Supplementary data S1. Species data used in this study and references list.

	Males		Females		SSD	Significant test	Ref
Species	n	SVL±SD	n	SVL±SD			
Andrias davidianus	2	532.5	8	383.0	-0.280		12
Cryptobranchus alleganiensis	53	277.4±5.2	52	300.9±3.4	0.084	Yes	61
Batrachuperus karlschmidti	10	80.0	10	84.8	0.060		26
Batrachuperus londongensis	20	98.6	10	96.7	-0.019		12
Batrachuperus pinchonii	5	69.6	5	74.6	0.070		26
Batrachuperus taibaiensis	11	92.9±12.1	9	102.1±7.1	0.099	Yes	27
Batrachuperus tibetanus	10	94.5	10	92.8	-0.017		12
Batrachuperus yenyuadensis	10	82.8	10	74.8	-0.096		26
Hynobius abei	24	57.8±2.1	34	55.0±1.2	-0.048	Yes	92
Hynobius amakusaensis	22	75.4±4.8	12	76.5±3.6	0.014	No	93
Hynobius arisanensis	72	54.3±4.8	40	55.2±4.8	0.016	No	94
Hynobius boulengeri	37	83.0±5.4	15	91.5±3.8	0.102	Yes	95
Hynobius formosanus	15	53.0±4.4	8	52.4±3.9	-0.011	No	94
Hynobius fuca	4	50.9±2.8	3	52.8±2.0	0.037	No	94
Hynobius glacialis	12	63.1±4.7	11	58.9±5.2	-0.066	No	94
Hynobius hidamontanus	39	47.7±1.0	15	51.3±1.2	0.075	Yes	96
Hynobius katoi	12	58.4±3.3	10	62.7±1.6	0.073	Yes	97
Hynobius kimurae	20	63.0±1.5	15	72.7±2.0	0.153	Yes	98
Hynobius leechii	70	61.6±4.5	18	66.5±5.9	0.079	Yes	99
Hynobius lichenatus	37	58.5±1.9	2	53.8	-0.080		100
Hynobius maoershanensis	4	86.1	2	80.1	-0.069		101
Hynobius naevius		72.1		76.7	0.063		102
Hynobius nebulosus	14	48.3±2.9	12	50.4±2.1	0.043	Yes	96
Hynobius osumiensis	9	68.4±3.1	15	70.2±3.0	0.026	No	103
Hynobius quelpaertensis	41	52.5±3.8	4	61.3±4.1	0.167	Yes	104
Hynobius schinichisatoi	25	82.9±5.5	8	84.3±8.9	0.016	No	105
Hynobius sonani	21	56.8±6.0	16	58.4±4.4	0.028	No	106
Hynobius takedai	24	57.2±2.0	7	57.8±2.0	0.010	No	107
Hynobius tokyoensis	117	63.1±6.1	36	65.3±6.4	0.034	No	108
Hynobius tsuensis	9	61.9±6.2	4	62.1±3.3	0.003	No	104
Hynobius yangi	18	52.6±4.4	3	57.8±2.4	0.098	No	104
Hynobius yiwensis	14	63.8	10	59.8	-0.062		109
Liua shihi	55	76.4±6.0	61	71.1±7.6	-0.069	Yes	121
Liua tsinpaensis	15	66.1	4	66.0	-0.001		12
Onychodactylus fischeri	35	70.1±3.7	35	66.8±5.8	-0.047	Yes	142
Onychodactylus japonicus	33	62.3±5.7	33	65.3±5.0	0.048	Yes	142
Onychodactylus koreanus	22	66.5±7.7	14	58.2±8.8	-0.124	Yes	142
Onychodactylus nipponoborealis	7	71.3±3.6	7	67.8±5.0	-0.049	No	142
Onychodactylus zhangyapingi	6	64.6±2.2	10	73.5±6.2	0.137	Yes	142
Onychodactylus zhaoermii	20	65.3±4.0	6	76.9±3.3	0.177	Yes	142
Pachyhynobius shangchengensis	7	102.3	9	100.8	-0.014		143
Paradactylodon gorganensis	12	103.8±10.4	15	105.9±15.8	0.020	No	150
Paradactylodon mustersi	19	74.8±8.6	15	73.1±7.3	-0.022	No	151
Pseudohynobius flavomaculatus	10	87.0	10	85.8	-0.013		193
Pseudohynobius shuichengensis	10	101.7±3.1	10	106.0±3.7	0.042	Yes	194
Salamandrella keyserlingii	276	57.6±0.2	130	61.7±0.4	0.071	Yes	203
Siren intermedia	1200	282.4	1200	216.9	-0.231		205
Dicamptodon copei	6	96.6	2	101.8	0.053		81

Species	Males n	Males SVL±SD	Females n	Females SVL±SD	SSD	Significant test	Ref
Dicamptodon ensatus	3	122.9	3	208.2	0.694		81
Ambystoma annulatum	111	92.0±0.6	44	95.0±0.9	0.032	Yes	1
Ambystoma bishopi	23	43.8±3.2	27	46.1±5.0	0.052	Yes	2
Ambystoma cingulatum	13	50.4±4.4	23	52.3±5.9	0.037	No	2
Ambystoma jeffersonianum	69	72.8±0.9	115	82.0±0.7	0.126	Yes	3
Ambystoma laterale	22	52.9	18	56.6	0.069		4
Ambystoma macrodactylum	196	60.9±0.2	203	64.3±0.2	0.055	Yes	5
Ambystoma maculatum	394	85.0±0.6	261	95.0±0.5	0.117	Yes	6
Ambystoma opacum	7	56.0±4.6	10	63.3±1.9	0.130	Yes	7
Ambystoma talpoideum	13	56.2	9	60.1	0.069		8
Ambystoma texanum	58	72.8	36	77.7	0.067		4
Ambystoma tigrinum	43	101.9±11.7	11	91.8±8.6	-0.099	Yes	9
Calotriton arnoldi	38	59.5±0.2	27	60.3±0.3	0.013	Yes	59
Calotriton asper	422	61.2	332	62.2	0.016		60
Cynops cyanurus	16	78.0	13	87.3	0.119		62
Cynops ensicauda	23	55.5	30	61.2	0.102		63
Cynops fudingensis	4	39.8±1.2	6	44.1±1.3	0.108	Yes	64
Cynops glaucus	8	35.7±0.6	21	45.7±3.1	0.280	Yes	65
Cynops orientalis	52	40.1±1.9	110	48.0±3.1	0.197	Yes	66
Cynops pyrrhogaster	46	49.0±2.9	24	55.7±5.0	0.136	Yes	67
Chioglossa lusitanica	64	45.5±0.2	67	47.1±0.2	0.035	Yes	68
Ichthyosaura alpestris	20	46.3±6.4	33	55.3±2.7	0.194	Yes	110
Echinotriton chinhaiensis	12	66.7	10	82.3	0.233		12
Euproctus montanus	24	47.5	55	45.9	-0.033		83
Euproctus platycephalus	80	55.7±7.1	45	47.1±3.8	-0.154	Yes	84
Laotriton laoensis	154	91.0±4.0	120	101.0±6.0	0.109	Yes	115
Lissotriton boscai	12	35.9±0.7	10	41.6±0.8	0.158	Yes	116
Lissotriton helveticus	139	36.0±0.1	232	38.0±0.1	0.055	Yes	117
Lissotriton italicus	14	33.8±0.03	21	34.5±0.06	0.020	Yes	118
Lissotriton montandoni	142	41.1±2.4	173	47.4±3.2	0.153	Yes	119
Lissotriton vulgaris	88	40.0.0	72	40.9	0.022		120
Lyciasalamandra antalyana	9	66.4	11	68.0	0.024		122
Lyciasalamandra atifi	25	63.4±1.2	42	58.8±1.4	-0.072	Yes	123
Lyciasalamandra billae	8	62.5	8	63.5	0.016		124
Lyciasalamandra fazilae	13	61.1±1.3	8	62.3±4.0	0.019	No	125
Lyciasalamandra flavimembris	8	44.7	14	59.7	0.335		126
Lyciasalamandra luschani	6	65.6±3.0	13	60.4±7.2	-0.079	No	127
Mertensiella caucasica	22	63.9±3.7	26	63.7±3.9	-0.003	No	128
Neurergus crocatus	34	69.2±3.6	19	76.2±3.8	0.101	Yes	130
Neurergus kaiseri	58	54.8±0.5	41	63.6±0.8	0.160	Yes	131
Neurergus strauchii	24	69.8±0.9	15	79.6±0.9	0.140	Yes	132
Notophthalmus perstriatus	450	33.5±1.6	556	35.6±2.7	0.062	Yes	133
Notophthalmus viridescens	14	42.4	19	44.5	0.049		134
Ommatotriton nesterovi	12	57.2±1.2	8	65.3±1.3	0.141	Yes	140
Ommatotriton ophryticus	43	70.4±4.6	49	58.9±4.4	-0.163	Yes	141
Ommatotriton vittatus	15	46.3±3.1	15	43.0±4.5	-0.071	Yes	141
Pachytriton archospotus	8	87.2±6.5	13	92.0±6.3	0.055	No	144
Pachytriton brevipes	18	88.9±5.6	7	78.6±3.6	-0.115	Yes	145
Pachytriton feii	18	73.3±8.6	13	81.6±7.5	0.113	Yes	146
Pachytriton granulosus	9	69.0±6.1	11	70.9±7.7	0.027	No	146

