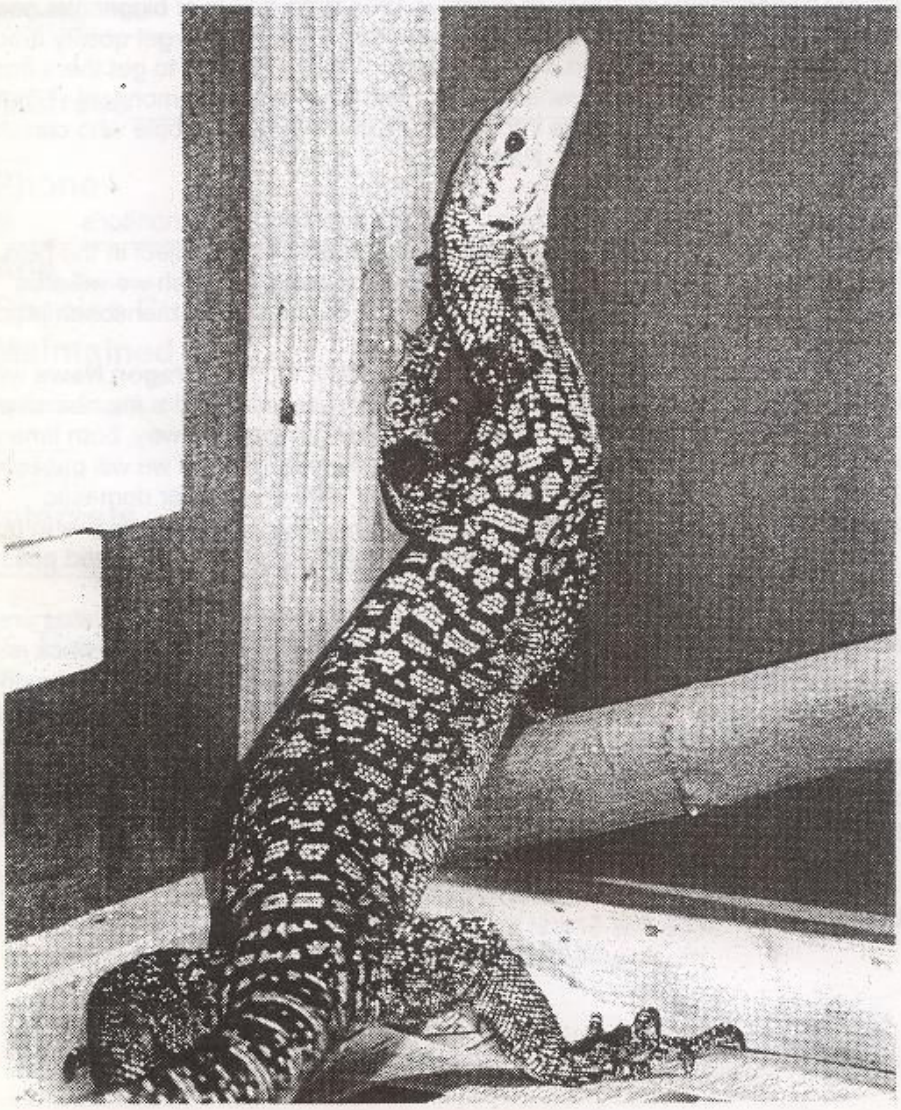
DRAGON NEWS

VOLUME 2 ISSUE 1 MARCH / MAY 1998



THE NORTHERN OHIO VARANID ASSOCIATION IS DEDICATED TO THE CARE AND UNDERSTANDING OF CAPTIVE MONITOR LIZARDS.

FROM THE EDITOR

March of 1998 marked the one year aniversary of **N.O.V.A.**. In that first year the society has grown by leaps and bounds, from a single page newsletter to about a twenty page newsletter. We would like to thank everyone who contributed to the success of **Dragon News** in 1997! In order for 1998 to be as big or bigger, we need people (besides Mark!) to contribute on a regular basis. It's hard to get quality articles from professional varanophiles on a regular basis. It's even harder to get them from the general readership. Let us know what's going on in your "world" of monitors. Even if you think it is insignificant, send the information to us. We have people who can write the articles for you. Don't just read, **Participate!**

1997 was also a year of discovery. Several new species of monitor's were discovered and/or re-classified. Look for an article on this subject in the next newsletter. 1997 also saw a few "firsts" in monitor breeding, of which we will also update in detail in the next issue (in conjunction with the previously mentioned article).

