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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

See the next to last page for general information about membership, back issues, newsletter submissions, etc.

Call for Photos

Preparations are finally underway to begin livening up Varanews with color photos and artwork. (A full-color magazine-format annual is also a possibility.)

All submissions are welcome (35mm, transparency and print negatives are preferable to prints). Please specify any conditions of publication.

Index to Varanews articles...

Next issue, promise!

How can I get involved, you ask? Here's an idea:

- **Komodo dragon information pak for school kids**

A couple or three times a year there are a handful of requests by students doing reports or term papers asking for "all you know" about Komodo dragons.

One idea is to assemble a folder of information, targetting an age range of 8 to 15, which might include papers giving general information/natural history, article reprints, a bibliography, artwork/photos, etc.

Help is needed to begin putting all this together. If you would like to prepare something or have any materials that would be useful, please send them in. If sending in articles or reprints for possible inclusion, it would be most helpful if you could provide author/publisher permissions.

Responses to reader questions in Varanews 3(5)

Robert Sprackland offers the following:

1. My monitor is constipated.. Monitors kept too cool often become constipated. First suggestion is to heat the cage to 85+ F and offer plenty of clean drinking water. Sometimes constipation requires administration of a stool softener or mild laxative. Consult a veterinarian for dosages, but even products such as Ex-lax® have been used with success.

3. Information on blue-tailed monitors is hard to find for the simple reason that the lizard does not yet "formally" exist to science! Hans-Georg Horn and Wolfgang Böhme, of Germany, are preparing the formal description. However, many have been kept in captivity under conditions appropriate for other large tropical forest varanids (e.g., *V. indicus*).

Another point worth addressing: the name *"kalabeck"* is so frequently misspelled that it could rate a history of its own. However, the blue-tail, whatever else it may be named, is NOT *kalabeck*. As for *kalabeck* itself, its name and status are currently under review and I shall provide more details at a later date.

5. "Enter the Dragons" was produced in 1989 by Nigel Marvin, BBC Natural History Unit, Broadcasting House, Bristol, U.K. Contact the BBC directly and be sure to specify that you need tapes in U.S. format.

9. Schools (in the U.S.) with a strong tradition of herpetology include: U. of Kansas; U. of Michigan; Harvard; U. of Florida; U. of California at Berkeley, Santa Barbara, Los Angeles and San Diego; U. of Washington, U. of Texas at El Paso; U. of Oklahoma.

Coming Home

Rebecca Speer relates the following story about a *V. indicus* she received on 7 July 1993. At that time, it measured 11.5 in/29.2 cm SVL and 30 in/76.2 cm TL.

On 19 July, I lost her. We were going to use her in one of our wildlife shows when she got out of my grasp. This show is done outdoors and there is a lagoon across from us. She smelled that water and she made a beeline for it. She ran across the midway which was packed with people. As she swam across the lagoon, one could almost see a smile on her face - she thought that she was home again. She swam over to an island that is under a roller coaster and disappeared into the brush. I knew that I would never see her again and that she would be happy for at least a couple of months before the cold weather would set in.

Well, on 26 August some Cedar Point employees came into our part of the park to see if we had lost a lizard. They had seen this lizard for the past three days behind a drink stand. She was coming out from under a bush and eating birds. [It was the same mangrove monitor, five weeks after escaping.] She had swum back across the lagoon. I know that there would have been plenty of food on the island and there are no people there. And here she was staying under a rock where thousands of people were walking past her every day! This area was also under one of the roller coaster supports and there was a lot of vibration each time the coaster would swing by the area.

I put out a box trap baited with a strip of beef and caught her in less than two hours! Unbelievable!

Seen in Print: Helping Select a Veterinarian for Your Reptiles

Though not specifically targeted for monitor owners, *Guide to Veterinarians* by Kevin Wright, DVM in the January 1994 issue of **Captive Breeding** 2(2):12-14 offers 10 basic points for evaluating a veterinarian's practice as it relates to reptiles. The first paragraph sums up the this common dilemma: "One of the most frustrating aspects of maintaining reptiles in captivity is finding a veterinarian who is both **willing and competent** to provide care for an ill and injured specimen." (Editor's note: The bold face type is mine.)