	Males		Females		SSD	Significant test	Ref
Species	n	SVL±SD	n	SVL±SD			
Pachytriton inexpectatus	12	85.9±9.6	17	92.3±9.4	0.074	No	146
Pachytriton labiatus	15	86.0	18	88.9	0.033		147
Pachytriton wuguanfui	2	86.1±0.8	6	83.5±6.1	-0.030	No	148
Pachytriton xanthospilos	6	87.0±9.6	17	91.7±7.1	0.054	No	149
Paramesotriton caudopunctatus	20	71.5	20	75.4	0.054		12
Paramesotriton chinensis	5	76.0±11.0	3	82.0±5.0	0.078	No	152
Paramesotriton ermizhaoi	5	56.1±3.1	6	56.3±2.7	0.003	No	153
Paramesotriton fuzhongensis	4	81.5	3	77.0	-0.055		154
Paramesotriton hongkongensis	100	66.9±0.2	100	70.2±0.2	0.049	Yes	155
Paramesotriton longliensis	4	77.3±5.6	3	78.8±6.8	0.019	No	156
Paramesotriton maolanensis	3	94.1±4.3	2	114.7	0.218		157
Paramesotriton wulingensis	5	71.6±1.7	5	69.3±3.3	-0.032	No	158
Paramesotriton yunwuensis	3	99.5	5	82.9	-0.166		159
Paramesotriton zhijinensis	7	58.1±3.9	7	63.0±4.6	0.084	No	160
Pleurodeles nebulosus	8	60.5	11	59.3	-0.019		185
Pleurodeles poireti	16	45.4	6	50.3	0.107		185
Pleurodeles waltli	158	79.7±9.0	142	83.4±11.9	0.046	Yes	186
Salamandra algira	42	95.3±7.9	17	99.0±7.8	0.038	No	128
Salamandra atra	20	58.2±2.6	17	59.6±2.8	0.024	No	199
Salamandra corsica	5	99.8	6	102.6	0.028		200
Salamandra infrainmaculata	149	129.4	121	134.9	0.042		201
Salamandra lanzai	11	74.2±2.8	9	74.0±3.8	-0.002	No	200
Salamandra salamandra	32	102.1±1.5	6	105.5±2.4	0.033	Yes	202
Salamandrina perspicillata	33	33.8±1.6	33	38.7±1.9	0.144	Yes	204
Taricha granulosa	805	58.2±0.2	945	54.8±0.03	-0.058	Yes	208
Taricha torosa	4	67.4±6.9	2	66.2±3.4	-0.017	No	209
Triturus carnifex	45	75.1±1.1	40	76.2±0.7	0.014	Yes	214
Triturus cristatus	8	68.3±2.2	3	73.6±8.3	0.077	No	215
Triturus dobrogicus	26	65.0±8.8	21	68.9±6.6	0.060	No	216
Triturus karelinii	40	76.9±5.6	46	75.6±10.1	-0.016	No	215
Triturus macedonicus	9	74.4±4.2	8	81.4±4.1	0.094	Yes	215
Triturus marmoratus	35	68.5±3.3	67	71.9±3.1	0.049	Yes	217
Triturus pygmaeus		42.3		43.9	0.037		218
Tylototriton anguliceps	2	61.8	5	70.6±3.4	0.142		219
Tylototriton anhuiensis		69.2		68.1	-0.015		220
Tylototriton asperrimus	20	65.8	6	87.0	0.322		12
Tylototriton broadoridgus	29	66.5±3.2	3	83.3±6.1	0.252	Yes	221
Tylototriton hainanensis	4	75.0	7	76.3	0.017		12
Tylototriton himalayanus	32	71.9±6.1	13	76.0±7.5	0.057	No	222
Tylototriton kweichowensis	13	96.2	6	110.8	0.151		12
Tylototriton liuyangensis	8	69.4±5.5	6	84.0±2.5	0.210	Yes	223
Tylototriton notialis	2	66.8	2	81.1	0.214		224
Tylototriton panhai	2	73.5	2	86.3	0.174		225
Tylototriton podichthys	13	66.9	2	75.5	0.128		225
Tylototriton shanjing	10	73.6	10	83.3	0.131		12
Tylototriton taliangensis	10	93.1	10	103	0.106		12
Tylototriton uyenoi	9	68.1	2	73.8	0.083		225
Tylototriton verrucosus	20	63.9±6.1	19	77.8±10.0	0.217	Yes	226
Necturus maculosus		148.8		167.7	0.127		129
Rhyacotriton cascadae	208	46.5	227	49.5	0.064		196

