

Table S1. Summary statistics of performance variables at each experimental temperature in ballistic (*Bolitoglossa* and *Ensatina*) and non-ballistic (*Desmognathus* and *Plethodon*) species.

Ballistic	5°C					10°C					15°C					20°C					25°C				
	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max
Projection distance (mm)	8.8	0.7	36	2.9	19.1	9.4	0.7	49	2.9	21.7	11.5	0.7	51	3.8	20.8	12.0	0.8	52	1.4	26.8	10.4	0.8	27	4.0	21.2
Projection duration (ms)	15.6	0.7	36	9.3	26.3	14.6	0.6	49	7.7	29.3	14.9	0.7	51	7.6	26.2	13.3	0.5	52	6.5	23.2	12.2	0.6	27	7.8	20.6
Average projection velocity (m/s)	0.54	0.05	36	0.18	1.41	0.63	0.05	49	0.09	1.57	0.77	0.04	51	0.12	1.50	0.85	0.05	52	0.13	1.57	0.79	0.04	27	0.41	1.21
Max. projection velocity (m/s)	1.35	0.10	36	0.41	2.58	1.56	0.10	49	0.38	3.31	1.96	0.10	51	0.70	3.21	2.06	0.12	52	0.39	3.93	2.11	0.11	27	0.77	2.98
Max. projection acceleration (m/s/s)	465.9	32.7	36	127.0	972.0	565.6	33.7	49	121.0	1420.0	747.5	44.9	51	252.0	1590.0	754.8	41.7	52	234.0	1500.0	968.7	59.4	27	513.0	1760.0
Max. tongue-mass-specific projection power (W/kg)	470.46	65.01	36	61.40	1890.00	642.33	67.29	49	28.70	2200.00	1058.76	98.39	51	116.00	2810.00	1113.57	106.37	52	48.80	3330.00	1386.48	134.48	27	294.00	3250.00
Max. muscle-mass-specific projection power (W/kg)	744.01	147.11	36	46.37	4077.00	797.97	120.07	49	61.91	3882.86	1164.67	155.76	51	135.53	5263.43	1286.71	154.34	52	105.27	4724.14	1023.73	94.88	27	209.72	2318.33
Projection energy (J)	6E-05	1E-05	36	2E-06	3E-04	6E-05	1E-05	49	6E-06	3E-04	9E-05	1E-05	51	1E-05	3E-04	1E-04	1E-05	52	6E-06	4E-04	6E-05	6E-06	27	8E-06	1E-04
Tongue-mass-specific projection energy (J/kg)	1.074	0.144	36	0.084	3.328	1.431	0.164	49	0.074	5.478	2.193	0.203	51	0.246	5.152	2.486	0.265	52	0.077	7.722	2.373	0.228	27	0.293	4.440
Muscle-mass-specific projection energy (J/kg)	1.791	0.343	36	0.060	7.179	1.787	0.283	49	0.159	7.689	2.439	0.324	51	0.340	9.323	3.071	0.415	52	0.166	12.322	1.757	0.162	27	0.209	3.167
Retraction duration (ms)	56.0	2.7	36	25.6	101.3	36.1	1.8	49	12.6	65.3	34.0	2.1	51	12.2	92.8	30.2	3.3	51	4.7	169.4	19.3	1.7	27	6.2	41.4
Average retraction velocity (m/s)	0.15	0.01	36	0.05	0.31	0.26	0.02	49	0.08	0.60	0.35	0.02	51	0.06	0.61	0.43	0.03	51	0.10	0.92	0.57	0.05	27	0.17	1.09
Max. retraction velocity (m/s)	0.35	0.03	36	0.14	0.89	0.60	0.05	49	0.14	1.50	0.72	0.04	51	0.25	1.56	0.77	0.05	51	0.17	1.77	1.08	0.07	27	0.41	1.94
Max. retraction acceleration (m/s/s)	23.9	2.8	36	4.4	71.5	57.6	6.0	49	10.0	156.0	77.4	6.8	51	11.7	199.0	121.2	11.6	51	2.4	402.0	178.5	16.7	27	49.6	380.0
Max. tongue-mass specific retraction power (W/kg)	5.73	1.00	36	0.56	21.00	20.22	2.93	49	2.20	90.20	36.97	4.52	51	2.83	137.00	73.24	9.74	51	0.21	337.00	133.24	18.48	27	11.30	355.00
