



XII EUROPEAN BAT RESEARCH SYMPOSIUM

**Programme
Abstracts
List of participants**

**XII-asis Europos
šikšnosparnių
tyrimų simpoziumas**

**August 22–26, 2011
Vilnius, Lithuania**

VARIATION IN BAT ACTIVITY AT ARTIFICIAL LAKES: IMPLICATIONS FOR MONITORING

RALF GYSELINGS, GEERT SPANOGHE and ERIKA VAN DEN BERGH
Research Institute for Nature and Forest, BRUSSELS, Belgium

The measuring of bat activity is important for studies on habitat use, conservation and monitoring of bats. In practice these measurements are often carried out in different ways, e.g. using point counts or transect counts in a standardized part of the night, or by measuring the overnight activity at fixed points with automated detectors. Irrespective of the method, variation in the data should be known for a proper statistical inference. We studied variation of bat activity at different artificial lakes and at a canal with Pettersson D-500X bat recorders. Our first results indicate that bat activity at these lakes does not always follow the classical pattern with an activity peak in the beginning of the night, but activity can peak several hours after sunset. Day to day variation was very large at some sites, but rather small at others. Apart from counting of bat passes, feeding buzzes have also been counted to check whether they are necessary for measuring foraging activity. Many studies have reported a correlation between the number of feeding buzzes and the number of bat passes. In our study, however, this correlation did not hold. The ratio between feeding buzzes and bat passes might even be site dependent. We concluded that overnight measurements are needed for a proper assessment of the importance of a site, and that the number of feeding buzzes gives important additional information.

BATS MAY BE CARRIERS OF *CAMPYLOBACTER*

WILMA HAZELEGER¹, WILMA F. JACOBS-REITSMA²,
MARCEL VAN BERGEN³, PETER H.C. LINA⁴, THIJS BOSCH¹
and RIJKELT R. BEUMER

¹Laboratory of Food Microbiology, Wageningen University, WAGENINGEN, the Netherlands

²RIKILT Institute of Food Safety, WAGENINGEN, the Netherlands

³Animal Sciences Group, CVI-KAZ, LELYSTAD, the Netherlands

⁴Netherlands Centre for Biodiversity 'Naturalis', LEIDEN, the Netherlands

Since the contamination cycles of *Campylobacter* and *Salmonella* are not fully elucidated, it is useful to search for possible reservoirs in the environment. Bats are known to be potential carriers of viral pathogens and they might also be relevant in the contamination cycles of *Campylobacter* and *Salmonella* since they

are warm blooded animals and could possibly act as hosts for these pathogens. In Western Europe, all bat species are insectivorous. Since it is known that insects are able to transmit *Campylobacter* and/or *Salmonella* for instance via faeces of farm animals or water birds, they might be a source of infection for bats. By contaminating water, crops, fruit, feed or soil with their faeces, infected bats might be a part of the contamination cycle of both pathogens. In this investigation, we examined wild bats for the presence of *Campylobacter* and *Salmonella* in 2007 and 2008.

Fresh faecal samples (<10mg -100 mg) were collected from live, wild bats with transport swabs (Copan Diagnostics Inc., 109.USE), kept at 0-7°C and examined within two days for *Campylobacter* using Bolton Broth, Preston Broth and CCDA and for *Salmonella* using BPW, MSRV and BGA/XLD.

Campylobacter was found in 17 out of 632 samples, in 6 (of 14) different bat species from diverse habitats. *Salmonella*, however, was never isolated. Since the aim was to determine the presence of both *Campylobacter* and *Salmonella*, splitting-up of the material and improvisations on the methods were necessary which could lead to an underestimation of the number of positive animals. The isolated strains are currently MLST-typed, preliminary results indicating *C. jejuni* strains similar to the types previously found in environmental waters, humans, wild birds, geese faeces and chicken.

Bats should be considered as carriers of *Campylobacter* and, where possible, necessary action should be taken to avoid contact between bats (faeces) and food/feed.

BATS AND WIND TURBINES: HOW AUTOMATIC ACTIVITY MEASUREMENTS CAN BE USED TO ASSESS THE COLLISION RISK

JOHANNA HURST, HORST SCHAUER-WEISSHAHN
and ROBERT BRINKMANN

Freiburg Institute of Applied Animal Ecology, FREIBURG, Germany

In recent years it has become evident that bats are regularly killed at wind turbines. To mitigate the collision risk it is common to cut off wind turbines at times of high risk. However there are significant differences between wind turbines regarding the collision risk depending on the location, and individual surveys are necessary to assess times of especially high risk. A commonly used method is bat fatality searches that are often methodologically difficult, e.g. if the search area is