

EUROPEAN SWALLOW RESEARCH: JOINT VENTURE

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After a hectic ten days, we bade farewell to Anders Møller, Nicola Saino and Neels Cadee, at the end of their field trip collecting data and blood samples of European Swallows and other swallow and martin species in the Potchefstroom area. The project is based at Copenhagen University headed by Anders Møller, with Neels as his assistant. Nicola, based at the University of Milan, collaborates in the project, his field being blood analysis.

Our role in this project started with an innocent phone call from SAFRING last year, requesting my help in locating swallow roosts and help with their capture. Henk Bouwman, who had previously met Anders in Vienna, was approached to provide laboratory facilities at Potchefstroom University.

Following an exchange of correspondence, the plans were drawn up and various club members, bird ringers and ringing trainees were approached to assist in the effort, with a target of 1 000 to 2 000 birds. Having trapped roosts previously, I knew we were in for some hard work. The real problem lay in finding swallows in sufficient numbers and in a location which was suited to mistnetting. This was eventually found in the Muiskraal area near Potchefstroom. It was a big roost with, by my humble estimate, over a million swallows. Initial efforts were disappointing, as the birds changed roosts each evening in the large reedbed. Eventually, we were able to set up our nets in an approach area which rapidly yielded results. Then the birds moved to another reedbed and we were reduced to trapping stragglers as in the first few days. The second roost was located in time for a last fling, before Anders and his team departed.

The object of the exercise was to gather information on the European (Barn) Swallow in their wintering quarters, in support of an

on-going project on sexual selection. The European Swallow is being studied to provide information on how variations in breeding plumage and general condition of breeding adults affect breeding success, female fidelity, offspring survival probability and general population dynamics.

DNA testing of blood samples has been used to confirm paternity in support of observations of breeding activity. As the DNA sample increases, it is hoped that a bird's breeding area and migration destination can be determined by blood sampling. Some of the birds were also tested for immunity and stress reaction immediately after capture. Moulting scores, wing dimensions and feather parasites were determined to gauge the efficiency of an individual bird's wing. This has a direct effect on the energy used in flying and can influence the bird's survival potential when food is scarce or during migration.

By the end of the visit, we had processed 647 European Swallows, well short of our target, but still a success in the opinion of our visitors. The local ringers involved also picked up valuable experience and knowledge regarding these birds. Other species for which full data and sample sets were recorded were 14 Banded Martin *Riparia cineta*, five European Sand Martin *Riparia riparia*, four Brownthroated Martin *Riparia paludicola*, two Greater Striped Swallow *Cecropis cucullata* and two Whitethroated Swallow *Hirundo albigularis*. These data were taken to provide comparative material.

A positive outcome of this research is that we have been asked to continue the collection of data and blood samples, with an emphasis on the arrival and departure periods of the migrating birds.

Students who assisted in the project gained valuable insight into methods used for data collection. More could have been learnt and achieved in the long term, had practical experience been gained in some of the more specialised methods of blood sampling and

processing, as well as in the analyses used to derive results from the accumulated data.

The wisdom of exposing undergraduate and postgraduate students to this type of project or learning opportunity is obvious. What is open to question is the degree to which they can be relied upon to do any follow-up work. They tend to have large workloads, and other conflicting priorities. From the point of view of the University, funding and the commitment of study leaders are as important as the interest of the students. Any co-authorship or acknowledgement offered in such a project will have to be earned and will require a lot of dedicated effort on the part of students.

Steven Piper has rightly raised the issue of tangible benefit to local ornithological development accruing from such visits. I believe that this can be achieved by identifying the sought-after skills, information or techniques which could be acquired and developed by local ornithologists and scientists. This would need to be done in consultation with any visiting researchers during the planning stages of the research. Where follow-up work is needed, the means and rewards for this need to be negotiated ahead of time by persons qualified to do so.

My thanks to all who helped with this venture. Their involvement and enthusiasm are really appreciated.

QUELEA RINGING PROJECT

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Having decided that the recently-announced Redbilled Quelea ringing subsidy was well worth supporting, I set about trying to find known concentrations of birds, so as to prevent wasted effort and costs.

I contacted representatives of various bodies in the small grain production and processing industry, and was eventually referred to the Resource Conservation Unit (RCU) of the Department of Agriculture. Unknowingly, I had travelled a full circle, as they were also the sponsors of the ring subsidy for quelea ringing and were very pleased to hear from a ringer intent on taking part.

The RCU is responsible for the monitoring of quelea activity and the coordination and control of eradication programmes. After explaining my needs, I was duly supplied with a print-out of quelea occurrence reports and a healthy dose of encouragement. After two days without touching this mine of information, I received a call from the RCU enquiring whether

any ringers were operating in the Upington area. After making investigations and passing back the negative answer, I mooted the possibility of using outside ringers on an 'expenses paid' basis. At that stage I wasn't expecting a call back as I didn't think that funds would be available.

Great was my surprise when I received a call the day before the Ringing Workshop asking when I could take a team of ringers to Upington, all expenses paid. The target was a breeding colony located in the red dunes about 50 km north of Upington. With all the planning and commitment in place for the Workshop, I undertook to make the trip the following weekend with a team of eight people.

This was easier said than done at such short notice! After many phone calls I finalised a team and made final arrangements in Upington. Needless to say, Dries Nel and Gerrie Grobler were not passing up this opportunity. The plan was to leave Potchefstroom on the Friday afternoon and travel through to arrive late that evening. We would then leave for the breeding colony at 4 am the following morning and trap until it became too hot. After that nothing was certain, other than that