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Modified Hall Trap

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News, Notes, Comments

Modified Hall Trap

I have read in the history of hummingbird banding by Ellie Womack that the drop side trap was developed and perfected by "Mike Hall, the husband of bander Janet Hall, who used PVC tubing as the frame and curtain falling outside the base" (Womack, 1996, Hummingbird Hotline No 38).

My basic training in hummingbird banding at Princeton was done with Hall Traps. At least two of these traps had been hand crafted by members of the Princeton banding group. The traps worked just perfectly except that -- at odd times -- the weighted middle hoop pinned a hummingbird that was making its fast exit. It was suggest that if that middle hoop did not meet the bottom hoop with a crash, there would be no fear of harming hummingbirds.

I had been given the step-by-step plans for the fabrication of my own Hall Trap along with the wooden circular top from which hang all the strings that manage raising and lowering the fabric sides.

In fabricating my own Hall Trap, the hula hoops from which the Princeton traps were construction were no longer available at the Dollar Store. I resorted to 21 mm outside diameter (OD; 3/4 inch) plastic water line from a local hardware store. By using the formula for the circumference of a circle,

the length of pipe for the desired trap diameter can be calculated. I added a 7 mm OD (1/4 inch) plastic pipe below the weighted middle hoop to meet the bottom hoop gently. I purchased wedding veil material for the fabric sides and 6.35 mm (1/4 inch) netting (used to keep birds off fruit bearing shrubs) for the top and bottom of the trap (and which also served as a way for wasps to escape the trap). The veil material is doubled, deep enough with the 7 mm diameter pipe in the fold to meet the bottom hoop when hung from the top hoop. The



middle weighted hoop is attached to the doubled veil material on the inside of the trap thus avoiding tangling concerns by a trapped hummingbird. Four lines are used to raise and lower the weighted hoop. A second set of lines suspend the bottom hoop from the top hoop.

Instead of using sliding weights on the strings used to make the middle hoop drop, I filled the middle hoop with very fine beach sand. Holes are drilled into the top hoop with brass furls inserted to permit the backing line to slide easily as it raises and rapidly lowers the walls of the trap. I used a fly fishing line that is strong, light and abrasion resistant as the backing line to hang the middle hoop.

The hoops were strung with the backing line, veil material cut to desired depth and length, netting cut to size for the top and bottom hoops, the whole assembly was put together using a craft hot glue gun. Actual construction can be done in a day.

In summary, the modifications are (1) 7 mm OD diameter hoop inserted between the weighted and bottom hoops; (2) sand used as weighting material in the middle hoop; (3) backing line for fly fishing for lines; and (4) small mesh netting for the top and bottom of the trap (which I had first seen as part of Cathie Hutcheson's passive banding traps).

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A Note on Hummingbird Banding in Saskatchewan

I have banded Ruby-throated Hummingbirds at several sites in the boreal and deciduous forest regions of southern Saskatchewan: 27 birds were caught at 5 sites in 2014, 129 birds caught at 7 sites in 2015 and 225 birds caught at 10 sites in 2016. Hummingbirds were captured using a modified Hall Trap (the modification is a fourth light-weight hoop below the weighted loop that brings down the trap sides when the drop string is released).

No birds have been recaptured from my 2014 banding, most likely because I did not revisit those banding sites. All 2015 banding sites were new; I banded 127 hummingbirds and had 3 repeats. In 2016, I captured 225 hummingbirds which including 14 repeats and 2 returns from 2015; additionally, recaptures of 5 hummingbirds banded at neighboring sites within 233 m of their original capture. While the individuals hosting my trapping efforts at the two Martins Lake sites were of the opinion that "their hummingbirds" did not go to the other banding site, I found that hummingbirds did visit both sites, which are located 232.5 m (763 ft, as measured using Google Earth), as documented by the capture of 1 female and 2 males at the other Martins Lake site than originally banded. Recaptures also showed movement between Pike

Lake Provincial Park-B and Pike Lake Provincial Park-A but the separating distance is just one cabin lot.

Banding in 2014 occurred between 7 Aug and 31 Aug with 3 AHY M, 9 AHY F, 3 HY M, and 12 HY F banded. In 2015, banding occurred between 26 May and 27 Aug, with 39 AHY M, 43 AHY F, 28 HY M, and 19 HY F banded. In 2016, banding occurred between 1 Jun and 25 Aug with 57 AHY M, 107 AHY F, 37 HY M, and 24 HY F banded. In 2014, 55.5 % of captures were of HY birds. This high percentage of HY birds might be accounted for by the short (24 days) period of banding very late in the breeding season. The proportion of HY birds was 36.4% in 2015 and 27.1% in 2016. The low proportion in 2016 may be partly accounted for by an extremely windy 24 hr period in late June 2016 at many banding sites. At the Chelan banding site, I had banded 16 AHY birds (6 males and 10 females) on 24 Jun, before the storm, and only five AHY birds were captured after the storm including three birds captured on my last banding day at Chelan.

While the above summary reports on only three years of banding results, it shows great annual variation in proportion of HY birds captured. Of the 375 hummingbirds banded between 2014 and