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Dům zahraniční spolupráce

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RNDr. Petr Veselý, Ph.D.
Přírodovědecká fakulta
Jihočeská Univerzita v Českých Budějovicích
Branišovská 31
370 05 České Budějovice, Czech Republic

and



Christine Schwab, Ph.D.
Universität Wien
Department für Kognitionsbiologie
Althanstrasse 14
1090 Wien, Österreich

**AKTION Česká republika -
Rakousko
Dům zahraniční spolupráce
Na Poříčí 1035/4, 110 00 Praha 1**

Final Project Report

Project title: Interactions with and learning from heterospecifics in birds.

Project number: 70p9

Main solver: RNDr. Petr Veselý Ph.D., Jihočeská Univerzita v Českých Budějovicích, Přírodovědecká fakulta, Branišovská 31a, 37005 České Budějovice, Česká Republika

Project partner: Christine Schwab, Ph.D., Universität Wien, Department für Kognitionsbiologie, Althanstrasse 14, 1090 Wien, Österreich

Realized activities

Due to changes in the available money (CZK as well as EUR) granted for our project (shortage in money granted to particular students), we had to make changes in comparison to our application. Three students from University of South Bohemia (indexed as USB hereafter; Mgr. Jana Beránková, Mgr. Alexandra Průchová and Kateřina Bílá) visited the University of Vienna (indexed as UV hereafter) during August and September 2014 (one month each – stipend 940 € each). They conducted experiments with wild crows at the Tiergarten Schönbrunn (Vienna zoo), presenting them conspecific (crow) and heterospecific (jackdaw) alarm calls and a control stimulus (great tit song) in two predatory contexts (at the zoo enclosure of wolves and a polar bears) and two non-predatory contexts (at the enclosures of a eland antelopes and peccaries). Altogether the students conducted 86 trials, with every context and playback combination being repeated four to six times. We decided to move the stay of Kateřina Bílá, from spring 2015 to September 2014, to increase the efficacy of the crow

research in the Vienna Zoo, because at least two researchers were needed to observe the whole animal enclosure to record the crows' responses. Therefore, Kateřina participated in this study and her planned research on nest defence in crows had to be omitted.

During the first visit on 30th July 2014, Petr Veselý (researcher) visited UV as well, to establish the details of the cooperation and discuss the design of the planned experiments together with Christine Schwab. All the equipment necessary for the research on crows was brought as well. During the second visit on 18-22th August 2014 Petr Veselý was in-situ updated about the progress of the research and further details of the methodology were discussed. The third journey to Vienna (26th September) included a visit of Petr Veselý (altogether all three visits - four days – 360 € for the daily costs and 4000 CZK for travel expenses) and Nela Nováková (M.Sc. student, two day daily costs – 180 €), who was planning her future cooperation on our project (instead of the planned visit of Kateřina Bílá). During this visit the final results of the two-month research in Vienna were presented at the seminar of the Department of Cognitive Biology. All experimental stuff and the students returned to Budweis.

Two students from UV (Florian Uhl and Alice Kirchmeir) visited USB in November-December 2014 (one month each, stipend 9500 CZK each). During their stay they conducted experiments with great tits by presenting conspecific (great tit), heterospecific (blue tit) and control (robin song) playbacks to great tits on a winter feeder in a predatory (stuffed sparrowhawk present) and non-predatory (stuffed pigeon present) context. Altogether they conducted 24 trials, which represent three repetitions of a set of all eight trials (four playback conditions in each of two predatory contexts). These data are not sufficient for any conclusions and further experiments need to be conducted.

In April 2015, prof. Thomas Bugnyar (researcher) visited USB (honoraria 176 € and travel costs 40 €) giving a talk titled “INDIVIDUUM: Integrative Approach to the Study of Individual Differences in Common Ravens (*Corvus corax*”. During his visit further cooperation and experiments were planned. This visit took place instead of the planned visit of Christine Schwab, planned for October 2014.

Two students from UV (Florian Uhl and Alice Kirchmeir) visited USB in Mai-June 2015 (one month each, stipends 9500 CZK each). During their stay they conducted experiments with red-backed shrikes by presenting conspecific (shrike alarm calls), heterospecific (barred warbler, blackcap alarm calls) and control (black and barred warbler song, no song) playbacks at the nests of red-backed shrikes in a non-predatory context (stuffed pigeon present). During their research, they conducted 20 repetitions of the whole 6 treatment experiment. Their results are about to be analysed in the upcoming weeks.

In Mai 2015, Petr Veselý (daily costs for three days 270 €, travel expenses 1316 CZK) and Michal Němec (researchers, daily costs for three days 270 €, honorarium 3200 CZK) visited UV, and Michal Němec gave his talk titled “Shrikes in action: what can anti-predator behaviour tell us about cognitive abilities of birds”. Further details in experiment design and future cooperation were discussed.

Obtained results

As this project supports the beginning of future cooperations of both respective scientific teams, there are no already published results. The experiments with the crows at the Vienna Zoo are at the moment coded and analysed with a manuscript in progress. The experiments with the great tits need to be continued to obtain a suitable number of replications. The experiments with the shrikes have just been finished and will be analysed in due time.

The cooperation contribution

There were no problems in establishing the cooperation. Planned student exchanges on both sides were realized without difficulties and their stays already brought publishable results. We feel that this AKTION project enabled a start of a promising scientific cooperation, enriching both participating parts.

In Vienna, 21st July 2015


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RNDr. Petr Veselý, Ph.D


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Christine Schwab, Ph.D.