

## Sampling and Trapping — Session and Workshop Summary

Conveners: E. Jane Wright and Paul Cogan

Sampling and trapping insects generated considerable interest with a keynote address and 22 contributed papers presented during the conference and a full-day workshop that was attended by about 70 people.

Insect traps baited with pheromones have been used for many years to monitor populations of stored-product insects in a variety of situations. Our contributed paper and workshop discussions clearly showed that we are moving forward both in terms of interpretation of trap catch but also in the use of pheromones and traps in IPM and active control of pests. Our keynote speaker, Dr Pasquale Trematerra, spoke on his ground-breaking work on the use of pheromones in integrated pest management of moth pests in commercial flour mills. This topic was expanded upon during the workshop with a presentation on the long term population suppression of phycitid moths and *Lasioderma serricorne* in food warehouses in Hawaii. Further discussion identified a need for more well-controlled but realistic trials of these techniques to realise their potential.

Another set of papers concerned the interpretation of trap catch results and included several papers that compared different trapping methods and one that concerned the difficulties of interpreting the direction of movement of moths from trap catches. We heard of important steps towards the calibration of trap catches and the new self-marking system and associated analysis of mark-recapture data was particularly interesting.

Detection of insects remains a topic of considerable interest and we heard about the development of immunoassays to detect insect contamination of grain, milled grain products and spices, an improved flotation method for detecting internal feeders, and a sieving system suitable for use with grain in transit. Since the last conference, the use of automated acoustical detection systems has advanced considerably from small experimental bulks to larger bulks in both France and the USA.

We were reminded of the diversity of behaviours in our pest complex with a number of papers concerning the special considerations and trapping methods for different species including; *Trogoderma variabile*, *Prostephanus truncatus*, *Lyctocoris campestris*, *Rhyzopertha dominica*, *Tribolium castaneum*, *Plodia interpunctella*, *Ephestia cautella*, and Psocoptera.

During the workshop we considered the issue of trap design and were treated to the insider's view of development of a new commercial trap. Our commercial colleagues pointed out that every manufacturer wants to sell a simple product that is easy to use, does everything and is disposable and urged the researchers to make the design simple and consider alternative uses of the design.

Given that the purity of pheromone in lures can markedly affect trap catch, the idea that manufacturers should state the purity of their pheromone lures was discussed at some length in the workshop. The commercial view was that this was unlikely to be considered at present.

We addressed the issue of standardisation of trapping research methods during the workshop with a panel discussion. There was general agreement that a minimum level of reporting of the trapping conditions and data presentation would be desirable for published papers so that the published data will be interpretable and useable by others. The session conveners have undertaken to prepare a note for publication in appropriate journals outlining these standards. The hope is that the quality of published papers on trapping will be improved and that researchers will have a guide to assist them in designing new trapping studies.