Dragon News is changing, both in frequency and format. **Dragon News** will be published 3 times a year, plus an "annual" issue (4 issues total) and a membership directory. Bi-monthly publication is, as we have found out the hard way, both time and cost prohibitive, and until we get articles on a more consistent basis we will publish an issue every three to four months. The new rates for 1998 are $20 for domestic memberships and $30 for memberships outside of the U.S. . This increase is to help cover the costs of printing the larger issues and in turn to cover the increased postal costs.
Members wanting extra issues can purchase them on an individual basis (rates are in the classified section). Members can also feel free to photocopy their own back issues if they feel the need to give out free copies to people interested in **N.O.V.A.** or monitors in general. We are also toying with the idea of an electronic version of the newsletter. This version could be sent via modem or floppy disk to interested members. An electronic version of the newsletter would also be less expensive. It could also open the door for high quality color photos in each issue. Well, mull it over and let us know what you think!

Thanks for making 1997 a great year! Lets work together and make 1998 an even better year!

HAPPY MONITORING!

N.O.V.A. OFFICERS AND DRAGON NEWS STAFF

JOHN HOGSTON - PRESIDENT AND MANAGING EDITOR
MARK K. BAYLESS - V.P. AND CONTRIBUTING EDITOR
CHUCK VORACEK - ADVISOR
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JACKIE HIXON - ILLUSTRATOR
KELSEY ENGLE, CURATOR QUEENSLAND REPTILE AND FAUNA PARK - AUSTRALIAN VARANID TAXON ADVISOR

CONSIDERATIONS

- **SYMPOSIUM SPEAKER LIST UPDATE:** SO FAR DANIEL BENNETT, MARK BAYLESS AND ROBERT FAUST HAVE EXPRESSED THEIR INTENTION TO SPEAK AT THE SYMPOSIUM.
- **THE SPECIES RESOURCE PANEL IS TAKING SHAPE. THIS IS WHAT WE HAVE SO FAR: MARK BAYLESS-** AFRICAN VARANIDS. **ROBERT FAUST AND GARY MAYNOR** - NILE MONITORS & ORNATE MONITORS. **JOHN ADRAGNA JR.** - WATER MONITORS. **JOHN HOGSTON** - TREE MONITORS AND OTHER PRIMARILY ARBOREAL MONITORS. **KELSEY ENGLE** - AUSTRALIAN VARANIDS.
- **ANYONE WILLING TO ANSWER QUESTIONS ABOUT A PARTICULAR MONITOR OR GROUP OF MONITORS AND FEELS THAT THEY HAVE SOME EXPERTISE ON THEM SHOULD CONTACT US AND WE WILL DIRECT QUESTIONS YOUR WAY.**
- **N.O.V.A. IS HAVING A CONTEST.....** A CONTEST TO SEE WHO HAS THE LARGEST MONITORS PRIVATELY HELD IN CAPTIVITY. THERE MAY BE TWO CATEGORIES. ONE FOR THE LONGEST TOTAL LENGTH AND ONE FOR THE HEAVIEST. ALSO MAYBE A CATEGORY THAT IS A COMBINATION OF BOTH FACTORS. SO START THINKING ABOUT ENTRIES!
- **LET US KNOW ABOUT YOUR BREEDING SUCCESSES/FAILURES.**
- **DON'T BE SHY! SEND IN YOUR ANIMAL PICS.**

N.O.V.A. Would Like to Thank:

Jeff Lemm for the great monitor pics!

Kevin Baker also for the great pics!

All the N.O.V.A. members that responded to the questionaire in the last newsletter!

Roger Price for passing out N.O.V.A. info. and newsletters at the St. Louis show!

Phil Crawley for all the great artwork!

Nina Katayama for her encouragement and support!

N.O.V.A. members for being patient while we re-organized and moved!

N.O.V.A. Welcomes New Members:

Nina Katayama
Phil McDonie
Walter Johnston
Christopher T. Williams
Daniel Bennett - U.K.

Dysecdysis in Varanus niloticus ornatus and a Practical Method of Correction

By Gary Lee Maynor, Jr.