The author points out that not all veterinarians will meet all the suggested guidelines. What is important is that the practice is equipped to properly house and treat reptiles. This includes having specialized equipment, such as a gram scale for weighing reptiles and measuring small dosages of drugs, and facilities for "in patient" accommodations (e.g., an exam room furnished with aquariums, heat lamps, etc. to meet the environmental needs of reptiles). The clinic should provide services common to reptile veterinary care, such as fecal exams, blood work, and microbial culturing. Dr. Wright stresses the importance of communication between you and your veterinarian. A knowledgeable vet should feel confident talking to you about reptiles, including discussion of exam procedures/test results, husbandry techniques, etc. You are also encouraged to inquire about the veterinarian's specialized training in the care of reptiles.

When a reptile vet is not close by, Dr. Wright recommends finding a local vet "who is willing to admit the limit of his/her knowledge and facilities, but seems open and honest when talking with you". A last point: find out what the costs are before proceeding with any treatment or services.

Insurance Info Wanted

Recent findings suggest that most normal household liability insurance does not cover injuries inflicted by herps. This means that legally your insurance company can cancel your insurance the minute it finds you are keeping reptiles in your house. If you do have household insurance that covers herps, please let us know so that we may publish their names in the future.

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Summary of Varanus Salvator *Reproductive Data at the Sedgwick County Zoo*

Karen Graham
Senior Herpetarium Keeper

Although the Sedgwick County Zoo (SCZ) had kept several individuals of *V. salvator* prior to 1990, copulation was never observed and nonviable eggs, sometimes deposited in the water, are the only reproductive event on record. As an incoming herpetarium keeper, it was my goal to successfully propagate these animals.

Since 1990, we have observed reproductive behaviors including courtship, copulation, and nest mound guarding. We have also recovered one post-copulatory clutch of eggs in each of three successive years. The first of these clutches produced no viable eggs. However, one egg was preserved in formalin and then dissected, revealing a small dimple which may be indicative of an early stage embryo. From the second clutch, hatched four neonates. The third clutch had two (verifiably) fertile eggs. Embryos from these survived to near-full term but did not hatch. The following information summarizes reproductive behaviors observed and egg incubation data collected. Events are arranged in chronological order, with behavior detailed for the first year. Behaviors were similar unless otherwise noted in successive years.

I. Reproductive Behavior

In late 1989, SCZ received a large (42 lb/19 kg, ca. 4 ft/120 cm SVL) wild born male from Gladys Porter Zoo. SCZ also has a wild born female (15 lb/6.8 kg, 2.5 ft/76 cm SVL) which was purchased in 1988. The male was placed on exhibit in December of 1989. This exhibit is approximately 25 x 15 ft (7.6 x 4.6 m), with a 12 x 7 x 3 ft (3.7 x 2.1 x 1 m) pool. The terrestrial area has soil substrate with large rocks and a branch situated under a heat lamp. The exhibit receives light through translucent greenhouse panels. UV light is provided by a spot lamp.

The female was introduced to the male in early February, 1990. Throughout February, the female was a vigorous eater, sometimes pulling food from the male's mouth. The male would become sexually stimulated during and precluding feeding times. However, none of our recorded copulations occurred in succession to feeding. The female also began to dig burrows at this time.

Fervent courtship occurred through April and May. On occasions when the male attempted to mount the female, she would prevent copulation by means of avoidance; diving to the bottom of the pool, backing into a burrow, or climbing onto "her" sunning log (so labeled because he's too big to fit comfortably on this log). They were discovered *in copula* on the mornings of November 7 and November 14, 1990. Both copulations occurred on land. By December 1, the female was quite large and the male was removed from the exhibit. On December 19, 1990, 13 eggs were recovered from a 2.5 ft/76 in deep nest mound. While the burrow was being excavated, the female showed very defensive behavior. By the following morning, the female had rebuilt the nest mound and was again very protective of it.

Attempts to reintroduce the male began on January 7, 1991. In the failed attempts, the female was always the aggressor. A successful introduction was achieved on February 25, 1991; 67 days after the eggs were laid. Again, vigorous courtship occurred

through April. Copulation (on land) was observed on July 21, 1991 between 1100 h and 1620 h. The female's body weight was higher this year and pregnancy was not as distinct. The male was removed from the exhibit on September 8, 1991. On September 10, 13 eggs were recovered from the new nest mound. The nest was badly destroyed in this excavation and the female did not return to the nest.

