

Darwin Initiative: Half Year Report

(due 31 October 2009)

Project Ref. No.	EIDPO036
Project Title	Monitoring biodiversity indicators through volunteer networks across Eurasia
Country(ies)	Romania, Bulgaria, Hungary, Ukraine, Russia
UK Organisation	Institute of Zoology, Zoological Society of London
Collaborator(s)	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).
Project Leader	Dr Kate E. Jones
Report date	31 st October 2010
Report No. (HYR 1/2/3/4)	HYR2
Project website	Website - http://www.ibats.org.uk Facebook - http://www.facebook.com/?ref=home#!/pages/iBats/110129645671294 Twitter - iBatsProgram Flickr - http://www.flickr.com/photos/ibatsprogram/

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 2.1: *Year 2, Months 1-6, Development of new analytical techniques to automatically analyse and identify acoustic data*

We have identified a spectrum analysis software package, Sonobat, to isolate bat calls from long recordings and automatically extract call parameters. This works well with the iBats acoustic recordings and extracts calls automatically with very little manual processing. This cuts down processing time enormously. Charlotte Waters (PhD, University of Kent & ZSL) is building a neural automatic identification network for European calls with Dr. Stuart Parsons (University of Auckland) using the 72 call parameters she has measured from 17,639 echolocation calls from the 38 European species in EchoBank (our global library of bat calls) and will travel to the University of Auckland in October-November 2010 to spend time in Dr. Parsons research group. We have extended the new three-dimensional eigensound technique to recognise bat calls to species as part of a University of London MSc student project (Michaela Moores). We are writing this new approach as a scientific paper with Dr. Jonathan Krieger (Natural History Museum). We are hoping to use this new technique to improve the neural identification network that Charlotte is developing with the traditional parameters.

Activity 2.2: *Year 1 and 2, Months 1-24, Development of new detector*

The development of an application for the iPhone in collaboration with Dr. George Roussos at Birkbeck (University of London) has been completed. The application allows an iPhone to be directly attached to the ultrasonic detector and the geo-referenced sound files can then be automatically uploaded onto the web portal, thus replacing the recording device, GPS unit and the recording sheets (Fig. 1). In addition, in collaboration with Dr Roussos a similar application for Google's Android operating system has been developed by an MSc student at Birkbeck (University of London), George Sin. Both applications have now been tested and will be formally released when the new web site has been completed in January 2011. The android application is available as a pre-release download from http://www.androidzoom.com/android_applications/tools/ibats-app_jboj.html.



Figure 1. Screenshots from the iBats iPhone application

Activity 2.3: *Year 1 and 2, Months 1-24, Improvements to the online data portal*

MSM www.mssoftware.com have been contracted to carry out a major overhaul of the iBats web portal (after an extensive tendering process). Not only will this improve the data management aspect of the project but also volunteers will be able to explore their data more easily – e.g. generate maps of data, download survey routes and geo-referenced bat call data, and produce reports. The new web portal will incorporate transect data gathered using the application for the iPhone and phones running the Android operating system. Full development specifications have now been agreed including a detailed outline of the system and work has now begun on implementation. The projected final delivery date is January 2010 (although the old version of web portal will continue to be operational until next year). The website will link the iBats 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.

(assisted by UK partners) reporting on annual progress and recruiting or maintaining volunteer network (10 volunteers each for each additional country).

iBats workshops were held in Hungary (7th – 10th May, organised by Protection Group, Natura Foundation), Ukraine (19th – 23rd May, organised by Animals Research and Protection Association) and Russia (27th – 31st May, organised by Peresvet) to train new participants to carry out iBats surveys and sonogram analysis and to report on progress. In addition, host countries decided on their survey plans for the forthcoming field season. Fifteen volunteers attended the workshop in Ukraine, 15 volunteers attended the workshop in Hungary and 22 volunteers attended the workshop in Russia. Photos of the workshops can be viewed on Flickr (Hungary - <http://www.flickr.com/photos/ibatsprogram/sets/72157624128134761/>, Ukraine - <http://www.flickr.com/photos/ibatsprogram/sets/72157624016005469/> and Russia - <http://www.flickr.com/photos/ibatsprogram/sets/72157624064085061/>). During 2010, 13 new volunteers participated in the project in Romania, 40 in Hungary, 40 in Russia and 21 in Ukraine. Although we had planned to organise a workshop in Bulgaria and Romania these countries decided that they would prefer to keep the money for continuing to run the project in 2011.