Dysecdysis (improper shedding) in ornate nile monitors, *Varanus niloticus ornatus*, is usually caused by low levels of humidity inside the animals enclosure. The ornate nile monitor, a resident of Western Africa, is found in areas with naturally high levels of humidity. In captivity this varanid must be provided with similar humidity levels of approximately 60-80%.

Dysecdysis will occur if these requirements are not met. This condition is particularly problematic for hatchlings and juveniles. In cages where the lizard is housed with too low humidity levels, the skin becomes extremely dry at the end of the shed cycle. If the old layer of skin does not come off, the lizard may actually lose some fingers or toes. I have even seen a few ornates that were in danger of losing the last few inches of tail. This was caused by several layers of skin being stuck one on top of the other. These accumulated layers of skin will actually cut off the blood supply to the affected area.

Many people use light bulbs to provide a source of heat and light to their monitors. In most cases this method works well, but in dry areas this method of husbandry is of little value. For example here in Ohio we have low to moderate levels of humidity, combine this with a heat lamp running at 98 degrees f for 12 hours a day and you've got instant problems!

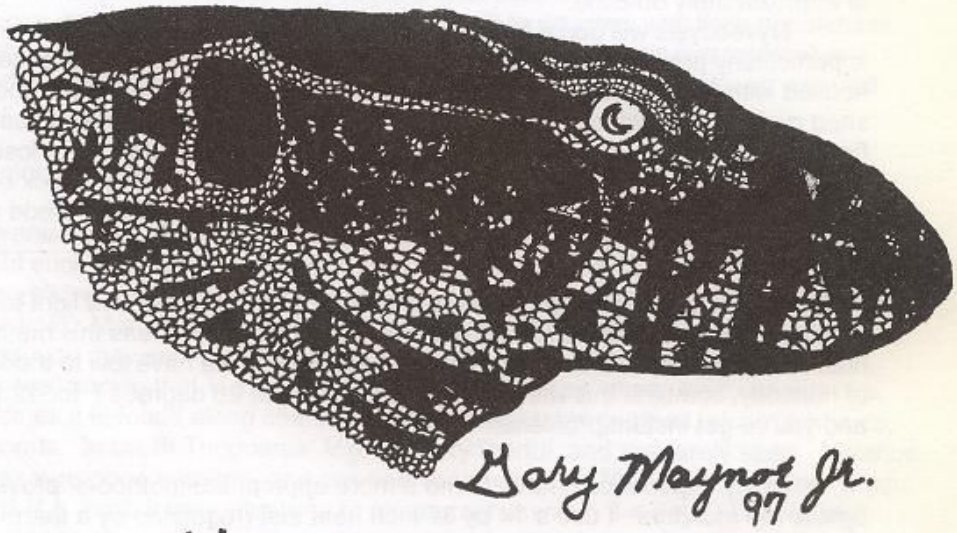
In my experience, I have found a more appropriate method of providing heat and light to my monitors. I use a 14 by 37 inch heat mat (regulated by a thermostat) with a full spectrum light suspended above the mat. Since monitors associate light with heat it is possible to "trick" them into thinking the heat is coming from the light while it actually is receiving warmth from the heat mat. The full spectrum lights give off very little heat. They do not rob the enclosure of its humidity. In my opinion, these bulbs are the only way to go when you want to provide your lizard with quality lighting.

After installing this heating / lighting system, shedding should resume normally. Some of you may be a bit worried about using a heat mat to provide heat to your lizards instead of the more frequently used heat lamps. I keep the temperature of the pad at a constant 98-102 degrees f and I have not had any of my animals ever get a thermal burn. Respiratory problems have never occured while using this method and shedding is now complete and normal.

Go ahead and try this method of providing light and heat to your ornate nile monitors, you will be pleased with the results.

I would like to thank the following people for trying to help me overcome this husbandry problem:

Robert Faust, thanks for taking Jesse. Mark Bayless, for all the monitor references. Pete Strimple, for all the good ideas on increasing cage humidity, and John Hogston who confirmed my idea of using the heating mat. These people have given me their time and efforts to make my keeping of monitors more enjoyable and I am deeply grateful to them all.



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FRECKLED MONITOR CASE

BY MARK D. BUTLER, D.V.M.
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COLUMBUS, OHIO 43235

A young Freckled Monitor, *Varanus tristis orientalis*, was presented because it had not eaten for 8 days and had been noticeably lethargic. The monitor weighed 8 grams, was thin and depressed. There was also concern for its bone quality. Its jawbones felt slightly more pliable than they should (2 clutch mates which seemed normal were available for comparison).

