

Herps of Baja

An introduction to herps that live along Baja.

By Karl H. Switak

The Baja Peninsula stretches like a giant finger for nearly 1,000 miles, from the United States border in the north, to Cabo San Lucas in the south. Baja's western boundary is guarded by the churning waters of the Pacific Ocean; to the east lies the Gulf of California (also Sea of Cortez). Maps dating back to 1666 actually depict the peninsula as an island.

There are several names commonly used to identify this vast piece of real estate: Baja California, Lower California or simply Baja. However, more geographically correct, the peninsula is divided into two separate regions, Baja California Norte and Baja California Sur. The line of demarcation lies just north of Guerrero Negro, straddling the 28th parallel. Further south, near the tip of the peninsula, is the Tropic of Cancer.

I have traveled the length of Baja California on numerous occasions, including periods of excessive drought and monsoonal rains. My very first sojourn to this land of elephant trees, rattleless rattlesnakes, pygmy boas and two-legged worm lizards, took place in 1965 when I was employed by the California Academy of Sciences in San Francisco. Our research team, consisting of such famous scholars as Dr. Earl S. Herald and Dr. Robert T. Orr, was primarily concerned with exploring the islands in the southern Gulf. Without doubt the most exciting, most memorable and by far most noteworthy expedition I have ever taken into Baja took place in June of 1974. For this trip south of the border I bought a brand new Chevy Blazer, took two months off work without pay and persuaded my girlfriend Carol, a real Sicilian beauty, to be my cohort.

However, before all was said and done, my brother Dirk and my life-long friend George Silva joined us in their 1971 Oldsmobile Cutlass. Our goal was to drive the recently paved road the entire length of the Baja Peninsula, then ferry across to mainland Mexico and points beyond.

On June 16, 1974, after weeks of planning and organizing equipment, our procession left the city limits of San Francisco. It was a cold, foggy and downright miserable morning. Carol immediately opted to exchange her mini-skirt for a pair of long pants. Baja couldn't arrive any too soon.

We crossed the border at Tijuana late in the afternoon and continued driving until Ensenada, where we checked into a halfway decent motel, then filled our growling stomachs with a fantastic seafood dinner. Before calling it a day we re-checked our schedule and maps for the 1,000-mile journey down to Cabo San Lucas. Our plan called for driving mostly at night, taking advantage of the reptilian habit of crawling onto warm paved roads after dark. Herpetological history was in the making; I just didn't know it yet. Our first night in the field was spent just south of El Rosario, where we slept in the open among a stand of majestic boojum trees. The following morning our sleeping bags were soaked by a blanket of penetrating fog.

Because of the similarity between U.S. and Mexican species close to the border, we decided to head south as fast as possible, not planning to start serious work until we reached San Ignacio. This small town lies about 600 road miles south of San Diego, California, almost at the center of the Baja Peninsula. On June 19, we entered this quaint and traditional town, and chose a campground hidden among the lush, green foliage of a palm grove. At 9 p.m. that same night we headed out. Snake sticks and flashlights ready, eyes focused on the road, we drove along slowly. I should add that we were in possession of a legal Mexican collecting permit, issued through my employ at the California Academy of Sciences in San Francisco.

After several hours of straining our eyes, we decided to call it a night. The drive turned out to be a fruitless venture, yielding a single red diamondback rattlesnake, *Crotalus ruber*, plus a dead striped whipsnake, *Masticophis lateralis*, and an equally flattened Southern Pacific rattlesnake, *Crotalus v. helleri*. Just before entering our campground, another DOR (dead-on-road) snake, this time a nicely banded *Chilomeniscus cinctus*.

The next day was spent strolling through town, having lunch under the huge trees in the central plaza, then emulating the local inhabitants in their traditional midday siesta. After a leisurely day, we decided to chase a few lizards that were quite common in town and on the rocky terrain surrounding it. These we identified as belonging to the genera *Cnemidophorus*, *Sceloporus* and *Urosaurus*.

Just prior to sunset we strolled down to the San Ignacio River. With its shores lined with palm trees and tall grasses, its surface smooth as a mirror, the river presented the perfect image of a desert oasis. At the river, one of several bullfrogs, *Rana catesbeiana*, started bellowing and Carol almost stepped on a small water snake, *Thamnophis h. digueti*. The bullfrog, obviously introduced, was hitherto not recorded in San Ignacio and the water snake turned out to be a rare find by itself. Things were definitely looking up.

Later, with complete darkness engulfing the entire countryside, George and I drove the road again. Carol and Dirk decided to stay behind and enjoy the solitude of our palm grove instead of straining those precious eyes. Ten miles of driving, 15 miles, 20 miles-nothing. It was hot, the ground was parched, and not a drop of rain in the forecast. Not exactly conducive weather for finding reptiles on the road. But we didn't give up.