Max. muscle-mass specific retraction power (W/kg)	5.70	1.22	36	0.31	27.25	16.94	2.63	49	1.21	69.04	27.26	3.38	51	2.70	104.47	53.18	6.60	51	0.28	194.66	75.41	10.13	27	6.22	195.45
Non-ballistic	5°C					10°C					15°C					20°C					25°C				
	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max
Projection distance (mm)	5.9	0.2	43	2.4	10.4	6.6	0.2	56	3.7	11.1	6.3	0.2	52	2.3	10.5	7.0	0.3	51	2.9	10.2	7.0	0.4	39	2.6	11.7
Projection duration (ms)	81.8	3.0	43	29.5	122.9	62.0	2.2	56	30.4	111.4	49.9	2.3	52	13.2	111.8	47.0	2.1	51	21.4	89.7	36.7	1.9	39	17.9	72.5
Average projection velocity (m/s)	0.07	0.00	43	0.04	0.12	0.10	0.00	56	0.05	0.20	0.12	0.01	52	0.05	0.26	0.15	0.01	51	0.05	0.26	0.19	0.01	39	0.06	0.39
Max. projection velocity (m/s)	0.12	0.00	43	0.07	0.19	0.19	0.01	56	0.11	0.31	0.24	0.01	52	0.12	0.47	0.31	0.01	51	0.14	0.68	0.39	0.02	39	0.19	0.72
Max. projection acceleration (m/s/s)	6.05	0.45	43	1.10	16.70	15.01	1.13	56	1.92	35.90	27.41	1.70	52	6.36	54.50	45.26	3.32	51	10.90	116.00	64.26	4.96	39	15.10	136.00
Max. tongue-mass-specific projection power (W/kg)	0.46	0.04	43	0.08	1.21	1.87	0.17	56	0.17	5.47	4.60	0.48	52	0.83	16.70	10.36	1.71	51	1.57	77.30	16.83	2.10	39	2.24	50.60
Max. muscle-mass-specific projection power (W/kg)	1.62	0.14	43	0.29	4.14	6.58	0.59	56	0.56	18.72	16.41	1.79	52	2.84	61.57	37.07	6.33	51	5.37	284.98	60.11	7.78	39	7.66	186.55
Projection energy (J)	4E-07	8E-08	43	8E-08	2E-06	1E-06	2E-07	56	2E-07	6E-06	3E-06	5E-07	52	2E-07	1E-05	5E-06	9E-07	51	3E-07	3E-05	7E-06	1E-06	39	6E-07	3E-05
Tongue-mass-specific projection energy (J/kg)	0.01	0.00	43	0.00	0.02	0.02	0.00	56	0.01	0.05	0.03	0.00	52	0.01	0.11	0.05	0.01	51	0.01	0.23	0.08	0.01	39	0.02	0.26
Muscle-mass-specific projection energy (J/kg)	0.03	0.00	43	0.01	0.07	0.07	0.00	56	0.02	0.18	0.11	0.01	52	0.03	0.41	0.19	0.02	51	0.03	0.86	0.30	0.04	39	0.06	0.95
Retraction duration (ms)	60.5	3.1	43	27.6	116.9	52.7	3.1	56	18.5	122.5	37.1	2.5	52	16.0	119.5	34.9	2.3	51	15.8	89.2	23.7	2.0	39	7.3	66.9
Average retraction velocity (m/s)	0.09	0.00	43	0.04	0.17	0.13	0.01	56	0.06	0.27	0.16	0.01	52	0.05	0.37	0.20	0.01	51	0.05	0.43	0.30	0.02	39	0.07	0.54
Max. retraction velocity (m/s)	0.18	0.01	43	0.11	0.33	0.27	0.01	56	0.13	0.59	0.32	0.02	52	0.11	0.69	0.42	0.02	51	0.23	0.76	0.54	0.03	39	0.23	1.10
Max. retraction acceleration (m/s/s)	11.28	0.85	43	1.92	25.00	23.2	2.2	56	5.6	95.4	30.5	2.5	52	6.1	98.5	51.3	3.7	51	8.5	134.0	79.8	8.1	39	9.5	206.0
Max. tongue-mass specific retraction power (W/kg)	1.72	0.18	43	0.08	5.00	6.8	1.1	56	0.47	40.9	9.7	1.5	52	0.7	43.2	18.1	2.3	51	1.9	83.9	34.5	5.5	39	2.0	167.0
Max. muscle-mass specific retraction power (W/kg)	1.84	0.19	43	0.09	5.51	6.4	1.0	56	0.37	31.6	9.3	1.4	52	0.8	44.9	18.0	2.3	51	2.2	99.9	33.7	5.0	39	2.4	142.9

Table S2. Summary statistics of motor control variables at each experimental temperature in ballistic and non-ballistic species.

