



APPENDIX 4.1: GROWTH

Growth models adopted by the SCRS for major species

Spp.	Area/Sex	Parameters	Reference	n	L range	Method
ALB	North and South Atlantic Sexes combined	$L_t = 124.74(1 - e^{-0.23(t+0.9892)})$ (used as default growth curve in the North)	Bard (1981)	352	46-113	Spines
ALB	North Atlantic Sexes combined	$L_t = 122.80(1 - e^{-0.217t})$ (used to compute catch-at-age) ages=8; $\bar{\sigma} = 3.593$; Ratio $\sigma = 1.391$	Anon. (1996)			MULTIFAN (size-freq. analysis)
ALB	South Atlantic Sexes combined	$L_t = 142.28(1 - e^{-0.145(t+0.674)})$	Lee and Yeh (1993)	353	85-117	Spines
ALB	South Atlantic Sexes combined	$L_t = 147.5(1 - e^{-0.126(t+1.89)})$	Lee and Yeh (2007)	344 125	51-130 81-117	Spines Vertebra
ALB	Mediterranean	$L_t = 94.7(1 - e^{-0.258(t+1.354)})$	Megalofonou (2000)	1136	57-92	Spines
YFT	Atlantic Sexes combined	$L_t = 37.8 + 8.93t + (137.0 - 8.93t)(1 - e^{-0.808t})^{7.49}$	Gascuel <i>et al.</i> (1992)	?	?	?
BET	All Atlantic Sexes combined	$L_t = 217.3(1 - e^{-0.18(t+0.709)})$	Hallier <i>et al.</i> (2005)	625 tags 255 otoliths	37-124 tags) 29-190 (otoliths)	Otoliths and Tagging
SKJ	Equatorial Sexes combined	$L_t = 80.0(1 - e^{-0.322t})$	Bard and Antoine (1986)	341	40-65	Tagging

SKJ	Cape Verde - Senegal Sexes combined	$L_t = 97.258(1 - e^{-0.251t})$	Hallier and Gaertner (2005)	222	40-65	Tagging; Meta- analysis
SKJ	West Atlantic Caribbean Sexes combined	$L_t = 94.9(1 - e^{-0.340t})$	Pagavino and Gaertner (1995)	?	38-96	MULTIFAN (size-freq. analysis)
SKJ	West Atlantic South-Brazil Sexes combined	$L_t = 87.078(1 - e^{-0.22(t+2.071)})$	Vilela and Castello (1991)	?	?	Spines
BFT	East Atlantic and Mediterranean Sexes combined	$L_t = 318.85(1 - e^{-0.093(t+0.97)})$	Cort (1991)	192	172-302	Spines
BFT	West Atlantic Sexes combined	$L_t = 382.0(1 - e^{-0.079(t+0.707)})$	Turner and Restrepo (1994)	903	50-300	Tagging
BUM	Atlantic	$L_t = 113.506 e^{-7.731 e^{-0.039t}}$ (time units in days)	Prince <i>et al.</i> (1991)	24	1-100	Otoliths
BUM	Atlantic Adults > 110 days	$L_t = 210.45(1 - e^{-1.533(t+0.1505)})$	Prince <i>et al.</i> (1991)	95	100-212	Otoliths
WHM	Atlantic	N/A				
SAI	Atlantic	N/A				
SWO	North Atlantic Sexes combined	$DWT_t = 305.56 e^{-4.6235 e^{-0.30582t}}$ (DWT = dressed weight in lbs)	Anon. (1989)	85	7-360 lbs	Tagging
SWO	North Atlantic Sexes combined	$L_t = \left[464.54^{3.2678} - (464.54^{3.2678} - 0.0001^{3.2678}) e^{-0.0023(3.2678)t} \right]^{\frac{1}{3.2678}}$	Arocha <i>et al.</i> (2003)	4209	63-262	Spines
SWO	North Atlantic Males	$L_t = \left[300.0^{3.921} - (300.0^{3.921} - 0.001^{3.2678}) e^{-0.00465(3.921)t} \right]^{\frac{1}{3.921}}$	Arocha <i>et al.</i> (2003)	1817	63-246	Spines
SWO	North Atlantic Females	$L_t = \left[375.49^{2.976} - (375.49^{2.976} - 0.0001^{2.976}) e^{-0.00734(2.976)t} \right]^{\frac{1}{2.976}}$	Arocha <i>et al.</i> (2003)	2392	74-262	Spines
SWO	South Atlantic	N/A				
SWO	Mediterranean Sexes combined	$L_t = 238.58(1 - e^{-0.185(t+1.404)})$	Tserpes and Tsimenides (1995)	1100	62-210	Spines

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