

Supplementary material

Contrasting natal origin and movement history informs recovery pathways for three lowland river species following a mass fish kill

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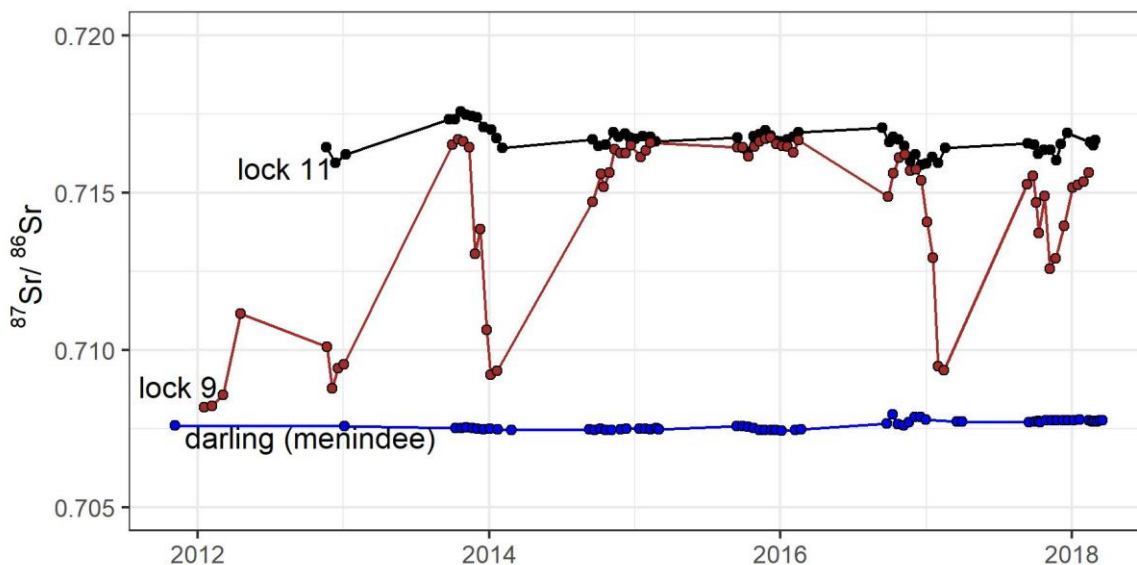


Fig. S1. Water $^{87}\text{Sr}/^{86}\text{Sr}$ collected over time at three specific locations, the lower Darling River (Menindee), lower Murray River after confluence with the Darling River (Lock 9), and mid-Murray River upstream of the confluence with the Darling River (Lock 11), demonstrating the temporal stability of water $^{87}\text{Sr}/^{86}\text{Sr}$ in the Darling River.

Table S1. The total number of hatchery-produced fingerling stocked into the lower Darling River

Note that silver perch are not stocked into the Darling River. Additional stocking of golden perch and Murray cod occurs in the nearby Murray River, although these stocking events are not captured here

Nominal birth year	Golden perch	Murray cod
1989		3570
1990		2000
1991		1500
2004		33332
2006	15000	24182
2007	20000	20000
2010	20000	94000
2018	6000	5000
Total	61000	183584

