



*Figure S1.* Lab Effect on Latency to Touch Familiar Food in Azure-winged Magpies, Carrion Crows, and Pinyon Jays, Related to STAR Methods. Azure-winged magpies ( $\chi^2 = 0.08$ ,  $df = 1$ ,  $p = 0.78$ ) and carrion crows ( $\chi^2 = 1.02$ ,  $df = 1$ ,  $p = 0.31$ ) did not differ between labs, but pinyon jays did ( $\chi^2 = 4.35$ ,  $df = 1$ ,  $p = 0.04$ ).

Table S1

*Pairwise Comparisons of Novel Object Difference Scores between Species, Related to Figure*

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	Estimate	Standard error	z	p-value
Azure-winged magpie - 'Alalā	-0.248	0.140	-1.777	0.076
Blue jay - 'Alalā	-0.431	0.162	-2.660	<b>0.008</b>
Carrion crow - 'Alalā	-0.056	0.127	-0.438	0.661
Clark's nutcracker - 'Alalā	-0.555	0.155	-3.590	<b>0.000</b>
Common raven - 'Alalā	0.148	0.131	1.127	0.260
Eurasian jay - 'Alalā	-0.058	0.111	-0.522	0.602
Large-billed crow - 'Alalā	-0.687	0.138	-4.985	<b>0.000</b>
New Caledonian crow - 'Alalā	-0.382	0.163	-2.338	<b>0.019</b>
Pinyon jay - 'Alalā	-0.307	0.113	-2.727	<b>0.006</b>
Blue jay - Azure-winged magpie	-0.183	0.202	-0.905	0.366
Carrion crow - Azure-winged magpie	0.193	0.175	1.101	0.271
Clark's nutcracker - Azure-winged magpie	-0.307	0.196	-1.566	0.117
Common raven - Azure-winged magpie	0.396	0.178	2.227	<b>0.026</b>
Eurasian jay - Azure-winged magpie	0.191	0.164	1.165	0.244
Large-billed crow - Azure-winged magpie	-0.438	0.183	-2.397	<b>0.017</b>
New Caledonian crow - Azure-winged magpie	-0.134	0.203	-0.658	0.510
Pinyon jay - Azure-winged magpie	-0.059	0.165	-0.358	0.720
Carrion crow - Blue jay	0.375	0.193	1.942	0.052
Clark's nutcracker - Blue jay	-0.124	0.212	-0.584	0.559
Common raven - Blue jay	0.579	0.196	2.955	<b>0.003</b>
Eurasian jay - Blue jay	0.373	0.183	2.040	<b>0.041</b>
Large-billed crow - Blue jay	-0.255	0.200	-1.275	0.202
New Caledonian crow - Blue jay	0.049	0.219	0.224	0.823
Pinyon jay - Blue jay	0.124	0.184	0.671	0.502
Clark's nutcracker - Carrion crow	-0.499	0.187	-2.670	<b>0.008</b>
Common raven - Carrion crow	0.204	0.168	1.210	0.226
Eurasian jay - Carrion crow	-0.002	0.153	-0.014	0.989
Large-billed crow - Carrion crow	-0.631	0.173	-3.639	<b>0.000</b>
New Caledonian crow - Carrion crow	-0.326	0.194	-1.678	0.093
Pinyon jay - Carrion crow	-0.252	0.154	-1.632	0.103
Common raven - Clark's nutcracker	0.703	0.190	3.704	<b>0.000</b>
Eurasian jay - Clark's nutcracker	0.497	0.176	2.819	<b>0.005</b>
Large-billed crow - Clark's nutcracker	-0.132	0.194	-0.677	0.498
New Caledonian crow - Clark's nutcracker	0.173	0.213	0.811	0.417
Pinyon jay - Clark's nutcracker	0.248	0.178	1.394	0.163
Eurasian jay - Common raven	-0.206	0.156	-1.317	0.188
Large-billed crow - Common raven	-0.834	0.176	-4.733	<b>0.000</b>
New Caledonian crow - Common raven	-0.530	0.197	-2.689	<b>0.007</b>
Pinyon jay - Common raven	-0.455	0.158	-2.890	<b>0.004</b>
Large-billed crow - Eurasian jay	-0.629	0.162	-3.886	<b>0.000</b>
New Caledonian crow - Eurasian jay	-0.324	0.184	-1.760	0.078
Pinyon jay - Eurasian jay	-0.250	0.141	-1.768	0.077
New Caledonian crow - Large-billed crow	0.304	0.201	1.512	0.131
Pinyon jay - Large-billed crow	0.379	0.163	2.325	<b>0.020</b>
Pinyon jay - New Caledonian crow	0.075	0.185	0.402	0.687

