

Supplementary material

Otolith chemistry delineates the influence of natal origin, dispersal and flow on the population dynamics of golden perch (*Macquaria ambigua*) in a regulated river

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$^{87}\text{Sr}/^{86}\text{Sr}$ values for water samples collected in the Murray River and Darling River in 2011–2014

Table S1. Site location, dates, $^{87}\text{Sr}/^{86}\text{Sr}$, and internal precision (2 s.e.) for water samples collected from the Murray River and Darling River from December 2011 to December 2014

Site	Date	$^{87}\text{Sr}/^{86}\text{Sr}$	Internal Precision
Murray River at Lock 11	Dec 2011	0.716295	0.000017
	19 Nov. 2012	0.716434	0.000015
	12 Dec. 2012	0.715954	0.000010
	7 Jan. 2013	0.716214	0.000015
	23 Sept. 2013	0.717318	0.000015
	7 Oct. 2013	0.717334	0.000017
	4 Nov. 2013	0.717482	0.000017
	2 Dec. 2013	0.717399	0.000017
	6 Jan. 2014	0.716988	0.000018
	3 Feb. 2014	0.716424	0.000017
	17 Sept. 2014	0.716694	0.000020
	2 Oct. 2014	0.716482	0.000019
	8 Nov. 2014	0.716920	0.000019
	8 Dec. 2014	0.716872	0.000028
Darling River upstream of Wentworth	Dec. 2011	0.707434	0.000015
Darling River downstream Weir 32	6 Nov. 2012	0.707592	0.000022
	8 Oct. 2013	0.707509	0.000016
	4 Nov. 2013	0.707542	0.000022
	2 Dec. 2013	0.707486	0.000017
	3 Jan. 2014	0.707498	0.000016
	26 Feb. 2014	0.707458	0.000017
	9 Sept. 2014	0.707481	0.000019
	7 Oct. 2014	0.707486	0.000017
	3 Nov. 2014	0.707462	0.000014
	11 Dec. 2014	0.707490	0.000014
	Murray River at Lock 6	Dec. 2011	0.712042
18 Jan. 2012		0.708715	0.000017
6 Feb. 2012		0.708619	0.000016
23 Mar. 2012		0.710413	0.000016
10 Apr. 2012		0.711247	0.000016
13 Nov. 2012		0.709700	0.000015
11 Dec. 2012		0.710338	0.000014
16 Sept. 2014		0.713774	0.000024
14 Oct. 2014		0.713254	0.000026
11 Nov. 2014		0.714130	0.000020
9 Dec. 2014	0.714719	0.000019	

