

Files S1 legend

Files S1 contains Table S1 to Table S3. Table S1: Results of MANOVAs performed with Sr:Ca and Ba:Ca ratios of fish collected in nurseries in order to evaluate the variations over time and the differences between nurseries. Table S2: Mean (\pm sd) and results of t-test performed on the Sr:Ca and Ba:Ca measured on the larval and juvenile life stages of YOY from Manguio in 2004 and 2008. Table S3: Seasonal mean (\pm sd) of the daily increment width of otolith from YOY collected in nurseries and results of comparisons between nurseries (ANOVAs and Fischer LSD).

Table S1: Results of MANOVAs performed with Sr:Ca and Ba:Ca ratios of fish collected in nurseries in order to evaluate the variations over time and the differences between nurseries.

	MANOVA F	Post-hoc elemental differences	
Inter-annual comparisons			
Thau	8.83*	2003=2004<2008	Sr:Ca, Ba:Ca
Mauguio	4.45*	2008<2004	Sr:Ca
Inter-sites comparisons			
2004	6.77**	Mauguio<Thau	Sr:Ca
2008	23.10***	Berre=Mauguio<Thau	Sr:Ca
		Mauguio=Thau<Berre	Ba:Ca

Table S2: Mean (\pm sd) and results of t-test performed on the Sr:Ca and Ba:Ca measured on the larval and juvenile life stages of YOY from Manguio in 2004 and 2008.

Life stage	2004	2008	N	t	
Larval life					
Sr:Ca	5.36 \pm 1.34	5.37 \pm 0.67	20	-0.02	ns
Ba:Ca	34.18 \pm 35.12	33.78 \pm 49.03	20	0.02	ns
Juvenile life					
Sr:Ca	4.78 \pm 0.42	4.33 \pm 0.21	20	3.03	p<0.05 2008<2004
Ba:Ca	9.88 \pm 2.23	10.40 \pm 4.07	20	-0.36	ns

Comments: the comparison of fish elemental signatures of YOY soles collected in Manguio in 2004 and 2008 showed no differences for the larval life stage and higher Sr:Ca ratios in 2004 for the juvenile stage. At the same time, mean values of Sr:Ca ratios during the juvenile life stage were distinctly lower (between 4.33 to 4.78) than those observed in fish from Thau (between 5.14 to 7.23). These results suggest a relative homogeneity of characteristics of the lagoons in this study despite some degree of interannual variability.

Table S3: Seasonal mean (\pm sd) of the daily increment width of otolith from YOY collected in nurseries and results of comparisons between nurseries (ANOVAs and Fischer LSD).

Season	Thau (T)	Mauguio (M)	Berre (B)	Rhône (R)	ANOVA F	Post-hoc
Winter	3.53 \pm 1.49	4.76 \pm 2.09	4.17 \pm 2.44	4.21 \pm 2.16	103.2***	T < R = B < M
Spring	3.69 \pm 1.57	5.13 \pm 2.24	3.69 \pm 2.12	4.76 \pm 1.89	483.5***	T = B < R < M
Summer	3.93 \pm 1.43	5.55 \pm 2.34	4.90 \pm 2.24	5.53 \pm 1.89	492.0***	T < B < R = M
Fall	4.14 \pm 1.63	5.95 \pm 3.14	7.19 \pm 2.88	-	598.0***	T < M < B