San Diego Herpetological Society

DEVOTED TO THE STUDY, APPRECIATION, AND CONSERVATION OF LOCAL AND EXOTIC AMPHIBIANS AND REPTILES

NEWSLETTER

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AUGUST MEETING • THURSDAY, AUGUST 27, 1987, 7:30 P.M. • SAN DIEGO ZOO, OTTO CENTER, BALBOA PARK

CHEMICAL COMMUNICATIONS IN LIZARDS

On Thursday, August 27 at 7:30 p.m. Allison Alberts will speak to us on desert iguana *Dipsosaurus dorsalis* femoral pore secretions and their role in social behavior. Ms. Alberts is a student in biology at UCSD and does her field research at Deep Canyon Desert Research Center, Coachella Valley.

The lecture will be followed by discussion groups.

Herp of the Month

THE GRAY-BANDED KINGSNAKE

Lampropeltis mexicana alterna

Photo by Robert Applegate

This medium-sized colubrid snake is very popular with herpetoculturists, because of its striking colors and extreme docility. Though it comes from a small limited range in Southern Texas and Northern Mexico (see map), through captive propagation a large number of hatchlings are available to herpetoculturists each year.

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THE GRAY-BANDED KINGSNAKE

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There are two morphs of *Lampropeltis mexicana alterna* and since 1962 each had been considered their own species, *L.m. alterna* and *L.m. blairi,* until 1970 when E. Tanzer combined them into one polymorphic race when he witnessed both morphs in the same clutch. The *alterna* morph, the most common form, has 17 to 30 narrow black bands with alternating red, black, or both, narrower bands on a gray ground color. The *blairi* morph has 12 to 15 wide red or orange saddles, bordered with black bands with white edges on a gray ground color. The gray ground color in both morphs can be as varied as *almost black* to *light-gray* (dark and light phases). Juvenile gray-banded kingsnakes may be born with a light-gray ground color and then change to a dark-gray ground color by their first year. The ventral scales are patternless and the head patterns are highly variable. Many *L.m. alterna* have been found to break all the above morph rules, including a striped one.

The very first *blairi* morph of the *L. m. alterna* was collected by H. Phillips and A. Flury in 1948 on U.S. Highway 90, just west of Dryden, Texas. With the discovery of this beautiful snake, the interest in the *blairi* morph escalated, and until recently they were considered one of the rarest of the American snakes.

L.m. alterna are found in areas with rocky hillsides and mountainous slopes. They are associated with the acacia-lechugilla-sotol succulent communities that are found in the limestone covered deserts. They seem to be found in the same areas as the rock rattlesnake *Crotalus lepidus lepidus* and their color markings tend to be very close in the two animals. Most of these shy snakes are collected while night-driving, very few are found while field collecting. Juveniles are rarely ever caught, making up only 4% of the numbers collected. Collecting season starts mid-to-late May, reaching a peak in late June, and tapering off in July. They are found in elevations from 1500 feet to 6000 feet.

Known predators are: man, great horned owls *Bubo virginianus,* ringtail cats *Bassariscus astutus* and skunks. Probable predators are foxes, coyotes, badgers, raccoons, pecaries and weasels.

The known diets in the wild are: eastern fence lizards *Sceloporus undulatus,* crevice spiny lizards *Sceloporus poinsetti,* canyon spiny lizards *Sceloporus merriami,* various whiptails *Cnemidophorus sp.,* canyon tree frogs *Hyla arenicolor* and pocket mice.

The gray-banded kingsnake is very easy to keep in captivity and the only special requirement seems to be that they like seclusion. Give them a hide-box or hide-area for security. One case of cannibalism was reported, so it is advised that you keep them separate.

Breeding size can be reached within 18 months of hatching, although 30 months is more realistic. Adults can get over 3 feet in length, with some reported up to 3½ feet. The average length is approximately 32", with slightly shorter ones found in the Chisos and Davis Mountains. Their life-span is approximately 20 years.

A ritualized male combat is reported by Murphy, Tryon, and Brecke (1978), and the behavior was categorized into six phases: 1) recognition-investigation, 2) solicitation display, 3) orientation, 4) topping, 5) recovery, and 6) submission. Each bout lasted roughly 5 minutes. Many bouts may occur until one male is found to be dominant. Courtship behavior was categorized into three phases: 1) tactile-chase, 2) tactile-alignment, and 3) intromission and coitus.

L.m. alterna should be over-wintered at temperatures ranging 42°-53° F for 8-12 weeks and gradually taken out of brumation until a temperature of 72° F or above is reached. After feeding them 2 or 3 times, you should introduce the female into the male's cage. One male can be mated to a number of females.

The gray-banded kingsnake is oviparous and deposits 3 to 13 eggs that are approximately 1" wide and 2" long. Females do on occassion "double-clutch", but the eggs are smaller and the numbers are fewer than the first clutch.

Lampropeltis mexicana alterna have been collected in 9 counties of the Trans-Pecos and Edwards County, Texas.

The eggs should be incubated on a peat moss/sand mixture or vermiculite substrate for 60-75 days at a temperature of 80° F. Once the baby snake slits the egg, it may take 24 or more hours before emerging. Juveniles average 9½" in length at birth.

Juvenile gray-banded kingsnakes eat pinky mice less than 50% of the time after their first post-hatching shed, most seem to prefer lizards. Various methods have been developed to get the juveniles to eat pinkies; one is to raise the humidity in their enclosure, while another is to wash the pinky and then rub a lizard all over it. Some people give up and feed them lizards, which they all eat with enthusiasm. After they start growing, the switch from lizards to mice is easier.

L.m. alterna was placed under protection by the State of Texas in 1976 and it is now illegal to hunt them without a scientific collecting permit from the Texas Parks and Wildlife Department. There are many herpetoculturists breeding the gray-banded kingsnake in captivity now, and the price is low enough that hunting them is no longer a necessary task.

Al Telles

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