

# Repeated patterns of reptile diversification in Western North America supported by the Northern Alligator Lizard (*Elgaria coerulea*)

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**Table S1.** Samples included in the phylogeographic analysis of *Elgaria coerulea* using ddRADseq data.

Voucher	Locality	Latitude	Longitude	SRA BioSample
<b><i>Elgaria coerulea</i></b>				
<b>MVZ191208</b>	Canada: British Columbia, Chemainus River Estuary, Vancouver Island	48.9	-123.6833	SAMN31818349
<b>MVZ191209</b>	Canada: British Columbia, Highlands above Victoria, Mann's Rd. Hydroline, Vancouver Island	48.43333	-123.35	SAMN31818350
<b>MVZ191252</b>	Canada: British Columbia, Shuswap Lake, Copper Island	50.9103	-119.405	SAMN31818351
<b>MVZ191163</b>	USA: California, Alameda Co., Berkeley	37.871028	-122.277108	SAMN31818352
<b>MVZ191287</b>	USA: California, Alameda Co., Joaquin Miller Park, Oakland	37.8142	-122.1857	SAMN31818353
<b>MVZ257124</b>	USA: California, Alameda Co., small knoll adjacent to the S side of the parking lot that provides access to the Lower Fire Road, Strawberry Canyon	37.872	-122.242	SAMN31818354
<b>CAS227268</b>	USA: California, Butte Co., Lassen National Forest, Willow Creek	40.11327778	-121.4809722	SAMN31818355
<b>MVZ191284</b>	USA: California, Butte Co., E end Snag Lake, 5 mi E (by air) Butte Meadows	40.0777921	-121.4484955	SAMN31818356
<b>CAS209519</b>	USA: California, Colusa Co., Mendocino National Forest, South Fork Stony Creek	39.32764167	-122.7321583	SAMN31818357
<b>MVZ129981</b>	USA: California, Contra Costa Co., abandoned Nike Missile Site, Tilden Regional Park	37.9002916	-122.2474675	SAMN31818358
<b>MVZ191232</b>	USA: California, Del Norte Co., Crescent Beach, S Crescent City	41.7439465	-124.1694951	SAMN31818359
<b>CAS213105</b>	USA: California, Fresno Co., Sierra National Forest, Forest Rd 5, 0.7 mi E (by rd) of Forest Rd 7S85	37.35066667	-119.2032222	SAMN31818360
<b>CAS212772</b>	USA: California, Glenn Co., Mendocino National Forest, between Rocky Basin Ridge and Cold Creek	39.69203611	-122.9003083	SAMN31818361
<b>CAS257924</b>	USA: California, Humboldt Co., ca 5 mi SE of Carlotta via SR 36, Van Duzen County Park, Pamplin Grove group campground	40.49786111	-123.9813528	SAMN31818362
<b>MVZ191227</b>	USA: California, Humboldt Co., Dry Lagoon State Park	41.2101376	-124.1126136	SAMN31818363
<b>MVZ191229</b>	USA: California, Humboldt Co., mouth of Fern Canyon, Prairie Creek Redwood State Park	41.4037614	-124.0628978	SAMN31818364
<b>MVZ191289</b>	USA: California, Humboldt Co., Weitchpec	41.187623	-123.7042772	SAMN31818365
<b>CAS213212</b>	USA: California, Kern Co., Sequoia National Forest, Breckenridge Mtn, Forest Rd 28S06, 1.4 mi W (by rd) of Forest Rd 28S07	35.47754444	-118.589625	SAMN31818366