Due to the monitor's small size and weak condition, extensive diagnostics were not realistic. A fecal sample was obtained and examined. Nothing was seen on flotation and direct saline smear of the stool. A culture and antibiotic sensitivity of the stool was also started, but the results would not be available for 3 to 5 days. In the meantime, supportive care was started with force feeding and calcium supplementation. Two days later, another stool sample became available and another saline smear was performed. some flagellates (possibly *giardia*) were now seen. Repeated fecal checks are often helpful as many organisms, especially protozoa, can be shed intermittently or in such small numbers that they can often be missed. Their small size doesn't help either.

The monitor was started on antibiotic therapy to treat the flagellates. Unfortunately, the monitor died later that same day.

A necropsy (post mortem exam) was performed. The kidneys appeared a little large and had some pale spots. Everything else looked fairly normal. Several tissues were submitted for histopathology (microscopic examination), including brain, stomach, intestines, adrenal gland, kidneys, lung, liver and bone.

Culture results of the stool were available the next day, and included heavy growths of *E. coli* and *Proteus mirabilis*. A few days later, the histopathology results were available. The kidneys were apparently normal microscopically. The bone did show some decreased density. But
the most significant finding was a moderate enteritis/colitis (inflamation of the intestines, including colon) with diffuse cryptosporidiosis. Nothing was seen in the stomach (cryptosporidiosis in snakes usually affects mainly the stomach).

Cryptosporidium is a kind of coccidian parasite (a protozoan). A number of species have been identified in numerous hosts, including mammals, birds, fish and reptiles. They have a worldwide distribution. In most warm-blooded animals, including humans, the infection is usualiy self-limiting with only transient clinical signs. However, in immunocompromised individuals (such as HIV positive people), the disease can be life-threatening.

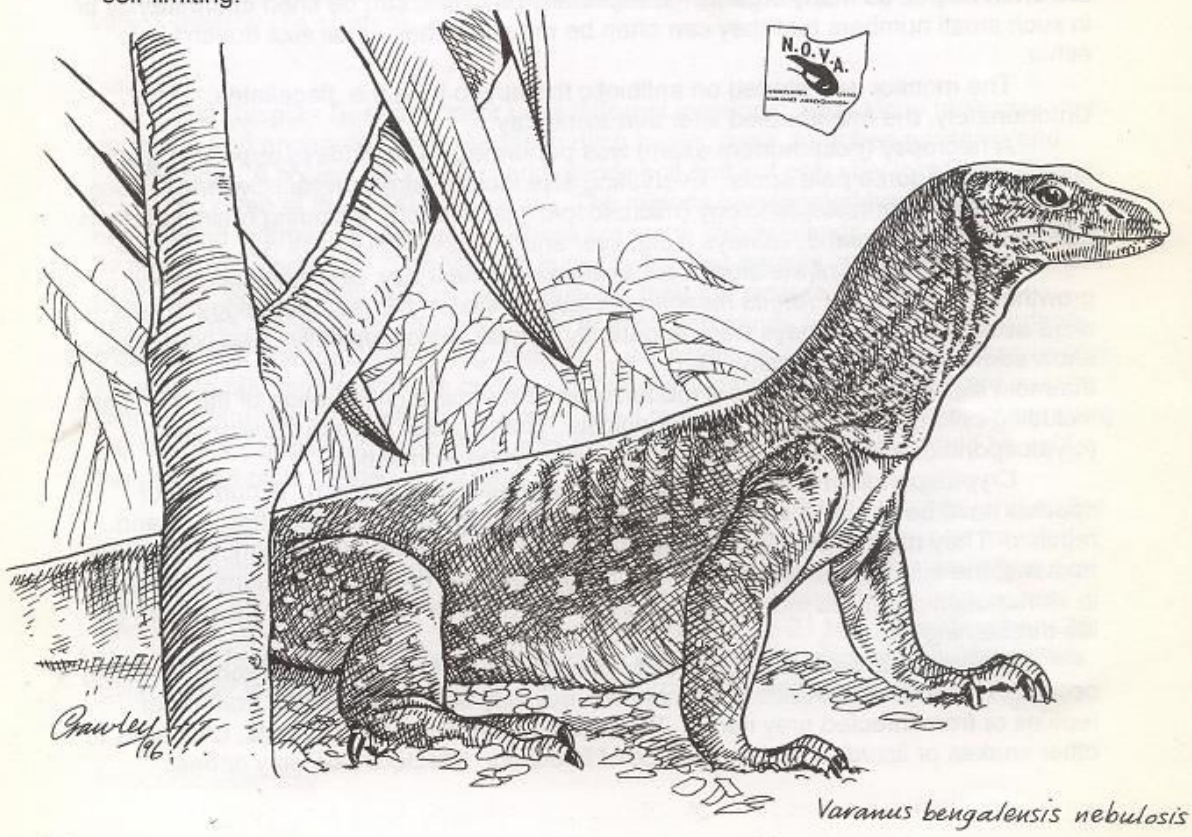
In reptiles, the infection does not appear to be self-limiting and chronic shedding occurs. The source of infection is unknown, but may be from shedding from other reptiles or from infected prey items. The feeding of infected mice, lizards, or snakes to other snakes or lizards, can be a source of infection. Infected mice may appear

