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Supplementary material

Too much hot air? Informing ethical trapping in hot, dry environments

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Fig. S1. Photographs of the 4 pit types (from left to right: Deep wide, Deep narrow, shallow narrow and bucket) and the shading treatments for surface traps (from left to right funnel trap with Glareshield, shadecloth and unshaded, and Elliott traps with pressed aluminium, unshaded and bettong excluder.

Table S1. Tukey multiple comparisons of means (95% family-wise confidence intervals for pit type and shading treatment at Secret Rocks and Roxby Downs on the hottest 4 days of the study

Pitfall trap types: Bucket = 20 L bucket, PitDW = deep wide pit (225 mm diameter, 600 mm deep), PitSN = shallow narrow pit ((150 mm diameter, 5400 mm deep), PitDN = deep narrow pit (150 mm diameter, 6040 mm deep). Trap treatments: NShd = no artificial shade, Snd = no artificial shade, plus 20 mm of sand in pit, SndRl = no artificial shade, plus 20 mm of sand in pit and cardboard toilet roll tube refuge, LShd = shaded by lid of pit/bucket elevated 200 mm on wire pins, no sand or refuge substrates, VShd = dappled shade from leafy vegetation, 20 mm sand and toilet roll refuge, LSndRl = shaded by lid of pit/bucket elevated 200 mm on wire pins, with 20 mm sand and cardboard toilet roll tube refuge.

Secret Rocks	**diff**	**lwr**	**upr**	**P adj**
PitDN-Bucket	-25.402	-30.639	-20.166	< 0.0001
PitDW-Bucket	-16.026833	-20.779	-11.275	< 0.0001
PitSN-Bucket	-19.488	-24.131	-14.846	< 0.0001
PitDW-PitDN	9.376	4.139	14.612	< 0.0001
PitSN-PitDN	5.914	0.777	11.051	0.017
PitSN-PitDW	-3.461	-8.104	1.181	0.214
LSndRl-LShd	-4.965	-11.617	1.686	0.260
NShd-LShd	8.660	2.264	15.057	0.002
Snd-LShd	1.813	-4.839	8.464	0.968
SndRl-LShd	0.083	-6.671	6.836	1.000
VShd-LShd	-2.111	-8.586	4.363	0.932
NShd-LSndRl	13.626	7.049	20.202	< 0.0001
Snd-LSndRl	6.778	-0.047	13.602	0.053
SndRl-LSndRl	5.048	-1.876	11.972	0.285
VShd-LSndRl	2.85386719	-3.798	9.506	0.811
Snd-NShd	-6.848	-13.424	-0.272	0.036
SndRl-NShd	-8.578	-15.257	-1.898	0.004
VShd-NShd	-10.772	-17.169	-4.375	< 0.0001
SndRl-Snd	-1.730	-8.654	5.194	0.978
VShd-Snd	-3.924	-10.576	2.728	0.524
VShd-SndRl	-2.194	-8.948	4.560	0.933
Roxby Downs				
PitDN-Bucket	-17.353	-21.930	-12.777	< 0.0001
PitDW-Bucket	-8.938	-13.514	-4.361	< 0.0001
PitSN-Bucket	-10.167	-14.743	-5.590	< 0.0001
PitDW-PitDN	8.416	3.839	12.992	< 0.0001
PitSN-PitDN	7.187	2.610	11.763	0.001
PitSN-PitDW	-1.229	-5.806	3.347	0.894
LSndRl-LShd	-5.072	-11.311	1.168	0.177
NShd-LShd	7.309	1.070	13.549	0.012
Snd-LShd	1.687	-4.553	7.927	0.968
SndRl-LShd	1.313	-4.927	7.552	0.989
VShd-LShd				
NShd-LSndRl	-3.540	-9.780	2.699	0.561
Snd-LSndRl	12.381	6.141	18.621	< 0.0001
SndRl-LSndRl	6.759	0.519	12.998	0.026
VShd-LSndRl	6.384	0.144	12.624	0.042
Snd-NShd	1.531	-4.708	7.771	0.979
SndRl-NShd	-5.622	-11.862	0.617	0.101
VShd-NShd	-5.997	-12.236	0.243	0.067
SndRl-Snd	-10.850	-17.089	-4.610	< 0.0001
VShd-Snd	-0.374	-6.614	5.865	1.000
VShd-SndRl	-5.227	-11.467	1.012	0.152