<b>CAS219708</b>	USA: California, Kern Co., Sequoia National Forest, Piute Mtns, Mach Meadow	35.50508333	-118.3456111	SAMN31818367
<b>CAS224119</b>	USA: California, Kern Co., Sequoia National Forest, Greenhorn Mtns, Sandy Creek, ca 1.0 mi W of Forest Service Rd 24S07	35.77625	-118.6198611	SAMN31818368
<b>CAS212591</b>	USA: California, Lake Co., Mendocino National Forest, State Game Refuge, Hayward Spring	39.51502222	-122.7404111	SAMN31818369
<b>CAS219423</b>	USA: California, Lake Co., Parramore Creek, Forest Rd M10, 2.0 mi E (by rd) of Forest Rd M1	39.31644444	-122.9211889	SAMN31818370
<b>CAS227016</b>	USA: California, Lassen Co., Dean's Meadow, T31N R11E S10 (SW 1/4 of SE 1/4)	40.55822222	-120.72025	SAMN31818371
<b>CAS227169</b>	USA: California, Lassen Co., Lassen National Forest, Duck Lake	40.57486111	-121.2797778	SAMN31818372
<b>CAS227630</b>	USA: California, Lassen Co., Lassen National Forest, Crazy Harry Gulch	40.38487222	-120.86305	SAMN31818373
<b>CAS238466</b>	USA: California, Marin Co., Dillon Beach, Lawson's Landing	38.24677778	-122.9609444	SAMN31818374
<b>MVZ191168</b>	USA: California, Marin Co., Phoenix Lake	37.9550124	-122.5759864	SAMN31818375
<b>MVZ191247</b>	USA: California, Marin Co., Drake's Estero, Point Reyes	38.0475	-122.9411	SAMN31818376
<b>CAS208925</b>	USA: California, Mariposa Co., Sierra National Forest, right bank of unnamed tributary to Iron Creek, ca 50 m below (E) of Forest Rd 4S17	37.56581111	-119.7213861	SAMN31818377
<b>CAS236175</b>	USA: California, Mariposa Co., Sierra National Forest, O'Neill's Meadow	37.43588889	-119.6916667	SAMN31818378
<b>MVZ240834</b>	USA: California, Mariposa Co., ca. 0.5 km NE of Campsite 24, Bridalveil Creek Campground, Yosemite National Park	37.6615	-119.62	SAMN31818379
<b>MVZ240835</b>	USA: California, Mariposa Co., between the Fissures and the footbridge over Bridalveil Creek, On Pohona trail, Yosemite National Park	37.70229	-119.61565	SAMN31818380
<b>MVZ240836</b>	USA: California, Mariposa Co., Meadow adjacent to Chapel, Yosemite Valley, Yosemite National Park	37.74048	-119.59162	SAMN31818381
<b>MVZ240837</b>	USA: California, Mariposa Co., Meadow adjacent to Chapel, Yosemite Valley, Yosemite National Park	37.74048	-119.59162	SAMN31818382
<b>MVZ243329</b>	USA: California, Mariposa Co., Yosemite National Park, Wawona Area, ca. 1 mi NE of Wawona Grocery Store/Gas Station	37.53979	-119.65056	SAMN31818383
<b>MVZ245559</b>	USA: California, Mariposa Co., 0.7 mi N of Echo Valley junction, Echo Valley, Yosemite National Park	37.75249	-119.44099	SAMN31818384
<b>MVZ245560</b>	USA: California, Mariposa Co., on trail between Babcock Lake Trail and Merced Ranger Station, Yosemite National Park	37.74231	-119.39352	SAMN31818385
<b>MVZ245561</b>	USA: California, Mariposa Co., Porcupine Flat, Yosemite National Park	37.80701	-119.565	SAMN31818386
<b>MVZ245562</b>	USA: California, Mariposa Co., 10 Lakes trail near Colby Mt, Yosemite National Park	37.89616	-119.5451	SAMN31818387
<b>MVZ249871</b>	USA: California, Mariposa Co., Merced Grove trailhead, Yosemite National Park	37.76208	-119.84264	SAMN31818388