clinically normal. Random sampling of all rodent shipments has been beneficial in some reptile collections. However, false negatives are a problem, due to intermittent shedding and the difficulty in identifying this small organism. Fortunately, new screening tests (ELISA methodology) are being developed and may be of significant help in the future.

Cryptosporidium was first diagnosed in reptiles in 1977. It has been seen more and more since, and can be a serious problem in captive reptiles.

This little monitor apparently had multiple problems, but the most significant and possibly primary one would never have been known without microscopic evaluation of multiple tissues. This case points out some of the real challenges we face in trying to diagnose some diseases. What could have been done differently? There are some special stains that might have allowed the *Cryptosporidium* organism to be seen in the stool... if it was being shed at the time. In snakes, stomach washes with special stains can be diagnostic, but that may not have helped here since the stomach appeared normal post mortem (including histologically).

Complete necropsies, including histopathology of multiple tissues are extremely important in the learning process so that, over time, we can do more 'pre-mortem'. Unfortunately, in this case, even if the diagnosis of cryptosporidiosis had been made ante-mortem, there is not much that could have been done. We still have no effective treatment for it in reptiles, nor in any animals, including humans, in cases where it is not self-limiting.



Varanus bengalensis nebulosis

THE MONITOR LIZARDS OF AFRICA: A PAN-AFRICAN CHECKLIST PART V: CABINDA

BY MARK K. BAYLESS

This multi-part series will examine country by country the monitor lizards that live within the country discussed (see Dragon News 1(2-5), 1997). Some segments will be short, while others may take up several parts within themselves (i.e. Republic South Africa).

CABINDA

Cabinda is a protectorate of Angola, like Western Sahara is to Morocco (see Bayless, 1997a). Cabinda occupies 2,810 square miles of territory just north of Angola, and is seperated from its 'mother-country' by a small parsec of Zairean territory. Cabinda was seperated from Congo in 1927, and became a protectorate of Angola then. Cabinda is surrounded by Zaire to its immediate south, the Atlantic Ocean to its west and Congo to its north.

Cabinda is a damp tropical climate, covered predominantly by a mosaic of Guinea-Congolian lowland rain forest and secondary grassland; the northern region of Cabinda is covered entirely by Guinea-Congolian rain forest, drier forests. The river courses are heavy with mangrove flora, and decreases with diversity and density towards the south (Sayer, 1992). The rainforest is multi-storeyed with a tree canopy between 120 to 180 feet in height.

The nile monitor (*V. niloticus*) was known to Cabinda in 1895 (Bocage, 1895), but no data on its present habitation there has been recorded for the last 100 years. As the habitat for *V. niloticus* appears to still be abundant, this species is most likely still present in Cabinda. *Varanus niloticus* is able to live in numerous habitats and micro-habitats, providing water is permanant (Bayless, 1997b).

Varanus niloticus has not been reported as a export product from Cabinda, but its future in Cabinda is uncertain, as habitat loss is the greatest threat to *V. niloticus* survival.

References

Bayless, M.K. 1997a. The Monitor Lizards of Africa: A Pan-African Checklist Part II: Angola. Dragon News 1(3):7-10.

