

# Darwin Initiative: Half Year Report

(due 31 October 2009)

<b>Project Ref. No.</b>	(Original Project Reference 15/033)	EIDPO036
<b>Project Title</b>	Monitoring biodiversity indicators through volunteer networks across Eurasia	
<b>Country(ies)</b>	Romania, Bulgaria, Hungary, Ukraine, Russia	
<b>UK Organisation</b>	Institute of Zoology, Zoological Society of London	
<b>Collaborator(s)</b>	The Bat Conservation Trust, The Romanian Bat Protection Association, The Green Balkans, The Nature Park Roussenski Lom, The Institute of Zoology Bulgarian Academy of Sciences, The Bulgarian Bat Research and Protection Group, Nature Foundation (Hungary), Animals Research and Protection Association (Ukraine) and Viola (Russia).	
<b>Project Leader</b>	Dr Kate E. Jones	
<b>Report date</b>	31 <sup>st</sup> October 2009	
<b>Report No. (HYR 1/2/3/4)</b>	HYR1	
<b>Project website</b>	<a href="http://www.ibats.org.uk">http://www.ibats.org.uk</a>	

## 1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

**Activity:** *Year 1, Months 1-6, International monitoring workshop hosted by Romanian and Bulgaria (assisted by UK partners) inviting key participants from Hungary, Ukraine and Western Russia to introduce the project and train key personnel.*

We held the workshop in Savadisla, Tordaszentlaszlo, Romania from 15-18<sup>th</sup> May 2009. The workshop was organised by the Romanian Bat Protection Association (RBPA) and attended by representatives and volunteers from RBPA, Bulgaria (The Green Balkans), Russia (Viola), Ukraine (Animals Research and Protection Foundation), Hungary (Nature Foundation) and UK (Institute of Zoology, The Bat Conservation Trust). We also took this opportunity to invite representatives from other similar monitoring projects that this project has been involved with and representatives attended from Ireland (Bat Conservation Ireland), UK (The South Lancashire Bat Group), France (Museum National d'Histoire Naturelle, Paris), USA (The American Museum of Natural History) and Belgium (Natuurpunt). Country representatives presented the results from their monitoring projects or their potential for their involvement in the project (see <http://www.ibats.org.uk/page.aspx?tabid=295> for schedule). A number of workshops were then held to train new volunteers in the iBats monitoring method. These were iBats Monitoring techniques; Sonogram Analysis; Bat Biology, Evolution and Conservation; iBats Website. Fifty-two volunteers attended the workshop with 12 new volunteers being trained. Individual sessions were held for volunteers from Romania, Bulgaria, Russia, Ukraine and Hungary to plan their projects for the forthcoming year (see photos here <http://www.flickr.com/photos/ibatsprogram/sets/72157622617126064/>).

**Activity:** *Year 1, Months 1-6, Equipment bought and transferred for Hungary, Ukraine and Western Russia and replacement equipment purchased for Romania and Bulgaria.*

Hungary, Ukraine and Russia each received 2 sets of surveying equipment, maps and hard discs for data storage. We also replaced damaged equipment in Bulgaria.

**Activity:** *Year 1, Months 1-6, Ongoing monitoring data collected by network of volunteer personnel in Romania and Bulgaria. Pilot data collected by Hungary, Ukraine and Western*

*Russia. 60 transects for Romania and Bulgaria and 20 transects for additional countries.*

During 2009, volunteers have collected data from 192 driven transects in Romania, Bulgaria, Ukraine, Russia and Hungary (Table 1). In Romania 67 transects have been driven making a total of 198 transects (7176 km) surveyed since 2006. Of these 102 are separate routes. In Bulgaria 69 transects were driven making a total of 231 transects (10233 km) surveyed since 2006, 79 of which are separate routes. In Russia, 20 transects (1200 km) of 11 different routes have been driven. Of the 37 volunteers registering with the project, 27 participated in the surveys. In Ukraine, 23 transects (716 km) of 13 different routes have been driven. Of the 11 volunteers registering with the project, 7 participated in the surveys. In Hungary, 20 transects (931 km) of 12 different routes have been driven adding to the 2007-2008 pilot data. Of the 32 volunteers registering with the project, 24 participated in the surveys. The uploading of data to the web portal is ongoing and the uploading and sonogram analysis should be completed by January 2010.

	Events	Routes	Monitoring transects	Registered volunteers	Survey volunteers	Km driven
iBatsBulgaria	231	79	37	69	48	10233.05
iBatsRomania	199	102	36	89	74	7176.17
iBatsHungary	44	22	13	32	24	1413.54
iBatsRussia	20	11	5	32	27	1200.92
iBatsUkraine	23	13	7	11	6	716.27

Table 1. Project summaries downloaded from the iBats online data portal (14/10/09) for the period 2006-2009.

**Activity:** *Year 1 and 2, Months 1-24, Development of new analytical techniques to automatically analyse and identify acoustic data*

Dr. Stuart Parsons took sabbatical leave from the University of Auckland from mid-July to mid-October 2009 to work at ZSL on automatic methods of identifying and extracting calls from long call sequences. Cepstral coefficients were used to identify bat calls within recordings with 80-90% accuracy. Dr. Parsons is working with Charlotte Walters (PhD student) to complete this research to improve the accuracy and to implement this algorithm into the website.