Species	Males n	Males SVL±SD	Females n	Females SVL±SD	SSD	Significant test	Ref
Rhyacotriton kezeri		52.0		55.0	0.057		197
Rhyacotriton olympicus		59.0		57.3	-0.028		197
Rhyacotriton variegatus	59	43.6±0.2	23	42.1±0.2	-0.034	Yes	198
Amphiuma means	117	404.5	147	398.1	-0.015		10
Amphiuma tridactylum	80	555.0±1.1	59	545.0±1.3	-0.018	Yes	11
Aneides aeneus		52.8±1.4		57.1±1.1	0.081		13
Aneides ferreus		57.1		58.1	0.017		14
Aneides flavipunctatus		65.4		69.0	0.055		15
Aneides lugubris		59.8		62.5	0.045		16
Aquiloeurycea cafetalera	2	45.5±3.8	6	49.9±6.4	0.096	No	17
Aquiloeurycea cephalica	8	45.3±3.9	15	47.3±4.5	0.044	Yes	17
Aquiloeurycea quetzalanensis	2	35.7±5.1	4	32.8±4.3	-0.081	No	17
Atylodes genei	55	52.8	50	52	-0.015		18
Batrachoseps altasierrae	8	38.0±2.4	8	40.1±3.5	0.055	No	19
Batrachoseps attenuatus		42.3		42.2	-0.002		20
Batrachoseps bramei	10	34.3±2.4	11	35.5±3.8	0.034	No	19
Batrachoseps campi	5	42.0±2.5	7	53.0±4.0	0.261	Yes	21
Batrachoseps diabolicus	10	36.2±2.4	10	38.9±4.4	0.074	No	22
Batrachoseps gabrieli	8	42.4	16	46.1	0.087		23
Batrachoseps gavilanensis	10	43.1±2.2	10	43.9±3.3	0.018	No	22
Batrachoseps gregarius	9	35.9±3.1	10	42.5±2.5	0.183	Yes	22
Batrachoseps incognitus	10	41.7±2.2	10	42.8±3.2	0.026	No	22
Batrachoseps kawia	10	34.9±2.6	8	37.6±4.6	0.077	No	22
Batrachoseps luciae	10	36.3±2.9	10	41.2±2.9	0.134	Yes	22
Batrachoseps major	5	36.9±3.8	9	37.6±5.3	0.018	No	24
Batrachoseps minor	10	31.0±1.6	10	30.1±1.6	-0.029	No	22
Batrachoseps nigriventris	10	38.2±2.1	10	36.8±1.4	-0.036	No	22
Batrachoseps pacificus	78	40.2±6.6	96	40.5±7.1	0.007	No	25
Batrachoseps regius	7	35.6±1.9	10	36.4±3.6	0.022	No	22
Batrachoseps relictus	7	37.3±1.7	8	40.1±3.5	0.075	No	22
Batrachoseps robustus	5	51.9±4.4	7	58.2±2.1	0.121	Yes	21
Batrachoseps wrighti	5	42.0±2.5	7	53.8±5.9	0.280		21
Bolitoglossa adspersa	20	49.9	22	54.7	0.096		28
Bolitoglossa alberchi	12	65.9±3.4	10	71.0±15.5	0.077	No	29
Bolitoglossa altamazonica		39.0		47.0	0.205		30
Bolitoglossa bramei	3	38.1	2	39.6	0.039		31
Bolitoglossa carri	14	42.6	9	49.9	0.171		32
Bolitoglossa celaque	32	47.7	20	48.3	0.012		33
Bolitoglossa colonnea	20	37.2	19	44.7	0.201		34
Bolitoglossa compacta	2	49.1±6.0	5	71.5±2.2	0.456	Yes	35
Bolitoglossa conanti	17	45.9	12	44.5	-0.030		32
Bolitoglossa chinanteca	6	37.6±3.1	8	32.3±5.4	-0.140	Yes	36
Bolitoglossa decora	2	38.4	2	61.6	0.604		32
Bolitoglossa diaphora	5	45.9±3.3	3	50.5±2.1	0.100	Yes	37
Bolitoglossa dofleini	56	53.8	25	94.2	0.750		38
Bolitoglossa dunni	10	53.5	4	53.5	0.000		32
Bolitoglossa engelhardti	38	39.0	4	47.0	0.205		39
Bolitoglossa equatoriana	2	41.5	15	41.7	0.004		40
Bolitoglossa flavimembris	9	50.1	21	54.4	0.085		32
Bolitoglossa franklini	157	52.0	62	64.0	0.230		39

	Males		Females		SSD	Significant test	Ref
Species	n	SVL±SD	n	SVL±SD			
Bolitoglossa gomezi	5	38.9	2	48.4	0.244		31
Bolitoglossa guaneae	12	37.6	11	37.7	0.002		41
Bolitoglossa hartwegi	7	40.6	11	45.1	0.110		42
Bolitoglossa heiroreias	9	38.6	20	44.2	0.145		32
Bolitoglossa helmrichi	25	45.5	21	48.1	0.057		43
Bolitoglossa hermosa		39.7		48.5	0.221		44
Bolitoglossa lignicolor	6	53.7±7.8	12	46.1±14.6	-0.141	No	45
Bolitoglossa lincolni	32	54.0	18	75.0	0.388		38
Bolitoglossa longissima	2	47.0	5	54.6	0.161		32
Bolitoglossa lozanoi	3	51.5	5	55.8	0.083		46
Bolitoglossa medemi	5	40.4	5	43.3	0.071		40
Bolitoglossa meliana	9	53.6±5.7	11	60.8±11.7	0.134	No	47
Bolitoglossa mexicana	7	56.5±5.0	10	62.5±7.9	0.106	No	37
Bolitoglossa minutula	16	33.4±1.7	14	33.6±1.8	0.005	No	48
Bolitoglossa mombachoensis	4	53.1	7	57.2	0.077		49
Bolitoglossa morio	15	43.0	12	46.4	0.079		32
Bolitoglossa nicefori	39	39.7±0.5	31	51.9±0.8	0.307	Yes	50
Bolitoglossa nympha	28	32.8±4.4	14	37.8±3.2	0.152	Yes	36
Bolitoglossa oaxacensis	3	46.1	2	55.8	0.210		51
Bolitoglossa occidentalis	61	32.1±4.4	47	35.9±4.8	0.118	Yes	36
Bolitoglossa orestes	9	37.7	13	42.2	0.119		28
Bolitoglossa paraensis	28	35.6±3.5	57	38.8±3.7	0.008	Yes	30
Bolitoglossa pesrubra		46.1		51.4	0.114		52
Bolitoglossa porrasorum	12	52.6	9	56.9	0.081		32
Bolitoglossa robusta	10	83.4	7	105.1	0.260		53
Bolitoglossa rostrata	236	52.0	130	64.0	0.230		39
Bolitoglossa rufescens	52	31.1±2.3	36	32.1±2.5	0.032	Yes	36
Bolitoglossa schizodactyla	8	48.3	9	56.4	0.167		54
Bolitoglossa sooyorum	7	63.1±2.4	8	55.0±14.7	-0.128	No	55
Bolitoglossa striatula	2	42.2	3	51.0±13.2	0.208		37
Bolitoglossa subpalmata		48.2		54.6	0.132		56
Bolitoglossa synoria	13	46.8	11	46.5	-0.006		32
Bolitoglossa tenebrosa	10	55.0±3.8	5	69.1±12.2	0.256	Yes	47
Bolitoglossa tica	10	45.1	7	46.8	0.037		57
Bolitoglossa zacapensis	12	36.5	13	45.7	0.252		43
Bradytriton silus	4	45.2±6.1	6	48.8±3.1	0.079	No	58
Cryptotriton nasalis	10	27.4±2.2	6	32.0±0.8	0.167	Yes	37
Chiropterotriton arboreus	9	33.4±3.6	5	32.2±3.4	-0.035	No	69
Chiropterotriton cieloensis	8	32.6±1.9	4	31.1±2.7	-0.046	No	69
Chiropterotriton cracens	58	26.6±0.3	35	27.2±0.6	0.022	Yes	70
Chiropterotriton chico	15	38.4±1.9	15	39.3±2.5	0.023	No	71
Chiropterotriton chondrostega	7	26.2±0.6	5	27.7±2.4	0.057	No	70
Chiropterotriton dimidiatus	25	24.5±0.5	28	26.3±0.6	0.073	Yes	70
Chiropterotriton magnipes	8	50.0±4.8	4	57.4±3.7	0.148	Yes	71
Chiropterotriton miquihuanus	11	33.3±2.7	7	36.5±3.7	0.096	Yes	72
Chiropterotriton multidentatus	62	38.4±0.6	56	40.2±0.6	0.046	Yes	70
Chiropterotriton priscus	12	38.5±2.9	18	41.8±2.7	0.085	Yes	72
Chiropterotriton terrestris	15	25.4±0.6	15	28.3±1.5	0.114	Yes	70
Dendrotriton bromeliaceus	491	30.0	156	33.0	0.100		73
Dendrotriton sanctibarbarus	10	31.4±0.5	10	33.1±3.8	0.054	No	37

