**Appendix 2.** Specimens used for phylogenetic analysis

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| DNA sequences obtained in this study. *Liolaemus antonietae.* SSUC 696 (MH178605) and SSUC 697 (MH178606). Termas de Chillán, Biobío Region, Chile. SSUC 700 (MH178607). Shangrila, Biobío Region, Chile. *L*. *bellii.* SSUC Re 208 (MH178576) and SSUC Re 209 (MH178577). El Colorado, Metropolitan Region, Chile. *L. carlosgarini*. MNHNCL 4563 (MH178578), MNHNCL 4564 (MH178579), SSUC Re 186 (MH178580) and SSUC Re 188 (MH178581). Camino a Laguna del Maule, Maule Region, Chile. *L. chillanensis*. SSUC Re 690 (MH178582). Termas de Chillán, Biobío Region, Chile. *L. cristiani*. SSUC Re 537 (MH178583). El Peine Mountain, Maule Region, Chile. *L. curis*. MNHNCL 4681 (MH178584). SSUC Re 167 (MH178585) and SSUC 168 (MH178586). Termas del Flaco, O`Higgins Region, Chile. SSUC Re 495 (MH178587). North shore of Las Damas river, O`Higgins Region, Chile. *L. elongatus*. SSUC Re 545 (MH178588) and SSUC Re 546 (MH178589). Eight km east of the summit of the Llaima Volcano, Araucanía Region, Chile. *L. janequeoae*. SSUC Re 649 (MH178590), SSUC Re 650 (MH178591) and SSUC Re 651 (MH178592). Tolhuaca, Araucanía Region, Chile. *L. leftrarui*. SSUC Re 647 (MH178593), SSUC Re 648 (MH178594) and SSUC Re 716 (MH178595). Tolhuaca, Araucanía Region, Chile. *L. leopardinus*. MNHNCL 4890 (MH178596). El Colorado, Metropolitan Region, Chile. *L*. *monticola*. SSUC Re 76 (MH178598), SSUC Re 87 (MH178599) and JT 210 (MH178597). Altos de Cantillana, Metropolitan Region, Chile. *L. nitidus*. SSUC Re 79 (MH178600). Altos de Cantillana, Metropolitan Region, Chile. *L. nitidus*. SSUC Re 298 (MH178601). Dunas de Ritoqui, Valparaíso Region, Chile. *L. nitidus*. SSUC Re 705 (MH178602). Quebrada de La Plata, Metropolitan Region, Chile. *L. scorialis*. SSUC 614 (MH178603), SSUC 615 (MH178604). Near Laguna del Laja, Biobío Region, Chile. *L.* sp. Lircay. SSUC 496 (MH178608). Camino al Enladrillado, Maule Region, Chile.DNA sequences obtained from GenBank. 1. *Liolaemus elongatus* clade. *Liolaemus antonietae*. AY529901, AY730669, AY730673, AY850621. *L*. *antumalguen.* KP121325, KP121335. *L. burmeisteri.* KP121327, KP121328. *L. choique.* KP121329. *L. elongatus.* AY173557, AY173564, AY173568, AY173585, AY173587, AY173798, AY173801, AY173803, AY173806, AY173809, AY173815, AY173818, AY173826, AY173827, AY173848, AY173852, AY173853, AY173854, AY173855. *L. shitan*.AY173571, AY173840. *L*. *scorialis*. EU649244. *L. smaug*. AY173598, AY173599, AY173600, AY173601, AY173603, AY173691, AY367806, AY173830, AY173832. 2. *L. sp*. 6. AY173595, AY173719, AY173816, AY367799. *L. sp*. 7. AY173578, AY173580, AY173582, AY173584, AY173588, AY173590, AY173596, AY173704, AY367799, AY367801, AY173823. *Liolaemus kriegi* clade. *L. buergeri*. KJ494070, KJ494079, KJ494080. *L. kriegi.* KJ494027, KJ494028, KJ494049, KJ494076, KJ494186, KJ494223, KJ494235. *L. tregenzai*. KJ494036, KJ494037. *L. zabalai*. KJ494056, KJ494057, KJ494059, KJ494074, KJ494085, KJ494086. 3. *Liolaemus petrophilus* clade. *L. austromendocinus.* AY173547, AY173550, AY173551, AY367815, AY173838, AY173839. *L. capillitas.* AY173844. *L. dicktracy.* AY367816. *L. gununakuna.* AY367807, AY173859. *L. parvus*. AY173836. *L. petrophilus*. JN847103, JN847211, AY173796. *L. talampaya.* AY173797. *L. tulkas*. AY367813. *L. umbrifer*. AY367814. 2. Other out groups. *L. bellii*. KU095830, KU095831. *L. chillanensis*. AY529903, AY730670, AY850623. *L.* aff*. chillanensis* (= *L*. sp. 1 Laja). KY127725, KY127727. *L. chiliensis*. DQ989785, EU649245. *L. cyanogaster*. DQ989786. *L*. *flavipiceus*. KP121330. *L. monticola.* AY850616, AY850619, AY851708, AY851710, AY851713, AY851718, AY851724, AY851726. *L. neuquensis.* AY173828. *L. pictus*. AY173795, EU649356, EU649407, JX494839, JX494859, JX494884, JX494891, JX494906, JX494916, JX494945, JX494946, JX494949, JX494952. *L. punmahuida*. AY173681, AY173824, KP121336. *L*. *septentrionalis*. EU649381, JX494941, JX494942, JX494962. *L. villaricesis*. AY730671, AY529905. *Phymaturus vociferator*. JX969016. *P. felixi.* JX969044.  |