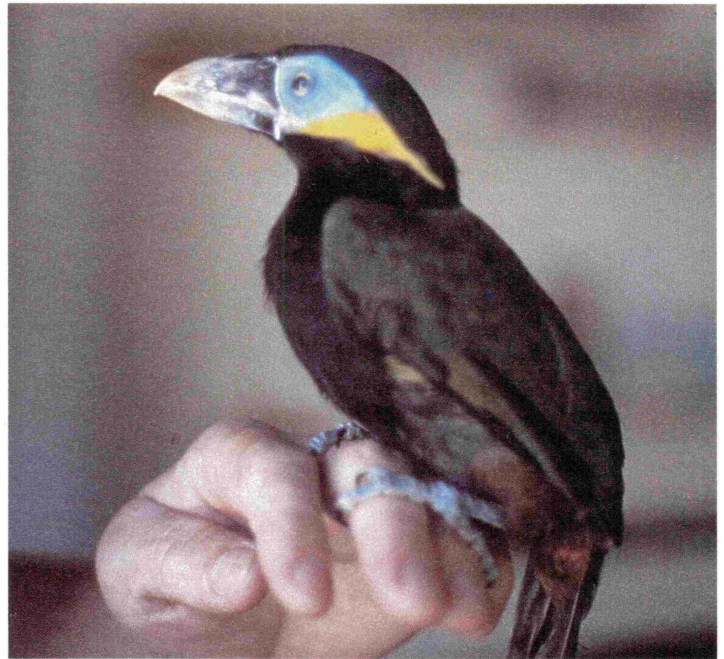
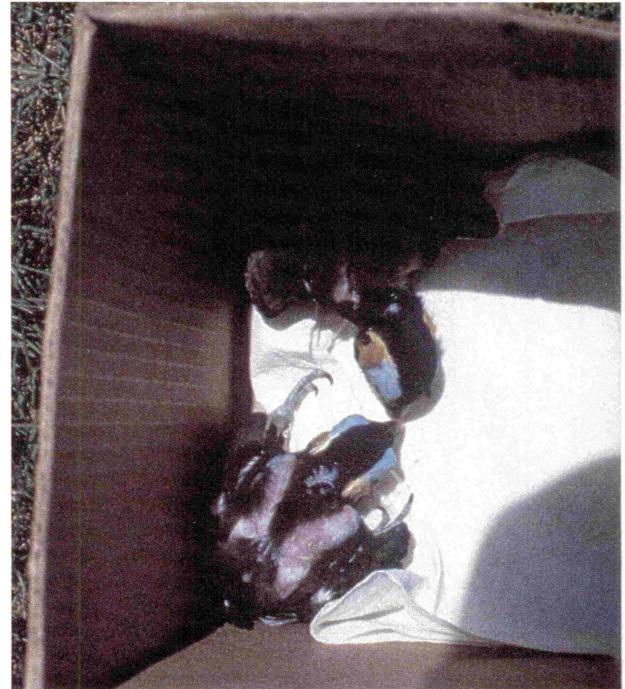


*The author holds two young spot bills raised in his aviaries.*



*A baby male spot bill about 56 days old.*

*Two 31 day old spot bills on the day they were removed from the nest for hand-feeding.*



*The breeding pair of spot billed toucanettes.*



*The female's head is just visible in the hole of her nest log.*



# The First Captive Breeding of the Spot-Billed Toucanet

by  
Jerry Jennings  
Woodland Hills, California

The spot billed toucanet (*Selenidera maculirostris*) is one of six similar appearing members of the lowland toucanet genus *Selenidera*, which replace each other geographically in Central and South American forests from northern Honduras to southern Brasil and northern Argentina. All six species exhibit heavy sexual dimorphism and, in contrast to the mountain toucanets, e.g., emeralds, crimson rumps, etc., are extremely colorful in appearance.

The sexes are similarly patterned, but differently colored. The male's head, neck, and breast are black, whereas the female's are brown. The back, wings, abdomen, rump and chestnut-tipped tail are olive green. A yellow collar separates the head from the back. The flanks and thighs are chestnut, the vent crimson. The bill, for which this toucanet is named, is greenish gray except for a series of vertically elongated spots on the sides of the upper mandible. Each bird's beak is so uniquely patterned as to make it individually identifiable.

The facial skin surrounding the eye of the spot bill is unusually extensive for a *Ramphastid* (a feature totally lacking in the mountain toucanets) and is a brilliant turquoise blue. To the rear of the facial skin begin brilliant yellow ear coverts that extend outward into tufts in the male. The eye itself is unique as the iris, yellow in color, is horizontally banded giving the appearance of an amphibian.

The spot bill is a lowland forest

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dweller ranging from southeastern Brazil to the northern part of Argentina. Little information is available on habitat and behavior, let alone the spot bill's status in the wild, an unfortunate though common story among toucans.

The history of spot bills in captivity is sketchy as well. Few specimens have been imported into the U.S. and most aviculturists have never seen this delightful creature. If the spot bill is rare, the other members of the genus are virtually nonexistent in zoological collections.