Species	Males n	Males SVL±SD	Females n	Females SVL±SD	SSD	Significant test	Ref
Desmognathus aeneus	24	16.0	24	25.5	0.593		74
Desmognathus apalachicolae	30	46.3	27	38.5	-0.168		75
Desmognathus auriculatus	92	46.6	112	45.0	-0.034		76
Desmognathus brimleyorum	249	77.0±9.4	150	69.7±6.6	-0.094	Yes	77
Desmognathus conanti	10	41.0	13	38.5	-0.060		75
Desmognathus folkertsi		72.7±5.2		65.1±4.0	-0.105		78
Desmognathus monticola	13	58.2	6	56.8	-0.024		75
Desmognathus ocoee	33	40.2	19	38.5	-0.042		74
Desmognathus ochrophaeus	41	40.3	42	36.2	-0.101		79
Desmognathus quadramaculatus	19	59.9±6.4	25	57.7±3.0	-0.036	No	80
Desmognathus valentinei	33	56.4±5.5	30	53.2±5.1	-0.056	Yes	75
Desmognathus wrighti	31	21.4	22	23.8	0.112		74
Ensatina eschscholtzii	18	50.6	11	53.4	0.055		82
Eurycea aquatica	50	40.5±3.3	31	40.9±3.7	0.009	No	85
Eurycea cirrigera	62	38.7±3.6	65	38.4±4.7	-0.007	No	85
Eurycea guttolineata	41	51.4	47	52.9	0.029		86
Eurycea longicauda	84	56.0±0.03	8	58.0±4.2	0.035	Yes	87
Eurycea lucifuga		60.4		62.0	0.026		88
Eurycea neotenes	19	28.9	11	34.7	0.200		89
Eurycea quadridigitata	64	30.7±2.0	59	31.5±1.8	0.026	Yes	90
Eurycea wilderae		38.4		39.8	0.036		88
Gyrinophilus porphyriticus		85.8		99.4	0.158		88
Hemidactylum sctuatum		65.1		74.7	0.147		88
Hydromates shastae		59.0		58.3	-0.011		91
Hydromates samweli		55.3		57.4	0.037		91
Hydromates wintu		57.4		60.2	0.048		91
Isthmura maxima	7	101.6	5	111.2	0.094		111
Isthmura sierraoccidentalis	3	84.0±3.4	2	90.0±2.8	0.071	No	112
Ixalotriton niger	10	56.6	9	54.4	-0.038		113
Karsenia koreana	11	40.5±2.5	13	45.2±3.1	0.116	Yes	114
Nototriton barbouri	2	37.0	13	35.6	-0.037		37
Nototriton lignicola	7	31.1±2.2	3	31.7±1.0	0.019	No	37
Nototriton limnospectator	5	36.3±2.0	2	38.2	0.052		37
Nototriton picadoi	10	25.3±3.1	13	29.0±3.3	0.146	Yes	135
Nyctanolis pernix	4	54.8±10.7	9	67.8±4.6	0.237	Yes	58
Oedipina complex	5	40.9±2.5	5	38.2±0.9	-0.066	No	136
Oedipina cyclocauda	10	41.6±2.3	8	41.3±2.4	-0.007	No	136
Oedipina gephyra	4	50.9±1.0	10	55.9±1.7	0.098	Yes	37
Oedipina grandis	3	62.8	4	66.9	0.065		137
Oedipina kasios	3	36.9	3	37.5	0.016		138
Oedipina maritima	4	43.3	3	46.2	0.066		139
Oedipina parvipes	3	45.3±2.5	7	48.6±5.3	0.072	No	133
Oedipina poelzi	14	54.2±7.2	19	53.7±6.6	-0.009	No	136
Oedipina pseudouniformis	12	44.7±4.3	9	45.7±4.6	0.022	No	136
Oedipina quadra	7	41.6	16	45.0	0.081		138
Oedipina savagei	3	36.8	3	37.5	0.019		139
Parvimolge townsendi	4	22.0	4	21.0	-0.045		161
Phaeognathus hubrichti	27	107.2±13.5	22	109.1±5.5	0.017	No	162
Plethodon albagula	12	61.7±5.4	11	59.8±4.4	-0.030	No	163
Plethodon angusticlavius	31	37.2±3.0	53	38.9±3.9	0.045	Yes	164

