## Waterfrog (*Pelophylax* sp.) found near Domusnovas in southwestern Sardinia, Italy

In Sardinia, and its satellite islands there are 10 species of amphibians, six of which are caudates and four anurans, and 18 species of reptiles (four endemics) (BASSU et al. 2008). Of the amphibians, 8 species are endemics (all six caudates and two anurans), making Sardinia one of the herpetologically most valuable regions of Italy, deserving special attention for conservation.

For Sardinia, AUCLAIR et al. (1983) and LANZA (1986) reported sightings of waterfrogs of the group *Pelophylax lessonae* (CAMERANO, 1882) and *Pelophylax* kl. *esculentus* (LINNAEUS, 1758), introduced recently and now acclimatized. In the 'Atlas of Italian Amphibians and Reptiles' (SINDACO et al. 2006), two populations of waterfrogs are indicated: one in the south, 40 kilometers from Cagliari, and one in the north, nearby Port Torres. Furthermore, BASSU et al. (2008) reported it from two unspecified sites in the southwestern part of the island.

During a herpetological excursion to the cave "Grotta di San Giovanni" (at Domusnovas), made on October 8, 2008, besides several *Hyla sarda* (DE BETTA, 1853), we found unexpectedly two waterfrogs, an adult and a sub-adult, the latter of which we managed to capture with the help of a net. The specimen (Fig. 1) was kept at the Zoology Department of the University of Palermo (Laboratorio di Zoologia applicata, Dipartimento di Biologia Animale, Università degli Studi di Palermo) until it died and then stored in the collection of the annexed Museo di Zoologia "Pietro Doderlein" (Via Archirafi 16, Palermo 90123, Italy) under the museum number MZPA A-129. The finding place was the bank of a little stream flowing next to the cave. It was quite full of water and covered with vegetation, but it also contained some waste. The stream is located between a car park, just in front of the entrance to the cave, and a restaurant on the other side. The GPS coordinates are: 39°20'10.74''N, 8°37'39''E, and the altitude is 181 m above sea level.

We do not know for sure what species/subspecies we found. Genetic verification will be made by Daniele CANESTRELLI (Viterbo) on the specimen collected in order to see which group it belongs to. In fact, the systematics of the waterfrogs of Italy is under debate. Until recently, the generally accepted concept claimed the presence of (i) the group *Pelophylax lessonae* and *Pelophylax* kl. *esculentus* in the north of Italy southwards to an imaginary line from Genoa to Rimini, and, (ii) the group *Pelophylax bergeri* (GÜNTHER, 1986) and *Pelophylax* kl. *hispanicus* (FITZINGER, 1826) in the rest of the Peninsula and in Sicily (UZZELL et al. 1979; DUBOIS et al. 1995a, 1995b; GÜNTHER et al. 1995; GÜNTHER 1997; CAPULA, 2006a, 2006b). SANTUCCI et al. (1996) proposed the presence of a third group for Calabria and Sicily, but it is still to be verified with further genetic and morphological studies, and to be named. CANESTRELLI et al. (2008) confirmed the presence of the three different lineages, but they consider them just as subspecies of *Pelophylax lessonae*. Following CROCHET et al. (2004) and LANZA et al. (2006), they suggested *Pelophylax lessonae lessonae* as the name of the populations from the Alps to the northern Apennine, *Pelophylax lessonae bergeri* as the name for the frogs ranging from the Apennine to northern Calabria, whereas a new name has

Fig. 1: Juvenile waterfrog (*Pelophylax* sp.) captured near the cave "Grotta di San Giovanni" (Domusnovas, Sardinia, Italy) and stored at the Museo di Zoologia "Pietro Doderlein" (MZPA A-129), annexed to the Zoology Department of the University of Palermo (Via Archirafi 16, Palermo 90123, Italy). Dorsal and ventral views.

still to be proposed for the southern Calabria and Sicily populations.

Since the waterfrogs we found at Domusnovas, of yet unclassified taxon, are not native to the island and were never before reported from that area, we wonder how these individuals arrived at this locality. If not brought by humans from the Italian Mainland or from one of the two Sardinian localities, they must have colonized the area autonomously. The north Sardinian waterfrog population near Porto Torres, is roughly 200 kilometers from Domusnovas, the southern one is about 40 kilometers airline from Domusnovas, and about 20 from Cagliari. A genetic comparison between the population at Domusnovas and the other two known introduced populations has to be done in order to see whether they are identical or not. A survey on the territory between the known localities and the new site reported here is urgently needed to find out if the species has managed to spread autonomously.

Finally, studies on the trophic and ecological relations between waterfrogs and the native species need to be conducted to discover whether the allochthonous species is a potentially threatening factor to the native amphibian fauna.

ACKNOWLEDGMENTS: We would like to thank Mario Lo Valvo, Antonio Romano, Franco Andreone and Paolo Faraone for their useful critics, comments and suggestions. Museo "Doderlein" is acknowledged for providing safe storage facilities of the frog specimen within a short time.

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KEY WORDS: Amphibia: Anura: Ranidae; *Pelophylax* sp., water frog, green frog, allochthonous species, distribution, new island record, Domusnovas, southwestern Sardinia, Italy

SUBMITTED: April 12, 2011

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