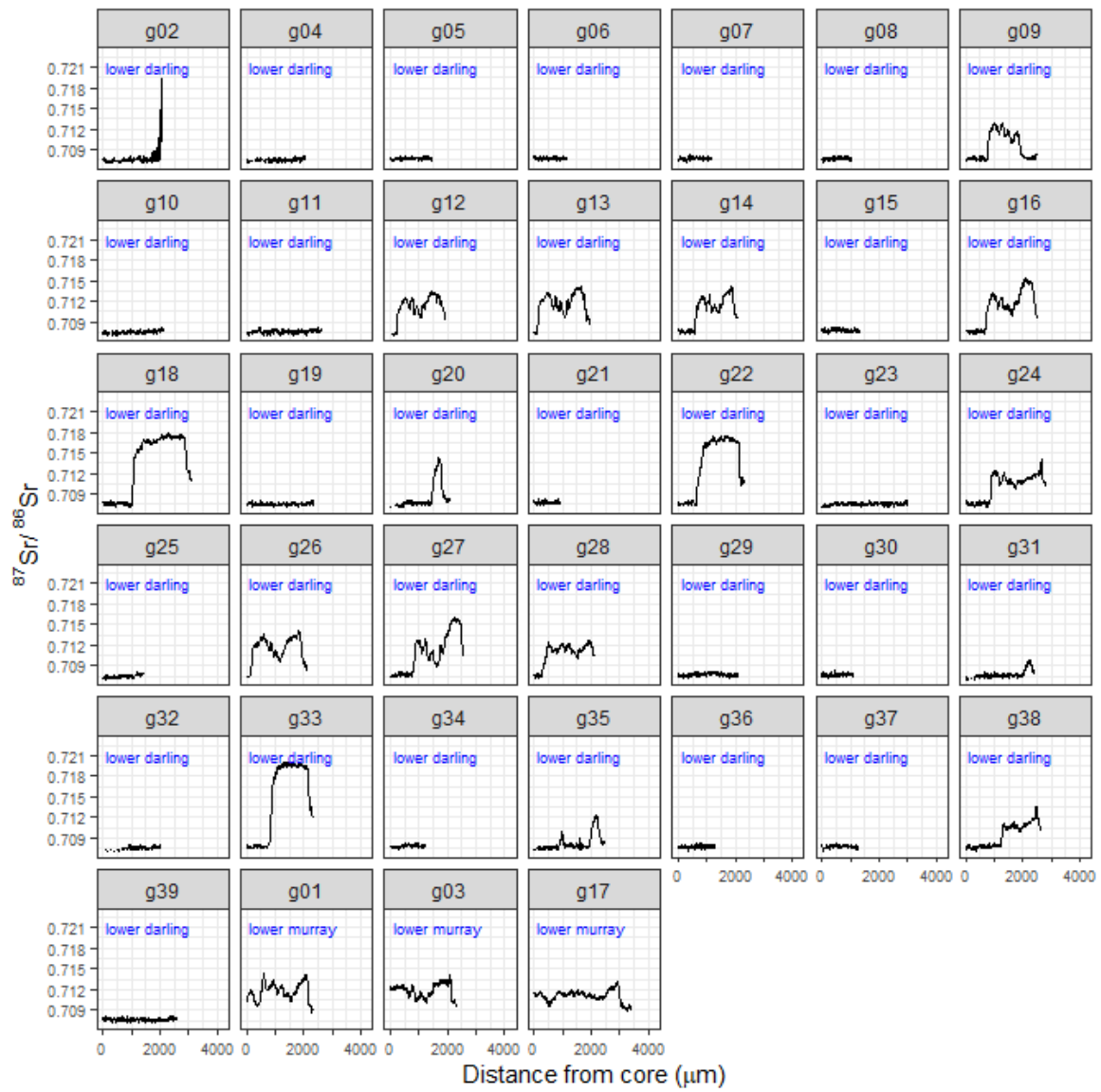


Fig. S2. Individual $^{87}\text{Sr}/^{86}\text{Sr}$ profiles for golden perch. Blue text indicates the predicted natal origin.