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Bocage, J.V.B. du. 1895. Herpetologie D'Angola et du Congo. Imprimerie Nationale, Lisbonne. 197p.

Sayer, J.A., C.S. Harcourt, and N.M. Collins. 1992. The Conservation Atlas of Tropical Forests AFRICA. Simon and Schuster, New York. 288p.

BIOLOGY OF THE DESERT MONITOR (*Varanus griseus caspius*) in Uzbekistan Part I

By Dmitryi Grechanichenko
Alma-Ata Zoo
Director

Editor's note: This series of original papers will be in Dragon News over the next few issues, with five papers being presented. These papers will discuss the field observations and studies made by the author on the Desert Monitor (*Varanus griseus caspius*) of Uzbekistan.

Distribution:

The Desert Monitor (*Varanus griseus caspius*) of Uzbekistan, with its northern border reaching the south-west sea coast of Aral (Bark and Mantay islands) and its eastern border stretching to the Syrdaria, Tien Shan and Pamiro-Alay. *Varanus griseus* were also found at the northern part of the Kizilkum between Kazalinsk and Turtkul towns, and also by Usun-Kudak, Tekbay, Taldy-Kudak, Bergabay wells and China's village (nearby Uzbekistan).

Habitat:

The Caspian Desert monitor uses different locations: Clay-stony territories, half-anchored and anchored sands, irrigation ditch banks, ruins, forgotten gardens, and saline pools. It prefers sand, clay sand, sandy soil, but not only clay locations. This lizard can climb at the 1000 meter level. The regions investigated had plains with cereals and wormword vegetation. There are many sandy islands, which are anchored by perennial vegetation. This varanid is not distributed equally, as on clay roads, metal (= paved?: editor) roads and mountainous lots they are rarely encountered. More often you meet them in anchored sands near a colony of rodents (*Rhombomys opimus*). Great migration of *V. g. caspius* is unknown. *V. g. caspius* may stray up to 500 meters from its burrow. Some investigators say that this lizard may go 1 kilometer (km) for 4-5 hours, while others say it may go 2-5 km in 4-5 days. In pursuing this lizard, it can pick up speeds of up to 100-200 meters / minute. It should be said that a speed of its moving is not high.

On 27 May 1987, one specimen traveled 180 meters for 40 minutes, and on the 07 June 1987, one moved 230 meters for 30 minutes. On 13-15 June, one traveled 200-400 meters for 40-60 minutes. This lizard probably may go a long way when it is hunting. Usually, *V. g. caspius* stays in the same territory where it eats and sleeps. Two males were observed for 7 days, one of them from 16-21 May, the other from 29 May to 04 June, 1987 remained in their same areas, with a radius of 800-900 meters. Even a year later, they were met on the same ground as before.

Population Density

Its characteristic that *V. g. caspius* distribution is uneven in places of the same habitat. For example, in 1988 at the same time when *V. g. c.* began to emerge from their wintering burrows, one could encounter 2-3 *V. g. c.* per hectare. On 15 May 1987 there were *V.g.c.* met at 200 meters at 15 specimens per hectare; but on 16 May *V.g.c.* at the same Orinbay farm location at 1500 meters, only 3 *V.g.c.* specimens were found (= 1.7 lizards per hectare). On Greyland plain, *V.g.c.* is extremely rare.

Activity and Reproduction

In Uzbekistan, the reproduction of *V.g.c.* is unknown. The reproduction period of activity is from May to September. In 1987, the first adult lizards were noticed in May, five were seen; later in May, many more were seen. In east Uzbekistan, near Kyzyl-Kum, the first adults were seen on 10, 12, & 21 September of 1983-84. Puberty comes to these lizards at 3-4 years old, with courtship and copulation taking place in May, soon after they emerge from their burrows. The adult females lay their eggs in June-July, with fertility from 8-34 eggs being the clutch size range. The eggs are layed at the end of June, with sizes measured at:

Table 1. Biometrics of *Varanus griseus caspius* eggs found.

	Length (mm)	Width (mm)	Weight (gr)
#1	49.0	26.0	19.3
#2	50.5	27.5	20.7
#3	47.5	28.0	20.3
#4	52.0	27.5	20.9

Pairs of *V.g.c.* were never seen, and the 6 animals captured were all males.

