

Amphibia, Anura, Hylidae, *Argenteohyla siemersi pederseni* (Williams and Bosso, 1994): first record and some hematological data in Santa Fe Province, Argentina

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ABSTRACT: We herein report on the first west-southern most record of *Argenteohyla siemersi pederseni* in Argentina. This finding was recorded ca. 250 km far from the nearest known locality in Corrientes, and also enlarges the distribution range for including for the Santa Fe Province.

Argenteohyla siemersi pederseni is an uncommon hylid frog classified as Endangered (IUCN 2008; Lavilla *et al.* 2008). The more known populations of this species are found in north-west of Corrientes Province (Argentina) in San Roque, San Cosme, Corrientes Capital and Parque Nacional Mburucuya localities (e.g. Williams and Bosso 1994; Céspedes *et al.* 1995; Céspedes 2000). Some natural history of *A. s. pederseni* was pointed by Díminich and Zaracho (2008) and Zaracho and Areta (2008) who described its reproductive mode and its advertisement call, respectively. Recently, Cajade *et al.* (2010) describes other reproductive traits such as egg number per clutch, tadpole's morphology, and also other general bioecological characteristics in a modified "quebracho" forest of *Schinopsis balansae* in Corrientes Province.

Herein, we present the first west-southern most record of *A. siemersi pederseni* for Santa Fe Province in Argentina. The night of 1 February 2012 (temperature 25.5 °C; relative humidity 75 %), we collected one specimen of *A. s. pederseni* (Figure 1) near marshes locate at 10.5 km approximately apart from Provincial Road N° 1 (31°10'21.10" S, 60°15'31.73" W Cayastá, Garay Department, Santa Fe Province, Figure 2). According to the Ecoregions scheme (Burkart *et al.* 1999), the area present intermixed floristic communities of the Espinal and Delta and Islas del Río Paraná mainly characterize by *Prosopis affinis*, *P. nigra*, *P. alba*, *Salix humboldtiana*, and *Acacia caven* trees. The ephemeral ponds and marshes present *Eichhornia crassipes*, *Pontederia cordata*, *Sagittaria montevidensis*, *Cyperus corymbosus*, *Salvinia biloba*, and *Pistia stratiotes*. The climate is humid to sub-humid and warm to temperate (Cáceres 1980). The disturbances in the area are due to agriculture expansion, lumbering and mainly livestock over-grazing (Hilgbert *et al.* 2003; Lewis *et al.* 2006; Figure 3). In addition, the invasion of exotic species (e.g. *Gleditsia triacanthos*, *Parkinsonia aculeata*, *Eucaliptus* spp.) (Pers. Obs.) is notable. These disturbances critically jeopardize conservation of floristic and faunistical

diversities (Arturi 2006).

We collected this specimen of *A. siemersi pederseni* in the habitat shared with other anurans such as *Rhinella fernandezae*, *Leptodactylus latrans*, *L. chaquensis*, *L. latinasus*, *Physalaemus albonotatus*, *Dendropsophus sanborni*, *D. nanus*, *Hypsiboas pulchellus*, *Lysapsus limellum*, *Scinax nasicus*, *S. squalirostris*, *S. acuminatus*, and *Pseudis paradoxa*. The specimen (Body weight = 4 g, Snout vent length = 41.25 mm, Head width = 14.5 mm, Femur length = 17 mm, Tibio-fibula length = 20 mm, Foot length = 28.5 mm, Inter-narial distance = 2.65 mm, Narial-eye distance = 4.25 mm, Tympanum diameter = 2.4 mm, Inter-orbital distance = 6.50 mm, Eye diameter = 3.75 mm) is deposited in the herpetological collection of Faculty of Biochemistry and Biological Sciences (PL-FBCB 3709).



