The genus *Liolaemus* comprises more than 230 species (Abdala et al. 2012) distributed from Perú and southern Brazil to Tierra del Fuego. The genus is divided into two subgenera: *Liolaemus* (sensu stricto) and *Eulaemus* (Laurent 1983), each of which has been divided into several groups.

*Liolaemus patriciaiturrae* (Navarro and Núñez 1993) belongs to the *Eulaemus* subgenus, *montanus* section and *montanus* series (Lobo et al. 2010). It is a large *Liolaemus* species, with maximum SVL of 96.6 mm. The dorsal color is gray. The throat and chest are black in males. (Navarro and Núñez 1993). This species is not included in the IUCN Red List of Threatened Species (IUCN 2010).

*Liolaemus patriciaiturrae* was described from El Cerrito, (26°27' S, 69°03' W, 3556 m), 12 km NW of La Ola, Atacama, Chile. Later, Moreno et al. (2001) mentioned one specimen captured at Nevado Jotabeche (27°40'33" S, 69°18'08" W estimated using Google Earth, Figure 1). The species has been recorded from other locations in Atacama, although with no collection of specimens: Laguna Santa Rosa (27°05'23" S, 69°10'34" W, estimated using Google Earth) (Moreno et al. 2000) and Mina El Hueso, near Potrerillos (26°27'01" S, 69°28'43" W, estimated using Google Earth) (Pincheira-Donoso and Núñez 2005).

During a field trip to Atacama in November 2011, we collected two specimens of *L. patriciaiturrae* in Cuesta Montandón (26°23'08" S, 69°21'34" W, 3088 m, 16 km W of El Cerrito). The specimens were found among rocks or near bushes, between 11:00 and 15:00 h. The specimens were collected under permit number N°1637 issued by Servicio Agrícola y Ganadero (SAG) and deposited in Colección de Flora y Fauna, Profesor Patricio Sánchez Reyes of Pontificia Universidad Católica de Chile (SSUC Re 163-64, Figures 2 and 3). All specimens were photographed. Midbody scales were counted according to Smith (1946). Ventrals were counted from mental scale to the anterior margin of cloacal opening. Body measurements were taken with a digital vernier (0.02 mm precision). Scale observations were made using magnifying lenses. The characteristics of these specimens matches the original description. We also examined two topotypes; SSUC Re 161-62 from El Cerrito and ten specimens of *L. rosenmanni* from La Ola (Núñez and Navarro 1992) (SSUC Re 142-51, four adults and six juveniles), the only species of the *montanus* series known to be sympatric with *L. patriciaiturrae*.

Additionally, we examined five specimens from Aldebarán (27°27'02" S, 69°21'57" W, estimated using Google Earth).
Troncoso-Palacios and Ferri-Yáñez | Distribution extension of Liolaemus patriciaiturrae in northern Chile

These specimens (MNHN-CL 2821-25, Figure 4) were previously identified as *L. nigriceps* (Philippi 1860) by Pincheira-Donoso and Núñez (2005). This led to other authors listing this species as present in Atacama (Troncoso-Palacios and Marambio 2011; Valladares 2011). However, *L. nigriceps* occurs in Pajonales, Llullaillaco (Antofagasta, Chile) and Socompa (Argentina) more than 240 km north of Aldebarán. The misidentification probably occurred because the two species are very similar and unfortunately the variation in scale counts and color pattern in *L. patriciaiturrae* were not included in the description of the species (Navarro and Núñez 1993). Our review of eight specimens shows that *L. patriciaiturrae* has gray dorsal background color, with black transverse lines alternating with narrow yellow or white lines, whereas *L. nigriceps* has gray background color with black transverse bars alternating with broad yellow or orange bands (based on four specimens from Llullaillaco, MNHN-CL 2971-73, 2975, Figure 4). On the other hand, *L. rosenmanni* has brown dorsal background color, with bands formed by dark brown and whitish spots, accompanied by yellow or orange spots (Figure 5).

