

HEROS BEANI: COMPLIMENTS OF THE SONORA DESERT MUSEUM

Written by Russell McAndrews

Sunday, 24 May 2015 10:20 - Last Updated Friday, 19 June 2015 15:30

While talking to some friends of mine in New Jersey, I found that there were a couple of cichlid species somewhat near Arizona in northern Mexico. *Heros minkleyi*, which occurs on the Atlantic slope in an isolate driver valley, is probably the more interesting of the two due to its apparent polymorphism. Unfortunately, the distance required to collect this fish is considerable.

The other, *Heros beani*, is a beautiful cichlid found in the Pacific lowlands. After nosing around a little further, it was brought to my attention that *H. beani* were on display at the Sonora Desert Museum outside Tucson. On my second trip to this wonderful living museum I found one

H. beani

female on display. Since I had no idea who the fish keeper was, I had made no previous arrangements to meet with him. Although, he was busy that day I was able to find out his name, Ken Wintin, and set up a future meeting via telephone. I was graciously received by Ken a week or so later and after introducing me to some of the staff we went off to a local diner for lunch. Over some first rate Mexican food, we talked fish (what else), and the task at hand. Aside from the female on display, it seemed there were two 350 gallon concrete vats which were in need of cleaning. I would estimate that one of the vats contained about 24 females, and the other approximately 18 males. The sexual segregation imposed by Ken was a very efficient, and yet very simple method of housing as many fish as possible, with as little aggression as possible in the limited quarters available.

The collection of specimens was comprised of several broods from several parents with one old male remaining from past generations. The inhabitants of each vat were temporarily transferred into rubber trash cans while the cement vats were drained and flushed. Tragically the patriarch went into shock and died despite two hours of nursing by Ken and myself. This was a large fish, about 15"TL with a basic shape very similar to *H. managuensis* or a few other gape predators. The protruding lower jaw, when opened creates a vacuum drawing in small, and not so small prey, whereupon it is held by quite an impressive set of teeth. The face and mouth are extremely fleshy and damage easily. In the case of this old male, the teeth were bright red, conical, and large (3/16"), but despite this, their characteristics were difficult to see when not actually handling the fish due to the enveloping fleshy gums. This mouth full of fangs is appropriate for grasping prey once it has been inhaled.

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After having assisted in the moving of the museum's stock, I want to pass on an observation of sexual dimorphism. The younger individuals all seem to have female coloration, by this I mean that the reticulated markings are regular and correspond to scale positions, each scale being black in the center while rimmed with gold. As the female matures, the reticulation remains regular and the contrast of her color scheme intensifies. The overall body color is a brassy gold with a large patch of black centered scales extending from below the eye to the caudal fin. Other markings include: a black spot occupying the forward 30% of the dorsal fin; and two black lines running across the face. The facial markings give the appearance of a mask and the contrast provided by these markings is attractive. In my opinion, the female is the prettier of the sexes even though less colorful. On the other hand, as the males mature, the reticulation spreads to cover the entire body. The scales gain size with the growth of the fish and almost seem to outgrow the lace pattern; the resulting pattern is no longer regular and no longer corresponds to the scales. With age, and presumably sexual maturity, the reticulated lace pattern becomes a very metallic copper color which is particularly bright on the head and back.

Of the individuals listed above, 3 pair were sent to an aquarium in Texas, and much to my glee, I was given custody of 5 pair. Some of you may have seen the largest pair at the '87 ACA Convention. They were entered in the show and donated to the Guy Jordan Endowment for auction, Don Danko has them now. One pair now resides in New Jersey at the home of one of my information sources Kevin Carr, and another pair is in Phoenix with Dane Johnson. Dane's pair spawned about five days after being brought home from Tucson but the eggs were infertile apparently due to an immature male. I had gone out of my way to pick the smallest male and a slightly larger female in order to avoid murder and to better suit my friends limited tank space. Nonetheless, the female was 6" and the male 5", a male of this size would seem to me to be mature, however, it may be that the male never matured because of its sexual segregation. Since the actual spawning went unobserved, what really happened will remain something of a mystery. It is known that a clutch of more than 200 eggs were laid, the male's face was torn up, and the female lost some scales off her caudal flanks. Ghastly as the male's face appeared, the damage healed rapidly and completely.

Through numerous conversations with Ken regarding the H. beani I was able to learn some background on the individuals released to me. It seems that the captive stock predated their present keeper and so there is some uncertainty as to their precise origin. Ken had bred the fish several times and over several generations with mixed results. He has managed to

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maintain a diverse gene pool, but many of his spawning efforts resulted in disaster. Even in the spacious quarters provided, females were murdered. Typically, the tanks used were 200-300 gallons of water basically lacking in hiding places for the female. If unresponsive to the male's attentions, the female would attempt to hide in cracks in the display tank's false backing. Sometimes Ken managed to rescue the beaten females, others weren't so lucky. Ken described an incident which I found unusual in which the male would take custody of one batch of fry as the second batch became free swimming, the female, in defense of the second brood would fight with the male. In turn the male would turn the tables, murdering the female and devouring the second brood.

I housed my animals in a small above-ground swimming pool under cover in my backyard. (Much to my wife's amazement). About 3 feet deep and 15 feet across, the pool afforded me enough room to snorkel with the group. One day while siphoning mulm from the bottom I was surprised and delighted to notice the mulm was moving, fleeing from the hose. I had babies!