Supplementary Table 4. Optimized parameters used in species distribution modeling of ant species.

Species	N points	Feature classes	RM	Train AUC	Test AUC	OR10	N parameters
Acromyrmex coronatus	29	LQH	4	0.95	0.93	0.07	5
Acromyrmex echinatior	29	H	3	0.73	0.67	0.03	3
Acromyrmex volcanus	17	LQH	2	0.91	0.88	0.06	7
Anochetus diegensis	6	L	2	0.50	0.36	0.33	0
Anochetus sp. jtl001	7	L	2	0.87	0.88	0.14	1
Anochetus mayri	45	LQH	4	0.83	0.77	0.02	7
Anochetus minans	5	H	2.5	0.82	0.80	0.17	1
Aphaenogaster araneoides	39	L	1.5	0.91	0.89	0.05	8
Aphaenogaster phalangium	36	LQHP	3	0.89	0.80	0.16	10
Atta cephalotes	60	LQHP	3.5	0.83	0.77	0.07	14
Atta colombica	15	LQ	1	0.68	0.61	0.20	2
Atta mexicana	39	L	4	0.72	0.66	0.08	4
Brachymyrmex cavernicola	26	LQH	3	0.87	0.82	0.16	6
Brachymyrmex coactus	11	H	4	0.86	0.81	0.09	3
Brachymyrmex heeri	38	LQ	1	0.83	0.77	0.05	12
Brachymyrmex sp. jtl003	14	LQ	3.5	0.89	0.85	0.07	4
Brachymyrmex sp. jtl004	7	H	2.5	0.84	0.80	0.14	1
Brachymyrmex sp. jtl005	8	H	4	0.87	0.86	0.13	2
Brachymyrmex sp. jtl007	23	L	1.5	0.83	0.77	0.09	5
Brachymyrmex longicornis	5	H	2	0.75	0.70	0.20	1
Brachymyrmex nebulosus	5	LQ	2.5	0.83	0.61	0.40	1
Brachymyrmex obscurior	21	H	2.5	0.87	0.71	0.13	7
Brachymyrmex pictus	10	L	2	0.75	0.60	0.40	1
Brachymyrmex santschii	9	LQH	3.5	0.95	0.93	0.11	2
Megalomyrmex foreli	11	LQ	1.5	0.84	0.80	0.18	3
Megalomyrmex incisus	15	H	4	0.82	0.74	0.07	3
Megalomyrmex megadrifti	34	L	2	0.76	0.73	0.06	4
Megalomyrmex modestus	16	LQ	0.5	0.92	0.87	0.19	7
Megalomyrmex mondabora	5	H	3	0.84	0.80	0.20	1
Megalomyrmex nocarina	5	L	4	0.50	0.57	0.00	0
Megalomyrmex silvestrii	38	LQH	4	0.74	0.68	0.03	5
Megalomyrmex symmetochus	6	L	2	0.77	0.69	0.33	1
Monomorium ebeninum	6	LQ	2.5	0.66	0.63	0.22	2

Monomorium floricola	21	LQH	2.5	0.90	0.86	0.02	14
Monomorium pharaonis	27	LQ	4	0.79	0.80	0.05	1
Nylanderia austroccidua	21	LQH	4	0.95	0.92	0.09	6
Nylanderia guatemalensis	27	LQH	3.5	0.90	0.88	0.04	6
Nylanderia sp. jtl001	17	LQ	1.5	0.90	0.84	0.18	6
Nylanderia sp. jtl007	5	H	4	0.82	0.54	0.20	1
Nylanderia sp. jtl010	7	H	4	0.77	0.57	0.00	1
Nylanderia sp. jtl013	7	LQ	3	0.82	0.81	0.29	1
Nylanderia steinheili	26	L	4	0.88	0.86	0.08	4
Nylanderia vividula	28	L	1.5	0.66	0.47	0.29	3
Solenopsis azteca	12	L	2.5	0.57	0.50	0.17	1
Solenopsis bicolor	10	H	3.5	0.88	0.68	0.30	3
Solenopsis brevicornis	33	H	3.5	0.86	0.83	0.07	6
Solenopsis castor	21	LQH	2.5	0.84	0.76	0.10	6
Solenopsis geminata	174	LQH	4	0.86	0.85	0.01	17
Solenopsis sp. jtl001	20	LQ	1.5	0.87	0.83	0.10	5
Solenopsis sp. jtl002	10	H	4	0.79	0.75	0.10	1
Solenopsis sp. jtl003	16	LQH	3.5	0.89	0.87	0.06	4
Solenopsis sp. jtl007	27	L	0.5	0.92	0.91	0.04	8
Solenopsis sp. jtl014	8	H	2	0.91	0.89	0.13	2
Solenopsis sp. jtl021	17	L	3	0.50	0.46	0.12	0
Solenopsis sp. jtl025	12	LQ	2	0.80	0.76	0.17	2
Solenopsis sp. jtl027	9	LQ	2	0.80	0.81	0.11	1
Solenopsis sp. jtl031	7	LQ	2.5	0.84	0.73	0.29	1
Solenopsis picea	40	LQ	1	0.87	0.80	0.05	12
Solenopsis pollux	8	LQ	3	0.80	0.69	0.38	2
Solenopsis pygmaea	39	LQ	0.5	0.87	0.82	0.05	14
Solenopsis striata	22	LQ	1.5	0.84	0.81	0.05	5
Solenopsis succinea	9	L	1.5	0.86	0.78	0.33	3
Solenopsis vinsoni	26	LQHP	3	0.85	0.80	0.15	10
Solenopsis zeteki	27	LQH	3	0.89	0.87	0.04	7
Tetramorium bicarinatum	14	L	1.5	0.87	0.84	0.20	3
Tetramorium lanuginosum	12	L	2.5	0.70	0.62	0.27	1
Tetramorium simillimum	18	H	2.5	0.83	0.74	0.33	3