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Feb. 1 - editorial copy
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**AFA Visits . . .**

**The Aviaries of Bill Bennett**
(Received Haven)
by Tom Marshall, Leesburg, Virginia

Where in the world would you expect to find the most successful flock of endangered Hyacinth Macaws? The Pantanal region of Brazil? Strongholds in Bolivia or Paraguay? Not so. A thriving flock of this magnificent species is located in southwestern Virginia, in a beautiful, rural setting just outside Christiansburg. Here not long ago I discovered aviculturist Bill Bennett, who specializes in Hyacinth Macaws exclusively. His devotion to a species has allowed him to realize a higher production from his birds than what could be predicted in nature.

Field biologists' studies indicate that only 15 to 30 percent of adult Hyacinths attempt to breed in any given year. In addition, not all breeding pairs of Hyacinth Macaws fledge young, and those that do almost never fledge more than one bird. Thus, a hypothetical wild flock of 100 mated pairs of breeding age macaws may only produce between 7 to 25 young per year, a less than successful reproductive rate, especially for an endangered species subject to the combined pressures of habitat destruction and illegal trade.

"Hyacinth Haven," with an average of 25 breeding pairs at any one time, produces more young than do 100 pairs of their counterparts in the wild. This is a very successful flock of Hyacinths, for not only does it produce a large number of offspring, but the captive young raised provide an alternative to wild-caught birds, thereby helping to reduce the pressure on wild populations and thus improving the species' chance for survival.

I had the good fortune recently to visit with Bill, and his daughter and son-in-law, Ellen and Clay Vest, to see firsthand this superior flock in a brand new aviary designed just for Hyacinths. The aviary building, measuring 120 feet by 20 feet, is an all metal construction manufactured by Wedgcor of Nebraska, which is kept warm and cool by a 5-ton air conditioning and heat pump unit. Two huge, eight-speed fans, each which can run in unison or separately, depending on the job, are located at ends of the aviary building.

There are 38 flights in the building and 38 paired flights outdoors, giving the birds access to a more natural environment during the months from April to October. The inside and the outside connecting flights are constructed of heavy 4-gauge wire

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*Bill Bennett's property before the construction of the aviary building that is now situated above the house and the man-made lake.*
which is purchased in 16 x 5 foot panels. To build one of the two paired flights, Bill and Clay take two 16-foot panels and bend each in two places at approximately five feet from each end. They then place the bent panels so that they intersect at 90 degree angles, forming a cube with dimensions just over five feet. The panels are attached to each other with 1-1/4 inch rings manufactured by the Valentine Company and then hung from metal hooks on the sides of the building. This construction approach acknowledges the difficulty in working with such heavy wire and takes advantage of the way in which this material is being marketed. The aviaries are hung high in the building and are seldom entered, thus giving the macaws a genuine sense of security. If the need arises to enter the flights, a trap door in the bottom facilitates any intervention or repair that is required.

The inside flights are separated by metal dividers so that adjacent pairs cannot see each other, although they can see the birds across the aisle. Thirty gallon cans are used as nest boxes and, like the feeding stations, are located in the front of the flights. Bill fastens wooden fronts to the nest box entrances to simulate more natural conditions and to satisfy the macaws' need to gnaw. A large slab of wood is bolted to the inside of the nesting chamber for the same purpose. Above the nest boxes on top of the flights are metal roofs designed to block light from the interior of the nest box.

Bill has not added a misting system in the building since the birds will have access to the outdoors and, most importantly, because of his concern that misting will cause the vaporization of bacteria and viruses normally confined to the floor. It is his feeling that creating humid conditions in an enclosed area is tantamount to creating trouble for birds.

Bill has abandoned the use of high-priced Vita-Lites in favor of full-spectrum fluorescent lights which are easier to obtain. Lighting engineers with whom he has consulted indicate that the less expensive lights are just as good or better for his purposes. All the lights are enclosed by a sealed globe to prevent dust from cutting down on the intensity of the lights, which apparently can be a serious problem. The lights in the aviary are kept on 16 hours per day as Hyacinths are opportunistic breeders.
and will breed anytime during the year. Next fall, however, Bill reports that he will experiment with reducing the number of hours the lights are on inside the building when the birds are no longer given access to the outside because of the onset of colder weather.

