

Session 4: Posters

Date: Tuesday 31 October, 2017
Time: 17:10 – 19:00
Room: Seminar Room

From notebook to app: tit research in the twenty-first century

Presenting author: **Frank Adriaensen**

Authors: **Frank Adriaensen¹, Ward Elst², Pieter Bonne², Erik Matthysen¹**

Affiliations: ¹Evolutionary Ecology Group, University of Antwerp, Antwerp, Belgium
²Genius Donkeys, <http://www.geniusdonkeys.com>

We developed a software application for data input and workflow management in population studies on birds in nestboxes. The application supports input of various kinds of field data (e.g. nest controls, captures, and sample collections) from any mobile device (e.g. tablet, smartphone) and immediate transfer to a server-based database. This database is updated in real-time and available in the field at any time, and to all fieldworkers. Two-way communication with the main server allows for information also to be transferred from the server to the tablets (e.g. previous captures of observed individuals, unique tag codes available for a new individual). This application solves a number of problems that we believe are generic to many field studies involving large numbers of individuals, locations and/or researchers, and where specific data have to be collected according to a strict protocol.

App development was guided by data safety (data immediately transferred to server), data quality (immediate validation of input data), efficiency (data entered only once, pictures and sample IDs uploaded with the data), and optimization of research management (work schedules updated in real-time, allowing for optimal task division, in-situ selection of individuals or nests for experiments).

The software, now used in three field seasons with very good results, is not freely available as it is heavily customized to our study and was commissioned to a commercial software developer. The application runs on all commonly used operating systems, and is highly modular in structure. Therefore, it could be readily adapted to other population nestbox studies, but it could also be applied in very different types of data collection, with similar requirements in terms of data collection and safety.