	5°C					10°C					15°C					20°C					25°C					
	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	Mean	SEM	N	Min	Max	
Bolitoglossa																										
SAR activity duration (s)	0.196	0.011	20	0.098	0.321	0.166	0.008	32	0.096	0.267	0.154	0.007	34	0.085	0.276	0.124	0.008	34	0.074	0.273	0.105	0.005	26	0.069	0.187	
SAR onset to tongue projection onset (s)	0.189	0.009	20	0.124	0.300	0.146	0.007	32	0.080	0.258	0.133	0.005	34	0.082	0.186	0.103	0.005	34	0.067	0.167	0.087	0.004	26	0.050	0.146	
SAR peak amplitude to tongue projection onset (s)	0.108	0.006	20	0.047	0.160	0.078	0.005	32	-0.005	0.155	0.058	0.005	34	-0.016	0.117	0.057	0.005	34	0.019	0.143	0.046	0.006	26	0.002	0.111	
SAR offset to tongue projection onset (s)	-0.007	0.007	20	-0.058	0.056	-0.020	0.005	32	-0.093	0.035	-0.021	0.004	34	-0.090	0.025	-0.021	0.004	34	-0.118	0.016	-0.018	0.002	26	-0.041	-0.006	
RCP activity duration (s)	0.081	0.006	20	0.042	0.156	0.066	0.004	32	0.035	0.133	0.051	0.006	34	0.017	0.165	0.041	0.004	34	0.018	0.097	0.051	0.005	26	0.017	0.110	
RCP onset to tongue projection onset (s)	0.023	0.006	20	-0.010	0.086	0.020	0.003	32	-0.004	0.089	0.014	0.005	34	-0.012	0.180	0.008	0.002	34	-0.015	0.066	0.015	0.005	26	-0.011	0.098	
RCP onset to max. tongue projection (s)	0.032	0.005	20	0.008	0.099	0.031	0.003	32	0.015	0.097	0.026	0.006	34	0.007	0.200	0.019	0.002	34	0.003	0.077	0.023	0.005	26	0.005	0.105	
RCP max. amplitude to max. tongue projection (s)	-0.002	0.003	20	-0.037	0.017	0.007	0.001	32	-0.017	0.019	0.011	0.003	34	-0.010	0.108	0.003	0.002	34	-0.049	0.022	0.002	0.003	26	-0.059	0.012	
RCP offset to max. tongue projection (s)	-0.049	0.004	20	-0.107	-0.021	-0.034	0.003	32	-0.084	-0.007	-0.023	0.003	34	-0.063	-0.001	-0.022	0.003	34	-0.080	0.005	-0.027	0.004	26	-0.062	-0.002	
Ensatina																										
SAR activity duration (s)	0.232	0.018	16	0.119	0.340	0.178	0.012	17	0.103	0.285	0.146	0.011	17	0.061	0.211	0.140	0.009	18	0.070	0.212	0.090	NA	1	0.090	0.090	
SAR onset to tongue projection onset (s)	0.162	0.011	16	0.074	0.230	0.121	0.007	17	0.075	0.166	0.099	0.005	17	0.072	0.138	0.094	0.005	18	0.062	0.128	0.049	NA	1	0.049	0.049	
SAR peak amplitude to tongue projection onset (s)	0.075	0.008	16	0.039	0.169	0.053	0.006	17	0.002	0.108	0.043	0.004	17	0.020	0.070	0.033	0.005	18	-0.019	0.083	0.028	NA	1	0.028	0.028	
SAR offset to tongue projection onset (s)	-0.069	0.010	16	-0.141	-0.007	-0.056	0.009	17	-0.122	0.011	-0.047	0.007	17	-0.098	0.015	-0.046	0.007	18	-0.099	-0.005	-0.041	NA	1	-0.041	-0.041	
RCP activity duration (s)	0.211	0.021	16	0.094	0.415	0.171	0.017	17	0.050	0.259	0.156	0.011	17	0.029	0.225	0.134	0.012	17	0.033	0.204	0.103	NA	1	0.103	0.103	
RCP onset to tongue projection onset (s)	0.118	0.014	16	0.034	0.234	0.098	0.012	17	0.013	0.156	0.091	0.012	17	-0.060	0.171	0.074	0.009	17	0.008	0.124	0.041	NA	1	0.041	0.041	
RCP onset to max. tongue projection (s)	0.130	0.014	16	0.045	0.241	0.108	0.012	17	0.023	0.165	0.101	0.012	17	-0.052	0.182	0.082	0.009	17	0.016	0.132	0.048	NA	1	0.048	0.048	
RCP max. amplitude to max. tongue projection (s)	-0.003	0.007	16	-0.070	0.030	-0.004	0.005	17	-0.056	0.020	-0.005	0.006	17	-0.066	0.018	0.000	0.004	17	-0.051	0.014	-0.026	NA	1	-0.026	-0.026	
RCP offset to max. tongue projection (s)	-0.081	0.010	16	-0.174	-0.034	-0.062	0.006	17	-0.111	-0.023	-0.055	0.005	17	-0.092	-0.017	-0.052	0.006	17	-0.096	-0.011	-0.055	NA	1	-0.055	-0.055	