Feeding Hyacinth Macaws doesn’t appear to present any particular problems. The hand feeding formula and the supplements for the breeding pairs rely on Purina high protein monkey chow as a base. Bill prefers Purina because bags are dated, with the recommendation that contents be consumed within 90 days. Hyacinth Haven stores almost all food products in a walk-in cold storage to prevent vitamin loss and spoilage. Stainless steel feeding dishes are kept scrupulously clean by a large, commercial dishwasher with a 3-1/4 cycle Clorox rinse. Palm nuts, Brazil nuts, coconuts, and large California striped sunflower seeds are fed in the late afternoon, whereas the morning meal consists of fresh corn-on-the-cob, apples, oranges, bananas and sweet potatoes, which are about 80 percent cooked in the microwave. To this is added a dusting of Super-preen, two or three times per week.

The most controversial aspect of Bill’s operation at Hyacinth Haven is that he insists on incubating all eggs that are laid and hand raising all babies. Bill feels that it is unfair to Hyacinths to have to 10 to 12 fertile eggs and just raise one chick and/or to produce parent-raised chicks that cannot be handled. These are typical results of those breeders who advocate minimum interference during the breeding cycle. It is not unusual for Hyacinths to copeulate in the nest box after eggs have been laid or babies have pipped, thus risking the success of a clutch. Hyacinths may also only be willing to feed one chick as is reported to be true in the wild. Financially, these birds are worth $8,000 to $8,500 as healthy pets and potential breeders, and that is a reasonable consideration as well.

“Remember,” he states, “the more birds captive raised lessens the demand for a wild-caught, smuggled bird.”

In incubating the eggs, Bill sets up several incubators at the same temperature but at different humidity readings. Humidity is the main controlling factor in weight loss. (Higher humidity equals lower weight loss and lower humidity equals higher weight loss). Experiments have shown that eggs which lose approximately 16 percent of new laid weight over the incubation period provide the most ideal conditions for hatching, and produce the most vibrant chicks. Eggs are weighed daily to 1/100th of a gram. Bill moves eggs from one incubator to the other to incubate at a lower temperature but at different humidity readings. Humidity is the main controlling factor in weight loss. (Higher humidity equals lower weight loss and lower humidity equals higher weight loss). Experiments have shown that eggs which lose approximately 16 percent of new laid weight over the incubation period provide the most ideal conditions for hatching, and produce the most vibrant chicks. Eggs are weighed daily to 1/100th of a gram. Bill moves eggs from one incubator to the other to insure the desired 16 percent weight loss and he employs an additional incubator at a lower temperature when the eggs are close to hatching.

**EXAMPLE:**

(Fresh laid Hyacinth egg) X (desired daily weight loss)

(32 grams X 16% daily weight loss)

OR

32 grams X 16% 
28 days
Daily weight loss target would be .183 grams in this example.

I learned a great deal on my visit to Hyacinth Haven. The level of enthusiasm and knowledge Bill brings to his avocation of aviculture is impressive. His dedication to Hyacinths has prompted him to explore formally the creation of a trust for the propagation of the species. The trust would be set up like a corporation with the goal of producing Hyacinths as pets and breeders. Certain provisos would prohibit the trustees from operating in a fashion that would substantially alter the way Hyacinth Haven operates today. For instance, no more than three breeding pairs could be sold off in a one-year period, and any adult pairs sold would have to be replaced by juvenile pairs, which could not be sold until after five years. Thus the numbers of potential breeders would remain fairly constant. Bill will serve as the first trustee, and if his daughter is amenable to the conditions of the trust and wishes to serve, he will appoint her to serve as the second trustee. She, in turn, will appoint the third trustee, in all probability her husband. The trustees may wish to run the operation themselves and receive compensation or hire an experienced aviculturist and other personnel. The creation of this trust, which includes house, property and birds, can insure a comfortable living for the people involved but, most importantly, will guarantee the continued protection of a most successful flock of endangered Hyacinth Macaws and will capitalize on the expertise of a most successful aviculturist.

* A pair of Hyacinths waiting for the completion of the feeding rounds.