Individual otolith $^{87}\text{Sr}/^{86}\text{Sr}$ profiles

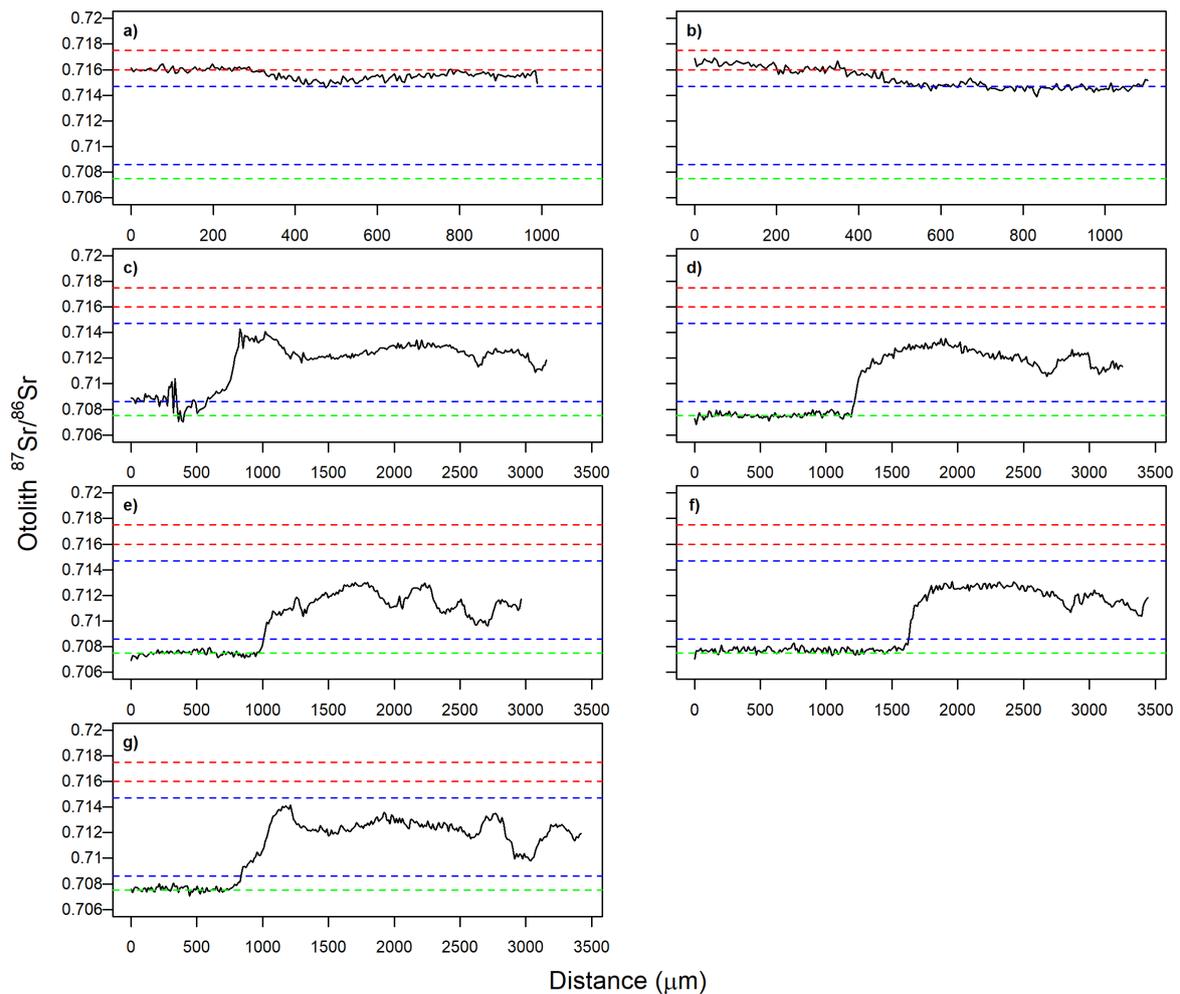


Fig. S1. Life history profiles based on transect analysis of $^{87}\text{Sr}/^{86}\text{Sr}$ from core to edge of otoliths from individual golden perch from the 2005–06 cohort at age 1+ (a and b) and the 2009–10 cohort at age 4+ (c–g). Green dashed lines indicate the $^{87}\text{Sr}/^{86}\text{Sr}$ of lower Darling River water (~ 0.7075 – 0.7076), blue dashed lines represent the range of $^{87}\text{Sr}/^{86}\text{Sr}$ in lower Murray River water (~ 0.7086 – 0.7147) and red dashed lines represent the range of $^{87}\text{Sr}/^{86}\text{Sr}$ in mid-Murray River water (Lock 11; ~ 0.7160 – 0.7175).

