Expression of interest for research cooperation

Description of institution

Interested institution:	**Institute of Biotechnology, University of Rzeszów**
Department carrying out the proposed research	**Department of Zoology** **&** **Laboratory of Bioacoustics and Spectrophotometry**
Address and webpage	address: Zelwerowicza 8b, 35-601 Rzeszów, Poland http://www.ur.edu.pl/wydzialy/pozawydzialowy-instytut-biotechnologii
Contact person (name, e-mail address, phone)	Ewa Węgrzyn, PhD. DSc., e-mail: songbird.ewa@gmail.com Konrad Leniowski, PhD. e-mail: songbird.konrad@gmail.com

Research offer

Brief description of the department (key research facilities, infrastructure, equipment)
(up to 1000 characters)

The Department of Zoology and The Laboratory of Bioacoustics and Spectrophotometry are focused on animal behaviour and ecology of vertebrates, especially birds. An important issue undertaken in scientific projects concerns signalization in animals, namely the visual and vocal communication. Efficiency of this process is one of the key factors in a breeding success in animals. The Department is equipped with professional microphones (including an ultrasound microphone), recording devices, professional software for sound analyses, portable spectrophotometer, miniature video cameras, etc.

Scientific area

☐ Chemistry	☐ Social Sciences and Humanities
☐ Economic Sciences	☐ Information Science and Engineering
☐ Environment and Geosciences	☐ **Life Sciences**
☐ Mathematics	☐ Physics

Research field

(up to 500 characters)

Current projects focus on anti-predator strategies of nesting birds, signalization of nestling demands under high predation pressure as well as vocal and visual communication in birds. The research on the birdsong aims to investigate (i) the function of repertoires in inter- and intra-sexual selection, (ii) mechanisms of sound production, (iii) the function of dialects and (iv) vocal signatures of the singing males. Another interesting question concerns cultural transmission in birds. Long-term changes in songs of the same population are analysed to find whether subsequent generations inherit their ancestors' dialect. The studies on visual communication focus on patterns of sexual selection in birds as well as the function of ornaments in signalization of quality in birds.

The proposed research/project description

(up to 1000 characters)

The Department of Zoology and The Laboratory of Bioacoustics and Spectrophotometry invite all interested scientists for cooperation in the field of vocal and visual signalization in animals, especially birds.

Additional information (key Persons and Expertise; additional trainings, research programme, other)

(up to 1000 characters)

Selected publications:

Węgrzyn E., Leniowski K. 2015. Blackcap Sylvia atricapilla nestlings do not use begging calls until they are able to escape from predators. Ibis, 157, 356-368

Leniowski K., Węgrzyn E., Kosiński Z. 2014. Mates exhibit similar brightness of mutual carotenoid plumage ornaments in Middle Spotted Woodpeckers – implications for assortative mating. Acta Ornithologica 49(2), DOI: 10.3161/173484714X687154.

Leniowski K., Węgrzyn E. 2014. Do blackcaps win host-ectoparasite arms race by building lacy nests and shortening nestling period? Ethology, Ecology & Evolution, 26: 49 – 57.

Leniowski K., Węgrzyn E. 2013. The carotenoid-based red cap reflects individual quality and territory size in the Middle Spotted Woodpecker *Dendrocopos medius*. Ibis, 155: 804 – 813.

Węgrzyn E. 2013. Intensity of mouth colouration in blackcap nestlings affects food distribution among siblings but not provisioning of the whole brood. Ibis, 155 (1): 156–164.

Węgrzyn E. 2013. Resource allocation between growth and endothermy allows rapid nestling development at low feeding rates in a species under high nest predation. Journal of Avian Biology, 44: 001–007.