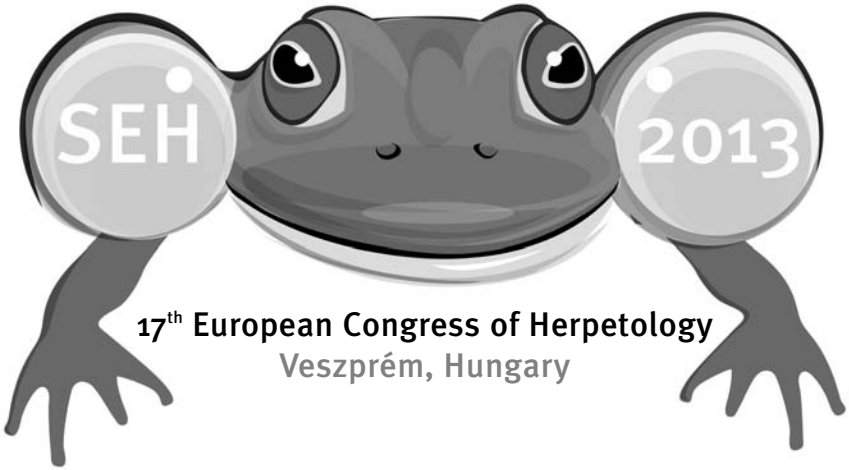

17th European Congress of Herpetology

Veszprém, Hungary

PROGRAMME & ABSTRACTS

DEPARTMENT OF LIMNOLOGY
UNIVERSITY OF PANNONIA

HUNGARIAN NATURAL HISTORY MUSEUM

University of Pannonia
22–27 August 2013

New distribution data and conservation status of *Vipera ursinii rakosiensis* (Méhely, 1893) in Transylvania, Romania

Tibor Sos[1], Ioan Ghira[2], Zsolt Hegyeli[1]

[1] *"Milvus Group" Bird and Nature Protection Association, 540620 Târgu-Mureş, Romania; tibor.sos@gmail.com*
[2] *Babeş-Bolyai University, Faculty of Biology and Geology, 400084 Cluj-Napoca, Romania*

The rare and endangered *Vipera ursinii rakosiensis* is a small-sized (up to 60 cm long) lowland steppe subspecies of the *V. ursinii* group. Its distribution is strictly associated with the natural or semi-natural steppe grassland remnants, and it displays a similar insular distribution pattern. Until now, the only extant population of the subspecies had been recorded in the district of Lopadea Nouă locality, Alba County. Previously, *V. u. rakosiensis* has been recorded from six localities: Fânaţele Clujului, Făget forest and Floreşti (all in the vicinity of Cluj-Napoca), between Bonţida and Sic, Valea Florilor and Bogata, all in Cluj County. Here we report on a new locality for the taxon in the administrative territory of Rădeşti (Alba County) and also reconfirm the presence of the meadow viper outside the borders of the Fânaţele Clujului Nature Reserves and in the hayfields neighbouring Bogata. The newly discovered sites occupied by meadow vipers at Fânaţele Clujului, Rădeşti and Lopadea Nouă have been totally or partially included within the existing Natura 2000 network. One of the most important results of the 11–12 October 2012 biogeographical seminar in Bucharest was the acceptance of the proposal for the Bogata population to be included within a new Natura 2000 site.

Although covered by the Natura 2000 network, all known Transylvanian viper populations are still significantly threatened by habitat loss caused by human agricultural activities. Habitat destruction and fragmentation by ploughing and breaking the natural and semi-natural grasslands for the extension of cultivated fields remains a significant threat. Most existing secondary grasslands are still recorded in the official cadastral documents as ploughlands, allowing owners to plough them, even when the land has not been ploughed for decades. Overgrazing and deliberate or accidental burning destroy the vegetation cover. Illegal collecting and harassment of snakes, which often end with their death, and associated effects of urban and tourism developments, also play an important role in the population decline.

In order to preserve the viper populations in Transylvania, the only suitable solutions would be: (1) to persuade private owners to manage lands traditionally—but with restrictions—through the use of subsidies for Natura 2000 sites, and to encourage them to benefit similar payments under the agro-environmental schemes outside the Natura 2000 network; (2) to create an administrative structure financially supported by the state, in order to ensure proper management of the three large Nature 2000 sites: "Pajiştile lui Suciu" (ROSCI0187), "Dealurile Clujului de Est" (ROSCI0295) and for the newly proposed "Dealurile Bogatei" site, or (3) for the state or NGOs to lease or purchase these lands in order to implement an appropriate management regime. Further intensive surveys are needed across the whole region to identify remnant meadow viper populations for immediate protection.

Acoustic communication in two syntopic spadefoot toads

Florina Stănescu[1], Paul Székely[1], Rafael Márquez[2], Dan Cogălniceanu[1]

[1] *Faculty of Natural and Agricultural Sciences, Ovidius University, Aleea Universităţii 1, 900470 Constanţa, Romania; florina_stanescu@ymail.com*
[2] *Fonoteca Zoológica, National Museum of Natural Sciences (CSIC), José Gutiérrez Abascal 2, 28006 Madrid, Spain*

Although most of the studies in anuran acoustic communication focus on advertisement calls, release vocalizations are also an important component of the mate-recognition system, by allowing energy conservation in cases of erroneous amplexus during reproduction (e.g. male-male, male-unreceptive female). Release calls are emitted both during and outside the reproductive season and provide their receivers information about the species, sex and size of the emitter. The genus *Pelobates* consists of four fossorial and nocturnal species. Two of these species, *P. syriacus* and *P. fuscus*, occur in south-eastern Europe, and their ranges overlap in the Balkan Peninsula. We quantitatively described the typical release calls (i. e. first order) of both species and tested for intra- and interspecific differences of the calling pattern. The sound samples were obtained under laboratory conditions by amplexus simulation, from 25 adults: 12 *P. fuscus* (8 males, 4 females) and 13 *P. syriacus* (7 males, 6 females). The animals were collected from two syntopic populations in Dobrudja region (Vadu, Romania). We used Raven Pro 1.4 software for sound analysis. We measured a series of temporal and spectral parameters from 497 calls: call duration, frequency range, dominant frequency and other parameters useful in pattern differentiation. In both species, the release vocalizations consisted of series of pulses and harmonic complex tones and the general structure of the call was approximately the same. We found no significant differences in the frequency range and dominant frequency of the calls, which indicates that the two species share the same acoustic niche. We found significant differences in the temporal and spectral patterns of the calls, between both sexes and species. We suggest that release vocalizations are important in mediating intra- and interspecific interactions and their communicational potential requires more attention.