Suddenly, our headlights picked up a slightly curved object in the middle of the paved road. We came to a quick stop, grabbed snake stick and flashlight, and there was our first specimen-a beautiful, 2-foot-long Lower California rattlesnake, *Crotalus enyo*. We hurriedly bagged the animal and continued our journey. A few miles further on, driving to the west of San Ignacio, I thought I saw another snake at the side of the road as we drove by. George backed up quickly, and there it was-a16-inch-long Mexican rosy boa, *Lichanura t. trivirgata*. It was stretched out on the dirt shoulder, an area where snakes are not easily spotted. If we caught nothing else that night, our efforts had already been amply rewarded. However, the hour was still early, and the temperature had dropped considerably, so we decided to give the road another chance.

Thirty minutes later, and within close proximity of where we found the gorgeous rosy boa, I asked George to stop for what appeared to be a dead rodent. Weary eyeballs were starting to show the detrimental effects of a pair of bouncing headlight beams in front of us. If it was a rodent, I surmised, we could always use it as food for the rattlesnake. I was in no hurry to get out of the car, since dead rodents are not known for their agility. As I approached the object on the road I immediately recognized it as a gecko, an exceptionally large specimen at that. It was much too large to be a banded gecko, but on the other hand, what else could it be?

"Look at this thing!" I exclaimed triumphantly to George. "Isn't it the most spectacular specimen you've ever seen?"

We both agreed that it was much too large for a banded gecko, *Coleonyx variegatus*. Jokingly, I referred to it as a leopard gecko, but only jokingly. Carefully, I placed our reptilian prize into a brand new cloth sack, added a bit of paper for support, then just stood for a moment in complete darkness and absolute tranquility, savoring the night's catch.

"It's probably an aberrant form of the banded gecko after all," I told George. And with that thought in mind, we headed back to camp.

On the return, we found a smaller gecko, this one definitely identifiable as *Coleonyx variegatus*. Carol and Dirk were already asleep, but they were not unhappy to be shaken out of a peaceful slumber when they gazed upon our worthwhile finds. For myself, sleep did not come quickly. There were too many questions with no immediate answers.

The find of such a large gecko kept me speculating to no end. Twice each day I checked the specimen to make sure it was perfectly content. It received water from an eyedropper and freshly caught crickets at least every other day. When we made our reptile shipment back to the California Academy of Sciences' Steinhart Aquarium in La Paz, I couldn't make myself include the gecko. I worried that the shipment might be delayed, or the box left in the scorching sun prior to being loaded onto the airplane. I decided not to take that chance, but to instead keep the strange gecko and care for it personally for the remainder of the journey.

From San Ignacio we drove leisurely to Santa Rosalia, then south to Loreto via Mulege and Conception Bay. It was unbearably hot when we arrived in Loreto, so in consideration of the animals in our possession, we registered at the Hotel Mission, located at the water's edge and overlooking Isla Carmen. This charming little town was to be home for at least a week while George and I visited Isla Santa Catalina, home of the rattleless rattlesnake *Crotalus catalinensis*, an endemic species. No other type of rattlesnake occurs on the island.

The first order of business was to find a man with a boat, willing to take us on a snake hunt and return us safely. A local boat rental agency provided such a person. The boat owner, Amando, had been to the island several times, and the boat was guaranteed to make it to the island and back. The boat, named *Agricelda*, was 22 feet long and powered by a 40 horsepower outboard motor.

George and I were anxious to get going, so we arranged an early departure the following morning. After a slight misunderstanding on our part (we forgot to set our watches back an hour), Amando guided his boat away from the small

docking area near the hotel. It was now 5:10 a.m., dark and silent, the air was filled with excitement. I should have been tired that morning after spending hours readying equipment the night before, but looking forward to catching, or even seeing a rattleless rattlesnake in its native haunts, made sleep an unimportant factor.

The sea was very calm now, and I hoped that it would stay that way. Amando estimated that our trip to Catalina would take approximately four hours, barring adverse weather conditions. Slowly, dawn was breaking. To the north we could see the dark outline of Isla Coronados, directly in front of us lay Isla Carmen, slightly to the southeast was Isla Monserrate and somewhere toward the middle of the gulf waited our goal.

The sun rising over Isla Carmen was a spectacular sight. I was so busy photographing and daydreaming, I forgot all about the water below us. Then we cleared the southernmost point of the island and the sea changed. Deep swells produced whitecaps and sent spray across our boat, saturating man and material to the utmost. Amando was now standing up in the back, watching for scattered patches of kelp that, if caught in the propeller, would stop the engine. Finally, just under four hours after our departure from Loreto, we landed on Catalina. It was 9 a.m. The sun had just cleared the island's central mountain range and was casting shadows through the ravines.