Successful reintroduction was not achieved until December 4, 1991; 85 days after the eggs were laid. Occasional courtship was observed from February through early July, 1992. The female became exceptionally active in digging in May. The male was removed and reintroduced twice to stimulate reproductive behavior. Copulation was observed for periods up to 6 hours on July 10, 18, and 19. On July 24, the male was removed from the exhibit. On August 8 1992, 13 eggs were recovered, again from a new nest mound. The cavity to this nest mound was 24 x 7 x 7 in (61 x 17.8 x 17.8 cm). The female made no attempt to rebuild the nest.

This time, the male was successfully reintroduced on the first try, November 4, 1992; 87 days after the eggs were laid. However, on November 16, a fresh, collapsed egg was discovered unburied in the exhibit. The female became aggressive to the male, received some lacerations, and was moved off exhibit to be treated. After many reintroduction attempts (female to male and male to female), reintroduction was finally successful on March 22, 1993; 94 days after the single egg was laid. Since this reintroduction, courtship has been observed once; on April 11, 1993.

II. Incubation Data

For all clutches, a neonatal incubator was utilized. Eggs were placed in a plastic box containing about 3 inches (7.6 cm) of substrate. Containers were covered with plastic wrap.

The first clutch of eggs, laid on December 18, 1990, was incubated at 85 F (29.4 C) in water:vermiculite 1:1. The mean initial weight was 58.85 g and the range in initial weights was 54.5 - 82.5 g. By January 5, 1991, the entire clutch was going bad. One egg was preserved and dissected, revealing a dimple in the albumen/yolk mass which may be indicative of a very early embryo. All eggs were discarded by February 2, 1991.

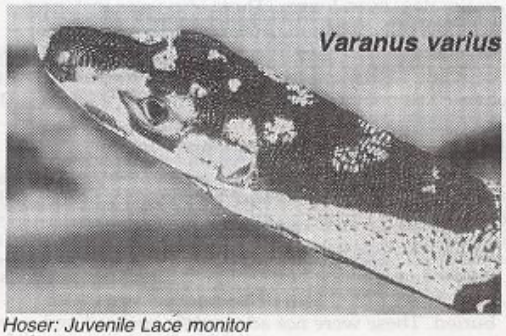
The second clutch of eggs, laid on September 10, 1991, was incubated at 83 F (28.3 C). The water:vermiculite ratio was initially 1:2 but was changed to 1:1 on December 21 because eggs were collapsing. The mean initial weight was 72.48 g and the range was 57.7 - 92.7 g. Four neonates hatched from this clutch on May 2, 3, 8 and 11. Incubation time was 232 -241 days.

The third clutch of eggs, laid on August 19, 1992, was incubated at 84 F (28.9 C). Just prior to the incubation of these eggs, our incubator was moved to a new location. Our heating system in this area became sporadic, reaching temperatures of over 90 F (32.2 C). The *Varanus* eggs were briefly subjected to these temperatures on several occasions before the problem was noted and rectified. No eggs from this clutch hatched. Two eggs contained near-term embryos. These eggs were opened on March 21 and April 11. Embryos weighted 20 and 23 g and yolk sacs weighed 20 and 26 g, respectively.

Summary of Reproductive Data for *Varanus Salvator*

Observation	Year			
	1990	1991	1992	1993
Courtship	April - May	April -	Feb - July	April -
Copulation	7 Nov, 14 Nov	22 July	10, 18, 19 July	
Egg Laying	18 Dec	10 Sep	19 Aug, 16 Nov*	
Date of (re)introduction	2 Feb	25 Feb 4 Dec	4 Nov	22 Mar *
Gestation (days)	34-41	40-55	20 - 22 *	
Incubation (days)	-	232 - 241	-	
Number of Eggs	13	13	13, 1 *	
Incub. Temp (F)	85	83	84	
Range in Egg Wt. (g)	54.2 - 82.5	57.7 - 92.7	53.0 - 86.7	
Mean Egg Wt. (g)	58.9	72.5	66.05	

Gestation estimated from days between observed copulation and egg-laying.
* Pertains to one egg laid 16 Nov 1992.



Hoser: Juvenile Lace monitor

Varanus varius in Captivity

Raymond Hoser

For a period of eight years in the 1970's and 1980's I maintained up to seven adult Lace monitors, *V. varius*, on a permanent basis in Sydney, New South Wales. In 1978, these monitors measured as follows:

5 males: 140 cm, 145 cm, 161 cm, 160 cm, 173 cm [55.1 in, 57.1 in, 63.4 in, 63 in, 68.1 in, resp.]

2 females: 111 cm, 140 cm [43.7 in, 55.1 in, resp.]