Desmognathus																										
SAR activity duration (s)	0.214	0.018	9	0.115	0.284	0.192	0.010	19	0.128	0.268	0.157	0.009	18	0.100	0.246	0.131	0.009	17	0.065	0.180	0.110	0.007	14	0.068	0.158	
SAR onset to tongue projection onset (s)	0.106	0.008	9	0.061	0.133	0.083	0.004	19	0.055	0.115	0.060	0.003	18	0.041	0.090	0.054	0.003	17	0.028	0.069	0.038	0.002	14	0.025	0.055	
SAR peak amplitude to tongue projection onset (s)	0.027	0.020	9	-0.118	0.071	0.027	0.005	19	-0.042	0.059	0.018	0.004	18	-0.040	0.041	0.018	0.002	17	0.010	0.033	0.006	0.003	14	-0.023	0.018	
SAR offset to tongue projection onset (s)	-0.109	0.019	9	-0.180	0.002	-0.109	0.008	19	-0.174	-0.050	-0.097	0.007	18	-0.162	-0.037	-0.077	0.007	17	-0.110	-0.015	-0.072	0.005	14	-0.103	-0.031	
RCP activity duration (s)	0.124	0.017	9	0.067	0.226	0.139	0.012	19	0.041	0.239	0.126	0.012	18	0.052	0.261	0.109	0.010	17	0.037	0.168	0.097	0.009	14	0.032	0.158	
RCP onset to tongue projection onset (s)	-0.010	0.021	9	-0.094	0.107	0.030	0.012	19	-0.142	0.084	0.032	0.009	18	-0.068	0.096	0.032	0.010	17	-0.048	0.076	0.036	0.005	14	-0.005	0.064	
RCP onset to max. tongue projection (s)	0.062	0.022	9	-0.024	0.177	0.090	0.010	19	-0.013	0.172	0.079	0.009	18	0.009	0.161	0.067	0.010	17	-0.011	0.124	0.062	0.006	14	0.018	0.098	
RCP max. amplitude to max. tongue projection (s)	-0.018	0.007	9	-0.047	0.012	-0.011	0.004	19	-0.047	0.007	-0.004	0.006	18	-0.046	0.075	-0.004	0.006	17	-0.036	0.076	-0.009	0.003	14	-0.047	0.003	
RCP offset to max. tongue projection (s)	-0.062	0.006	9	-0.096	-0.042	-0.049	0.004	19	-0.101	-0.024	-0.047	0.005	18	-0.100	-0.022	-0.041	0.003	17	-0.061	-0.019	-0.034	0.005	14	-0.085	-0.014	
Plethodon																										
SAR activity duration (s)	0.150	0.006	34	0.084	0.220	0.151	0.010	37	0.080	0.340	0.109	0.005	34	0.070	0.163	0.100	0.005	34	0.064	0.181	0.089	0.004	25	0.055	0.137	
SAR onset to tongue projection onset (s)	0.081	0.002	34	0.060	0.102	0.063	0.002	37	0.046	0.085	0.051	0.001	34	0.040	0.074	0.043	0.001	34	0.027	0.055	0.039	0.002	25	0.028	0.059	
SAR peak amplitude to tongue projection onset (s)	0.022	0.008	34	-0.113	0.064	-0.004	0.009	37	-0.154	0.051	0.014	0.004	34	-0.092	0.036	0.017	0.001	34	0.001	0.032	0.013	0.003	25	-0.051	0.033	
SAR offset to tongue projection onset (s)	-0.068	0.005	34	-0.128	-0.012	-0.088	0.010	37	-0.282	-0.025	-0.058	0.005	34	-0.115	-0.018	-0.057	0.005	34	-0.139	-0.023	-0.051	0.004	25	-0.092	-0.015	
RCP activity duration (s)	0.138	0.009	34	0.057	0.233	0.150	0.011	37	0.036	0.305	0.111	0.007	34	0.044	0.191	0.114	0.010	34	0.042	0.325	0.093	0.008	25	0.012	0.177	
RCP onset to tongue projection onset (s)	-0.006	0.010	34	-0.096	0.096	0.032	0.008	37	-0.056	0.095	0.023	0.006	34	-0.044	0.077	0.022	0.009	34	-0.119	0.154	0.021	0.005	25	-0.042	0.050	
RCP onset to max. tongue projection (s)	0.071	0.008	34	-0.016	0.171	0.098	0.009	37	0.012	0.219	0.068	0.006	34	0.009	0.128	0.068	0.009	34	-0.015	0.249	0.055	0.006	25	0.003	0.124	
RCP max. amplitude to max. tongue projection (s)	-0.005	0.008	34	-0.091	0.117	-0.002	0.006	37	-0.063	0.103	-0.001	0.004	34	-0.042	0.052	-0.012	0.003	34	-0.049	0.027	-0.004	0.003	25	-0.033	0.021	
RCP offset to max. tongue projection (s)	-0.067	0.005	34	-0.134	-0.022	-0.052	0.004	37	-0.118	-0.009	-0.043	0.004	34	-0.082	0.033	-0.046	0.003	34	-0.084	-0.009	-0.038	0.004	25	-0.086	-0.002	