Species	Males n	Males SVL±SD	Females n	Females SVL±SD	SSD	Significant test	Ref
Plethodon asupak	7	60.7±3.0	8	67.2±2.0	0.107	Yes	165
Plethodon cinereus	7	39.9	8	40.5	0.015		166
Plethodon elongatus	9	50.2±3.4	13	47.7±3.7	-0.049	No	165
Plethodon fourchensis	57	62.1±7.5	54	62.0±8.1	-0.001	No	167
Plethodon hoffmani	32	45.1±4.4	34	46.1±5.5	0.022	No	168
Plethodon idahoensis	21	49.8±2.8	23	51.2±3.4	0.028	No	169
Plethodon jordani	31	55.6	24	59.5	0.070		170
Plethodon kentucki	153	54.1±0.2	149	56.6±0.2	0.046	Yes	171
Plethodon larselli		45.5		50.1	0.101		172
Plethodon longicrus	15	92.9	13	99.8	0.074		173
Plethodon metcalfi	20	65.7±4.3	22	67.4±5.3	0.025	No	174
Plethodon neomexicanus	39	57.9	45	60.5	0.044		175
Plethodon ouachitae	98	57.2±4.9	123	59.4±6.1	0.038	Yes	176
Plethodon petraeus	10	71.2	10	79.5	0.116		177
Plethodon serratus	45	38.0±0.2	34	38.9±0.3	0.023	Yes	178
Plethodon stormi	6	62.9±2.2	13	58.2±2.2	-0.074	Yes	179
Plethodon teyahalee	17	70.1	25	73.8	0.052		180
Plethodon vehiculum	335	46.7	105	50.9	0.089		181
Plethodon websteri	97	35.3	89	35.3	0.000		182
Plethodon wehrlei	5	55.5±0.8	4	44.8±4.3	-0.192	Yes	183
Plethodon yonahlossee	27	67.0	40	72.0	0.074		184
Pseudoeurycea aurantia	2	43.2	7	44.6	0.032		187
Pseudoeurycea lineola	20	38.3±0.5	17	39.5±0.6	0.031	Yes	188
Pseudoeurycea longicauda	16	51.0	9	52.7	0.033		189
Pseudoeurycea lynchii	5	43.6	14	47.5	0.089		190
Pseudoeurycea orchimelas	13	31.0±0.5	6	34.8±0.7	0.122	Yes	191
Pseudoeurycea papenffusi	11	77.0	10	80.4	0.044		192
Pseudoeurycea rex	120	46.0	81	55.0	0.195		73
Pseudotriton montanus		65.6		73.6	0.121		
Pseudotriton ruber	145	65.8	58	72.3	0.098		195
Speleomantes ambrosii	20	54.4±2.2	20	59.8±3.0	0.099	Yes	206
Speleomantes flavus	14	60	26	63.9	0.065		18
Speleomantes imperialis	66	60.8	61	62.1	0.021		18
Speleomantes italicus	58	52.2	42	56.2	0.076		18
Speleomantes sarrabusensis	33	61.6±3.1	16	59.1±6.1	-0.040	No	207
Speleomantes strinatii	20	54.4±2.6	20	58.0±3.6	0.066	Yes	206
Speleomantes supramontis	38	60.4	55	63.6	0.052		18
Stereochilus marginatus		41.7		41.8	0.002		88
Thorius arboreus	4	17.0±2.0	7	17.2±2.2	0.011	No	210
Thorius aureus	21	25.9±2.1	20	29.1±3.5	0.123	Yes	211
Thorius boreas	21	27.4±1.2	20	29.7±2.0	0.083	Yes	211
Thorius dubitus	6	19.3±0.8	6	20.2±1.3	0.046	No	211
Thorius grandis	16	25.2±2.2	16	27.9±2.2	0.107	Yes	211
Thorius longicaudus	10	25.0±1.4	10	27.7±1.0	0.108	Yes	212
Thorius lunaris	16	27.4±2.0	26	27.7±2.2	0.010	No	213
Thorius macdougalli	12	20.2±1.3	11	21.2±2.7	0.049	No	213
Thorius magnipes	11	23.3±1.7	12	22.0±1.7	-0.055	No	210
Thorius munificus	19	23.5±1.3	20	24.4±2.0	0.038	No	210
Thorius narisovalis		25.2±1.7		27.8±1.3	0.103		213
Thorius omiltemi	22	24.3±1.8	14	28.1±2.1	0.156	Yes	211

Species	Males n	Males SVL±SD	Females n	Females SVL±SD	SSD	Significant test	Ref
Thorius papaloae	10	20.4	10	21.6	0.058		213
Thorius pennatulus	26	18.2±1.1	22	18.6±1.0	0.021	No	211
Thorius pinicola	7	25.7±1.7	9	26.5±0.8	0.031	No	212
Thorius schmidti	18	23.1±1.6	19	25.9±1.6	0.121	Yes	211
Thorius spilogaster	18	22.2±1.6	23	24.3±1.8	0.094	Yes	211
Thorius tlaxiacus		28.0±3.2		25.8±1.4	-0.078		212
Thorius troglodytes	10	23.5±1.2	16	25.9±1.9	0.102	Yes	213
Urspelerpes brucei	5	25.3	3	25.8	0.019		227

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Supplementary data S2. Accession numbers of the DNA sequences, bibliographic references, points of reference used to build the time-calibrated tree.

Species	CYTB	16S	ND2	RAG1
Ambystoma annulatum			KC870849	
Ambystoma bishopi	NC027501	NC027501	NC027501	
Ambystoma cingulatum	EF036621	KM434925	KC870855	
Ambystoma jeffersonianum	EF036687		KC870859	
Ambystoma laterale	NC006330	NC006330	NC006330	
Ambystoma macrodactylum	JX650216 EF036633		KC870865	
Ambystoma maculatum	EF036637		KC870868	
Ambystoma opacum	EF036638		KC870871	
Ambystoma talpoideum	EF036640		KC870875	
Ambystoma texanum	EF036663		KC870877	
Ambystoma tigrinum	AY659992	AY659992	AY659992	
Amphiuma means	GQ368656	GQ368656	GQ368656	
Amphiuma tridactylum	FJ951358	X86292FJ951297		
Andrias davidianus	KX268733	KX268733	KX268733	
Aneides aeneus	AY691742			
Aneides ferreus	KF781793		DQ105359	
Aneides flavipunctatus	KM197822	DQ105355		EU275809
Aneides lugubris	AY274676		DQ105350	
Aquiloeurycea cafetalera		HM365064		
Aquiloeurycea cafetalera		HM365064		
Aquiloeurycea quetzalanensis	KP900055	HM365058KP886851		
Atylodes genei	FJ602275	FJ602164		
Batrachoseps altasierrae	KM203076			
Batrachoseps attenuatus	AY728228	AY728228	AY728228	
Batrachoseps bramei	JQ035779	JQ035721		
Batrachoseps campi	KM203094		EU117193	
Batrachoseps diabolicus	KM203094	EU011256	EU117190	
Batrachoseps gabrieli	JQ250321	AF199234	EU117195	
Batrachoseps gavilanensis	KM203065		EU117191	
Batrachoseps gregarius	KM203079	JQ035726	EU117192	
Batrachoseps incognitus	KM203083			
Batrachoseps kawia	KM203085			
Batrachoseps luciae	KM203086			
Batrachoseps major	U89622			
Batrachoseps minor	KM203088			
Batrachoseps nigriventris	NC028184	NC028184	NC028184	KM202929
Batrachoseps pacificus	KM203095			
Batrachoseps regius	KM203091			
Batrachoseps relictus	KM203093	JQ035716		
Batrachoseps robustus	KM203064			
Batrachoseps wrightorum	NC006333	NC006333	NC006333	
Batrachuperus karlschmidti	JQ303896	JN165909		
Batrachuperus londongensis	DQ333809	DQ333809	DQ333809	
Batrachuperus mustersi	DQ333821	DQ333821		
Batrachuperus pinchonii	KX757918	KX757918	KX757918	
Batrachuperus taibaiensis	EU296342	AY028729		
Batrachuperus yenyuanensis	DQ333818	DQ333818	DQ333818	HM037715
Bolitoglossa adspersa	AF212984	AF218492		
Bolitoglossa alberchi	KP735278	KP735249		KP735306
Bolitoglossa altamazonica	AY526160	AY526117		
Bolitoglossa bramei	JQ899190	JQ899159		
Bolitoglossa carri	AY526176	AY526139		
Bolitoglossa celaque	AY526178	AY526141		
Bolitoglossa colonnea	AY526162	FJ784318		
Bolitoglossa compacta	JQ899193	JQ899163		
Bolitoglossa conanti	GU725458	GU725445		