While Amando took care of the boat and unpacked supplies, I quickly grabbed a snakestick and headed inland. After hiking for several hundred yards, looking at the edge of bushes and small rock outcroppings, I realized it was already too hot. The snakes, if any were to be found in this particular locale, had taken refuge underground to escape the scorching rays of the sun. The hunt would have to wait until nightfall.

A small grass shack on the beach, used by fishermen on their occasional visits to the island, provided much-welcomed shade. Nearby was a huge pile of shark, turtle and fish carcasses, harboring a multitude of maggots. These hatched out and decided to share our humble abode. Three sweaty people and 10,000 flies constitutes a recipe for immediate insanity.

During the remainder of the day we watched countless numbers of desert iguanas scurry in and out of the spinose underbrush that covers much of the island just beyond the beach. Whiptail lizards quickly propelled themselves from one shady spot to another. The gaudy turquoise-tailed side blotched lizards shot in and out of our grass shack, feeding on flies and thus becoming most welcome guests. Every hour or two we put on our masks, fins and snorkels, and watched the colorful world below the water. Cortez angels, iridescent blue damsels, butterflies, triggers and a dazzling array of other aquatic life performed a continuous underwater ballet. Watching these animals in their relatively cool domain was indeed a great and pleasurable diversion from the hot, desolate terrain above.

Immediately after sunset, we set forth in search of *Crotalus catalinensis*. I thought that might be a good time to start looking, but never having been on this island before, and not knowing the habits of this species, I was actually only guessing as to their active period. We hiked up one ravine and down another. Nothing was moving-not a serpent, not a rodent, not even a scorpion or gecko. By now it was quite dark. We rested for a few minutes back at camp, enjoyed a drink of lukewarm water, then headed out once more. Snake tongs and plastic container in one hand, lantern in the other, we slowly walked about 20 yards apart. Halfway up the first ravine my lantern cast its guiding light upon a snake that was stretched out along a thornbush. There was no mistake in identity, I had found our first catalinensis. Carefully, I placed the lantern and plastic container on the ground, never taking my eyes off the snake. I wanted to call to George for help, but didn't dare. My voice wouldn't have frightened the snake, as snakes have no external ears, but the ground vibrations from George's footsteps might have provoked the serpent to move. Slowly, I edged the snake tongs forward, then seized the snake at mid-body and brought it out into the open.

Now I called for George to come and open the plastic container. In the meantime I had my hands full trying to contain what turned out to be 2 feet of fighting fury. I had to release my hold with the tongs, or the thrashing snake would certainly have broken a rib or two. As soon as I did this, the snake darted away. Quickly, I reached for my 12-inch-long pair of forceps cushioned with foam rubber and seized the snake some distance from the neck. By now George had the container open and in went our prize. Within the next several hours we bagged an additional four catalinensis, making a grand total of five neurotic beauties. Every rattleless rattlesnake caught on the island behaved in exactly the same fashion. It was a hit-and-run proposition at each meeting, but worth every bit of nervous energy in the taking.

The following morning, about 6 a.m., we located a small specimen neatly coiled up in the sand just at the outer edge of a thornbush, and an hour later, another adult. Now we decided to move our camp to another beach, in part to escape those hordes of pesky flies. On the way there, George and Amando fished for dinner. We had grouper, bonita and a species resembling mackerel. There was much too much for the three of us, so we shared our meal with a flock of attentive seagulls. A storm prevented further examination of the second beach site. So, on the morning of our third day, we headed back to Loreto. It was a rough sea, but we were much too happy discussing our valuable catch to worry about all those hammerhead sharks swimming with anticipation close to our boat. I did caution Amando several times to keep both eyes

open for that ever-present floating kelp.

We stayed in Loreto for an additional two days, cleaning, feeding and watering our accumulated collection. I was fortunate enough to hire a small private plane for an aerial reconnaissance of Catalina. Night driving north and south of Loreto was not productive, yielding only a couple of small banded geckos, *Coleonyx variegatus*, and a speckled rattlesnake, *Crotalus mitchelli*, hit by a truck directly in front of us. Local inhabitants told us that with the upcoming rains snakes could be found "everywhere." But waiting for rain in the desert can turn into a lengthy and frustrating experience.

For us it was time to leave this lovely town and once again head south. The road hugged the shoreline for a few miles, then climbed inward and upward toward Villa Insurgentes and Villa Constitucion, both of which are agricultural centers. Within 40 miles of La Paz we saw numerous yuccas in bloom, showing great contrast of the white flowers against a cobalt-blue sky.

