Table 1: Descriptions and values of parameters used in a simulation study to evaluate the performance of alternative methods for estimating maternity parameters

Symbol	Description	School shark	Gummy shark
L_∞	Asymptotic length (mm)	1618.3	2019
K	Growth coefficient (yr^{-1})	0.16	0.086
t_0	Age at length 0 (yrs)	-1.2818	-3.01
CV_L	CV length at age	0.075	0.075
A_{Max}	Maximum age	54	16
L_{50}	50 % maturity (mm)	1349	1253
L_{95}	95 % maturity (mm)	1502	1472
L'_{50}	50 % maternity (mm)	1421	1263
L'_{95}	95 % maternity (mm)	1488	1405
α	Intercept (litter size)	-46	0.2804
β	Slope (litter size)	0.0491	0.00286
R	Sex ratio (M:F)	1	1
θ_1	Selectivity parameter 1	192	184.3
θ_2	Selectivity parameter 2	67595	29739
Mesh (low)	Gillnet mesh size (in)	7.05	6.08
Mesh (high)	Gillnet mesh size (in)	7.75	7.62

Table 2: Parameter estimates and model selection criteria for three parameter logistic functions fit to empirical data for western North Atlantic sandbar sharks

Method	$\hat{P_{\text{Max}}}$	$\hat{L'_{50}}$(cm)	$\hat{L'_{95}}$(cm)	AIC	Δ_i	w_i
3PLF - fixed	0.5*	161 (159 - 163)	176 (171 - 181)	833.91	0.00	71.63
3PLF - estimated	0.48 (0.392 - 0.611)	160 (157 - 164)	174 (167 - 183)	835.77	1.86	28.31
3PLF - fixed	0.333*	156 (155 - 158)	167 (163 - 171)	848.06	14.15	0.06