Species	CYTB	16S	ND2	RAG1
Bolitoglossa chinanteca	KC288086	KC287994		
Bolitoglossa decora	AY526180	AY526143		
Bolitoglossa diaphora	GU725460	AY526144		
Bolitoglossa dofleini	KP900047	AF218497KP886842		
Bolitoglossa dunni	GU725459	AY526145		
Bolitoglossa engelhardti	GU725461	JQ899157		
Bolitoglossa equatoriana	DQ353840			
Bolitoglossa flavimembris	GU725462	KP886840		
Bolitoglossa franklini	AY526184	AY526147		KP900131
Bolitoglossa gomezi	JQ899188	JQ899157		
Bolitoglossa guaneae	KX458163	KU985265		
Bolitoglossa hartwegi	KC288103	KP886839		
Bolitoglossa heiroreias	HQ010010			
Bolitoglossa helmrichi	GU725463	GU725450		
Bolitoglossa hermosa	AF416678	AF416686		
Bolitoglossa lignicolor		JX434643		
Bolitoglossa lincolni	HQ010019	GU725451		KC614440
Bolitoglossa longissima	AY526186	AY526149		
Bolitoglossa lozanoi	KX458165	KU985267		
Bolitoglossa medemi	AY526163	AY526123		
Bolitoglossa meliana	HQ010004	KJ175100		
Bolitoglossa mexicana	KC288104	AF218479		
Bolitoglossa minutula	AF212098	AY526124		
Bolitoglossa mombachoensis	AY133486	AY133488		
Bolitoglossa morio	AY526187	AF218495		
Bolitoglossa nicefori	KX458166	KC257105		
Bolitoglossa nympha	KU670953	KC288003		
Bolitoglossa oaxacensis	AF416681	HQ009954		
Bolitoglossa occidentalis	KC288059	AY526115		
Bolitoglossa orestes	JQ665281	JN635351		
Bolitoglossa paraensis	AY526166	AY526128		
Bolitoglossa pesrubra	AF212084	AY526132		
Bolitoglossa porrasorum	AY526188	AY526151		
Bolitoglossa robusta	EU448110	EU448109		
Bolitoglossa rostrata	KJ175107	AY526152		
Bolitoglossa rufescens	KC288085	KC288000		
Bolitoglossa schizodactyla	AY526171	KM527338		
Bolitoglossa sooyorum		EU448108		
Bolitoglossa striatula	AF212982	AF218488		
Bolitoglossa subpalmata	AF212091	EU448107DQ640052		
Bolitoglossa synoria	AY526193	AY526156		
Bolitoglossa tenebrosa	KJ175110	KJ175104		
Bolitoglossa tica	JQ899192	EU448106		
Bolitoglossa zacapensis	GU725469			
Bradytriton silus	KP337344	KP886877		
Calotriton arnoldi	KY200686	KY200771		
Calotriton asper	EU880307	EU880307	EU880307	
Cryptobranchus alleganiensis	GQ368662	GQ368662	GQ368662	
Cryptotriton nasalis		KP886879		
Cynops cyanurus	EU880309	EU880309	EU880309	
Cynops ensicauda	EU88031	EU88031	EU88031	AB754771
Cynops fudingensis			GU301785	
Cynops glaucus			KC762304	
Cynops orientalis	EU880311	EU880311	EU880311	
Cynops pyrrhogaster	EU880313	EU880313	EU880313	
Chioglossa_lusitanica	EU880308	EU880308	EU880308	AY583347
Chiropterotriton arboreus	KP900083	AY522474KP886890		
Chiropterotriton cieloensis	KT820710	KT820693KU057955		
Chiropterotriton cracens	KT820700	KT820674		

Species	CYTB	16S	ND2	RAG1
Chiropterotriton chico		AY522471		
Chiropterotriton chondrostega	KT820699	AY523996		
Chiropterotriton dimidiatus	KT820701	KT820675		
Chiropterotriton magnipes	KP900085	KP886892		
Chiropterotriton miquihuanus	KT820713	KT820696		
Chiropterotriton multidentatus	KT820706	AY522473		
Chiropterotriton priscus	KT820708	KT820683		
Chiropterotriton terrestris		AY522455		
Dendrotriton bromeliacius	JN559991	JN560058KP886883		
Dendrotriton sanctibarbarus	JN560002	KP886884JN560070		
Desmognathus aeneus	AY691736		AY612342	
Desmognathus apalachicolae	KY659005		AY612373	
Desmognathus auriculatus	KY659007	U71221		KY659031
Desmognathus brimleyorum	KR732329		AY612422	EU275786
Desmognathus conanti	KY659024		KX764602	
Desmognathus folkertsi			AY612351	
Desmognathus monticola			AY612380	
Desmognathus ocoee	AF442541		AY612362	
Desmognathus ochrophaeus	AF442527	U71223	AY612367	
Desmognathus quadramaculatus	EU552416	AY691739	AY691783	AY650117
Desmognathus valentinei				KY659037
Desmognathus wrighti			KR732339	
Dicamptodon copei	AY734628			
Dicamptodon ensatus	AY734623	X86268		
Echinotriton chinhaiensis	EU880315	EU880315	EU880315	
Ensatina eschscholtzii	AY728216	AY728216	AY728216	EU275785
Euproctus montanus	EU880316	EU880316	EU880316	
Euproctus platycephalus	EU880317	EU880317	EU880317	
Eurycea aquatica	KF562543		DQ018654	
Eurycea cirrigera	NC035494	NC035494	NC035494	
Eurycea guttolineata	KF562549	FJ866453	FJ866431	KF562651
Eurycea longicaudata	AY528403	FJ866478	JQ920808	
Eurycea neotenes	AY528400	KM435018	JQ920817	
Eurycea quadrigitata	JQ920712	JQ920614	JQ920901	
Hynobius abei	LC225433	AY915987	AY915939	
Hynobius amakusaensis	AB921167			
Hynobius arisanensis	EF462213	EF462213	EF462213	
Hynobius boulengeri	AB266675	AB201706	AY915946	
Hynobius formosanus	DQ333816	DQ333816	DQ333816	
Hynobius fuca	DQ652199			
Hynobius glacialis	DQ652203			
Hynobius hidamontanus	LC225434			
Hynobius katoi	AB266673			
Hynobius kimurae	AB266674	AB201705	AY915947	
Hynobius leechii	DQ333811	DQ333811	DQ333811	
Hynobius lichenatus	JQ929921	JQ929921	JQ929921	
Hynobius maoershanensis	NC023789	NC023789	NC023789	
Hynobius naevius	AB266672	AB201688		
Hynobius nebulosus	HM036356	HM036356	HM036356	
Hynobius osumiensis	AB921165			
Hynobius quelpaertensis	HM036352	HM036352	HM036352	
Hynobius shinichisatoi	AB921163			
Hynobius sonani	DQ652215	AY915993	AY915945	
Hynobius takedai	LC225430		AY915942	
Hynobius tokyoensis	HM036357	HM036357	HM036357	
Hynobius tsuensis	JQ929923	JQ929923	JQ929923	
Hynobius yangi	JN415127	JN415127	JN415127	
Hynobius yiwuensis	AB548374	JN165977		
Ichthyosaura alpestris	EU880335	EU880335	EU880335	