<b>MVZ253048</b>	USA: California, Mariposa Co., E of Tenaya Lake, N side of Tioga Rd.	37.8406	-119.45044	SAMN31818389
<b>CAS206446</b>	USA: California, Mendocino Co., Jackson State Forest, Hwy 20, 5.8 mi SE of Fort Bragg, Red Jail 'Horse' Campground	39.38001944	-123.6930667	SAMN31818390
<b>CAS220680</b>	USA: California, Mendocino Co., Mendocino National Forest, Blands Cove area	39.90536111	-123.0644167	SAMN31818391
<b>MVZ162041</b>	USA: California, Mendocino Co., Drive-Thru-Tree, ca. 0.5 mi S Leggett on Hwy. 101, Station 12"	39.8585515	-123.7181141	SAMN31818392
<b>MVZ162044</b>	USA: California, Mendocino Co., Oak Rd., 5.5 mi E (by road) Fort Bragg	39.3916343	-123.6440349	SAMN31818393
<b>MVZ191167</b>	USA: California, Mendocino Co., Fort Bragg, Noyo Harbor	39.4435148	-123.7998582	SAMN31818394
<b>MVZ191170</b>	USA: California, Mendocino Co., Dunlap Camp Rd., 1.3 mi SW junction Hwy. 20	39.351	-123.557	SAMN31818395
<b>MVZ191174</b>	USA: California, Mendocino Co., Manchester Beach State Park	38.9739065	-123.7104068	SAMN31818396
<b>MVZ193270</b>	USA: California, Mendocino Co., Orrs Springs Rd., 14.1 mi E Flynn Creek Rd.	39.2473435	-123.4189131	SAMN31818397
<b>MVZ264779</b>	USA: California, Mendocino Co., Little River Rd., at entrance to Pygmy Forest, Van Damme State Park entrance	39.26295	-123.73773	SAMN31818398
<b>MVZ249872</b>	USA: California, Mono Co., Between Twin Lakes & Barney Lake, Hoover Wilderness, Humbolt-Toiyabe National Forest	38.14504	-119.43507	SAMN31818399
<b>MVZ249873</b>	USA: California, Mono Co., On trail S of Leavitt Meadows, S of Lane Lake, Stanislaus National Forest	38.28542	-119.53897	SAMN31818400
<b>MVZ191195</b>	USA: California, Monterey Co., near mouth Salinas River	36.74966	-121.80221	SAMN31818401
<b>CAS203385</b>	USA: California, Nevada Co., Tahoe National Forest, East Fork Creek at Forest Rd 41 bridge	39.48152778	-120.669	SAMN31818402
<b>MVZ162047</b>	USA: California, Nevada Co., 1.3 km W Prosser Creek, Hobart Mills	39.3963333	-120.1866667	SAMN31818403
<b>CAS209951</b>	USA: California, Placer Co., Tahoe National Forest, Little Mosquito Creek at Spruce Creek Rd (Forest Rd 16), 0.2 mi W of Mosquito Ridge Rd (Forest Rd 96)	39.05493056	-120.5937833	SAMN31818404
<b>CAS209956</b>	USA: California, Placer Co., Tahoe National Forest, Humbug Canyon, Humbug Canyon Rd (Forest Rd 66), 0.7 mi N of Foresthill Rd (County Rd 88)	39.16710833	-120.6613139	SAMN31818405
<b>CAS209440</b>	USA: California, Plumas Co., Plumas National Forest, Forest Rd 26N28, 0.4 mi E of Forest Rd 26N25 (North Branch Mosquito Creek)	40.12347222	-121.1799444	SAMN31818406
<b>CAS210023</b>	USA: California, Plumas Co., Plumas National Forest, 0.25 mi E of Gray Eagle Lodge and 0.1 mi W of Gold Lake Hwy (County Rd 519), 'Gray Eagle Meadow' W	39.72297222	-120.6569028	SAMN31818407
<b>CAS225016</b>	USA: California, Plumas Co., Lassen National Forest, Bunchgrass Creek	40.38358333	-121.4631111	SAMN31818408
<b>CAS225018</b>	USA: California, Plumas Co., Lassen National Forest, North Fork Feather River	40.34233333	-121.3105833	SAMN31818409
<b>CAS234601</b>	USA: California, Plumas Co., Plumas National Forest, on Forest Rd 23N30, near intersection with Forest Rd 23N56X	39.84091944	-121.3532333	SAMN31818410

