

Table S4. Confusion matrix comparing manual state classifications (from Katzner et al., 2015) and model state estimates based on the posterior medians. Grey boxes highlight matching classifications.

Model → ↓ Manual	<i>State 1 and 3</i> <i>(thermal soaring)</i>	<i>State 2</i> <i>(gliding)</i>	<i>State 5</i> <i>(orographic soaring)</i>	<i>State 4</i> <i>(on the ground or perching)</i>	Accuracy
<i>Thermal soaring</i>	1660	438	374	4	0.67
<i>Gliding</i>	446	1766	308	1	0.70
<i>Orographic soaring</i>	134	114	464	2	0.65
<i>Unknown</i>	1497	289	294	27	-
Reliability	0.44	0.68	0.32	-	

References

Katzner, T. E., Turk, P. J., Duerr, A. E., Miller, T. A., Lanzone, M. J., Cooper, J. L., ... Lemaître, J. (2015). Use of multiple modes of flight subsidy by a soaring terrestrial bird, the golden eagle *Aquila chrysaetos*, when on migration. *Journal of the Royal Society Interface*, *12*, 20150530. doi:10.1098/rsif.2015.0530

State-space modelling of the flight behaviour of a soaring bird provides new insights to migratory strategies

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