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Growth estimates for
Grand Bank cod, 1963 and 1965

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Von Bertalanffy growth curves were fitted by the Allen (1966) method to length-at-age data derived from 253 cod taken by lined otter trawl from May 1 to 3, 1963, and from 1209 fish similarly taken from May 7 to 16, 1965. The parameters of the curves and the standard error for each were:

	<u>1963</u>	<u>1965</u>
L_{∞}	125	157
standard error	5	4
K	.128	.089
standard error	.011	.004
t_0	.58	.32
standard error	.12	.05

At the 1% level, the curve for 1965 has a higher L_{∞} , and a slightly lower K than that for 1963. The t_0 values are similar.

May et al. (1965) derived the equation $l_t = 130 \left(\frac{-0.12(t-1.03)}{1-e} \right)$

for Grand Bank cod. Their curve was based on cod taken in the April-September period of 1960-62. The ages used in constructing this curve were one-half year above those read from the otoliths. No adjustment was made to the ages read from the otoliths used for the present curves. The present curves therefore show maximum values for length-at-age (Fig. 1). The 1963 and 1960-62 curves are very similar. The difference in t_0 is almost entirely accounted for by the adjustment of 0.5 made in the ages used to construct the 1960-62 curve.

The data for 1963 and 1965 were combined to allow an estimate of the growth rate over that period. The resulting equation was $l_t = 152$

$$\left(\frac{-0.09(t-0.34)}{1-e} \right)$$

References

- Allen, K.R. 1966. A method of fitting growth curves of the von Bertalanffy type to observed data. *J. Fish. Res. Bd. Canada*, 23: 163-179.
- May, A.W., A.T. Pinhorn, R. Wells and A.M. Fleming. 1965. Cod growth and temperature in the Newfoundland area. *Int. Comm. NW Atlantic Fish.*, Spec. Publ. No. 6, pp. 545-555.

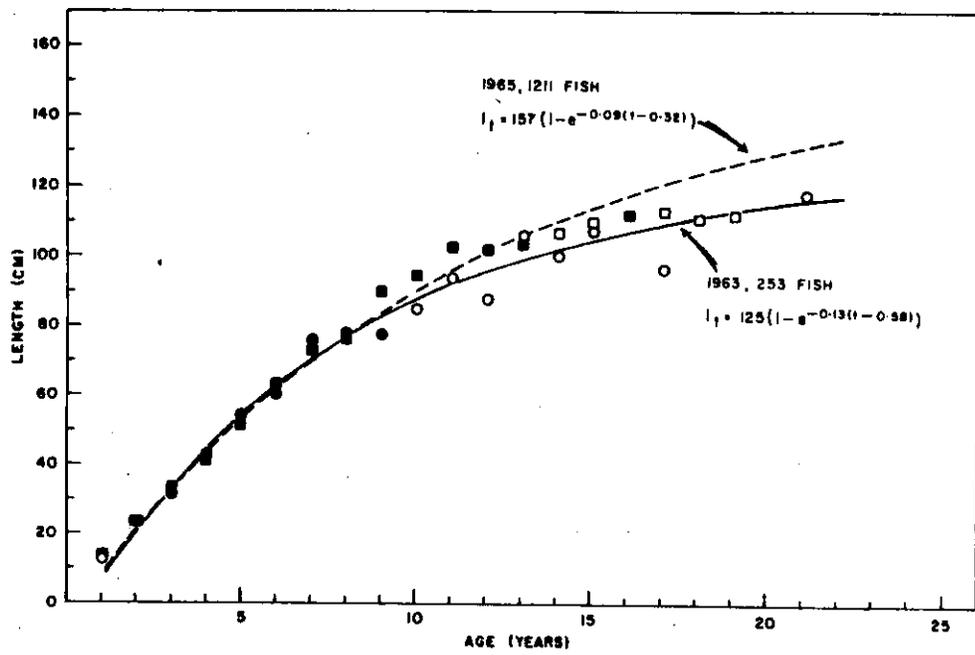


Fig. 1. Average length at age for 3NO cod. The 1963 and 1965 averages are represented by circles and squares respectively. Blacked in symbols represent averages based on more than 10 fish.