Three of these specimens were from Bingara NSW and one each from Cannowindra NSW, Nevertire NSW, Lightning Ridge NSW, and Turramurra NSW. All of

these goannas were of the common *V. varius* color phase, except for one male which was of the broad-banded color phase and the smaller female which was a cross between the common and broad-banded phase.

None of these goannas had grown since being in captivity apart from the smaller female from Cannowindra, who grew only 11 cm (4.3 in) in 3 years. This would indicate that this species has a very slow adult growth rate.

Housing

These monitors were housed in enclosed adjoining pits, whose combined measurements were 17 x 7 m (55.8 x 23 ft) Walls were constructed of smooth rendered brick approximately 1.6 m (5.2 ft) high. Wire mesh (1 cm squares) covered the enclosure approximately 2.3 m (7.5 ft) above the ground. The same type of wire netting was buried 18 in (46 cm) below the ground in both pits to prevent the monitors from burrowing out. Two *V. gouldii* were also housed in the same pits. Other than the buffalo and cooch grass which covered 95% of the bare ground in both pits, all other vegetation was native and was a major feature of the enclosures. Numerous logs, both hollow and solid, were placed throughout, along with rock outcrops and slabs. The porosity of the sandy soil and the slope of the land prevented flooding, which eliminated the need for special drainage. Full, direct sunlight was available to the monitors throughout the day.

Captive Habits and Observations

All monitors did well in captivity. Females produced eggs on at least 4 occasions, though none hatched. None of the animals proved difficult to feed. Although males would fight, there were never serious casualties. Most wounds, mostly scratches, appeared on and around the base of the tail and sometimes around the front legs, head, and neck. Combat mostly consisted of clawing and scratching rather than biting. On the contrary, friends reported incidents where a combatant had been seriously bitten and clawed, typically happening in enclosures smaller than those housing my *V. varius*.

The monitors appeared to establish a social hierarchy within the pits based solely upon size and strength. This hierarchy sometimes carried over to feeding, though I have seen smaller monitors approach the food while the larger ones were eating. I often witnessed larger lace monitors attack smaller ones which had not finished eating.

Captive lace monitors appear to spend more time in the open and basking during the day than those in the bush (wild). Captives are also more likely to be out on cold days than their wild counterparts. After dark, some captives would seek shelter, though some often slept in the open. Though this does happen in the wild, observations indicate it does not occur as often.

In my pits, the sandstone outcrops received most of the direct sunlight, though the monitors appeared to prefer basking on wood, including the logs and beams which held up the wire roof. They also preferred to shelter in logs rather than under rocks or in rock outcrops and shelters. Although the plants were large enough for the *V. varius* to sleep in, none ever did so and few ever bothered to climb the plants.

The 160 cm male from Nevertire frequently slept in a pond of water completely submerged except for its snout, with no apparent ill affects. Most captive lace monitors appear to become less timid with time. It may take years for a captive lace monitor to take food from ones hand without biting at the hand[1], though many never become this tame. My experience has been that lace monitors kept individually seem to settle down much more rapidly than those kept in a group. (By "settling down", I mean they become less timid and feed in a regular, reliable manner.)

Lace monitors display varying personalities, so each seems to cope with captivity in a different way. Some also appear to undergo periodic changes in temperament for no apparent reason, for example from being shy to aggressive, or vice-versa.

Feeding

Feeding occurs throughout most of the year except in the colder winter months. (I never fed my goannas when it was cold to avoid digestive problems and potential health complications.) During the warmer months, the goannas will often eat even on cold days. The 160 cm male from Nevertire frequently ate at night. Their diet included: fish, bones, reptiles, frogs, mammals, snails and a variety of eggs (including goanna eggs). They had also accidentally ingested pieces of metal, plastic bags, rocks and sticks with no apparent ill effects. These objects were often regurgitated, as happened with egg shells, or subsequently defecated. Chopped meat (e.g., kangaroo) appeared to be the preferred type of food along with mammals and birds.

Breeding

All captives exhibited mating behavior. Usually, the male approached the female and attempted to mount her, accompanied by tongue-flicking and stroking her head with either a foot or his head. He also frequently wrapped his tail around hers. A non-receptive female usually walked away, though sometimes she would run. Males may persist for an entire day, even longer. There also were instances where a male was pre-occupied with a female for several weeks. I have also witnessed a single female copulate with more than one male in the same day as well as one male *V. varius* attempting to mount another male.