Navarro and Núñez (1993) proposed a diagnosis for *L. patriciaiturrae* based on three characters: large size, gray dorsal color and black throat and chest in males. However, these characters are also present in *L. nigriceps* and the throat is black in both sexes in *L. patriciaiturrae*. Table 1 summarizes some comparative characters among *L. patriciaiturrae*, *L. nigriceps* and *L. rosenmanni*. According to Pincheira-Donoso and Núñez (2005) *L. patriciaiturrae* has 4–5 supraocular scales and *L. nigriceps* has 5–7. However, our data (Table 1) show that this is not a diagnostic character.

On the other hand, the Liolaemus from Laguna del Negro Francisco (Figure 5), 25 km from Aldebarán, identified as *L. eleodori* (Cei et al. 1985) by Núñez and Torres-Mura (1992) and as *Liolaemus sp.* by Moreno et al. (2000), strongly resembles *L. rosenmanni*. Aldebarán is located 80 km S of Pastos Largos, the type locality of *L. rosenmanni*. According to Carlos Garin (personal communication) this population corresponds to *L. rosenmanni*, but a formal study is needed to clarify this issue.

The new records of *L. patriciaiturrae* extend the species' range by 16 km (Montandón) and 110 km (Aldebarán). Although these distances are not large, the new records contribute to the understanding of the habitat and distribution of these rare lizards. Currently, the only elevational data for *L. patriciaiturrae* (3556 m) is provided...
in the description (Navarro and Núñez 1993). Therefore the new record from Montandón (3088 m) represents the lowest reported elevation. The only protected population of *L. patriciaiturrae* is in Laguna Santa Rosa (in Parque Nacional Nevado de Tres Cruces). In all other locations the species is threatened by mining projects. The great diversity and similarity among *Liolaemus* species often makes identification difficult. We hope that this contribution will help to distinguish among the members of the *montanus* series.

**Table 1.** Comparative characters in adults of *Liolaemus patriciaiturrae*, *L. nigriceps* and *L. rosenmanni*.

<table>
<thead>
<tr>
<th></th>
<th><em>L. nigriceps</em> ($♂=1$, $♀=3$)</th>
<th><em>L. patriciaiturrae</em> ($♂=4$, $♀=4$)</th>
<th><em>L. rosenmanni</em> ($♂=1$, $♀=3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midbody scales</td>
<td>96–104</td>
<td>90–96</td>
<td>86–92</td>
</tr>
<tr>
<td>Ventral scales</td>
<td>108–116</td>
<td>90–106</td>
<td>90–100</td>
</tr>
<tr>
<td>Supraoculars</td>
<td>5–7</td>
<td>4–7</td>
<td>5–6</td>
</tr>
<tr>
<td>Head coloration</td>
<td>Black</td>
<td>Gray to incomplete melanism</td>
<td>Brown with black spots</td>
</tr>
<tr>
<td>Throat pattern</td>
<td>Black</td>
<td>Black</td>
<td>Gray with spots (females) / immaculate dark gray (male)</td>
</tr>
<tr>
<td>Precloacal pores (males)</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Range of SVL (mm)</td>
<td>84.0–90.3</td>
<td>61.1–91.1</td>
<td>62.3–75.6</td>
</tr>
</tbody>
</table>

**ACKNOWLEDGMENTS:** Thanks to M. Penna, M.B. Araújo and L. Laanisto for their support, to P. Zavala for allowing access to the SSUC Collection, to H. Núñez for allowing access to the MNHN-Santiago Collection, to C. Garin for his comments and to Y. Marambio for photos.

**LITERATURE CITED**


Troncoso-Palacios, J. and Y. Marambio. 2011. Lista comentada de los reptiles de la Región de Atacama. *Boletín del Museo Regional de Atacama* 2: 60-78.


**Figure 5.** *Liolaemus rosenmanni* from Laguna del Negro Francisco (photograph by Y. Marambio).