Table S3. Results of anova comparing motor control variables at each experimental temperature.

<i>Bolitoglossa</i> vs. <i>Ensatina</i>	5°C		10°C		15°C		20°C		25°C	
	F ratio	P value	F ratio	P value						
SAR activity duration	3.48	0.0729	0.92	0.3434	1.54	0.2217	4.63	0.0374 *	0.45	0.5095
SAR start to tongue projection start	4.99	0.0337 *	6.59	0.0143 *	32.50	<0.0001 *	1.49	0.2288	7.63	0.0120
SAR max. r.m.s. to tongue projection start	12.72	0.0013 *	9.46	0.0039 *	9.64	0.0035 *	11.33	0.0017 *	0.09	0.7679
SAR end to tongue projection start	28.32	<0.0001 *	13.00	0.0010 *	12.25	0.0013 *	13.29	0.0008 *	4.21	0.0535
RCP activity duration	69.30	<0.0001 *	98.59	<0.0001 *	123.00	<0.0001 *	120.50	<0.0001 *	2.41	0.1359
RCP start to max. tongue projection	84.97	<0.0001 *	156.40	<0.0001 *	175.50	<0.0001 *	126.80	<0.0001 *	3.37	0.0812
RCP end to max. tongue projection	10.51	0.0031 *	22.17	<0.0001 *	32.22	<0.0001 *	33.80	<0.0001 *	1.11	0.3039
<i>Desmognathus</i> vs. <i>Plethodon</i>	5°C		10°C		15°C		20°C		25°C	
	F ratio	P value	F ratio	P value						
SAR activity duration	22.40	<0.0001 *	29.25	<0.0001 *	44.27	<0.0001 *	13.33	0.0007 *	8.31	0.0072 *
SAR start to tongue projection start	15.53	0.0004 *	32.22	<0.0001 *	8.44	0.0058 *	23.60	<0.0001 *	0.10	0.7483
SAR max. r.m.s. to tongue projection start	3.37	0.0778	4.03	0.0528	0.25	0.6191	0.83	0.3690	0.88	0.3582
SAR end to tongue projection start	15.69	0.0004 *	19.41	0.0001 *	36.51	<0.0001 *	4.24	0.0460	10.61	0.0028 *
RCP activity duration	0.94	0.3397	0.20	0.6567	2.32	0.1352	0.01	0.9366	0.64	0.4297
RCP start to max. tongue projection	0.72	0.4013	1.45	0.2348	2.83	0.0997	1.66	0.2055	3.75	0.0621
RCP end to max. tongue projection	0.03	0.8692	0.00	0.9440	0.07	0.7995	0.37	0.5477	0.00	0.9843

* Significant difference between species after adjusting for false discovery rate.

Table S4. Results of ancova examining the effects of species x temperature interaction in each of the experimental temperature intervals within ballistic species (*Bolitoglossa* and *Ensatina*) and non-ballistic species (*Desmognathus* and *Plethodon*).