Fighting occurred only when two males were interested in the same female. This rarely happened in the pits, possibly because no goanna was inclined to dispute the well-established hierarchy.

Although eggs had been laid by both females, none hatched, all having been eaten by the other goannas. Only twice out of four occasions had eggs been buried. These were not adequately covered and were subsequently eaten. On the other two occasions, the

eggs were simply laid in the open. This may have been due to the fact that at that time they lacked the "proper" places to bury the eggs, such as termite mounds or ant hills.

Summary

Successfully keeping *V. varius* is not difficult if the correct conditions are provided and maintained. This means providing a large, escape-proof cage, preferably outdoors (provided climate is suitable), furnished with logs, adequate vegetation and cover, and water. These monitors did not exhibit susceptibility to diseases, such as colds. They tend to feed well in captivity and have a long life span if properly cared for.

[1] Feeding monitors by hand is not generally recommended since the monitor may not make the distinction between the food item and your hand.

Editor: Some of the lace monitors mentioned in this article are pictured on page 121, 122 and 182 of *Australian Reptiles and Frogs*, by the same author. The book has 9 pages on Australian monitors and about 2 dozen color photos. Others pictured include *acanthurus, giganteus, gilleni, gouldii, indicus, tristus*, and *mertensi*. Pages 181-183 discuss captive environments, with 3 color photos of the pits discussed in this article.

Notes on the Egg Deposition and Incubation of the Argus Monitor (Varanus gouldii horni, Gray 1838) *in Captivity*

Mark Bayless, Ron Huffaker and Owen Maercks

Field observations indicate that the Argus, or yellow-spotted, monitor lives in cooler temperate regions and are usually encountered in riparian habitats. To a lesser extent, they are also found in woodlands, billabongs, and low-lying flood plains in Western Australia (Arnhem Land and Kimberly). It is also found in drier regions on New Guinea (Cogger; James; Shine; Storr).

Argus monitors are most active in the morning hours between 0900-1100 (Shine). They appear to prefer large insects such as beetles, though other dietary items include spiders, fish, agamas, varanids, colubrids, carrion, eggs from turtle nests and rodents (Cogger; Greene; Shine).

Reproductive behavior of this species has been observed in their wild habitats. Courtship/reproductive behavior has most often been noted in January - February, but also in July. In Arnhem Land, recorded clutch sizes range from 6 to 13 eggs with 11 eggs being the average. Female Argus monitors dig their own burrow in sandy soils, often choosing higher ground on flood plains (Cogger; Shine).

This species has bred at the Dallas Zoo. East Bay Vivarium (Berkeley, CA) has also had breeding success (which is the motivation for this paper).

The apparent difference in egg dimensions between the 1987 Mitchell breeding event and the 1993 Bayless (et. al) event may be the result of the unclear taxonomic status of the *V. gouldii* group, and two different subspecies may, in fact, be referenced here. Size, health, and diet of the parents may also contribute to the condition of the eggs.

For the first few days, the surviving neonate in the Bayless event appeared in good health and activity. At one week, the neonate became listless, bloated in appearance and refused food (baby crickets). Upon examination, a hard object was felt underneath the skin on the monitors underside. Due to the monitor's weakening condition, it was decided to attempt removal of the object. Ron Huffaker made a 1 cm long incision at the umbilical cord point. A 2 cm long, hard, cigar-shaped yellow mass was discovered in the abdominal cavity, which was removed and discarded. Two days later, the hatchling was once again active, drinking water and eating baby crickets. (It also did not hesitate to defecate in the first author's hand upon inspection!) The hatchling continues to do well.

Literature Cited

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Date	Female length SVL (mm)	Days Incubated	No. of Eggs	Egg Size length (mm)		Egg Weight (grams)	Reference
4/30/87	310-430	228 237	1 2 (3-6)	24.2 27.2 32.8-41.2	42.8 44.3 -	14.9 18.0 6.5-13.3	Mitchell, A.
Feb-Mar (summary)	390	-	11 +/- 2	-	-	-	Shine, R.
10/9 - 10/21/93 1/23/93		223-227* 220**	8 1	-	-		Card, W.
11/3/92	762 ***	191 185	1 (1)	72.5 64.0	37.0 43.9	- 26.2	Bayless, Huffaker, Maercks

() denotes infertile or deceased neonate

* copulation was observed on 5 Dec 91, egg deposition 117 days later

** a second female born in 1987 (see Mitchell) hatched twins. Copulation was observed on 13 Feb 92; egg deposition occurred 92 days later.