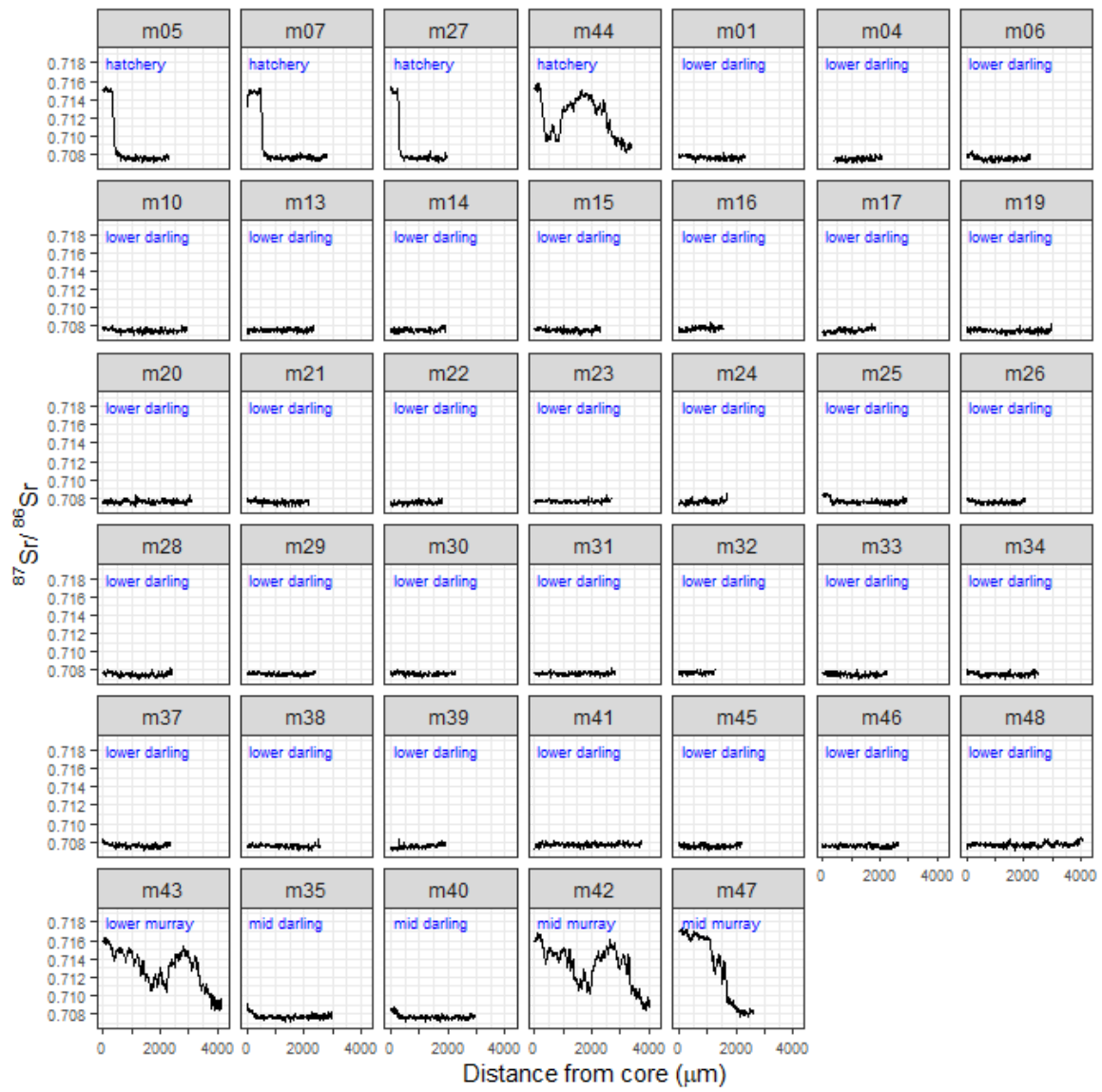


Fig. S3. Individual $^{87}\text{Sr}/^{86}\text{Sr}$ profiles for Murray cod. Blue text indicates the predicted natal origin.

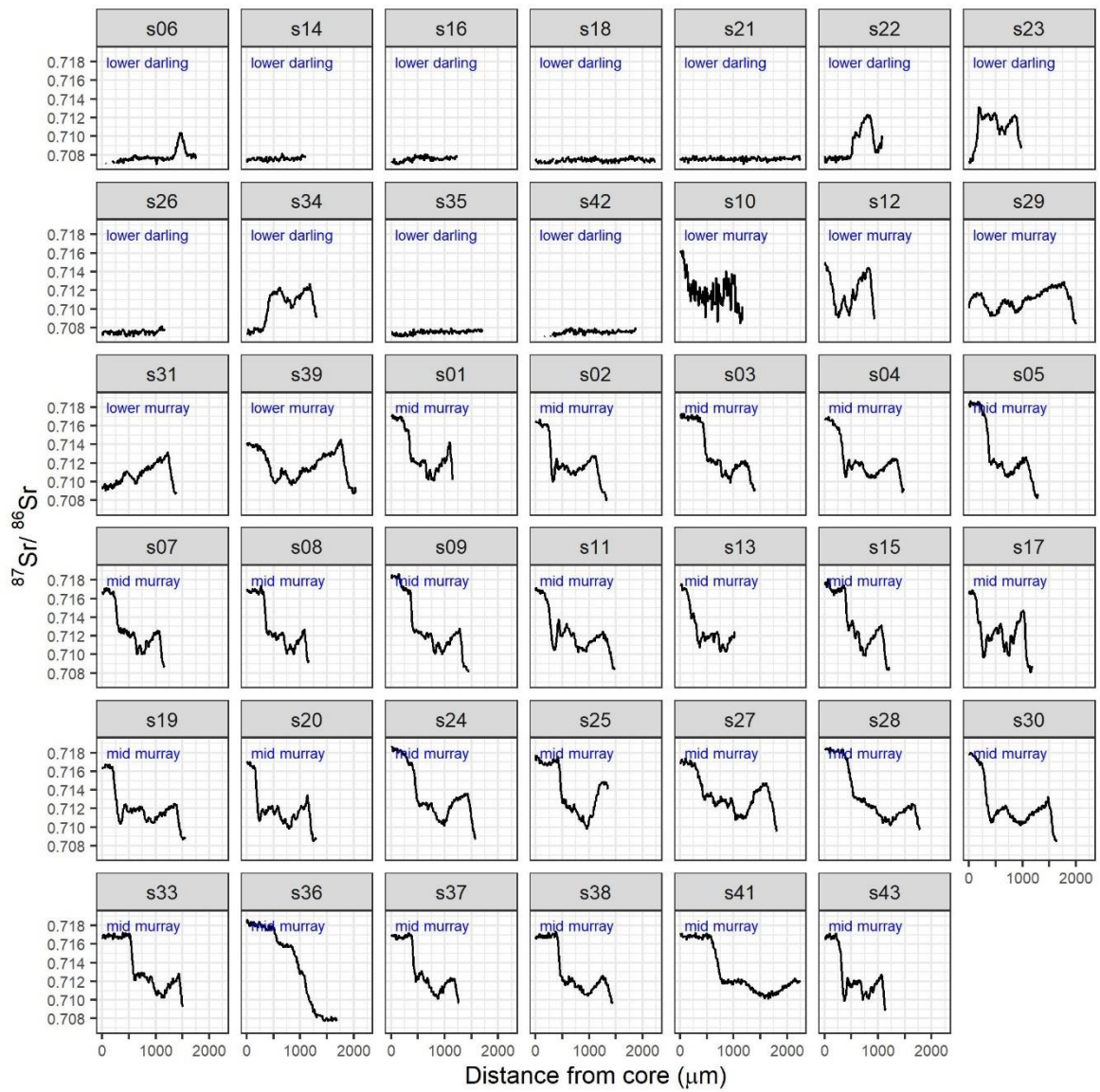


Fig. S4. Individual $^{87}\text{Sr}/^{86}\text{Sr}$ profiles for silver perch. Blue text indicates the predicted natal origin.