<i>Bolitoglossa</i> and <i>Ensatina</i>			<i>Desmognathus</i> and <i>Plethodon</i>		
Variable	Species x Temp F-ratio	Species x Temp P-value	Variable	Species x Temp F-ratio	Species x Temp P-value
5-15°C			5-15°C		
SAR activity duration	1.13	0.2909	SAR activity duration	0.04	0.8456
SAR start to tongue projection start	0.05	0.8265	SAR start to tongue projection start	2.47	0.1184
SAR max. r.m.s. to tongue projection start	0.52	0.4725	SAR max. r.m.s. to tongue projection start	1.66	0.1996
SAR end to tongue projection start	0.05	0.8313	SAR end to tongue projection start	0.15	0.6979
SAR r.m.s.	0.70	0.4047	SAR r.m.s.	4.46	0.0365
RCP activity duration	1.53	0.2184	RCP activity duration	0.41	0.5208
RCP start to to max. tongue projection	0.12	0.7258	RCP start to to max. tongue projection	0.32	0.5743
RCP end to max. tongue projection	4.37	0.0387	RCP end to max. tongue projection	0.09	0.7648
RCP r.m.s.	1.39	0.2410	RCP r.m.s.	4.52	0.0353
10-20°C			10-20°C		
SAR activity duration	0.16	0.6907	SAR activity duration	0.16	0.6869
SAR start to tongue projection start	0.91	0.3431	SAR start to tongue projection start	0.93	0.3367
SAR max. r.m.s. to tongue projection start	0.64	0.4233	SAR max. r.m.s. to tongue projection start	0.37	0.5429
SAR end to tongue projection start	0.84	0.3625	SAR end to tongue projection start	0.67	0.4158
SAR r.m.s.	1.49	0.2244	SAR r.m.s.	2.45	0.1194
RCP activity duration	2.14	0.1459	RCP activity duration	0.02	0.8835
RCP start to to max. tongue projection	1.65	0.2018	RCP start to to max. tongue projection	0.00	0.9589
RCP end to max. tongue projection	1.54	0.2162	RCP end to max. tongue projection	0.46	0.5004
RCP r.m.s.	0.42	0.5204	RCP r.m.s.	3.15	0.0779
15-25°C			15-25°C		
SAR activity duration	2.38	0.1258	SAR activity duration	3.52	0.0630
SAR start to tongue projection start	0.94	0.3333	SAR start to tongue projection start	1.26	0.2631
SAR max. r.m.s. to tongue projection start	0.01	0.9323	SAR max. r.m.s. to tongue projection start	0.65	0.4216
SAR end to tongue projection start	0.07	0.7866	SAR end to tongue projection start	3.00	0.0857
SAR r.m.s.	0.34	0.5611	SAR r.m.s.	0.48	0.4893
RCP activity duration	0.66	0.4177	RCP activity duration	0.00	0.9730
RCP start to to max. tongue projection	1.83	0.1789	RCP start to to max. tongue projection	1.41	0.2369
RCP end to max. tongue projection	0.27	0.6050	RCP end to max. tongue projection	0.00	0.9584
RCP r.m.s.	1.18	0.2804	RCP r.m.s.	7.46	0.0072
5-25°C			5-25°C		
SAR activity duration	0.07	0.7899	SAR activity duration	2.05	0.1538
SAR start to tongue projection start	0.17	0.6781	SAR start to tongue projection start	6.15	0.0139
SAR max. r.m.s. to tongue projection start	0.24	0.6228	SAR max. r.m.s. to tongue projection start	2.93	0.0884
SAR end to tongue projection start	0.58	0.4484	SAR end to tongue projection start	3.66	0.0570
SAR r.m.s.	0.50	0.4790	SAR r.m.s.	1.98	0.1603
RCP activity duration	0.00	0.9810	RCP activity duration	0.02	0.8984
RCP start to to max. tongue projection	0.31	0.5795	RCP start to to max. tongue projection	0.21	0.6463
RCP end to max. tongue projection	0.72	0.3979	RCP end to max. tongue projection	0.07	0.7903
RCP r.m.s.	0.02	0.8819	RCP r.m.s.	0.01	0.9430

*Significant interaction after adjusting for false discovery rate. Full model includes individual as a random effect and projection distance as a covariate. Bold indicates a significant effect of projection distance.

Table S5. Results of anova comparing motor control variables of ballistic and non-ballistic species at each experimental temperature.

	5°C		10°C		15°C		20°C		25°C	
	F ratio	P value								
SAR activity duration	28.33	<0.0001 *	1.54	0.2185	26.24	<0.0001 *	10.95	0.0014 *	2.37	0.1299
SAR start to tongue projection start	262.50	<0.0001 *	294.60	<0.0001 *	565.80	<0.0001 *	441.60	<0.0001 *	268.70	<0.0001 *
SAR max. r.m.s. to tongue projection start	41.67	<0.0001 *	54.83	<0.0001 *	131.80	<0.0001 *	103.10	<0.0001 *	29.21	<0.0001 *
SAR end to tongue projection start	42.62	<0.0001 *	76.41	<0.0001 *	46.03	<0.0001 *	65.79	<0.0001 *	141.00	<0.0001 *
RCP activity duration	0.84	0.3618	44.76	<0.0001 *	52.67	<0.0001 *	64.23	<0.0001 *	31.18	<0.0001 *
RCP start to max. tongue projection	0.84	0.3641	62.19	<0.0001 *	28.30	<0.0001 *	40.51	<0.0001 *	58.35	<0.0001 *
RCP end to max. tongue projection	0.65	0.4244	6.01	0.0163 *	30.68	<0.0001 *	36.97	<0.0001 *	5.11	0.0269 *

* Significant difference between species after adjusting for false discovery rate.