<b>CAS236014</b>	USA: California, Plumas Co., Plumas National Forest, N Fork Black Gulch near Forest Rd 24N29X	39.94444722	-121.1107917	SAMN31818411
<b>CAS200997</b>	USA: California, San Francisco Co., San Francisco, ca 80 m S of intersection of Ortega St and 14th Ave, 15 m E of 14th Ave	37.75486667	-122.47105	SAMN31818412
<b>MVZ191160</b>	USA: California, San Francisco Co., Alemany Blvd. W of Farmer's Market, below Bache Street, S-facing slope, San Francisco	37.736543	-122.40949	SAMN31818413
<b>CAS203686</b>	USA: California, San Mateo Co., Skyline Blvd (State Route 35), 1.4 mi S (by rd) of State Route 92	37.48303334	-122.3563	SAMN31818414
<b>CAS214277</b>	USA: California, San Mateo Co., State Route 1, 0.4 mi N (by rd) of Tunitas Creek Rd	37.36302778	-122.4011667	SAMN31818415
<b>MVZ150169</b>	USA: California, San Mateo Co., Princeton	37.504684	-122.485175	SAMN31818416
<b>MVZ147923</b>	USA: California, Santa Cruz Co., Hwy. 1 at Scott Creek	37.0407328	-122.2279462	SAMN31818417
<b>MVZ191164</b>	USA: California, Santa Cruz Co., mouth of Waddell Creek	37.0947514	-122.2768406	SAMN31818418
<b>CAS227115</b>	USA: California, Shasta Co., Lassen National Forest, Hat Creek, at Bridge Picnic Area	40.73155556	-121.4365	SAMN31818419
<b>CAS227214</b>	USA: California, Shasta Co., Shasta National Forest, unnamed and unmapped tributary of Rock Creek	41.05497222	-121.7370278	SAMN31818420
<b>MVZ191237</b>	USA: California, Shasta Co., 7.5 mi W (by road) Burney on Hwy. 299	40.8524016	-121.7722134	SAMN31818421
<b>MVZ246036</b>	USA: California, Shasta Co., Trapsite B-2, Lassen Volcanic National Park	40.531735	-121.5583995	SAMN31818422
<b>CAS209461</b>	USA: California, Sierra Co., Plumas National Forest, unnamed pond 0.75 mi N of Poverty Hill via Forest Rd 21N11.2, Port Wine Ridge	39.63031389	-121.0020889	SAMN31818423
<b>CAS221033</b>	USA: California, Sierra Co., Plumas National Forest, Potosi Creek	39.72059167	-120.8863611	SAMN31818424
<b>CAS236158</b>	USA: California, Sonoma Co., Willow Creek Rd, ca 7 mi E of Bridge Haven	38.42066667	-123.0401667	SAMN31818425
<b>CAS238463</b>	USA: California, Sonoma Co., Poddatti Ranch, 18000 State Route 1, State Route 1, 0.4 mi S of Reef Campground	38.50552778	-123.2218611	SAMN31818426
<b>MVZ191171</b>	USA: California, Sonoma Co., Hwy. 1 at Windemere Point	38.524793	-123.2639393	SAMN31818427
<b>CAS212658</b>	USA: California, Tehama Co., Mendocino National Forest, Thomes Creek, downstream of Forest Rd 24N01 crossing	39.87566667	-122.8311667	SAMN31818428
<b>MVZ236790</b>	USA: California, Tehama Co., Trapsite R-1, Lassen Volcanic National Park	40.4322209	-121.5330702	SAMN31818429
<b>MVZ236791</b>	USA: California, Tehama Co., Trapsite S-1, Lassen Volcanic National Park	40.4459632	-121.5279982	SAMN31818430
<b>CAS220704</b>	USA: California, Trinity Co., Mendocino National Forest, Lucky Lake	40.01481389	-123.0865861	SAMN31818431
<b>MVZ161454</b>	USA: California, Trinity Co., Salmon-Trinity Wilderness area	41.1018299	-122.7780298	SAMN31818432