FIGURE 1. Individual of *Argenteohyla siemersi pederseni* (PL-FBCB 3709) collected in Cayastá field, Santa Fe Province, Argentina. Photo by Paola M. Peltzer

Previously, frog was anesthetized in MS222 (0.1%) solution buffered with 0.2% NaHCO₃, a blood sample was collected by cardiac puncture using a heparinized needle. Two peripheral blood smears were prepared on clean slides, fixed and stained by the May-Grunwald-Giemsa method (Dacie and Lewis 1991). Mature erythrocytes are oval cells with centrally placed and similarly shaped nuclei (Figure 4). The size of the Red Blood Cell (RBC mean $\pm$ SD, N = 2000) was $242.11 \pm 23.41 \mu\text{m}^2$ and the nuclei were: $56.22 \pm 6.17 \mu\text{m}^2$. These values were above the average recorded for adult anurans in this area and similar to

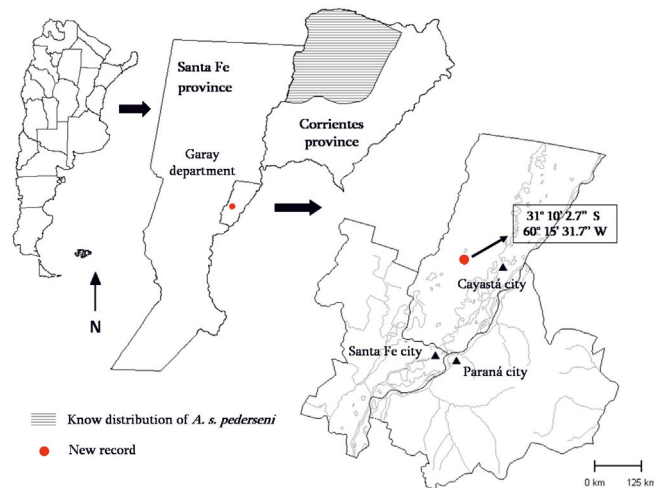


FIGURE 2. Geographical distribution map of the new record of *Argenteohyla siemersi pederseni* in Santa Fe Province.



FIGURE 3. Habitat of *Argenteohyla siemersi pederseni* at the Garay Department, Santa Fe Province, mideastern Argentina. Photo by Paola M. Peltzer

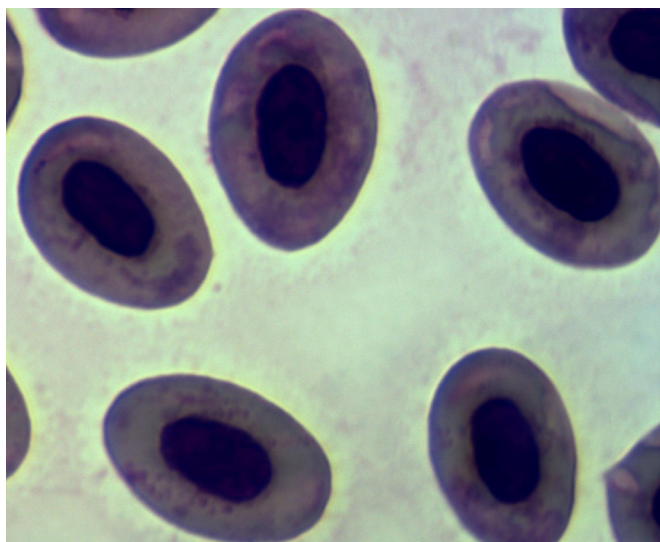


FIGURE 4. Erythrocytes found in blood samples of frog *Argenteohyla siemersi pederseni* (1000 x).

those obtained for *H. pulchellus* and *H. raniceps* (Cabagna unpublished data) and within range of the few determined for hylid frogs (Glomski et al. 1997).

Although this finding significantly enlarges the known distribution of this endangered frog (IUCN 2008) for 250 km to the west-south, and constitutes the first record for Santa Fe Province, we are conducting studies to determine if this species has a stable population in this area. This is especially important because major parts of this region are not included in the conservation action plans where modification by anthropic activities gradually and profoundly changed the quality of aquatic systems by pesticide contaminations, composition of the vegetative communities either by over-grazing the herbaceous layer, eliminating the hardest forest species or by burning all of the forest for agriculture.

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