In early 1983 a small number of birds were imported from Argentina into California, Florida, and perhaps New York. Prior to that time an occasional bird appeared, usually a male, but no pairs were established, as far as it is known. With the exception of a hatching and early death of one chick at the London Zoo in 1917, no other known captive breeding attempts have occurred in the Western world.

In February 1983, I acquired two pairs of spot bills from a Florida importer. After a routine veterinary health examination and thirty day isolation, the birds were placed together in an unplanted 8' x 12' x 6' aviary, where they remained several months for evaluation. After the birds had settled down and adjusted to their new environment, one male and one female were observed constantly sitting together, while the other two remained aloof and apart. The interested parties were subsequently removed to a planted flight of identical dimensions, where they were housed alone.

The flight design consists of a shelter covered on the top, sides and back, occupying one third of the enclosure, the remainder of which is screened in half-inch hardware cloth and open to the elements year round. The plantings consist of honeysuckle vine, potato vine, and Brazilian pepper tree, all of which were overgrown through the top of the flight providing constant shade.

A nest log taken from a palm tree, measuring approximately three feet in length and nine inches in diameter, was hollowed out with a chain saw to an internal depth of approximately eighteen inches and a diameter of six inches. A two and a half inch entry hold was made in the side of the log approximately three inches below the top. The top of the log was covered with a one inch, cut to fit, pine lid. This nest was placed on a platform in one corner of the shelter as close to the ceiling as possible.

It was over a year after the spot bills were set up, before they paid any atten-

tion to their nest log. In May 1984 they were observed entering and leaving the nest over a period of several days and could frequently be heard digging inside. By the 14th of May it was apparent they had begun to incubate, both parents sharing the duties. Throughout the incubation period, and after the chicks hatched, the male continued to excavate and otherwise remodel the interior. On May 28th the first faint sounds of nestlings could be heard from within the log, which was not visually inspected, however, until June 18th out of fear that any disturbance would result in abandonment. All observations were made with the aid of a small mirror, inserted through the entrance hole, and a flashlight. The chicks were checked in this fashion every other day.

At approximately twenty-five days of age, head and throat feathers are sufficiently developed to make sexual determination possible. Since both chicks were males, they were removed for handfeeding in the expectation the parents would recycle and produce females, which they subsequently did. Since this nest was never disturbed from the onset of laying until the chicks were approximately three weeks of age, it is not known how many eggs were laid or how many chicks hatched.

Throughout the nesting cycle the parents were fed an ambitious diet of Purina Hi-Pro Dog Kibble (served dry), grapes, diced apple, banana, papaya; peas, corn, carrots, mealworms and a mouse daily. Fresh water was available at all times and the fruit was sprinkled with Vionate vitamins. It should be noted that the young receive their moisture entirely from the fruit and not from the drinking water available to the parents.

Once the young were removed from the nest, they were fed a diet of soaked Kitten Chow (Purina), diced papaya, grape, and banana. Feedings took place four times daily, beginning with a morning feeding at eight, a noon feeding, later afternoon, and ending with a night feeding at ten. Each time the babies were given as much as they would voluntarily take. A feeding would begin with vigorous begging, swallowing small chunks as fast as they could be fed, and would end with a swallowing bite every minute. Every morning, before the first feeding, the chicks were individually weighed on a gram scale to monitor their growth, and after the first feeding to monitor their food intake, which gradually increased over several weeks to a maximum of forty grams per feeding. When the spot

bills were pulled at thirty one days of age, they weighed approximately 120 grams, and when weaned approximately 170 grams. One bird consistently weighed 15-20 grams more than the other, possibly due to a later hatch date. The two young males were eating sporadically on their own at fifty days of age. They were completely independent by July 21st, and were removed to an outdoor aviary.

As had been hoped, the parents returned to the nest. The old log was replaced when the first clutch was removed, since the parents had excavated it to the very bottom. The new log was similar in diameter and depth of cavity, but was longer overall. On July 15th, the log was examined with a mirror, at which time four white eggs were observed. These eggs hatched July 29th. Although the onset of incubation of this clutch is not precisely known, the period lasted at least fourteen days and probably a couple days longer. The nest was not examined a second time until after my return from the AFA Convention in Orlando. At that time only one chick was in the nest. This chick was immediately removed for fear it might otherwise disappear. It was hand reared in the identical fashion as the first clutch. Fortunately it turned out to be a female, which is now paired up with a wild caught male on breeding loan from the Pittsburgh Aviary.

Spot bills are fairly nervous nesters and will often vacate the nest at the approaching sounds of footsteps during the incubation period. Once the chicks hatch, the parents are steadier. Often during hot weather, the parents will spend extended periods of time off the nest. This, however, does not appear to affect nesting success.

At sixty two days of age the spots on the young birds' beaks faintly take shape, and the eyeskin, which is grayish white at thirty-one days of age, has acquired its turquoise color. Recently imported spot bills are usually fairly excitable, but adjust to captivity readily. After a few weeks they become quite calm, making a very attractive aviary bird. They are hardy and easy to care for, though should be housed alone, as they can become pugnacious to other smaller birds, resulting in potential casualties.

Since so few spot bills have been imported, and probably few will be in the future, it is imperative they be given the prompt attention so vital to their establishment in captivity. To lose such a gem would be disheartening and irresponsible. ●