Table S2

*Pairwise Comparisons of Novel Food Difference Scores between Species, Related to Figure 4*

	Estimate	Standard error	z	p-value
Blue jay - Azure-winged magpie	-0.005	0.179	-0.031	0.976
Carrion crow - Azure-winged magpie	0.145	0.156	0.932	0.352
Clark's nutcracker - Azure-winged magpie	-0.010	0.173	-0.059	0.953
Common raven - Azure-winged magpie	0.010	0.158	0.066	0.948
Eurasian jay - Azure-winged magpie	0.446	0.146	3.046	<b>0.002</b>
Large-billed crow - Azure-winged magpie	0.012	0.162	0.072	0.942
New Caledonian crow - Azure-winged magpie	-0.186	0.179	-1.040	0.298
Pinyon jay - Azure-winged magpie	0.024	0.146	0.164	0.869
Carrion crow - Blue jay	0.151	0.171	0.879	0.380
Clark's nutcracker - Blue jay	-0.005	0.187	-0.025	0.980
Common raven - Blue jay	0.016	0.173	0.091	0.927
Eurasian jay - Blue jay	0.452	0.163	2.771	<b>0.006</b>
Large-billed crow - Blue jay	0.017	0.177	0.097	0.923
New Caledonian crow - Blue jay	-0.180	0.192	-0.937	0.349
Pinyon jay - Blue jay	0.029	0.163	0.181	0.856
Clark's nutcracker - Carrion crow	-0.155	0.166	-0.936	0.349
Common raven - Carrion crow	-0.135	0.150	-0.900	0.368
Eurasian jay - Carrion crow	0.301	0.138	2.187	<b>0.029</b>
Large-billed crow - Carrion crow	-0.133	0.154	-0.867	0.386
New Caledonian crow - Carrion crow	-0.331	0.171	-1.930	0.054
Pinyon jay - Carrion crow	-0.121	0.137	-0.883	0.377
Common raven - Clark's nutcracker	0.021	0.168	0.122	0.903
Eurasian jay - Clark's nutcracker	0.456	0.157	2.902	<b>0.004</b>
Large-billed crow - Clark's nutcracker	0.022	0.172	0.127	0.899
New Caledonian crow - Clark's nutcracker	-0.175	0.187	-0.936	0.349
Pinyon jay - Clark's nutcracker	0.034	0.157	0.218	0.827
Eurasian jay - Common raven	0.436	0.140	3.113	<b>0.002</b>
Large-billed crow - Common raven	0.001	0.156	0.009	0.993
New Caledonian crow - Common raven	-0.196	0.173	-1.131	0.258
Pinyon jay - Common raven	0.014	0.139	0.098	0.922
Large-billed crow - Eurasian jay	-0.435	0.145	-3.007	<b>0.003</b>
New Caledonian crow - Eurasian jay	-0.632	0.163	-3.876	<b>0.000</b>
Pinyon jay - Eurasian jay	-0.422	0.127	-3.337	<b>0.001</b>
New Caledonian crow - Large-billed crow	-0.197	0.177	-1.116	0.265
Pinyon jay - Large-billed crow	0.012	0.144	0.085	0.932
Pinyon jay - New Caledonian crow	0.210	0.163	1.290	0.197