<b>MVZ191242</b>	USA: California, Trinity Co., 1 mi E [on Hwy. 36] junction of Hwy. 36 and Hwy. 3, ca. 13 mi S Hayfork	40.416096	-123.1614237	SAMN31818433
<b>CAS212888</b>	USA: California, Tulare Co., Sequoia National Forest, Scarlet and Davis Creek, upstream of Forest Rd 23S16	35.89069444	-118.5601667	SAMN31818434
<b>CAS213027</b>	USA: California, Tulare Co., Sequoia National Forest, Taylor Meadow	35.83200278	-118.2957583	SAMN31818435
<b>CAS213164</b>	USA: California, Tulare Co., Sequoia National Forest, Jackass Meadow	36.09372222	-118.2271667	SAMN31818436
<b>CAS213224</b>	USA: California, Tulare Co., Sequoia National Forest, Kangaroo Meadow, Forest Rd 23S41, 1.1 mi W (by rd) of Forest Rd 23S41A	35.92425	-118.4169444	SAMN31818437
<b>CAS224768</b>	USA: California, Tulare Co., Sequoia National Forest, Golden Trout Wilderness, Forest Trail 3E12, 0.5 mi S of Grey Meadow	36.20136944	-118.50355	SAMN31818438
<b>CAS224868</b>	USA: California, Tulare Co., Sequoia National Forest, tributary of Dry Creek	36.70516667	-118.9594722	SAMN31818439
<b>CAS224873</b>	USA: California, Tulare Co., Sequoia National Forest, Mountain Home, North Fork Middle Fork Tule River alongside Mountain Home Grove	36.26913889	-118.6683611	SAMN31818440
<b>CAS224876</b>	USA: California, Tulare Co., Sequoia National Forest, Slate Mountain, unnamed tributary of the South Fork Tule River, Forest Rd 21S94, 0.4 mi NW of South Fork Tule River	36.08855556	-118.61025	SAMN31818441
<b>MVZ191213</b>	USA: California, Tulare Co., 1.4 mi N (by road) junction of Hwy. 190 (on Hwy. 190) and California Hot Spring-Johnsondale Rd., 26 mi ESE (by air) Porterville	35.881754	-118.67051	SAMN31818442
<b>MVZ191216</b>	USA: California, Tulare Co., Horse Meadow, ca. 0.5 mi N, 0.5 mi W junction of Hwy. 190 and California Hot Spring-Johnsondale Rd., 26 mi ESE (by air) Porterville	35.97114	-118.621237	SAMN31818443
<b>MVZ240838</b>	USA: California, Tuolumne Co., ca. 0.5 km W of Glen Aulin, N side of Tuolumne River, Yosemite National Park	37.91295	-119.42372	SAMN31818444
<b>MVZ240839</b>	USA: California, Tuolumne Co., ca. 0.5 km W of Glen Aulin, N side of Tuolumne River, Yosemite National Park	37.91295	-119.42372	SAMN31818445
<b>MVZ240842</b>	USA: California, Tuolumne Co., Hodgdon Meadow, Hodgdon Meadows Camp, Yosemite National Park	37.79847	-119.86699	SAMN31818446
<b>MVZ249875</b>	USA: California, Tuolumne Co., About 400m N of Grace Meadow along PCT, Yosemite National Park	38.14632	-119.61263	SAMN31818447
<b>MVZ249876</b>	USA: California, Tuolumne Co., Frog Creek at junction with S trail to Laurel Lake, Yosemite National Park	37.99745	-119.78236	SAMN31818448
<b>MVZ249877</b>	USA: California, Tuolumne Co., Lake Vernon, ~100m E of Ranger Station, Yosemite National Park	38.02178	-119.71564	SAMN31818449
<b>MVZ249878</b>	USA: California, Tuolumne Co., S end of Laurel Lake, Yosemite National Park	37.99553	-119.79481	SAMN31818450
<b>MVZ249880</b>	USA: California, Tuolumne Co., SW end of Lake Vernon, Yosemite National Park	38.01171	-119.72825	SAMN31818451
<b>MVZ249881</b>	USA: California, Tuolumne Co., Tuolumne Grove of Giant Sequoias, Yosemite National Park	37.77355	-119.8087	SAMN31818452
<b>CAS202982</b>	USA: Nevada, Washoe Co., Upper High Rock Canyon, ca 300 m NW of mouth	41.49161111	-119.5023056	SAMN31818453