Species	CYTB	16S	ND2	RAG1
Isthmura maxima	AY864684			
Isthmura sierraoccidentalis	KP900065	KP886862		KP900151
Ixalotriton_niger	AF451207	AF451242		KP900163
Karsenia koreana	JF449367	JF449367	JF449367	
Laotriton laoensis	EU880328	EU880328	EU880328	
Lissotriton boscai	DQ821219	GQ380401	DQ517831	
Lissotriton helveticus	DQ821239	GQ380399	AY951504	
Lissotriton italicus	DQ821243	DQ092269	JN788212	
Lissotriton montandoni	DQ821255		KC297561	
Lissotriton vulgaris	EU880339	EU880339	EU880339	
Liua shihi	DQ333810	DQ333810	DQ333810	
Liua tsinpaensis	KP233806	KP233806	KP233806	KJ715368
Lyciasalamandra antalyana		KJ622364	DQ517778	
Lyciasalamandra atifi	NC002756	NC002756	NC002756	
Lyciasalamandra billae		EU430969	DQ517781	
Lyciasalamandra fazilae	KF645936	EU430976	AF296630	
Lyciasalamandra flavimembris	EU880318	EU880318	EU880318	
Lyciasalamandra luschani	AY196285KF645935	EU430983	DQ517786	
Mertensiella caucasica	EU880319	EU880319	EU880319	
Necturus maculosus	AY691724		KY225859	
Neurergus crocatus	AY336661	EU430953	DQ517788	
Neurergus kaiseri	EU880320	EU880320	EU880320	
Neurergus strauchii	EU880321	EU880321	EU880321	
Notophthalmus perstriatus	NC028278	NC028278	NC028278	
Notophthalmus viridescens	EU880323	EU880323	EU880323	
Nototriton barbouri	GU971734	AF199201		
Nototriton lignicola	AF199142	GU971735		
Nototriton limnospectator	JQ899197	KP886881		
Nototriton picadoi	AF199145	AF199205		
Nyctanolis pernix	AY691756	KP886895		
Oedipina complex	AF199157	AF199213		
Oedipina cyclocauda	AF199159	AF199215		
Oedipina gephyra	AF199161	AF199218		
Oedipina grandis	AF199165	AF199220		
Oedipina kasios	HM113484	HM113477		
Oedipina maritima	AF199166	AF199221		
Oedipina parvipes	AF199155	AF199211		
Oedipina poelzi	NC006326	NC006326	NC006326	
Oedipina pseudouniformis	AF199177	AF199227		
Oedipina quadra	FJ196871	FJ196865		
Oedipina savagei	AF199153	AF199209		
Ommatotriton nesterovi	KX682122			
Ommatotriton ophryticus	EU487627	EU483501		
Ommatotriton vittatus	KX682164	EU880338	EU880338	
Onychodactylus fischeri	DQ333820	DQ333820	DQ333820	
Onychodactylus japonicus	AB452955	JX158061	AY916032	
Onychodactylus koreanus	KX590690	JX158001		
Onychodactylus nipponoborealis	AB923993	JX158074		
Onychodactylus zhangyapingi	NC026853	NC026853	NC026853	
Onychodactylus zhaoermii	NC026854	NC026854	NC026854	
Pachynobius shangchengensis	DQ333812	DQ333812	DQ333812	
Pachytriton archospotus	KT152422		GQ303628	
Pachytriton brevipes	EU880324	EU880324	EU880324	
Pachytriton feii	NC029345	NC029345	NC029345	
Pachytriton granulosus	AB638652		KT152546	
Pachytriton inexpectatus	JX907933		JX907832	
Pachytriton labiatus	EU880325	EU880325	EU880325	
Pachytriton wuguanfui	KU374987		KU375014	
Pachytriton xanthospilos	JX237765		JX237745	

Species	CYTB	16S	ND2	RAG1
Paradactylodon gorganensis	NC008091	NC008091	NC008091	
Paradactylodon mustersi			DQ333821	
Paramesotriton caudopunctatus	AY458597	AY458597	AY458597	
Paramesotriton chinensis	NC035008	NC035008	NC035008	
Paramesotriton ermizhaoi	AB601426		FJ744602	
Paramesotriton fuzhongensis	JX480892		FJ169605	
Paramesotriton hongkongensis	AY458597	AY458597	AY458597	
Paramesotriton longliensis	JX480884	HQ711550	GU980573	
Paramesotriton maolanensis	JX480888			
Paramesotriton wulingensis	JX480874		KJ650056	
Paramesotriton yunwuensis			GU980579	
Paramesotriton zhijinensis	JX480881	HQ711547	JF438978	
Parvimolge townsendi	KP900078	AF451247DQ640050	AY916024	
Phaeognathus hubrichti	AY728233	AY728233	AY728233	
Plethodon albagula	JF504320		AY874996	
Plethodon angusticlavius	DQ994913		DQ018677	
Plethodon_asupak	AY688287			
Plethodon cinereus	AY728232	AY728232	AY728232	
Plethodon elongatus	AY728223	AY728223	AY728223	
Plethodon fourchensis	FJ611473		AY874876	
Plethodon hoffmani	AY378048		DQ018666	
Plethodon idahoensis	DQ994945			DQ995031
Plethodon jordani	DQ994946	DQ283126	EU275800	
Plethodon kentucki	DQ994948		AY875027	
Plethodon kisatchie	DQ994951		DQ018699	
Plethodon longicrus	DQ994953			DQ995037
Plethodon metcalfi	DQ994956		AY874995	
Plethodon neomexicanus				DQ995044
Plethodon ouachitae	FJ267024		AY874877	EU275796
Plethodon petraeus	AY728222	AY728222	AY728222	
Plethodon serratus	KM225294		DQ018672	
Plethodon shermani	DQ994989		AY875088	
Plethodon teyahalee			AY875041	
Plethodon vehiculum	JF521653		DQ018661	
Plethodon websteri	AY378076		DQ018682	
Plethodon wehrlei	AY378079		DQ018687	DQ995074
Plethodon yonahlossee	AY378075	X86281Y10948	DQ018707	
Pleurodeles nebulosus		DQ092266		
Pleurodeles poireti	EU880329	EU880329	EU880329	
Pleurodeles waltl	EU880330	EU880330	EU880330	
Pseudoeurycea aurantia	KP900048	HM365056KP886844		
Pseudoeurycea lineola	AF380769	AF380808DQ640036		
Pseudoeurycea longicauda	AF380757	KP886849		
Pseudoeurycea lynchi	AF380785	AF380824		
Pseudoeurycea orchimelas	KP900063	KP886860DQ640030		
Pseudoeurycea papenfussi	KP900054	KP886850		
Pseudoeurycea rex	KP900056	KP886852	AY916025	
Pseudohynobius flavomaculatus	NC020635	NC020635	NC020635	
Pseudohynobius shuichengensis	NC021001	NC021001	NC021001	
Pseudotriton ruber	AY728220	AY728220	AY728220	
Rhyacotriton cascadae	AY764249			
Rhyacotriton kezeri	AY764253			
Rhyacotriton olympicus	EF036689	X86285		
Rhyacotriton variegatus	AY728219	AY728219	AY728219	
Salamandra algira	MF043386	MF043386	MF043386	
Salamandra atra	MF043387		MF043387	
Salamandra corsica	MF043388	MF043388	MF043388	
Salamandra infraimmaculata	MF043390	MF043390		
Salamandra lanzai	MF043391	MF043391	MF043391	