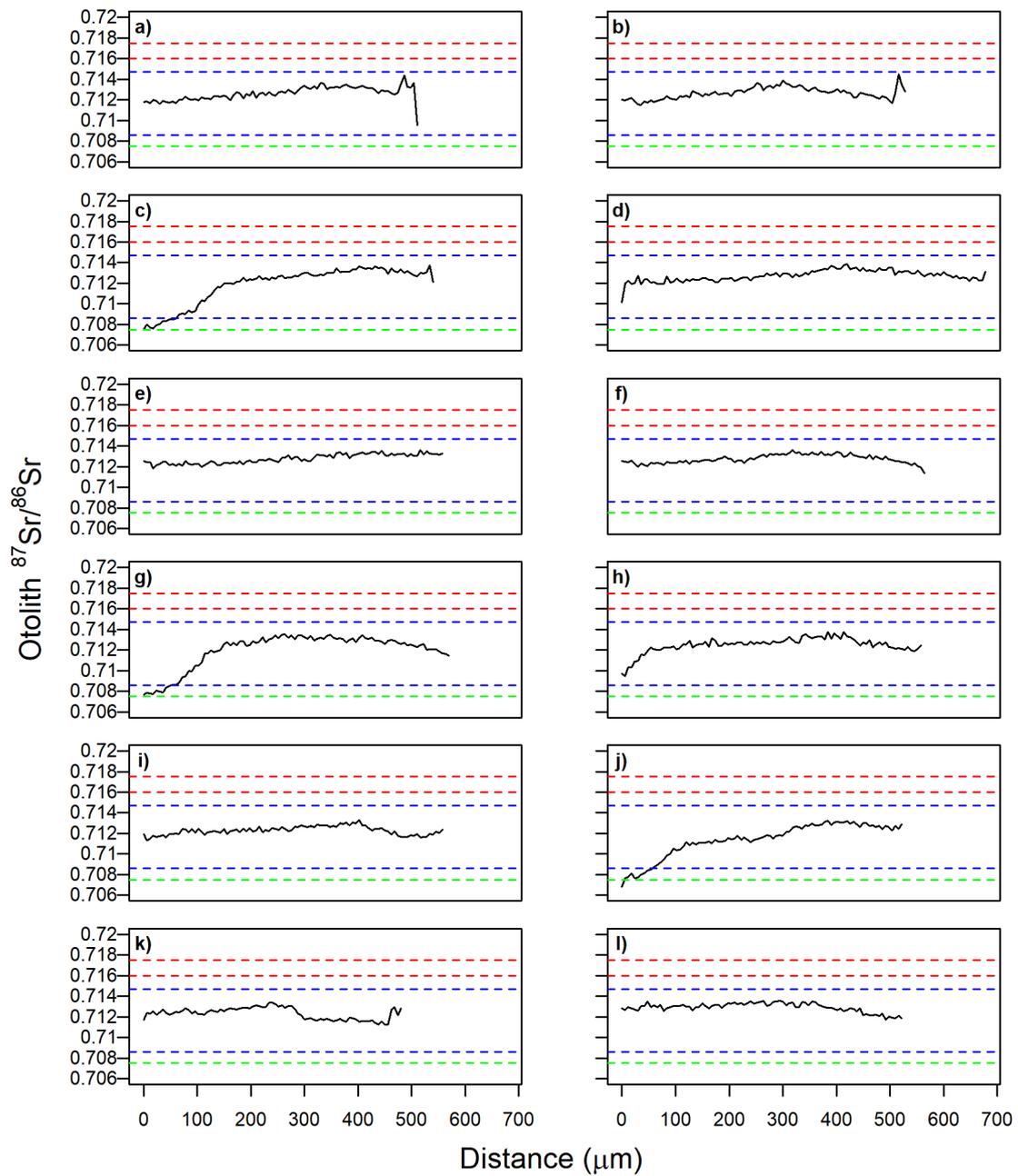


Fig. S2. Life history profiles based on transect analysis of $^{87}\text{Sr}/^{86}\text{Sr}$ from core to edge of otoliths from individual golden perch from the 2010–11 cohort at age 0+ (a–l). Green dashed lines indicate the $^{87}\text{Sr}/^{86}\text{Sr}$ of lower Darling River water (~ 0.7075 – 0.7076), blue dashed lines represent the range of $^{87}\text{Sr}/^{86}\text{Sr}$ in lower Murray River water (~ 0.7086 – 0.7147) and red dashed lines represent the range of $^{87}\text{Sr}/^{86}\text{Sr}$ in mid-Murray River water (Lock 11; ~ 0.7160 – 0.7175).