Table S6. Results of ancova examining effects of temperature and projection distance on motor control variables in ballistic species (*Bolitoglossa* and *Ensatina*) and non-ballistic species (*Desmognathus* and *Plethodon*).

<i>Bolitoglossa</i> and <i>Ensatina</i>								<i>Desmognathus</i> and <i>Plethodon</i>							
Variable	Projection distance P-value	Temperature P-value	Temperature slope	Temperature intercept	Q ₁₀	1/Q ₁₀		Variable	Projection distance P-value	Temperature P-value	Temperature slope	Temperature intercept	Q ₁₀	1/Q ₁₀	
5-15 °C															
SAR activity duration	0.0001 *	<0.0001 *	-0.0197	-0.64	0.64	1.57		SAR activity duration	0.5251	<0.0001 *	-0.0148	-0.68	0.71	1.41	
SAR start to tongue projection start	0.0006 *	<0.0001 *	-0.0222	-0.69	0.60	1.67		SAR start to tongue projection start	0.0511	<0.0001 *	-0.0216	-0.93	0.61	1.64	
SAR peak r.m.s. to tongue projection start	0.5607	<0.0001 *	-0.0286	-0.89	0.52	1.93		SAR max. r.m.s. to tongue projection start	0.1172	<0.0001 *	-0.0288	-1.12	0.52	1.94	
SAR end to tongue projection start	0.0967	0.15	-0.0148	-1.42	0.71	1.40		SAR end to tongue projection start	0.1042	0.0135 *	-0.0091	-1.17	0.81	1.23	
SAR r.m.s.	0.02	<0.0001 *	0.0276	-1.27	1.89	0.53		SAR r.m.s.	0.4558	<0.0001 *	0.0292	-1.05	1.96	0.51	
RCP activity duration	0.3848	<0.0001 *	-0.0219	-0.82	0.60	1.66		RCP activity duration	0.0845	0.0043 *	-0.0098	-0.80	0.80	1.25	
RCP start to peak tongue projection	0.6637	0.0267 *	-0.0103	-1.25	0.79	1.27		RCP start to max. tongue projection	0.0253	0.2759	-0.0065	-1.09	0.86	1.16	
RCP end to max. tongue projection	0.6888	<0.0001 *	-0.0331	-1.07	0.47	2.15		RCP end to max. tongue projection	0.0963	<0.0001 *	-0.0142	-1.14	0.72	1.39	
RCP r.m.s.	0.6275	0.0238 *	0.0157	-0.78	1.44	0.69		RCP r.m.s.	0.7618	<0.0001 *	0.0278	-0.85	1.89	0.53	
10-20 °C															
SAR activity duration	0.0002 *	<0.0001 *	-0.0161	-0.68	0.69	1.45		SAR activity duration	0.0346	<0.0001 *	-0.0169	-0.65	0.68	1.48	
SAR start to tongue projection start	0.0004 *	<0.0001 *	-0.0171	-0.76	0.67	1.48		SAR start to tongue projection start	0.7359	<0.0001 *	-0.0195	-0.96	0.64	1.56	
SAR peak r.m.s. to tongue projection start	0.5433	0.0003 *	-0.0175	-1.03	0.67	1.50		SAR max. r.m.s. to tongue projection start	0.0368	0.0003 *	-0.0214	-1.40	0.61	1.64	
SAR end to tongue projection start	0.134	0.3234	-0.0087	-1.49	0.82	1.22		SAR end to tongue projection start	0.0244	0.0002 *	-0.0138	-0.98	0.73	1.38	
SAR r.m.s.	0.0416	<0.0001 *	0.0254	-1.23	1.80	0.56		SAR r.m.s.	0.0406	0.0027 *	0.0157	-0.85	1.44	0.69	
RCP activity duration	0.102	<0.0001 *	-0.0233	-0.80	0.59	1.71		RCP activity duration	0.0014 *	<0.0001 *	-0.0153	-0.91	0.70	1.42	
RCP start to peak tongue projection	0.0907	<0.0001 *	-0.0242	-1.07	0.57	1.75		RCP start to max. tongue projection	0.0021 *	<0.0001 *	-0.0202	-1.15	0.63	1.59	
RCP end to max. tongue projection	0.0167	<0.0001 *	-0.0249	-1.16	0.56	1.77		RCP end to max. tongue projection	0.0004 *	0.0048 *	-0.0094	-1.42	0.81	1.24	