*** This female laid over one dozen infertile eggs before laying the two fertile eggs. She has since died, possibly from an egg-bound condition.

Husbandry 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.

Always carefully consider what you read and weigh it against your own experiences before acting. When in doubt, keep asking questions. *What works in one case may not be suitable in another.*

Seen on the internet in the rec.pets.herp group:

Q: *I recently received some info that they enjoy eating smaller lizards. My question is two fold:*

1. Is there a "feeder" type lizard (anole maybe?)

2. Is there anyone out there who is using lizards as food for larger lizards. Oh, I apologize if anyone is offended by the thought of feeding an anole to something. I'm just trying to give my creatures the closest diet to their natural one as possible.

A: Mike Balsai: Be aware that parasites are more easily transferred from food that is closest to natural. I suggest that anyone using anoles regularly try captive breeding them to reduce this risk.

Kevin Bierl: I agree with Mike. I talked with the person I use @ East Bay Vivarium and was told that they don't recommend feeding lizards (e.g., anoles) to any other herp. The chances of transferring parasites or other disease to your herp are too great.

Q: *Kathleen Richards asks:*

Does anyone know if several coats of well-dried, much-ventilated marine varnish will be ok for the bottom of turtle enclosures (land turtles), iguana enclosures, and large snake enclosures or might it cause problems? I'd like to use it in my savannah monitor enclosure as well.

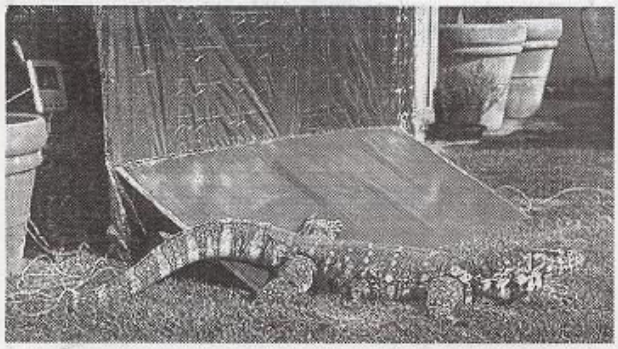
A: John Turnipseed: I wouldn't use marine varnish. I use "McClovesky's 'Clean-Air Formula' Polyurethane Gloss" finish on my wooden cages (for monitors and burmese). It has very little fumes and says right on the back label "Non-Toxic". It may be expensive, $25/gallon, but what are a few extra few dollars when it may save you herps' life. Imagine using something toxic, killing your herp, and then having a cage that cost you a lot of money sitting around unusable. My $.02 - research everything that comes in contact with your herp.

Steve P: I've been happy with Varathane Diamond, too. It's also expensive but is nontoxic and relatively fume free. As implied by its name, it does indeed dry to an extremely hard and durable finish which I like using for both interior and exterior wood.

Some of the best things in life are free...

or at least under $3. Found in sporting goods sections, camping emergency blankets (aka "space" blankets) are like sheets of thin, pliable aluminum (actually, aluminum laminated polyethylene). The ones I've found measure 84 x 52 inches. These highly reflective sheets can turn an otherwise "marginally-monitor kind of day" into an afternoon of outdoor basking.

nacleric



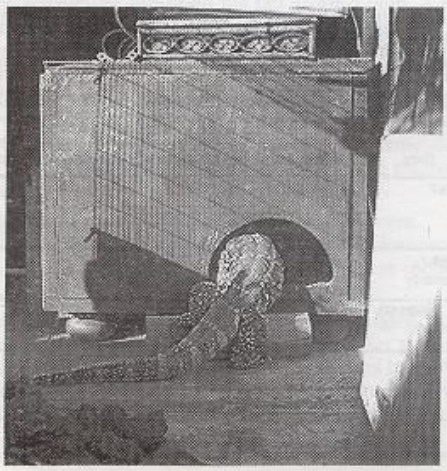
Taped or tacked to a thin sheet of plywood, they can be propped up outdoors and angled down to create a nice, warm basking spot on a sunny but otherwise cool day. (I originally used this setup to bounce light back onto shaded plants on sunny, winter days.) To really maximize the solar energy and retain heat, make the basking spot out of something dark, such as black slate. I've also used pieces of heavy black rubber floor runner (shown in above photo); you can buy this by the foot at most home improvement/hardware stores.

