

Collecting and Breeding the Jamaican Red-billed Streamertail

Trochilus polytmus

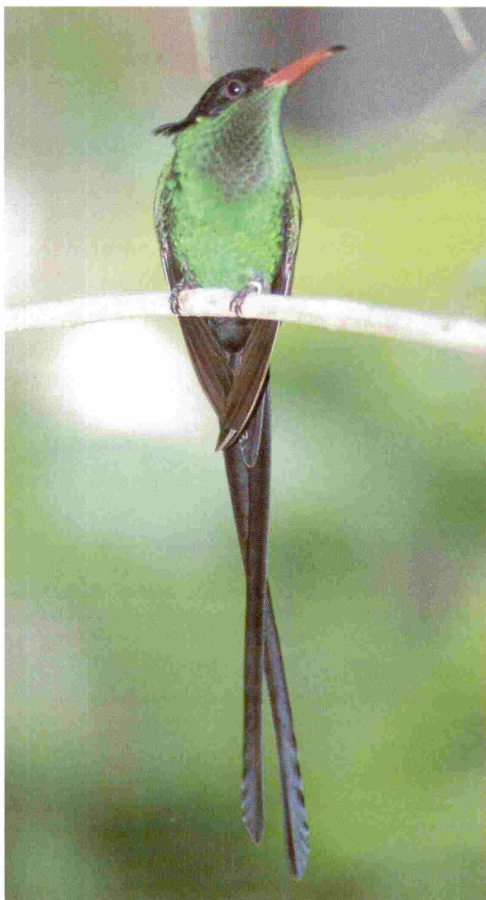
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Jamaica tops all of the Caribbean Islands by boasting more endemic bird species than any other – 30. In this group of endemics are three hummingbirds, the Red-billed Streamertail *Trochilus polytmus*, the Black-billed Streamertail *Trochilus scitulus*, and the Jamaican Mango *Anthracoceros mango*.

The Red-billed Streamertail is known by hummingbird fanciers throughout the world for its two long tail feathers (steamers). In Jamaica the locals call this bird the “Doctor Bird,” when perched it will usually cross its streamers, thus resembling a doctor’s stethoscope. This is their national bird and it is adorned throughout the Island from airplanes to street vendors.

The basic differences between the Red-billed and Black-billed are the colors of their bills, sexual and aggressive behavior, song, and range. The Red-billed obviously has a red bill but it is tipped in black. The amount of black on the tip of the bill varies according to the age of the bird – the older the bird the less black on the bill. This species is found throughout Jamaica except the far eastern part of the Island separated by the Blue Mountains and the John Crow Mountains. This is the only area where both species can be found together. Hybrids have been recorded in this area.

After years of studies and permit requests, we were granted permission to export the Red-billed species in 1999. In



Photos by Greg Stoppelmoor



Adult male Jamaican Red-billed Streamertail on the left, female on the right

August of the same year we collected these birds with the help of Dr. Michael Hailey, Director of the Discovery Bay Marine Lab along with students of the University of the West Indies. Dr. Hailey had been conducting migratory studies on the species for many years and knew the exact location to collect the birds.

Except for getting up hours before the sun came up it was quite easy collecting the streamertails. Mist nets were set up about a half-hour prior to the sun rising in areas where the birds were found in large numbers. Most of the sites selected were rich with Bahinia trees, also called “the poor man’s orchid.” This is the favorite nectar source for the streamertails. It was also interesting to observe that the males had their territories staked out in these trees. The females would come in from other surrounding areas to feed from the nectar source, usually a heavily forested area near the Bahinias.

Captured specimens were looked over thoroughly once removed from the mist nets. We looked for any distinct bill, feet, or feather problems or abnormalities

along with looking for any banded birds. Weights and measurements were recorded on any banded birds collected then they were released. Birds were also released that would not accept the nectar feeder after fifteen minutes. We were very conscious about keeping the number of losses

to a minimum and also did our best to distinguish the age of the birds in order to keep only the youngest. Age can be determined fairly accurately on this species a number of ways. One way is by the color of the bill and the amount of black on it, both in the male and female. Immature males also do not possess the long streamers and the tail feathers are much duller in color.