RCP r.m.s.	0.0497	0.0461	-0.0130	-0.37	0.74	1.35		RCP r.m.s.	0.9858	0.0004 *	0.0194	-0.74	1.56	0.64	
15-25 °C															
SAR activity duration	<0.0001 *	<0.0001 *	-0.0162	-0.69	0.69	1.45		SAR activity duration	0.0021 *	<0.0001 *	-0.0126	-0.85	0.75	1.34	
SAR start to tongue projection start	<0.0001 *	<0.0001 *	-0.0187	-0.75	0.65	1.54		SAR start to tongue projection start	0.0542	<0.0001 *	-0.0167	-1.01	0.68	1.47	
SAR peak r.m.s. to tongue projection start	0.5008	0.0018 *	-0.0188	-1.02	0.65	1.54		SAR max. r.m.s. to tongue projection start	0.1673	0.0005 *	-0.0207	-1.40	0.62	1.61	
SAR end to tongue projection start	0.2709	0.5862	-0.0052	-1.56	0.89	1.13		SAR end to tongue projection start	0.0095 *	0.0303 *	-0.0087	-1.25	0.82	1.22	
SAR r.m.s.	0.6469	0.0001 *	0.0200	-1.16	1.59	0.63		SAR r.m.s.	0.4371	0.6618	0.0024	-0.62	1.06	0.94	
RCP activity duration	0.1916	0.0866	-0.0087	-1.04	0.82	1.22		RCP activity duration	0.0016 *	0.003 *	-0.0115	-0.78	0.77	1.30	
RCP start to peak tongue projection	0.0162 *	0.0004 *	-0.0195	-1.02	0.64	1.57		RCP start to max. tongue projection	0.0442	0.0804	-0.0096	-1.07	0.80	1.25	
RCP end to max. tongue projection	0.0346	0.5842	-0.0045	-1.51	0.90	1.11		RCP end to max. tongue projection	0.0021 *	0.0001 *	-0.0184	-1.26	0.65	1.53	
RCP r.m.s.	0.0324	0.4271	0.0066	-0.70	1.16	0.86		RCP r.m.s.	0.9806	0.3098	-0.0056	-0.31	0.88	1.14	
5-25 °C															
SAR activity duration	<0.0001 *	<0.0001 *	-0.0178	-0.66	0.66	1.51		SAR activity duration	0.058	<0.0001 *	-0.0139	-0.70	0.73	1.38	
SAR start to tongue projection start	<0.0001 *	<0.0001 *	-0.0200	-0.71	0.63	1.58		SAR start to tongue projection start	0.942	<0.0001 *	-0.0192	-0.96	0.64	1.56	
SAR peak r.m.s. to tongue projection start	0.7306	<0.0001 *	-0.0242	-0.93	0.57	1.75		SAR max. r.m.s. to tongue projection start	0.3412	<0.0001 *	-0.0238	-1.26	0.58	1.73	
SAR end to tongue projection start	0.0741	0.0209 *	-0.0101	-1.46	0.79	1.26		SAR end to tongue projection start	0.0279	<0.0001 *	-0.0099	-1.17	0.80	1.26	
SAR r.m.s.	0.0239	<0.0001 *	0.0245	-1.23	1.76	0.57		SAR r.m.s.	0.3543	<0.0001 *	0.0161	-0.90	1.45	0.69	
RCP activity duration	0.3025	<0.0001 *	-0.0174	-0.87	0.67	1.49		RCP activity duration	0.0001 *	<0.0001 *	-0.0114	-0.78	0.77	1.30	
RCP start to peak tongue projection	0.0747	<0.0001 *	-0.0150	-1.21	0.71	1.41		RCP start to max. tongue projection	0.0008 *	<0.0001 *	-0.0121	-1.30	0.76	1.32	
RCP end to max. tongue projection	0.0977	<0.0001 *	-0.0221	-1.18	0.60	1.66		RCP end to max. tongue projection	0.0001 *	<0.0001 *	-0.0147	-1.34	0.71	1.40	
RCP r.m.s.	0.0623	0.0144 *	0.0088	-0.71	1.23	0.81		RCP r.m.s.	0.6423	<0.0001 *	0.0146	-0.72	1.40	0.71	

* Significant effect after adjusting for false discovery rate. The coefficients and Q₁₀ values for variables with projection distance p-values >.05 come from the model without projection distance included.