Table S3

*Individual Temporal Repeatability within Each Species and Condition, Related to STAR Methods*

Species	Control	Novel object	Novel food
'Alalā	N=84, R=0.542 (0.428, 0.659), p < 0.001	N=84, R=0.540 (0.415, 0.642), p < 0.001	NA
Azure-winged magpie	N=13, R=0.309 (0.000, 0.659), p = 0.044	N=13, R=0.593 (0.240, 0.831), p = 0.001	N=14, R=0.233 (0.000, 0.602), p = 0.121
Blue jay	N=9, R=0.962 (0.876, 0.988), p < 0.001	N=9, R=0.814 (0.447, 0.939), p < 0.001	N=9, R=0.680 (0.234, 0.895), p < 0.001
Carrion crow	N=18, R=0.740 (0.458, 0.887), p < 0.001	N=17, R=0.755 (0.502, 0.893), p < 0.001	N=17, R=0.456 (0.101, 0.728), p = 0.002
Clark's nutcracker	N=10, R=0.535 (0.114, 0.835), p = 0.002	N=10, R=0.582 (0.168, 0.845), p = 0.001	N=10, R=0.492 (0.037, 0.799), p = 0.005
Common raven	N=15, R=0.638 (0.310, 0.841), p < 0.001	N=15, R=0.707 (0.394, 0.871), p < 0.001	N=15, R=0.630 (0.278, 0.837), p < 0.001
Eurasian jay	N=24, R=0.557 (0.323, 0.759), p < 0.001	N=24, R=0.290 (0.018, 0.561), p = 0.012	N=24, R=0.346 (0.043, 0.611), p = 0.003
Large-billed crow	N=13, R=0.496 (0.108, 0.773), p = 0.001	N=13, R=0.216 (0.000, 0.591), p = 0.099	N=13, R=0.426 (0.030, 0.722), p = 0.006
New Caledonian crow	N=9, R=0.177 (0.000, 0.600), p = 0.189	N=9, R=0.164 (0.000, 0.605), p = 0.245	N=9, R=0.000 (0.000, 0.460), p = 1.000
Pinyon jay	N=21, R=0.690 (0.464, 0.842), p < 0.001	N=21, R=0.863 (0.735, 0.930), p < 0.001	N=21, R=0.738 (0.533, 0.870), p < 0.001

Table S4

*Individual Contextual Repeatability within Each Species, Related to STAR Methods*

Species	Repeatability across conditions
'Alalā	N=84, R=0.545 (0.374, 0.683), p < 0.001
Azure-winged magpie	N=14, R=0.740 (0.449, 0.890), p < 0.001
Blue jay	N=9, R=0.889 (0.674, 0.967), p < 0.001
Carrion crow	N=18, R=0.721 (0.477, 0.867), p < 0.001
Clark's nutcracker	N=10, R=0.693 (0.333, 0.888), p < 0.001
Common raven	N=15, R=0.802 (0.580, 0.912), p < 0.001
Eurasian jay	N=24, R=0.583 (0.326, 0.765), p < 0.001
Large-billed crow	N=13, R=0.651 (0.328, 0.849), p < 0.001
New Caledonian crow	N=9, R=0.270 (0.000, 0.687), p = 0.091
Pinyon jay	N=21, R=0.800 (0.640, 0.905), p < 0.001