Hint: Keep the space blanket as clean and smudge-free as possible to maintain maximum reflectivity.

Under $20...

Also shown to the left in the outdoor photo above is a digital display thermometer. Radio Shack has a number of inexpensive, dual reading indoor/outdoor thermometers. For $19.99, a recent model (catalog #63-1020; no. 4 in thermometer photo) also has a memory feature which displays the highest/lowest readings since the last reset. There is also one thermometer/ hygromemter unit (catalog #63-844, $29.99). When on sale, you can save $5-10 per unit.

I've used these units during preparation of outdoor enclosures when designing and testing heated caves/hide spots. At night, I place the thermometer in the "open air" part of the enclosure (protected from rain and condensation) and the outdoor probe inside the heated cave area. In the morning, I can compare the lowest temperatures to see if the cave is remaining warm enough.



Inquiries & Membership

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USA: $12
Foreign: 15 $US

Members receive Varanews, published every even-numbered month.

- Varanews is offered free to zoos interested in sharing their experiences with Varanews readers.
- Newsletter exchanges are considered.

Address all written inquiries & memberships to:

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[Personal responses are typically not possible. Best efforts will be made to respond to calls of an urgent medical nature. Questions of a general nature are answered in Varanews.

For mailing information about the most recent issue, press 3 once the message begins.]

Messages may be sent via modem:

- CompuServe: user ID: 71320,721
- Internet: gjn@triple-i.com
  71320,721@compuserve.com

Back Issues (some may only be available as photocopies)

Num. 0: $1.50;

Vol(num) 1(1) - 1(8), 2(1) - 2(6), 3(1) - 3(6), 4(1) -current: $2 each

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When writing to Varanix . . .

Letters to Varanix often contain information of general interest to Varanews readership. When writing, 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.)

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Please indicate any special conditions of publication, such as withholding mention of name or crediting a person/publication.

Editorial

- Submission in electronic form preferred on PC or Mac diskettes. Most data format accepted, including Word, WordPerfect, ASCII. Typed or handwritten submissions are, of course, most welcome.
- Submissions may be in English, French or German.
- Translations of non-English articles must be accompanied by a copy of the original work, including bibliography.

Graphics

Hand-drawn graphics:	up to 11x17 inches
Computer-generated:	EPS, TIFF, ...
Photos:	up to 11 x 17 in.
Slides:	35 mm color and b&w

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*); tegus
  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

What you read 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.

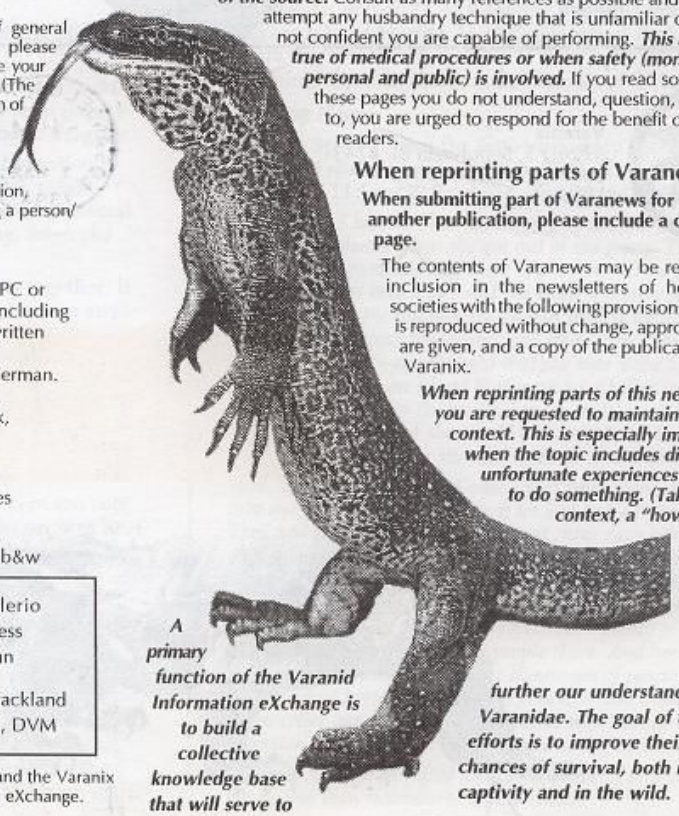
The reader is well-advised to evaluate everything heard and read, regardless of the source. Consult as many references as possible and never attempt any husbandry technique that is unfamiliar or you are not confident you are capable of performing. ***This is especially true of medical procedures or when 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.