Dr. Jonathan Krieger, Alanna Maltby (PhD student) and Kate Jones funded by a small grant from The Centre for Ecology and Evolution in London, began to investigate better ways of parameterising bat echolocation calls by extracting measurements from a set of isolated echolocation calls using three-dimensional eigenshape analysis. We tested this system with *Myotis* bats, commonly considered the most difficult to identify acoustically from their echolocation calls. We found that this method outperforms the classification obtained with traditional parameters. We are working on neural classification networks to identify echolocation calls to species using these new and traditional parameters. To further develop this work we have submitted a 2 year research proposal in July to NERC 'Developing tools to monitor ultrasonic biodiversity'.

**Activity:** *Year 1 and 2, Months 1-24, Development of new detector*

The equipment kits we currently use are complex to put together and to explain in other languages and we have experienced the loss of the data from a number of transects due to this problem. To address this, we are developing an application for the iPhone in collaboration with Dr. George Roussos at Birkbeck (University of London) which can be directly attached to the ultrasonic detector and the geo-referenced sound files will then be automatically uploaded onto the web portal. A MoU between ZSL and Birkbeck was signed in September 2009 and a 3 month contract to develop the software application commenced at the beginning of October 2009. The system should be available for testing in January 2010. In collaboration with Dr Roussos an MSc student at Birkbeck is to developing a similar application for Google's Android operating system.

**Activity:** Year 1 and 2, Months 1-24, Improvements to the online data portal

We have written a tender document to improve the iBats online data portal and to link this portal with EchoBank, our online ultrasonic call database and YouTHERIA, a web portal to capture species information about the world's mammals from existing scientific literature. We will offer this document for tender to a number of web development companies to bid for the contract at the end of October 2009.

**Other Progress:**

Presentations: Dr. Kate Jones gave a presentation at an international symposium in June 2009. Biodiversity monitoring and conservation: bridging the gaps between global commitment and local action, Zoological Society of London. This research will also be published in the Symposium volume (Jones et al. Monitoring ultrasonic biodiversity: using bats as biodiversity indicators). Kate Jones also gave a talk to the Max-Planck Institute of Ornithology, Germany in June 2009. Dr. Kate Jones (ZSL, UK), Dr. Abigel Szodoray-Paradi (Romanian Bat Protection Association) and Dr. Zoltán Bihari (Nature Foundation, Hungary) gave presentations at the VIIth Hungarian National Bat Conservation Conference in Hungary, 16-18 October 2009 relating to their involvement with the iBats project. The meeting generated more interest from bat researchers in Hungary and five more teams have volunteered for the project from different parts of Hungary (<http://www.flickr.com/photos/ibatsprogram/sets/72157622617130540/>). Dr. Andriy Bashta. Presented the Ukrainian results at 'Scientific basis of biodiversity conservation' conference in Lviv, Ukraine in October 2009. Dr. Jon Russ and Kate Jones ran two iBats workshops at Bat Conservation Trust's National Bat Conference in September 2009.

Media: The iBatsUK project was featured in the BBC programme Autumn Watch on 9<sup>th</sup> October 2009 (<http://www.flickr.com/photos/ibatsprogram/4011024145/>). An article about the iBats project appeared the Zoological Society of London's Magazine, Wild About in August 2009 and their annual report in October 2009. In Romania there was a national press release on 9<sup>th</sup> October 2009 and 3 articles about the iBatsRomania project were published in local newspapers (two from Satu Mare, one from Sibiu).

Students: Charlotte Walters started her PhD to investigate the habitat and climate associations of Eastern European bats collaborating with our partners. We also have two MSc students from Imperial College, London next year doing related projects: 'Status of UK Bats'. This project will estimate population abundances of bats in the UK obtained from the iBats programme to investigate any trends over the last 5 years and compare these results to other more traditional surveys carried out by the National Bat Monitoring Programme. The other project 'Niche models of Mediterranean bats' uses the iBats methodology to obtain baseline data from southern Mediterranean countries and to generate habitat and climate models for these species. Dr. Kate Jones has assisted Alexander Gorbachev (iBatsRussia) to apply for an internship at ZSL to learn analytical techniques to analyse the iBatsRussia data and to attend The Student Conference on Conservation Science in Cambridge in 2010.

Outreach: Viola (iBats Russia) started two children's clubs for bats (Domoshovsky and Bryansk schools) developing their own research projects. Viola are also forming an Association for Protection of Bats and planning a Russian speaking website for the organisation.

**2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

None

**Have any of these issues been discussed with the Darwin Secretariat and if so, have changes been made to the original agreement?**

Discussed with the DI Secretariat:	no/yes, in..... (month/yr)
Changes to the project schedule/workplan:	no/yes, in.....(month/yr)

**3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?**

None

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

**Please note: Any planned modifications to your project schedule/workplan or budget should not be discussed in this report but raised with the Darwin Secretariat directly.**

Please send your **completed form email** to Eilidh Young, Darwin Initiative M&E Programme at [Darwin-Projects@ectf-ed.org.uk](mailto:Darwin-Projects@ectf-ed.org.uk) . The report should be between 1-2 pages maximum. **Please state your project reference number in the header of your email message eg Subject: 14-075 Darwin Half Year Report**