<b>MVZ191203</b>	USA: Oregon, Benton Co., 1.5 mi up Mary's Peak Rd. from Hwy. 34	44.4709	-123.5152	SAMN31818454
<b>MVZ191283</b>	USA: Oregon, Jackson Co., E border Rogue River National Forest on Dead Indian Rd., ca. 20 mi E Ashland	42.2878	-122.3908	SAMN31818455
<b>MVZ191265</b>	USA: Washington, Cowlitz Co., unused portion of Hwy. 4, just W confluence Mill Creek and Columbia River	45.95747	-122.80458	SAMN31818456
<b>UWBM10103</b>	USA: Washington, Jefferson Co., East Quilcene	47.828001	-122.856902	SAMN31818457
<b>CWU-4BC6</b>	USA: Washington, Kittitas Co., SE of crossing at MP60.9	47.327136	-121.334153	SAMN31818458
<b>CWU-4C06</b>	USA: Washington, Kittitas Co., Hudson Cr., south, roadside	47.269627	-121.263733	SAMN31818459
<b>CWU-4C0A</b>	USA: Washington, Kittitas Co., Weather station Hill	47.266685	-121.24044	SAMN31818460
<b>CWU-B8D</b>	USA: Washington, Kittitas Co., Overcrossing north	47.316232	-121.317218	SAMN31818461
<b>MVZ208161</b>	USA: Washington, Kittitas Co., Reecer Canyon, 15.0 mi N Dry Creek Rd. on Reecer Canyon Rd., N of Ellensburg	47.1614	-120.6117	SAMN31818462
<b>UWBM10063</b>	USA: Washington, Pierce Co., Tacoma, Point Defiance Park	47.30728	-122.5382	SAMN31818463
<b>UWBM10071</b>	USA: Washington, Pierce Co., Ketron Island, South End	47.147221	-122.639057	SAMN31818464
<b>UWBM8698</b>	USA: Washington, San Juan Co., San Juan Island	48.546	-123.014	SAMN31818465
<b>UWBM6282</b>	USA: Washington, Snohomish Co., Tulare Beach	48.105321	-122.344886	SAMN31818466
<b>UWBM7983</b>	USA: Washington, Whatcom Co., Diablo Lake Trail	48.722	-121.146	SAMN31818467
<b>UWBM8048</b>	USA: Washington, Whatcom Co., Little Beaver Trail	48.917	-121.081	SAMN31818468
<b><i>Elgaria multicarinata</i></b>				
<b>MVZ240844</b>	USA: California, Mariposa Co., along Old Oak Flat Rd., Yosemite National Park	37.7243	-119.6521	SAMN31818469
<b>MVZ240845</b>	USA: California, Tuolumne Co., 1.0 mi W of Dam along Hetch Hetchy Rd., Hetch Hetchy Area, Yosemite National Park	37.92791	-119.79466	SAMN31818470

**Table 2.** D-statistic (ABBA/BABA) and f4-ratio statistics for trios of *Elgaria coerulea* populations (the outgroup is *E. multicarinata*) as calculated using DSUITE. Only results with Z-score > 3.0 are shown. Population codes are as follows: CRN = Coast Range North, CRS = Coast Range South, LC = Lower Cascades, NC = Northern California, PNW = Pacific Northwest, SNC1 = Sierra Nevada Central 1, SNC2 = Sierra Nevada Central 2, SNN1 = Sierra Nevada North 1, SNN2 = Sierra Nevada North 2, SNS = Sierra Nevada South.

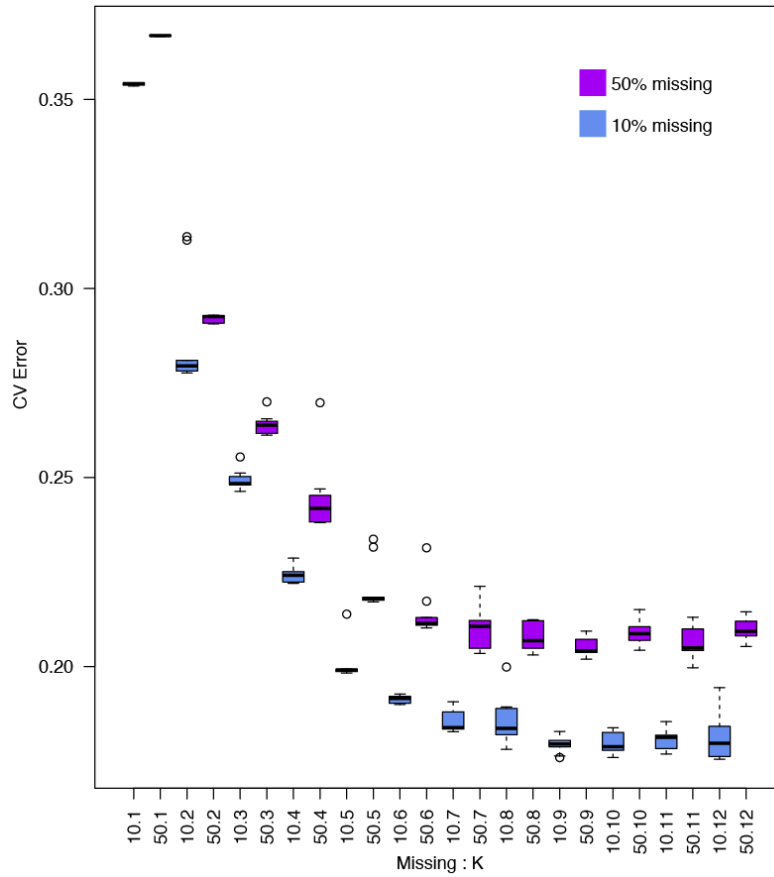
P1	P2	P3	D-statistic	Z-score	p-value	f4-ratio
SNC1	LC	SNN1	0.27	4.653	3.27E-06	0.337
SNC2	LC	SNN1	0.295	4.552	5.31E-06	0.369
SNN1	SNN2	SNC1	0.267	4.516	6.30E-06	0.09
SNN2	SNN1	NC	0.205	3.739	1.85E-04	0.165
SNN2	SNN1	CRN	0.185	3.736	1.87E-04	0.17
SNC1	SNC2	SNS	0.238	3.67	2.42E-04	0.11
SNN1	SNN2	SNC2	0.235	3.463	5.33E-04	0.106
LC	SNN2	SNN1	0.172	3.385	7.11E-04	0.285
SNN2	SNN1	CRS	0.169	3.319	9.04E-04	0.087
LC	SNN1	SNS	0.289	3.235	1.22E-03	0.108
SNN2	SNN1	PNW	0.195	3.187	1.44E-03	0.065
SNN1	SNN2	SNS	0.21	3.13	1.75E-03	0.076



