House Wren Intern Summary

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The Beaverhill Bird Observatory keeps record of the nesting success of House Wrens in man-made nest boxes throughout the Beaverhill Natural Area. There are 4 House Wren nest box grids labeled A-D, the boxes are arranged in a 5x5 square in grids A, C, and D; grid B is arranged in a 3x8 manner. These grids are located in mature stands of aspen and poplar forest. There are 99 House Wren boxes in total throughout the natural area. The nest boxes in all 4 grids were checked weekly from May 23 to July 21, 2020. On each visit I recorded the extent of construction for each nest, the number of eggs, the number and ages of any nestlings, and the presence of any adult birds nearby. The House Wren boxes are also frequently used by Tree Swallows, swallow nests were also monitored according to the same protocol.

51 of the 99 nest boxes in the House Wren grids were occupied during the survey period. 35 of those boxes were occupied by House Wrens; the remaining 16 nest boxes were occupied by Tree Swallows. House Wrens nesting in the grids had an average clutch size of 6.44 eggs; Tree Swallows in the same grids had an average clutch size of 4.62 eggs. The average number of nestlings in House Wren nests was 5.08; the average number of Tree Swallow nestlings in the grids was 3.83. Of the 35 House Wren nests constructed, 11 had young that successfully fledged, giving what appears to be a success rate of 31%. Five of the 16 Tree Swallow nests present in the grids had young successfully fledge, giving a success rate of 31% as well.

Both species had a quite low success rate in the House Wren grids, likely due to separate explanations. The House Wren grids are located in forest habitat that is not especially suitable for Tree Swallows, which typically nest closer to water bodies and open fields. This combined with the additional competition for resources from House Wrens likely contributed to the failure of swallow nests in the grids. The Tree Swallows that occupied the House Wren grids also did so later in the nesting season than swallows elsewhere such as in the road grid, again suggesting that the habitat in the grids is less favorable for swallows. The low success rate among House Wren nests in the grids seems to be skewed by a large number of nests that were abandoned early in the breeding season. During May, June and July the natural area received heavy rains; 17% cooler and 51% wetter. The temperature in May was particularly cold with the average daily low only 0.9C, barely above zero many mornings. The relatively cold wet weather likely caused many nest failures and smaller brood sizes. Among nests that actually reached the egg stage of nesting, the success rate was much higher at 69%. House Wrens build multiple nests before selecting a nesting site, so the 69% value is likely more representative of the actual nesting success of House Wrens in the grids.

Table 1. Comparison of average rainfall and temperature to 2020 data in Edmonton, Alberta

		May	June	July	Mean Temp/Total Precip
Temperature -mean	2020	11.5	15.5	18.2	15.1
	Average	18	21	24	21
Precipitation	2020	92.9	105.5	121.2	319.6
	Average	40.7	77.5	93.8	212.0