Table S5  
Subject Information, Related to STAR Methods

Species	Lab	Sex (males/females or unknown)	Age (adults/juveniles)	Rearing information	Housing	Controlled feeding schedule
Common raven <i>Corvus corax</i>	Bugnyar	7/8	15/0	Hand-reared	Group/pair	No (fed prior to testing)
Carrion/hooded crow <i>C. corone</i> ; <i>C. cornix</i>	Bugnyar	4/4	8/0	Hand-reared	Group/pair	No (fed prior to testing)
Carrion crow <i>C. corone</i>	Nieder	10/0	10/0	Hand-reared	Group	Yes (tested before feeding)
Large-billed crow <i>C. macrorhynchos</i>	Izawa	8/5	13/0	Wild: parent reared	Group	Yes (fed 2 hours prior)
New Caledonian crow <i>C. moneduloides</i>	Taylor	3/6	4/5	Wild: parent reared	Group	No (fed prior to testing)
'Alalā <i>C. hawaiiensis</i>	Greggor	64/44	93/25	Hand-reared and parent-reared	Group/pair	No
Eurasian jay <i>Garrulus glandarius</i>	Clayton	14/10	24/0	Hand-reared	Group	Yes (fed 1 hour prior)
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	Stevens	10/2	12/0	Wild: parent reared	Individual cages	No (tested at feeding time, fed after testing)
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	Kelly	4/5	9/0	Wild: parent reared	Individual cages	No (tested at feeding time, fed after testing)
Blue jay <i>Cyanocitta cristata</i>	Gould	2/2 (5 unknown)	9/0	Hand-reared	Individual cages	No (tested at feeding time, fed after testing)
Clark's nutcracker <i>Nucifraga columbiana</i>	Kelly	7/3	10/0	Wild: parent reared	Individual cages	No (tested at feeding time, fed after testing)
Azure-winged magpie <i>Cyanopica cyanus</i>	Li	6/2	8/0	Parent-reared & Hand-reared	Individual cages	No (tested at feeding time, fed after testing)
Azure-winged magpie <i>Cyanopica cyanus</i>	Bugnyar & Massen	2/4	6/0	Parent-reared & Hand-reared	Group	No (fed prior to testing)

Species	Cage size (m)	Testing situation	Familiar with testing cage	Transportation to testing cage	Prior neophobia testing
Common raven <i>Corvus corax</i>	3×4×5	Alone	Yes (constant access)	Voluntary (trained/encouraged)	No (but frequent introduction of novel objects and food)
Carrion/hooded crow <i>C. corone</i> ; <i>C. cornix</i>	3×4×5	Alone	Yes (constant access)	Voluntary (trained/encouraged)	No (but frequent introduction of novel objects and food)
Carrion crow <i>C. corone</i>	1.4×1×1	Alone	Yes (habituated in prior experiment)	Moved	No (but frequent introduction of novel objects and food)
Large-billed crow <i>C. macrorhynchos</i>	2×2×2	Alone	Yes (constant access)	Moved	No
New Caledonian crow <i>C. moneduloides</i>	2×3×3	Alone	Yes (constant access)	Voluntary (flushed)	No
'Alalā <i>C. hawaiiensis</i>	6.1×6.1×5.5 – 12.2×6.1×5.5	Partner or juvenile social group present	Yes (home cage)	Tested in home cage	No
Eurasian jay <i>Garrulus glandarius</i>	2×2×1	Alone	Yes (constant access)	Voluntary (trained/encouraged or flushed)	No (but frequent introduction of novel objects and food)
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	0.5×0.7×0.7	Alone	Yes (habituated in prior experiment)	Moved	Yes (experienced novel object task 3 years prior)
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	0.9×0.6×0.8	Alone	Yes (identical to home cage)	Moved	No
Blue jay <i>Cyanocitta cristata</i>	1×0.5×0.5	Alone	No (habituated until ate food in under 10 minutes for 3 consecutive trials)	Moved	Yes (experienced novel object task 4 years prior)
Clark's nutcracker <i>Nucifraga columbiana</i>	0.9×0.6×0.8	Alone	Yes (identical to home cage)	Moved	No
Azure-winged magpie <i>Cyanopica cyanus</i>	0.8×0.5×0.9	Alone	No (habituated with two 30 minute sessions)	Moved	No
Azure-winged magpie <i>Cyanopica cyanus</i>	4.3×3×3	Alone	Yes (constant access)	Voluntary	No