**Table 3.** Migration rate estimates estimated using MSC-M. Migration rates are given in units  $M (=Nm)$  and shown are posterior means and 95% highest posterior density confidence interval (HPD CI) between the 10 populations of *Elgaria coerulea*. Sample sizes ( $N$ ) and number of loci are listed for each comparison. Population codes are as follows: CRN = Coast Range North, CRS = Coast Range South, LC = Lower Cascades, NC = Northern California, PNW = Pacific Northwest, SNC1 = Sierra Nevada Central 1, SNC2 = Sierra Nevada Central 2, SNN1 = Sierra Nevada North 1, SNN2 = Sierra Nevada North 2, SNS = Sierra Nevada South.

Pop1 ↔ Pop2	$N$ pop1	$N$ pop2	Loci	$M$ pop1 → pop2	$M$ pop2 → pop1
PNW ↔ NC	17	8	2,453	0.0547 (0 – 0.203)	0.126 (0.108 – 0.144)
NC ↔ CRN	8	22	2,609	0.427 (0.271 – 0.581)	0.581 (0.423 – 0.738)
CRN ↔ CRS	22	12	2,574	0.224 (0.170 – 0.280)	0.275 (0.187 – 0.370)
NC ↔ LC	8	5	2,979	0.075 (0.018 – 0.133)	0.063 (0 – 0.182)
LC ↔ SNN1	5	11	3,408	0.196 (0.155 – 0.240)	0.265 (0.226 – 0.304)
SNN1 ↔ SNN2	11	7	3,489	0.415 (0.323 – 0.511)	0.227 (0.169 – 0.283)
SNN2 ↔ SNC1	7	9	3,005	0.041 (0.031 – 0.051)	0 (0 – 0.001)
SNC1 ↔ SNC2	9	16	2,714	0.634 (0.561 – 0.711)	0.143 (0.123 – 0.165)
SNC2 ↔ SNS	16	13	2,528	0.063 (0.046 – 0.079)	0.026 (0.010 – 0.042)

**Figure S1.** ADMIXTURE analysis results for estimating population structure in *Elgaria coerulea*. The number of populations ( $K$ ) was compared using cross-validation (CV) scores for  $K$  values ranging from 1 to 12. Analyses were conducted with datasets with different levels of missing data: 50% (purple) and 10% (blue). Ten replicate analyses (run1 – run10) were performed under each  $K$  value. The optimal  $K$  value is the run with the lowest CV score. We selected  $K = 10$  as the optimal value using the 10% missing data threshold.



**Figure S2.** Principal Component Analysis (PCA) scatterplot of the *Elgaria coerulea* SNP data using the program Adegnet.

