Liolaemus chiliensis (Lesson, 1830) is a lizard species distributed from central-southern Chile to the southern of Argentina. The species inhabits bushes and usually climbs the branches (Donoso-Barros, 1966). It is known as the “weeping lizard” because it vocalizes when it is seized (Donoso-Barros, 1966; Labra et al., 2013). This is an oviparous lizard, and according to Donoso-Barros (1966), females lay half-dozen eggs under stones between October and November. Thereafter, Pincheira-Donoso and Núñez (2005) reported that females laid between 7 to 11 eggs in November, while Ibargüengoytia (2008), reported a maximum of 18 eggs, indicating that pregnancy takes place in October and the oviposition occurs in November. Altogether, data suggest that the clutch size of *L. chiliensis* presents a great variation. Here, we provide a new egg laying record for *L. chiliensis*, and investigate a potential correlation between female body size and egg clutch size (e.g. Martori and Aun, 1997).

As part of an ongoing study with *L. chiliensis*, we collected lizards in mid-spring and early summer (October–December) of 2009 and 2012, in central Chile. They were transported to the laboratory where we measured their body sizes (snout–vent length, SVL) with a Vernier calliper (± 0.02 mm) and determined their sex by direct observation of the tail base (Mella, 2005). During their permanence in the laboratory, the lizards were maintained individually in plastic enclosures (44.5 x 32 x 25 cm), which had two windows covered by plastic mesh. Enclosures contained a sandy substrate, a clay pot to maintain water continuously, a wooden stick used as a perch, and an inverted tile used as shelter and basking place (see details in Hoare and Labra, 2013).

In our sample group, we had fifteen females that laid a mean of 14.3 ± 4.5 eggs (SD; range = 5-22, median and mode = 13) between late October to November (Table 1). Four females had more eggs than was previously reported; two females had 19 eggs, one had 20 eggs and the other had 22 eggs. Although females showed a high variation in the number of laid eggs, we found that their body size correlated significantly with the number of eggs laid (Pearson correlation Coefficient = 0.59; \( P = 0.021 \), Fig. 1). This positive correlation has been reported for some *Liolaemus* lizards (Martori and Aun, 1997; Pincheira-Donoso and Tregenza, 2011; Ramírez-Pinilla,

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**New egg laying record for *Liolaemus chiliensis* (Lesson, 1830)**

(Iguania: Liolaemidae)

Jaime Troncoso-Palacios\(^1\,*\) and Antonieta Labra\(^1,2\)

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\(^1\) Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad de Chile, Santiago, Chile. Casilla 70005, Correo 7, Santiago, Chile.

\(^2\) Centre for Ecological and Evolutionary Synthesis (CEES). Department of Biosciences, University of Oslo, PB 1066, 0316 Oslo, Norway

\(*\) Corresponding author e-mail: jtroncosopalacios@gmail.com

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**Figure 1.** Relationship between the female body size and the number of eggs laid in *Liolaemus chiliensis*. 
Therefore, to understand the selective pressure of the forces that may determine this larger clutch size in the size of the females considered. It is unknown, however, which are the selective forces that may determine this larger clutch size in L. chiliensis.

The distributional range of L. chiliensis covers around 10° of latitude; it goes between Coquimbo (29°S; 29°42’ S – 71°12’ O) and Valdivia (39°S; 10° of latitude; it goes between Coquimbo (29°S; 29°42’ S – 71°12’ O) and Valdivia (39°S; 10° of latitude). It is unknown, however, which are the selective forces that may determine this larger clutch size in L. chiliensis.

Based on fecundity and body size data available for other Liolaemus species (see Donoso-Barros, 1966; Ibargüengoytía, 2008; Leyton and Valencia, 1992; Pincheira-Donoso-Treguenza, 2011; Ramírez-Pinilla, 1992, 1995; Rocha, 1992), L. chiliensis has a comparative larger clutch size than other Liolaemus species. It is unknown, however, which are the selective forces that may determine this larger clutch size in L. chiliensis.

The distributional range of L. chiliensis covers around 10° of latitude; it goes between Coquimbo (29°S; 29°42’ S – 71°12’ O) to Valdivia (39°S; 10° of latitude). We reported data from a population coming from the midpoint of the species distribution. Therefore, to understand the selective pressure of the high fecundity of L. chiliensis, it would be necessary to include data from the extreme populations. This would also allow for testing at intraspecific level if, in fact, fecundity is not affected by the climatic conditions, as was suggested by Pincheira-Donoso and Treguenza (2011). Testing this would also be relevant considering that southern populations of L. chiliensis (at lower temperatures) present smaller body size (Labra et al., 2011). Therefore, more research could clarify if the southern populations have an absolute lower number of eggs than the central populations, due to their body size, but keep a relative high fecundity, as the central population studied here.

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References


<table>
<thead>
<tr>
<th>Nº of pregnant females</th>
<th>Year of capture</th>
<th>Locality</th>
<th>Oviposture Mean ± SD (range)</th>
<th>Date of Oviposture</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2009</td>
<td>El Manzano (33°42’S – 71°12’O)</td>
<td>12.3 ± 5.7 (5-19)</td>
<td>28/10/2009 - 03/11/2009</td>
</tr>
<tr>
<td>6</td>
<td>2010</td>
<td>Melipilla (33°35’S – 70°24’O)</td>
<td>15.7 ± 3.4 (11-20)</td>
<td>NA</td>
</tr>
<tr>
<td>5</td>
<td>2012</td>
<td>Melipilla</td>
<td>14.4 ± 4.8 (10-22)</td>
<td>09/11/2012 - 20/11/2012</td>
</tr>
</tbody>
</table>

Table 1. Data on oviposition of Liolaemus chiliensis. All lizards were collected in October. NA= Information not available.


Accepted by Gonçalo Rosa