introduction into the main collection. With monitor lizards, be especially cautious as you introduce new animals because aggressive behavior is common. Different species should not be mixed. For example, do not house *V. niloticus* with *V. timorensis*. Obviously, the vast size difference of these monitors could lead to aggression problems. It is just as important to realize the normal bacterial flora for each animal may be different. Bacteria that is important for the normal intestinal function of one animal may cause disease in another.

What are the suspect vehicles which could introduce disease into a captive collection?

Recently acquired reptiles, especially imported animals, are prime vehicles. Contaminated water or food items are also possible. For example, the herpetoculturist who cleans the cage of one animal and then feeds another without washing his/her hands may spread disease. Even cleaning cages without washing hands between each one is risky. Ticks, mites, insects and rodents that can move from cage to cage can also spread disease.

Proper quarantine procedures for new animals and good hygiene are the two most critical factors to maintaining a healthy collection.

Scott J. Stahl, DVM
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Correction

Evidence that you should ***always*** question what you hear and read about captive husbandry (and life in general, for that matter), Dr. Stahl also called to correct a typo in VaraNews 2(2):4, Monitor Medicine Cabinet. The correct dosage for Ivermectin should have read **.2 mg/kg** (and not 2 mg/kg). For the lack of a decimal point the resulting dosage would be 10 times too strong, the likely side effects fatal to the patient.

Medications in Use

On pages 2(1):5-6 of the Bulletin of the Association of Reptile and Amphibian Veterinarians, Walter Rosskopf, DVM of the Avian and Exotic Animal Hospital recommends the use of silver sulfadiazine (Silvadene cream, 1%, Marion Labs) for treatment of wounds and skin infections, particularly against *Pseudomonas* and *Aeromonas*. Dr. Rosskopf also reports that enrofloxacin (Baytril, 22.7mg/ml, Mobay), a commonly used antibiotic, may cause appetite loss in some animals. Kidney problems and elevated levels of uric acid are also a potential side effect, especially with long term use. Usages are given for iguanas (5 mg/kg for 5 days, then every other day) and snakes (5 mg/kg every other day).

On page 7, William Suedmeyer, DVM, of the Gilmer Park Animal Clinic reports on the effective use of a 1:20 or 1:30 dilution of chlorhexidine/tap water (Nolvasan, non-scented 2% solution, Fort Dodge Labs.) when treating mouthrot (infectious stomatitis). This is in addition to treatment with injectable antibiotics, vitamins and improved husbandry practices. Dr. Suedmeyer states that "this solution is commonly effective against many strains of *Pseudomonas*".

Inquiries & Membership

One-year membership in Varanix is:

USA: $10
Foreign: 12 $US (surface), 15 $US (airmail)

Members receive VaraNews, which is published bi-monthly.
VaraNews is free to zoos upon request. Newsletter exchanges considered.

Address all inquiries & memberships to:

Varanix
8726D S. Sepulveda Bl. #243
Los Angeles, CA 90045 USA

Messages may be sent via modem:
(Please specify "monitor" as the keyword/subject)

- Herpetology Online Network: (215) 464-3562
  Send mail to "Greg Naclerio"
- CompuServe: User ID - 71320,721
- Internet: 71320.721@compuserve.com
  gjn@triple-i.com

Tel. (310) 768-8669
[Due to odd hours and a busy schedule, phone calls may not be returned for a week or more. Lengthy questions should be sent electronically or by mail.]

Editorial submissions

May be in electronic form (preferred), typed, or written. PC/Mac diskettes acceptable, in ASCII, Word, WordPerfect or RTF format. Please indicate any special conditions of publication, such as withholding mention of name/organization or giving credit to a person/publication).

Back Issues

(some issues may only be available as photocopies)
Number 0: $1.50; 1(1) - 1(8), 2(1) - 2(3): $2 each

Editor: Greg Naclerio
Editorial Review Board: Mark Bayless
Frank Braun
Robert Sprackland
Veterinary Advisor: Chris Cauble, DVM

This is your last issue of VaraNews if the mailing label says:

expires vol. 2 num. 3

No additional reminders will be sent due to the time and expense in doing so.

Species Resource Panel

The individuals listed below have volunteered to field specie-specific questions. Please recognize that everyone has a busy schedule and is not able to spend great hours each month in this service. In the case of a panel member returning a phone call, you are asked to pay for the call. You are still encouraged to submit questions for response by the readership in this newsletter.

