North American Bird Bander

Volume 30 | Issue 4 Article 16

2005

"New" bonnet-style trap

Bill Taylor

Table 1. Black-chinned Hummingbird Captures at Brown Ranch, Christoval, Tom Green Co., TX					
Year	Total Banded	Young	Adults	Y:A	% Young
1997	240	30	210	1:7.0	12.5%
1998	355	83	272	1:3.3	23.4%
1999	447	111	336	1:3.0	24.8%
2000	358	129	227	1:1.8	36.2%
2001	293	107	186	1:1.7	36.5%
2002	384	147	237	1:1.6	38.3%
2003	517	114	4-3	1:3.5	22.1%
2004	369	110	250	1:2.4	20.8%
2005	504	163	341	1:2.1	32.3%

Table 2. Daily Sugar Consumption for Selected weeks at Brown Ranch, Christoval, Tom Green, Co. TX					
Year	Lbs/Wk of 3 Jun	Lbs/Wk of 17 Jun	Lbs/Wk of 1 Jul	Lbs/Wk of 15 Jul	Total for Year
1996	4.2	5.0	3.8	4.2	550
1997	4.5	5.6	10.0	2.9	685
1998	6.3	7.1	4.2	4.2	684
1999	5.0	5.0	5.0	6.3	660
2000	6.3	3.1	4.2	4.2	685
2001	4.2	5.0	5.0	6.3	680
2002	2.1	1.7	5.0	5.0	540
2003	4.8	6.3	6.3	6.3	725
2004	7.1	9.4	14.3	5.4	825
2005	6.3	6.3	6.3	5.6	>650

Cutting and forming hummingbird bands. BOB SARGENT, *Trussville, AL.*

The process of making hummingbird bands is generally done by following a brief set of instructions that comes with the equipment when purchased. In view of the fact many banders learn to make bands with little or no assistance from others, this discussion will touch on techniques that have been used successfully by the author. Techniques to be discussed and demonstrated will be slicing the bands in strips of the proper width, finishing and properly smoothing the edges of newly cut band strips, cutting bands to proper lengths and the storage of finished bands for easy use. A discussion of brand names and sources of equipment will also be discussed. The negative implications of poorly made and improperly sized bands will be high on the list of topics. Negative experiences encountered by the author will be demonstrated.

Russell trap installation. BRENT ORTEGO, *Victoria, TX.*

Procedure for erecting and managing a Russell Trap will be demonstrated.

"New" bonnet-style trap. BILL TAYLOR, *Tucson, AZ.*

BONNET TRAP—Brief Set-up and Operational Notes: (1) Hang from suitable limb or bracket and anchor docking lines to tent peg, rebar or suitable stationary ground fixture. Level of trap is adjusted by pulling on docking lines, beginning by shaking out attachment ring which will more or less find its own center. (2) Running lines with small ring should be drawn through guide ring on hanger and attached to operator's release line (not supplied). (3) Fill and place feeder base on Velcro attach points of the Base ring. Best results are when feeder base is identical in design to that on the feeders to which the birds are accustomed. A third eyebolt can be affixed to the attach plate inside the trap for hanging a feeder when the trap is tied and left open for any period of time when not in use. This allows birds to become accustomed to feeding from the trap; a dummy trap can be a useful alternative for extended periods of time. (4) Draw up curtain with skirt attached to a gap of approximately 4" - 5". Release when bird is centered in trap and/or feeding comfortably. The responsiveness of the trap can be enhanced by attaching approximately 6" - 8" of elastic with paper clips or hooks from the weight eyelets to the Base ring. The trap can be operated manually as above, or with a remote release; this has been found useful for conditions where crowds might interfere with trap release lines; and for intermittent or selective trapping. Significant safety and operational features of Bonnet Trap include the following: (1) NO wires inside curtain for birds to contact or with which to become entangled. (2) NO hanging feeders to encumber or exacerbate capture (optional). (3) Soft skirt with weight stops minimizing bird strikes on attempted escapes. Also reduces gap when operator's arm is inserted to retrieve bird. (4) Weights EXTERNAL to trap chamber; reduced to 3/4 oz. (20 g) each. (5) Component construction simplifies repairs or replacement of parts and curtain. (6) Interchange-

able skirts allows for a variety of colors and fabrics, and to meet existing adverse conditions, e.g, 3.6 g rattan stiffener threaded through one skirt for wind resistance.

