

Ecography

ECOG-03476

Resasco, J., Tuff, K. T., Cunningham, S. A., Melbourne, B. A., Hicks, A. L., Newsome, S. D. and Davies, K. F. 2017. Generalist predator's niche shifts reveal ecosystem changes in an experimentally fragmented landscape. – Ecography doi: [10.1111/ecog.03476](https://doi.org/10.1111/ecog.03476)

Supplementary material

Appendix 1:

Table A1: Sampled specimens of the skink *Lampropholis guichenoti* in relation to pitfall trap distribution.

Treatment	Replicate	Size	Sampled skinks	Pitfall traps
Fragments	1	Small	8	8
		Medium	8	8
		Large	8	8
	2	Small	8	8
		Medium	8	8
		Large	8	8
	3	Small	8	8
		Medium	8	8
		Large	8	8
	4	Small	8	8
		Medium	8	8
		Large	8	8
Continuous forest	5	Small	7	8
		Medium	6	8
		Large	8	8
	6	Small	8	8
		Medium	5	8
		Large	8	8
Matrix			44	44
Total			182	188

Table A2: $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, [C], [N], and [C]/[N] of the skink *Lampropholis guichenoti* liver and muscle tissue by experimental levels.

Muscle		Treatment			Fragment size			Edge category		Topography	
		Eucalypt	Fragments	Matrix	Small	Medium	Large	Interior	Edge	Slope	Drain
$\delta^{13}\text{C}$	mean	-24.4	-24.4	-25.2	-24.4	-24.5	-24.5	-24.3	24.6	-24.6	-24.6
	sd	0.5	0.6	0.6	0.6	0.7	0.7	0.5	0.7	0.7	0.7
$\delta^{15}\text{N}$	mean	4.9	5.6	6.5	5.6	5.6	5.6	5.4	5.8	5.6	5.7
	sd	0.4	0.7	0.9	0.6	0.7	0.7	0.5	0.7	0.8	1.0
[C]	mean	47.8	47.9	48.5	47.4	48.1	48.3	47.7	48.2	47.7	48.4
	sd	3.9	3.8	2.8	5.2	3.0	2.8	3.8	3.8	4.0	3.2
[N]	mean	14.4	14.4	14.4	14.3	14.5	14.5	14.4	14.5	14.3	14.5
	sd	1.3	1.2	1.0	1.6	1.0	1.0	1.2	1.2	1.3	1.0
[C]/[N]	mean	3.3	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.4
	sd	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Liver		Treatment			Fragment size			Edge category		Topography	
		Eucalypt	Fragments	Matrix	Small	Medium	Large	Interior	Edge	Slope	Drain
$\delta^{13}\text{C}$	mean	-24.3	-24.4	-25.2	-24.4	-24.5	-24.4	-24.3	24.6	-24.7	-24.5
	sd	0.5	0.6	0.6	0.5	0.5	0.6	0.4	0.6	0.6	0.7
$\delta^{15}\text{N}$	mean	5.8	6.5	7.1	6.7	6.3	6.6	6.4	6.7	6.4	6.5
	sd	0.7	0.9	0.7	0.7	1.1	0.8	0.6	1.1	1.0	0.8
[C]	mean	49.2	49.0	48.5	49.2	48.6	49.1	49.0	48.9	48.7	49.1
	sd	0.7	1.1	1.6	0.6	1.6	0.6	0.8	1.3	1.2	1.2
[N]	mean	14.4	14.0	13.8	14.1	13.8	14.2	14.1	13.9	13.9	14.2
	sd	0.5	1.1	0.7	0.7	1.6	0.7	0.7	1.4	1.1	0.6
[C]/[N]	mean	3.4	3.5	3.5	3.5	3.6	3.5	3.5	3.6	3.5	3.5
	sd	0.1	0.5	0.2	0.2	0.7	0.2	0.2	0.6	0.5	0.1

Table A3: $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, [C], [N], and [C]/[N] of common prey of the skink *Lampropholis guichenoti*. Samples were collected from pitfall traps collected from 2010-2011 spread across the six patches of the continuous eucalypt forest.

Prey taxon	Individuals per sample	Samples	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	[C]	[N]
amphipod (<i>Arcitalitrus sylvaticus</i>)	2.5 (± 0.83)	6	-24.5 (± 0.5)	0.9 (± 0.4)	38.4	9.2
ant (<i>Rhytidoponera</i> sp. 1)	5 (± 0)	6	-23.7 (± 0.5)	5.4 (± 0.7)	52.0	14.3
ant (<i>Aphaemogaster</i> sp. 1)	5 (± 0)	6	-24.3 (± 0.1)	4.4 (± 0.4)	50.4	14.1
spider (Family: Hexathelidae)	5 (± 0)	6	-24.6 (± 0.7)	5.5 (± 0.9)	48.7	13.3
spider (Family: Lycosidae)	1 (± 0)	6	-24.3 (± 0.4)	5.6 (± 0.7)	49.4	13.7

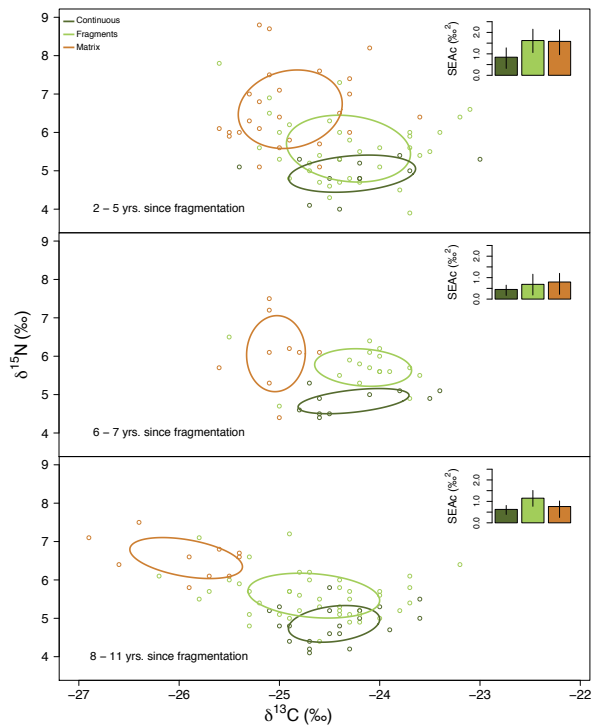


Figure A1: Bivariate plot of skink (*Lampropholis guichenoti*) muscle $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values over time. Top pane shows 2-5 years after forest clearing. Middle pane shows 6-7 years after forest clearing. Bottom pane shows 8-11 years after forest clearing. Time intervals were chosen to return at least 9 data points per treatment. Colors represent habitat treatments, dark green: continuous eucalypt forest, light green: eucalypt fragments, bronze: matrix. Thick solid lines represent sample size corrected standard ellipses (SEAc). Inset bar plot shows area in ‰^2 of SEAc for each treatment with bootstrapped 95% CIs. Continuous forest SEAc area was smaller than that of fragments ($P = 0.03$) and matrix ($P = 0.05$) in the first interval. Continuous forest

SEAc area was also smaller than that of fragments ($P = 0.01$) in the third interval. All other differences were not statistically significant ($P > 0.05$).