Once collected, the birds were transported to the marine lab where we had cages arranged individually for each bird. We held the birds in the cages changing the feeders twice daily. We were hoping that keeping the birds in these individual cages, limiting their flight expenditures and having an endless supply of food would enable them to put weight on prior to export. Our theory ended up proving right and each bird gained on average nearly $\frac{3}{4}$ a gram. This is a lot considering they only weigh 4.5 to 6 grams.

After nearly two weeks of collecting and caring for these birds it was time to pack up and bring them to their "New World." What I thought was going to be a relatively easy day turned out to be rather exhausting. The marine lab is located on the north shore between Montego Bay and Ocho Rios and is only a little over an hour from the airport in Montego Bay. But since the flight goes through Kingston and the birds would have to be transferred to another flight we decided to drive the two hours to Kingston and stop every thirty minutes to check the birds. We figured this would be a little less stressful on the birds and would eliminate any chance of the birds being left sitting out in the open heat on a runway.

A few hours prior to leaving for Kingston we decided to call the airline to make sure the flight was on schedule and to re-confirm the space for the birds. We could not get through to the airline so we decided to take the chance and leave for Kingston a little earlier than planned. It was a good thing we left early since the trip took us four hours, twice as long as we had expected. We had stopped about every thirty minutes to check the birds and found most of them were not feeding so we had to hand feed them. This can take a little time feeding twenty birds. Luckily, there were four of us and the feedings went fast. We finally arrived in Kingston and proceeded to the American Airlines Cargo Facility. There was commotion all over. We were stopped at the cargo entrance and were told we could not go any further.

Overnight the AA Cargo Building had burned to the ground. I thought to myself that this could not be happening; we were already tired from the unexpectedly long drive from the other side of the Island and I could not even think about driving back with the birds. Since I was flying on the same flight as the birds we decided to go the ticket counter and see what the alternative was. It ended up that they let me check the birds as baggage but the stress didn't subside. Because of the fire the flight was delayed for another two hours.

After I explained to them the need for the birds to be placed in a stress free area until they are loaded on the plane they were kind enough to provide me with a chair and let me sit behind the ticketing office with the birds. One thing they also let me do, which I am sure would not happen these days, is they let me load the birds onto the plane after all the bags were loaded. After this I was the last on the plane and they literally closed the door behind me.

The two and a half hour flight to New York was pretty smooth and once on the ground I was greeted by my customs broker, US Fish and Wildlife, a USDA officer and Vet, and a US Customs agent. I felt like a diplomat. The birds were already unloaded and waiting for me in an inspection room along with the above group. A few of the birds were in torpor and I was allowed to warm the birds up and feed them prior to sending them on the 2-hour drive to the quarantine station. I was allowed to ride in the vehicle with my Customs Agent to the quarantine facility. Once at the USDA Quarantine Facility I checked the birds one last time to ensure they were all OK. They were and I would not see them in Florida until at least 28 Days later.

After they completed the standard USDA quarantine requirements, the birds were shipped to us in Florida. All but one male arrived safely. A necropsy was performed on the deceased male but results were inconclusive. Stress was suspected as the cause of death since no viruses or bacteria were found. Other than the birds going through a molt they appeared to be in good condition. We checked the weight of the birds prior to releasing them in our quarantine facility and found that each bird had returned to its original weight, having lost the weight gained prior to export.

Since there were no losses in the USDA quarantine we decided to quarantine the birds the same way. All the males were together in one flight and the females were housed in a separate flight. The flights were approximately 16'x4'x8'. The flights were fitted with flowering nectar plants and small trees for perching. Two feeders per bird of Nectar-Plus were provided along with a large supply of fruit flies. Feeders were changed twice daily and fruit flies were attracted by placing rotting bananas on a plate on the floor of the flights.

We were very pleased with the outcome of our thirty-day quarantine period since we had only one casualty. This was a female and her bill had been damaged, probably during one of the transports. The birds had also gained the weight back that they had lost in the previous month. We observed no aggressions towards one another housed in this manner, and feel there are two reasons for this, one being the birds had passed their breeding season and the other being the birds did not have the space to establish and defend territories.