• Savannah *(exanthematicus)* • White-throated *(albigularis)*	Mark Bayless (510) 527-3744
• Dumeril's *(dumerilii)*	Mike Fost Zoo Atlanta, Reptile Dept. 800 Cherokee Ave. SE Atlanta GA 30315-1440 (404) 624-5618 (daytime EST)
• Nile *(niloticus)*	Greg Naclerio <address to left>
• Yellow *(flavescens)*	Ennis Berker 9603 Woodlawn Dr. Portage MI 49002

Monitor Rescue Program (MRP)

This volunteer-sponsored program was established to place unwanted monitor lizards 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
4099 Timberline Dr.
San Jose CA 95121
(408) 274 9020, (408) 274 2555

VaraNews is the newsletter of Varanix, the Varanid Information eXchange. Varanix was founded to promote responsible care of varanids in captivity through education and the open exchange of information.

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

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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.

§ PUBLICATIONS §

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

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

Herpetological Booksellers, Goodwill Lane, Holbrook, NY 11741 USA. (516) 585-6539, fax (516) 585-6115

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

This booklet provides hard-to-find information that's critical to the successful captive care of monitors, including discussion of food, housing, heat, and health care.

Reviewer Mark Miller had this to say in VaraNews 2(2):

"This is a nice booklet for those new to the hobby and should reduce early mortality of captive monitors. For those Varanophiles that have already evolved to the enclosure with a drain, timers, and pumps, this book may not be as valuable but should be on hand to lend out to those at the other end of the varanid learning curve."

§ WANTED §

Information on Dumeril's (*V. dumerili*) or black roughneck (*V. rudicollis*) monitors. Also information on incubation of monitor eggs, such as temperature, humidity, substrate, reports on successful/unsuccessful hatchings. Mike Fost, Zoo Atlanta Reptile House, 800 Cherokee Ave., SE, Atlanta GA 30315-1440. (404) 987-3933

GUEST SPEAKERS wanted for Minnesota Herp Society: Please give me a call if you would consider speaking about monitors at one of our monthly meetings. Bill Moss (612) 488-1383.

Information on geographic range of all species. I am composing species' range maps. Derik Clackum, 5860 Wright Rd., Dallas GA 30132

§ ANACONDA TO ZOOXANTHELLA §

To contact another member about other herps or ?

I am working on a study of the African monitors *V. exanthematicus* & *V. albigularis*. The goal is to improve husbandry techniques. Mark Bayless (510) 527 3744

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

Varanix Coffee Mugs

On one side is the original Varanix logo in black& green. The other side has the species text piece shown below.

COST: $5.95 per cup. S&H: Add $3.50 for the first cup and $1.50 for each additional cup. Please allow 3 - 4 weeks for delivery. (These shipping rates are for the US only.)

komodoensismertensiprasinusvariusexanthematicuspanoptes
rudicollisindicusglauertisalvadoriikordensismitchelli
acanthurusprimordiusdumeriliflavescensrosenbergi
timorensisbrevicaudagiganteusglebopalmaspencerii
albigulariscaudolineatusniloticusolivaceusgriseus
tristiskingorumsemiremexgouldiisalvatoreremiusgilleni
karlschmidtiocellatusnebulosustorribengalensispunctatus

Vita-Lites: 4 ft. (40W). Power-twist: $17.50 each, Regular: $15.50 (prices include shipping & handling). Minimum order 4 bulbs (to facilitate packing). Any combination powertwist/regular acceptable; please specify. Send check or money order to Varanix. (Again, US only.)

Note on Publications:

Requests are often received regarding the availability of publications through Varanix. This has been investigated, but generally is not feasible due to the competition from mail order booksellers and larger herp societies (such as the oft-mentioned Chicago Herp Society) who buy in large quantities and are able to offer excellent prices. We will continue to look into opportunities as they arise.

Varanix
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USA

Mark Bayless
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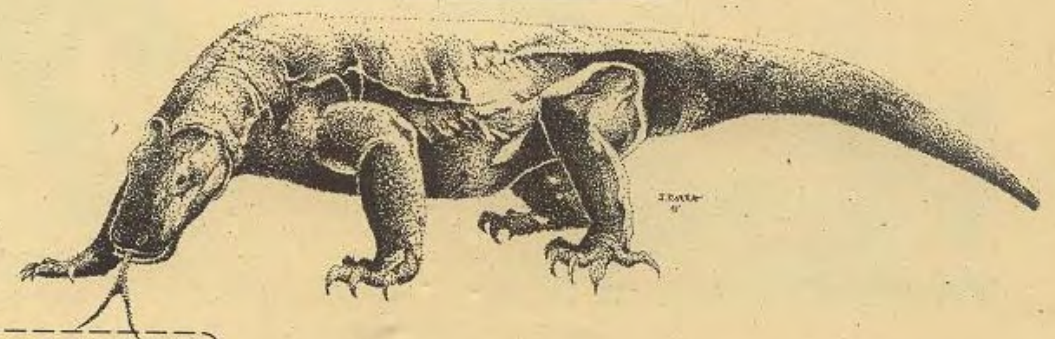
Berkeley CA 94703



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