
Appendix 2

**THE RELATIONSHIPS BETWEEN LENGTHS OF CAPTURED BOWHEAD WHALES,
YEAR OF CAPTURE AND VILLAGE**

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Results presented in SC/39/PS22 indicated there had been a significant increase in the annual average length of landed bowhead whales over the period 1973–87. Two issues were raised in the sub-committee regarding these results. First it was suggested that the increase was due primarily to captures made by a single village (Wainwright); verification of this suggestion was requested. Second, the sub-committee questioned whether the trend had continued beyond the 1981 recommendation that the catch select for smaller whales. This Appendix provides information on these two matters.

Rather than analysing annual mean lengths, this analysis was carried out using lengths recorded from the 216 whales landed during the period 1973–86. To test for the influence of Wainwright we regressed length on both year and

village, with two groups defined: Wainwright and "Others". Overall, there was a significant increase in the length of landed whales ($p = 0.002$). The regression coefficient for village was large (4.4, $P(t) < 0.001$). The coefficient for year was small, but still significantly different from zero (0.13, $P(t) < 0.01$).

Lastly, repeating the regression of annual means weighted by the inverse of the variances (as in SC/39/PS22) but using 1981–6 data only, there is no significant trend in length of landed whales ($P = 0.45$). We conclude from these findings that the increase over the entire time period was due predominantly to Wainwright landings. Also, even for this village, there has been no trend in length of landed bowheads since 1981.