Between La Paz and Cabo San Lucas we expected to find the brilliantly colored rock lizard, *Petrosaurus thalassinus*, and the large spiny-tailed iguana, *Ctenosaura hemilopha*. The rock lizard is an endemic species, found on mainland Baja and several of the Gulf islands. Thirty miles south of La Paz, we stopped along the road to investigate some rock outcroppings just beyond a mediocre fence. It looked promising for both of the aforementioned species.

A quick movement to my left, accentuated by the color blue, attracted my attention. But by the time I reacted there remained nothing but bare rock. Just on the other side of this massive boulder, however, was a deep crevice in which a huge *Petrosaurus* had taken refuge. Unfortunately, I saw no way of getting him out. The crevice tapered downward to a narrow fit, and the lizard had wedged itself perfectly within. After an hour of climbing, and watching several of these speed demons disappear in the same fashion, we decided to travel on.

At El Triunfo, south of Cabo, we stopped again. Not because it looked like a good reptile-collecting spot, but because a colorful church attracted our attention. While photographing it, we did find a very large horned lizard, *Phrynosoma coronatum*, resting on a hot rock very near this pink-colored structure. Knowing that the favorite food for horned lizards is ants, I looked around the area and found an anthill just 4 feet from where the lizard was resting. More than likely he had just finished his noon meal when we interrupted his religious meditation.

The sun was already setting as we drove into the El Arco trailer park in Cabo San Lucas. A slight breeze from the Gulf provided an exceptionally comfortable climate. Just before entering the city, we found a 5 1/2-foot-long DOR whipsnake. It was a very light-colored specimen of the genus *Masticophis* and would have made a valuable contribution to our collection had we found it alive.

The next morning found us clambering over the rocks that Hotel Finisterra is built on (tip of Baja Peninsula). It was my brother Dirk who spotted the first spiny-tailed iguana while we were enjoying breakfast in the hotel lounge. Once again we were faced with the problem of looking for specimens among gigantic rock formations. Yet it was here that we ran across a second colony of *Petrosaurus*. Watching these colorful flashes bounce from rock to rock, scale completely vertical surfaces, and being unable to lay our hands on one, proved a frustrating experience. Other reptiles in the area included lizards of the genera *Cnemidophorus* and *Sceloporus*. After three hours of lizards getting the better of us, we adjourned for some adult liquid refreshment served by a chatty waiter in the picturesque hotel bar. Atop the stairs, within inches of the lobby entrance, George found a lyre snake (*Trimorphodon*)-freshly killed.

Night driving in this region produced nothing, except a small mouse for one of the rattlesnakes. We were anxiously waiting for the rains, which I am certain would have turned the negative into positive, but these never materialized. So we headed back to La Paz and started the meticulous task of preparing our collection for their flight back to San Francisco. On the return north we stopped to look at a large DOR patch-nosed snake (*Salvadora*), and collected a small spiny-tailed iguana that had made the mistake of seeking refuge in too shallow a crevice.

After making final arrangements with the airline in La Paz, we watered our specimens for the last time, packed them well in a Styrofoam box, checked with customs, then off they went. From that moment on, they were in the hands of destiny.

As for the large gecko I found early in the journey, I did not ship it until after returning to the States. After Baja, our travels took us to mainland Mexico, from where we slowly meandered to the Big Bend country of west Texas. I shipped the gecko from El Paso and before turning the box over to the airlines made certain the flight wouldn't leave before dark and that the shipping box remained in an air-conditioned room until the very last minute. The gecko arrived at the Academy in great shape. I knew that Robert Murphy, an expert in terrestrial geckos, would be pleased to see the animal. He, of all people, would be able to tell me if, in fact, I had found something new.

After several weeks of intensive research, he had the answer. Not only was it a new species, but it was so outstandingly different anatomically, it warranted being placed in its own genus. I am indeed honored that it was named Switak's barefoot gecko, *Anarbylus switaki*. The name *Anarbylus* (treated as a masculine noun) stems from the Greek "without shoes," and refers to the lack of transverse lamellae on the ventral surface of digits. It wasn't long, however, that taxonomists, using a rather complex method of revision, but not necessarily agreeing with each other, decided to eliminate the genus *Anarbylus* altogether and place the gecko into the already existing genus of *Coleonyx*. Judging by the weight of the criteria used for said revision, I'm surprised the gecko survived at all.

Since that eventful night in mid-June of 1974, quite a number of switaki have been collected in both Baja California Sur and Baja California Norte, and in the Anaza-Borrego Desert of the U.S. (Imperial and San Diego counties). In 1988, Grismer and Ottley described a new subspecies from San Marcos Island in the Gulf of California, just offshore from Santa Rosalia. Appropriately it is known as the San Marcos barefoot gecko, *Coleonyx switaki gypsicolus*. Considering the great amount of color and pattern variations that exist within all populations of switaki, I wouldn't be at all surprised if sometime in the near future additional taxonomic revisions will take place.