Tail photo technique. TOM WOODS and SHERI WILLIAMSON

No abstract

Physical and chemical properties of various sugar water ratios for hummingbird feeders. ROSS DAWKINS, *Dept. Chem. & Biochem., Angelo State University, San Angelo, TX.*

Most people using sugar water for hummingbird feeders use a recipe ratio involving volumes of water (solvent) to volumes of dry granular sugar (solute) or they measure the final volume of the solution instead of added solvent. In either case it is not easy to compare one recipe to another as far as energy content or total amount of sugar. We have made up a series of sugar (sucrose, Imperial Pure Cane granulated) solutions using the percentage volumes of water and dry sugar. We have then measured the density, molarity, molality, calories/gal and freezing point of various ratios. Density (or the similar specific gravity) is measured easily in the field. The molarity (M) is a normalized method of measuring the moles of solute per volume of final solution. This makes comparisons between solutions easy. The molarity (*m*) measured the moles of solute per kilogram of solvent. This helps calculate colligative properties such as freezing point or boiling point of any solution. From the molarity, the number of calories/gal can be calculated. This can be converted to calories or to joules easily. The results are in tabular form and interpolated into graphic form.

Table of Characteristics

V% water/ V% sugar	Molarity M	Molarity m	Freezing Point (F)	Density g/mL	kCal/gal
33/67 (1:2)	2.31	4.97	15	1.256	11.96
50/50 (1)	1.58	2.485	24	1.174	8.18
60/40 (1.5:1)	1.20	1.66	26	1.132	6.21
67/33 (2:1)	0.965	1.24	28	1.107	5.00
75/25 (3:1)	0.695	0.828	29	1.077	3.60
80/20 (4:1)	0.543	0.621	30	1.058	2.81

Sugar preferences of Black-chinned Hummingbirds at a mega feeding station in Texas. ROSS DAWKINS, *Dept. Chem. & Biochem., Angelo State Univ., San Angelo, TX.*

At Dan Brown's ranch near Christoval, TX, approximately 3,000 Black-chinned Hummingbirds regularly feed during the breeding season. Dan feeds more than 800 lb of cane sugar (sucrose) during the year. At this location, we tested various sources and types of sugar and different concentrations of sugar to see if preferences existed. The sugars tested were sucrose from beet sugar (Albertson's Granulated Sugar), cane sugar (Imperial Pure Cane Sugar), fructose (Eastman Organic Chemicals), glucose (Reagent Grade), and high fructose corn syrup (Betty Crocker Corn Syrup). One cane sugar solution was 80.0 ml of deionized water (80.0 g) added to 20 ml of dry, granular sugar (17.7 g sucrose) and this was designated as CS4. A second cane sugar solution was 90.0 ml of deionized water (90.0 g) added to 30 ml (26.5 g sucrose) of cane sugar. This was designated as CS3. The other solutions were like CS4 with 80.0 ml of deionized water added to 17.7 g. of sugar. These solutions were BS (beet sugar), G (glucose), F (fructose), and K (Karo-type high fructose corn syrup). 70.0 ml of each solution were placed in clear, new Perky Pet single port feeders with a bee guard. A six feeder array was assembled in oak (*Quercus fusiformis*) shade in a 2x3 arrangement. Feeders were 2 m above the ground and 1.5 - 2 m apart. A second six feeder array was set up under the back eaves of Dan's house in a linear arrangement. Again, feeders were 1.5 - 2 m apart. After each sample period, volumes were measured and feeders switched with higher and lower usage feeders exchanged to zero out positional variables. In addition, sampling periods were varied as to time of day from 8 Jul - 11 Jul. Dan's normal complement of about 20 two-liter feeders were also available the whole time. Results were tallied by place of finish in each time period. The places of finish were then averaged over the four-day period. The results were fructose (average place 1.7) slightly preferred to beet sugar (average place 1.8). Next were Cane Sugar 3 (CS 3) (average place 2.8) followed by Cane Sugar 4 (CS 4) (average place 3.8). Last were glucose (average place 5) and high fructose corn syrup (average place 5.9). A second method of comparison was by total volume of solution