When reprinting parts of Varanews . . .

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

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".)



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

Short line ads are free and must relate to the audience of this newsletter. They 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.

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

komodoensismertensiprasinusvariusexanthematicuspanoptes
rudicollisindicusglauertisalvadoriikordensismitchelli
acanthurusprimordiusdumeriliiflavescensrosenbergi
timorensisbrevicaudagiganteusglebopalmaspenceri
albigulariscaudolineatusniloticusolivaceusgriseus
tristiskingorumsemiremexgouldiisalvatoreremiusgilleni
karlschmidtiocellatusnebulosustorribengalensispunctatus

§ 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)]

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 World Conference on Monitors in 1989. Price: $25 (includes surface mail); add $10 for air mail.

Wolfgang Bischoff, Museum Alex. Koenig, Adenauerallee 150-164, 5300 Bonn 1, Germany.

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

Serpent's Tale. Natural History Books & Supplies. Eric Thiss. 464 Second St. Excelsior, MN 55331. (612) 470-5008

§ 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)

I'm studying varanid reproduction and would like info on breeding projects, esp. pre-courtship environmental conditions, courtship rituals, clutch size & egg incubation. Chris Nelling, 10 Criswell Ave., Mercersburg, PA 17236

HerpNet is an electronic forum for anyone with an interest in reptiles/amphibians. Participants include 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 4(1)

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.

I am interested in Information on *dumerili* and *rudicollis*. Mike Fost, Zoo Atlanta Reptile House, 800 Cherokee Ave., SE, Atlanta GA 30315-1440. (404) 987-3933

Miner's Monitor Mansions. Top of the line cages and enclosures for the serious monitor owner. (916) 725-0382. Neil.

§ WANTED §

Captive hatched and/or raised varanids, preferably hatchling to sub-adult. Wish list includes: *griseus, flavescens, bengalensis, albigularis* and most Australian varanids. Jim O'Dell. (602) 649-1399.

Hatchling or juvenile Asiatic water monitors, *V. salvator*. Captive-born preferred. Michael Pate. (502) 899-1900

Female *V. acanthurus* . Neal 907-776-5294

§ FOR SALE §

Quality hand-picked monitors available. Send SASE to Ron St. Pierre, P.O. Box 680364, Miami, FL 33168 (305) 685-3725 phone/fax

albigularis 4 ft $400, *albigularis ionides* CH 12 in. $350, *glebopalma* CB adult $2500. Giant Lizards (Sprackland) $50. Ray's Reptiles, (402) 477-1975, fax (402) 466-8423

1.1 *angolensis* 3.5-4 ft, $500; .1 *jobiensis* 1.5 ft $250; 1. *rudicollis* 2-2.5 ft $350; 1. *dumerilii* 2-2.5 ft $250; 1. *salvator* 2-2.5 ft $200; 1. *niloticus ornatus* 2-2.5 ft $200; 4 (?) *albigularis ionides* 2-2.5 ft $275. All prices per monitor. Bob McDonald (516) 822-5316

Varanix
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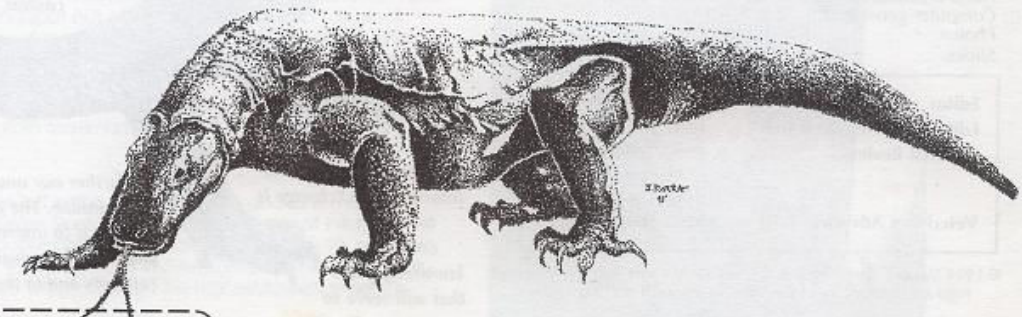
Los Angeles, CA 90045
USA

LOS ANGELES, CA 900 SB - P M 1 MAR 1994

CA .34 20 USA

gratis

Mark Bayless
1406 Holly St.
Berkeley, CA 94703



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