Species	CYTB	16S	ND2	RAG1
Salamandra salamandra	EU880331	EU880331	EU880331	KC165600
Salamandrella keyserlingii	JX508764	JX508764	JX508764	
Salamandrina perspicillata	KF431243			
Siren intermedia	GQ368661	GQ368661	GQ368661	
Speleomantes ambrosii	EU117045KX347899	FJ602145	KX347907	
Speleomantes flavus	JQ582147	FJ602147		FJ602327
Speleomantes imperialis	JQ582271EU117011	EU116991	KJ834057	
Speleomantes italicus	AY728215	AY728215	AY728215	EU275792
Speleomantes sarrabusensis	EU117013JQ582153			
Speleomantes strinatii	FJ602305	FJ602188	KJ834056	
Speleomantes supramontis	FJ602310EU117010	EU116997		
Taricha granulosa	EU880333	EU880333	EU880333	
Taricha torosa	DQ196252	EF107218		EF107340
Thorius arboreus	KC884119	KC884060		
Thorius aureus	KC884065	KC884006		
Thorius boreas	KC884067	KC884008		
Thorius dubitus	DQ640019	DQ640055		
Thorius grandis	KC884115	KC884056		
Thorius longicaudus	KC884088	KC884029		
Thorius lunaris	KC884069	KC884010		
Thorius macdougalli	KC884070	KC884012		
Thorius magnipes	KC884122	HM367088		
Thorius munificus	KP900081	KC884014		
Thorius narisovalis	KC884077	KC884047		
Thorius omiltemi	KC884079	KC884020		
Thorius papaloae		KC884021		
Thorius pennatulus	KC884082	KC884022		
Thorius pinnicola	KC884094	KC884035		
Thorius schmidti	KC884085	KC884025		
Thorius spilogaster	KC884087	KC884027		
Thorius tlaxiacus	KC884098	KC884039		
Thorius troglodytes	KC614433	DQ640027		
Triturus carnifex	HQ697272	HQ697272	HQ697272	
Triturus cristatus	HQ697273	HQ697273	HQ697273	
Triturus dobrogicus	HQ697274	HQ697274	HQ697274	
Triturus karelinii	HQ697277	HQ697277	HQ697277	
Triturus macedonicus	HQ697278	HQ697278	HQ697278	
Triturus marmoratus	HQ697279	HQ697279	HQ697279	
Triturus pygmaeus	HQ697280	HQ697280	HQ697280	
Tylototriton anguliceps			LC017834	
Tylototriton asperrimus	EU880340	EU880340	EU880340	
Tylototriton broadoridgus		KY800570	KY800837	
Tylototriton hainanensis		JQ824192	KC147817	
Tylototriton himalayanus	KT765162		KT765212	
Tylototriton kweichowensis	KU320632	KU320632	KU320632	
Tylototriton liuyangensis			KJ205598	
Tylototriton notialis			AB769536	
Tylototriton panhai			AB830737	
Tylototriton podichthys			KT304296	
Tylototriton shanjing	KR154461	KR154461	KR154461	
Tylototriton taliangensis	KP979646	KP979646	KP979646	
Tylototriton uyenoi			AB830734	
Tylototriton verrucosus	NC017871	NC017871	NC017871	
Urspelerpes brucei	JQ920618	JQ920579	KY073053	KF562703

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Points of calibration used to date the species phylogenetic tree and references.

Cryptobranchoidea / Salamandroidea: 170 – 151 Mya (Evans, 2005)

Salamandridae / Ambystomatidae + Dicamptodontidae: 151 – 55 Mya (Estes, 1981)

Taricha + Nothopthalmus / Euroasian newts: 23 – 15 Mya (Estes, 1981)

Amphiumidae / Plethodontidae: 65 – 19 Mya (Tihen & Wake, 1981)

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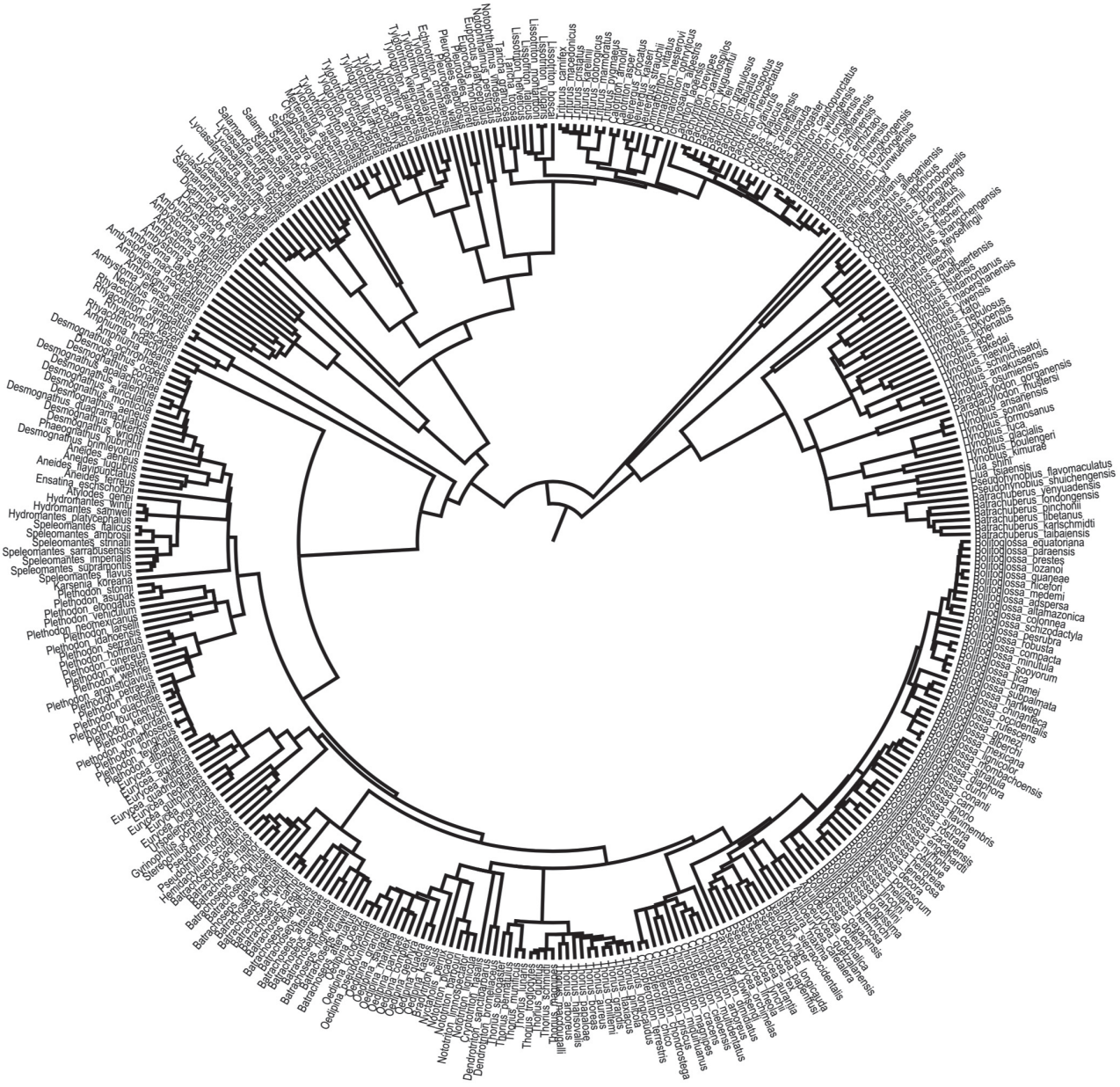

Supplementary Figure S1. Phylogenetic tree depicting phylogenetic relationships among the salamander species analysed