Appendix 2. Model parameters (feature classes and regularization multiplier values), binarization threshold and performance values (partial ROC, omission rate and Akaike Information Criterion) of potential distribution models of the selected owl species.

Species	Feature	Regularization multiplier	Binarization threshold	Partial ROC	Omission rate	AICc
Tyto alba	lqp	0.5	0.375	1.079	5.882	14,041.487
Psiloscops flammeolus	lqpt	2.0	0.207	1.254	5.405	4,076.437
Megascops kennicottii	lqp	0.4	0.335	1.169	5.455	6,070.247
Megascops asio	lq	0.4	0.183	1.174	9.524	2,156.232
Megascops cooperi	lqp	0.9	0.383	1.575	6.897	5,427.758
Megascops trichopsis	lqpt	2.0	0.322	1.468	5.682	9,841.881
Megascops barbarus	lqpt	1.0	0.208	1.945	7.143	1,212.572
Megascops seductus	lqpth	2.0	0.366	1.419	6.897	2,805.098
Megascops clarkii	lqp	0.9	0.167	1.741	6.818	3,461.941
Megascops choliba	lqpt	1.0	0.330	1.340	5.556	11,586.623
Megascops vermiculatus	lqp	0.6	0.216	1.209	7.692	2,218.558
Megascops guatemalae	lqpt	2.0	0.371	1.289	5.319	10,327.579
Bubo virginianus	lqpt	2.0	0.483	1.188	5.785	14,379.355
Pulsatrix perspicillata	lqpt	1.0	0.318	1.138	6.349	6,991.498
Strix squamulata	lqpt	1.0	0.503	1.319	5.587	20,282.035
Strix nigrolineata	lqpt	0.9	0.268	1.190	5.556	9,363.638
Strix occidentalis	lqpt	1.0	0.140	1.581	8.333	1,262.075
Strix fulvescens	lqp	0.1	0.152	1.600	5.556	1,702.972
Strix sartorii	lq	0.2	0.099	1.673	11.111	905.065
Lophostrix cristata	lqpt	2.0	0.206	1.153	5.455	5,650.051
Glaucidium gnoma	lqpt	2.0	0.362	1.297	6.173	8,870.249
Glaucidium cobanense	lqp	1.0	0.181	1.770	7.692	2,357.947
Glaucidium costaricanum	lqp	0.2	0.296	1.775	9.524	1,666.971
Glaucidium sanchezi	lq	0.2	0.174	1.750	9.091	1,829.187
Glaucidium palmarum	lq	0.1	0.306	1.559	6.977	4,433.914
Glaucidium griseiceps	lqpt	2.0	0.296	1.261	7.143	4,335.968
Glaucidium ridgwayi	lqp	1.0	0.323	1.371	5.769	5,847.688
Micrathene whitneyi	lqpt	2.0	0.245	1.220	6.667	5,110.666
Athene cunicularia	lqp	0.8	0.458	1.235	5.495	10,386.260
Aegolius acadicus	lqpth	2.0	0.254	1.648	7.692	1,324.570
Aegolius ridgwayi	lq	0.3	0.079	1.942	0.000	1,748.289
Asio stygius	lq	2.0	0.237	1.201	9.524	2,425.005
Asio otus	lqp	1.0	0.395	1.199	5.882	1,937.500
Asio clamator	lqp	1.0	0.386	1.158	5.405	4,219.948
Asio flammeus	l	2.0	0.445	1.217	5.882	1,912.753

† Feature classes are here abbreviated as follows: l= linear, q = quadratic, p = product, t = threshold, and h = hinge.
† Binarization threshold refers to the minimum environmental suitability value used to convert continuous model output into a presence-absence estimation (Peterson et al. 2011). Given each species´ climatic preferences, the suitability values change and thus, the choice of the threshold.