Continued on page 8

After a successful quarantine at our facility we started introducing some of the birds into their new aviary. Five males and five females were placed into a highly planted aviary that measured 49' long x 30' wide by 16' high. Feeders, fruit flies, and nectar plants were available for the birds to dine on. Flowing water fountains were available for the birds to bathe in along with twice daily misting of the plants. Nesting material consisting of spider webbing, cotton, string, dryer lint and moss was also made available.

The ten birds remained in this aviary together for eight months. We had little aggression toward one another but had no breeding in their first season together. We were also discouraged because most of the birds would perch low in well hidden areas in the foliage and it would take hours every day to count them. With the consultation of Karen Krebs of the Arizona Sonora Desert Museum, we came to the conclusion that there were too many birds of this species in the same enclosure. We decided to remove most of the birds and take them off exhibit. We left one male and two females in this aviary and placed one male and two females into another aviary. The other aviary is approximately the same size and makeup with the only difference being it is only ten feet high.

Within weeks the birds had established their territories and were visible most of the day. Three months after these changes three females started building nests, one in the original aviary and two in the second. In this first successful breeding season there were numerous nests built as well as egg laying but there were problems with nest construction and location.

Nests would fall apart or be disturbed by visitors. Even though we always took measures to block off areas and put up blinds to keep the nests as secluded as possible, nests would randomly be abandoned. All in all we had three out of five fledglings from two bloodlines survive, two females and one male. These captive raised birds are now 14 months old and are housed in an aviary behind the scenes. One of the new females has been attempting to build a nest for over two months. We are confident she will get the technique of nest building licked and soon be producing her own offspring.

To date, these are the longest living captive born *Trochilus polytmus* in the United States. In 1956 the Cleveland Zoo bred this species in their facility and had one fledgling that lived for three months.

Now in their second full breeding season we currently have one female with two babies, one sitting on two eggs and another in the construction process. We are hoping to double the number off offspring this season.

We will be collecting more species from the wild this year but are working towards establishing a captive population, thus reducing the need for future wild collections.

It must be noted that these birds are on loan to us from the government of Jamaica under the authorization of CITES and the National Environmental Protection Agency (NEPA) in Jamaica. The project is contracted until 2005 but with continued success will undoubtedly be renewed.

Weight, Streamer, and Wing Averages:

(Information compiled from 10 male and 8 female *Trochilus polytmus*)

Average weight at time of collection:

Male: 5.02 grams
Female: 4.05 grams

Average weight prior to export from Jamaica:

Male: 5.43 grams
Female: 4.26 grams

Average weight after USDA Quarantine:

Male: 4.99 grams
Female: 4.19 grams

Average weight after Butterfly World Quarantine:

Male: 5.50 grams
Female: 4.64 grams

Male average wing length

Right: 62.28 mm Left: 61.08

Female average wing length

Right: 55.29 mm Left: 56.73

On average, when in good feather, the Right Streamer tends to be 4.73 mm longer than the Left Streamer.

Acknowledgments

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References:

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2001	White cell support system	Better disease resistance through an excellent immune response	World
	Live yeast probiotics	Improved digestive disease resistance	World
	Powdered essential fatty acids	Very healthy skin	World
2000	Herbal respiratory support	Fewer breathing problems	World
1999	Probiotic/prebiotic blends	Improved probiotic (hence digestive) performance	World?
	Protein enhanced in-water supplement	Obesity control for fussy eaters	World
1998	Fibre enrichment	Improved performance in cases of severe digestive compromise	World?
1997	Non-smelly highly bio-available trace minerals	Improved fitness, fertility and disease resistance	World
	Herbal prebiotics / immune support / anti-microbials	Improved gut function, better disease resistance	UK
	Bio-available sulphur	Improved fertility, feathering and disease resistance	World
1996	High levels of amino acids	Faster, stress free molts, obesity control	World?
	Liquid calcium/magnesium/VitD3 (Europe)	Larger clutch sizes, improved hatchability, fitter hens, more clutches, improved behaviour, less stress	Europe, USA
1994	Long lasting, non-dehydrating energy system for sick birds	Quicker recovery from illness	Europe, USA

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