Activity 3.3: *Year 2, Months 1-3, Transfer of any replacement monitoring kit to countries.*

In addition to the two sets of equipment received by Hungary, Ukraine and Russia in 2009 a further four sets of surveying equipment, maps and hard discs for data storage were received by each country in May 2010. Two sets of equipment given to the Hungarians were replaced with better quality models that were easier to use and were less prone to equipment failure.

Activity 3.4: *Year 2, 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 30 transects for additional countries.*

Table 1 shows the total numbers of events, routes, monitoring transects, volunteers and kilometres driven since the project began and Table 2 shows the same data for 2010 (as of 08/10/10). 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	306	85	38	70	48	15892
iBatsRomania	312	135	48	97	78	14389
iBats Hungary	111	62	27	49	40	5113
iBatsRussia	90	42	22	74	66	5787
iBatsUkraine	78	35	22	37	34	4532

Table 1. Project summaries downloaded from the iBats online data portal (08/10/10) for the period 2006-2010.

	Events	Routes	Monitoring transects	Survey volunteers participating in 2010	KM driven
iBatsBulgaria	69	47	31	15	3171
iBatsRomania	85	58	31	28	4159
IBats Hungary	67	47	16	25	2659
iBatsRussia	70	38	22	46	3919
iBatsUkraine	51	40	22	30	2938

Table 2. Project summaries downloaded from the iBats online data portal (08/10/10) for the 2010.

Other Progress:

April 2010: Alexander Gorbachev (Russia) completed his Cambridge University internship with Kate Jones at ZSL and he also won the student prize for his project on habitat modelling of Russian bats from acoustic information. He is planning on starting a PhD at the University of Bryansk, Russia next year on this subject and Dr. Kate Jones will be one of his supervisors.

May 2010: Dr. Kate Jones attended the 6th Session of the Meeting of Parties (MoP6) to EUROBATS in Bonn as a scientific advisor for BCT and added information about the iBats project in the annual report for the UK.

May 2010: Dr. Jonathan Kreiger and Dr. Kate Jones presented at talk at University of London on the new 3D call modelling technique.

July 2010. With funding from the Japanese Environment Agency, we ran a workshop in Japan training 14 local scientists and biologists. With this training they launched their own iBats Japan programme in July and has been collecting data over the past few months (10 transects have been uploaded as of 08/10/2010)

Aug 2010: Kate chaired a monitoring symposium entitled "Global bat Monitoring and Bioindication" at the 15th International Bat Research Conference in Prague and reported on the iBats programme in a talk entitled "Monitoring ultrasonic biodiversity: using bats as biodiversity indicators".

Aug 2010: Abigél Szodoray-Parádi (Romania) gave talk a talk at 15th International Bat Research Conference in Prague, 23-27 Aug 2010 entitled "Results of the Indicator Bats (IbatsRo) programme in Romania between 2006–2009"

Aug 2010: Charlotte Walters has been carried out iBats surveys in Bosnia, Serbia and Croatia to increase the data for PhD investigating the habitat and climate associations of European bats. Charlotte collaborated with local batworkers and EUROBATS representatives during her fieldwork. Charlotte presented a poster on her work at the International Bat Conference in Prague.

Sept 2010: The Hungarian team published a webpage for the project: <http://www.natura-alapitvany.hu/index.php/ibats-denever-monitoring>

Sept 2010: Dr. Kate Jones presented the work of the iBats program to the Conservation Programmes Department at ZSL.

Sept 2010: Dr. Jon Russ ran two iBats workshops at the Bat Conservation Trust's National Bat Conference in Loughborough, UK

Sept 2010: We lent a set of iBats equipment to Emrah Çoraman of Boğaziçi University, Istanbul to carry out some iBats survey in Turkey to increase coverage of bat distributional data across the Eastern European region.

Oct 2010: Annabelle Pagan completed her MSc thesis at ZSL and Imperial College under the supervision of Dr Kate Jones entitled "An analysis of iBats UK (Indicator Bats Program UK): How effective is iBats at generating an indicator of bat abundance in comparison to existing programs?"

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 . 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**