Feeding

Varanus griseus is omnivorous. There are different kinds of rodents, lizards, middle asian tortoises, toads, birds and their eggs which were found in the stomach contents of the animals captured. Some *V.g.c.* were found with the poisonous Kufi (*Vipera lebetina*) and the Asian cobra (*Naja oxiana)* within their stomachs. There are also known cases of cannibalism. The Caspian monitor swallow adult rodent (*Rhombomys opimus*) from 10 seconds to one minutes time. When hungry, a single caspian monitor may eat 2-3 Rhombomys at a single feeding. The speed of digestion is from 2-4 days time. A well fed caspian monitor will remain in its burrow for 3-4 days in a very drowsy condition. In June, a great many Rhombomys are present,

and are the primary prey item of the caspian monitor lizard. The density population is high enough in Kizil-Kums, but on the banks of Sir-Darya river in Isakuduk sands, the Rhombomys is very low, with *V.g.c.* feeding principally on gophers.

They may be eaten by pet dogs, run down by cars, and caught in traps. In Fergana and Vachsh plains, the quantity of Varanus was sharply reduced because of irrigation practices.

Enemies and Parasites

Adult *V.g.c.*, due to their size have very few natural enemies. Some of their are Circaetus ferox, Black kite, and Black Griffon. To the south-west of Kizil-Kums and in the south of Uzbekistan, it is eaten by fox and feral cats.
These above animals do not feed on *V.g.c.* enough to do away with their populations. Ectoparasites such as *Haemaphysalis silcata*, nematodes such as *Hastospiculum varani* and the flegellate *Monocercomonas colibranum* and *Trichomastix sp.* are well known.

Anthropomorphic Influence

Varanus griseus can easily become accustomed to man. A.M. Nikolskyi wrote in 1915 about such a case where a *V.g.c.* lived in captivity during a winter with him. When it stops its striking, threatening attitude, it will not be afraid of man, and may even allow itself to be held. Many *V.g.* are held in different zoos of the former Soviet Union. Sometimes, you may see *V.g.* at the circus as well.

It is well known that *V.g.* do not like to be near places where many people live, but sometimes it is found along channel banks, in vegetable gardens, close to homes, and at airports. In south Turkmenia, *V.g.* are very fearful, and are rarely seen. *Varanus griseus* has very good eyesight, and can see very well at 50-70 meters distance. If you offer a wild *V.g.* food, it may allow you to photograph it within 3-4 days. I have seen these lizards become very accustomed to man, and will take food from your hand, and would not leave camp for several days, hunting and sleeping nearby.
If the lizard does not feel threatened, the lizard will reconcile itself to mans presence.

Protection

Nowadays, the monitor is protected in 11 reservations of Uzbekistan, Turkmenia and Tadjikistan. It is not protected in Kazakhstan. For this reason, one can recommend the territory of protection of south Kizil-Kums. It is necessary to begin a system of fines for killing *V.g.c.*, which is in the Red Book of the former USSR. Along the roads should be placed definite signs to limit the speed of transport. There should be active propaganda among agriculture workers, geologists, drivers and so on.

CLASSIFIEDS

THIS SECTION IS OPEN TO N.O.V.A. MEMBERS WHO WISH TO BUY, SELL OR TRADE VARANIDS, TEGUS OR OTHER RELATED PRODUCTS. NON-MEMBERS CAN PLACE ADS AT A RATE OF .50 A WORD (NO MINIMUM). DEALERS CAN PLACE QUARTER PAGE ADS AT $20, HALF PAGE ADS AT $35, AND FULL PAGE ADS AT $50. NOTE: N.O.V.A. IS NOT RESPONSIBLE FOR THE QUALITY OF THE ANIMALS OR MERCHANDISE IN ANY AD.

FOR SALE: 1.1 *V. doreanus*. 4 year captives. $700/pair. John 718-987-2212

FOR SALE: F2 & F3 baby timors. $150 Each. Roger 573-637-2570

FOR SALE: Dumeril's monitors: captive bred hatchlings periodically available. $200 Each. Mike Fost 770-987-3933

FOR SALE: Storr's monitors, hatchlings, $525 Each. Argus hatchlings, $175 Each. Timors available regularly. Patrick 309-662-2609

FOR SALE: Spotted tree monitor, *V. scalaris*, long term captive male. $175/offer or trade for female brown dumeril's monitor. John 440-365-0317

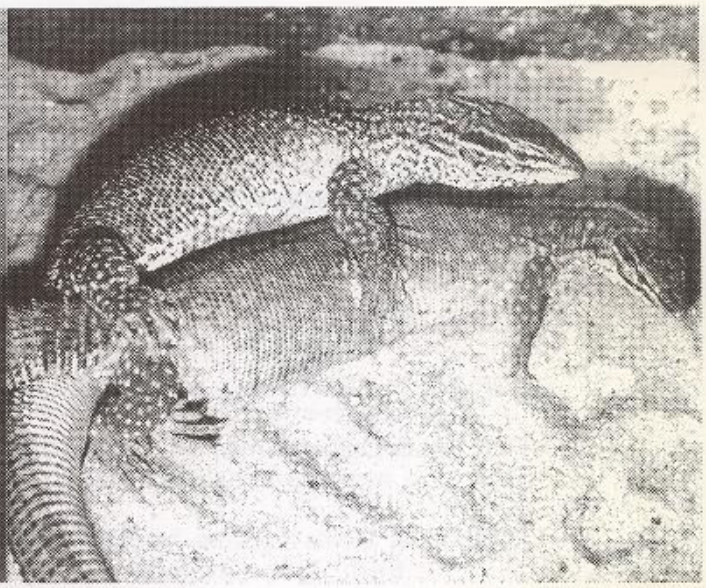
FOR SALE: Back issues of Dragon News!
Vol. 1 issue 1- $15, Vol. 1 issue 2 - $5, Vol. 1 issue 3 - $5 Vol. 1 issue 4 - $5, Vol. 1 issue 5 - $10. Make check or money order out to N.O.V.A. and mail to 38 Nightengale Ct. Elyria, Ohio 44035.

WANTED: Locality specific pictures of varanids in New Guinea, Indonesia and especially any of the smaller insular species. Recent bio-geographical data on these areas is also needed. Photos of animals from these areas in private collections are also needed. Anyone with information or pictures please contact :
John Hogston 440-365-0317 or at the address above. You can also E-Mail me at dragonnews@yahoo.com

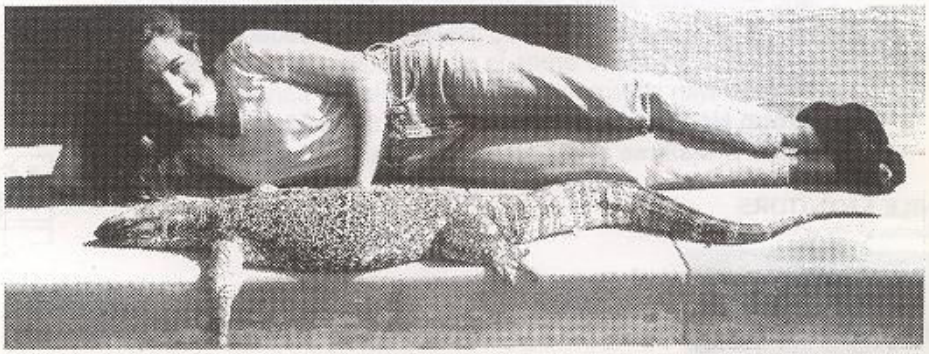
PARTING SHOTS

PHOTOS BY JEFF LEMM

BIPEDAL FEEDING BEHAVIOR IN A JUVENILE (4 1/2 FT.) KOMODO DRAGON



COPULATING RED DESERT RIDGE-TAILED MONITORS (*V. acanthurus*)



CAROLYN CONRADT, WIFE OF N.O.V.A. MEMBER JEFF LEMM, WITH TITAN, A NAMIBIAN WHITE-THROATED MONITOR (*V. a. albigularis*)

Northern Ohio Varanid Association Membership Form and Questionnaire

N.O.V.A. Membership is $20 a Year Domestic and $30 a year Foreign (U.S. Funds). Membership includes 3 Issues of Dragon News (The Journal of N.O.V.A.), an Annual issue and a membership directory.

Name_____

Address_____

Phone #_____

Age_____

Species Currently Maintained_____

_____

Other Interests_____

_____

Is There a Product Relating to Monitor Lizard Husbandry That You Wish Existed but Can't Find? (If Yes, Explain)

_____

Make Check or Money Order Out to N.O.V.A.
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