

Forensic Entomology: The Next Step

Since the Second World War, only a handful of scientists and crime scene experts have pioneered a way forward for forensic entomology. All of them had the tough job of convincing local authorities, and other scientists, of the benefits of using arthropods in criminal investigations. Judges, in numerous countries, finally decided that forensic entomology was suitable for use in cases ranging from tricky high profile murders to wildlife violations [1–9].

In recent years, insect and other arthropod evidence has made its way into routine use in forensic and medico-legal investigation and research. The discipline, now 150 years old, has become scientifically mature for practical use. Two recent congresses marked this historic turn: firstly Italy's University of Bari congress at the section of Legal Medicine in November 1998, and secondly the 21st International Congress of Entomology, Iguazu Falls, Brazil, during August 2000; the latter included a full conference day of forensic entomology lectures. At present, the field has not only a recent scientific textbook [3], and a handbook for practical work [4], but also four popular scientific books dealing with forensic entomology [1,5,6,10], with another two in preparation. Also, the German Handbook of Legal (Forensic) Medicine, and the *Encyclopedia of Forensic Sciences* included a whole subchapter on Forensic Entomology, following the example of Tedeschi's *Forensic Medicine* [2,7,8]. Forensic entomologists will hopefully use this special issue of Forensic Science International as a handbook as well.

With all the recent advances duly noted, we still hope to encourage the next generation of scientists to find a discipline that their inner flame is burning for, no matter what the current trends may be. Forensic entomology is one of the few truly multidisciplinary scientific fields, which makes it both exciting and challenging. At the same time, it brings an enormous responsibility, compelling everyone working in the field to be both virtuous and unbiased in their actions and conclusions. The guest editor and the referees believe that young scientists entering forensic entomology will continue the tradition of open-minded, multidisciplinary, and responsible work.

Kenneth G. Smith (London, UK), author of a milestone publication on forensic entomology [9], was very kind to act as the main reviewer of all articles in this Forensic Science International special issue. (The guest editor, receiving numerous requests concerning this matter, is optimistic in finding an editorial house that will reprint his *Manual of Forensic Entomology* as an historic introduction into the field.) Marcel Leclercq (Beyne-Heusay, Belgium) and Pekka Nuorteva (Helsinki, Finland), both senior researchers in

forensic entomology, were of great help in preparing this volume with comments and generous gifts of their original publications and manuscripts. My colleague Nicole von Wurmb reviewed articles dealing with DNA, and Guido Sticht reviewed manuscripts focusing upon toxicological issues and James Clery helped in translation issues. About 2 years ago, Pekka Saukko and Elsevier Science Publishers immediately responded to the idea of a Forensic Entomology special issue: I would like to cordially thank them, as much as the authors, for their contributions.

References

- [1] M. Benecke, *Kriminalbiologie (Forensic Biology)*, BLT, Bergisch Gladbach, 1999 (in German).
- [2] M. Benecke, *Leichenbesiedlung durch Gliedertiere (Arthropods on Corpses)*, in: B. Brinkmann, B. Madea (Eds.), *Handbuch Rechtsmedizin, Handbook of Forensic Medicine*, Vol. I, Springer, Heidelberg, 2001 (in German) (Chapter 2.2).
- [3] J.H. Byrd, J.L. Castner (Eds.), *Entomological Evidence, Utility of Arthropods in Legal Investigations*, CRC Press, Boca Raton, 2000.
- [4] P.E. Catts, N.H. Haskell (Eds.), *Entomology and Death, A Procedural Guide* Joyce's Print Shop, Clemson, 1990.
- [5] Z. Erzinclioglu, *Maggots, Murder and Men*, 2nd ed. 2001 Harley Books, Colchester (2000).
- [6] M.L. Goff, *A fly for the Prosecution, How Insect Evidence Helps to Solve Crimes*, Harvard University Press, Cambridge, 2000.
- [7] R.W. Merritt, M.J. Higgins, J.R. Wallace, *Entomology*, in: J. Siegel, P. Saukko, G. Knupfer (Eds.), *Encyclopedia of Forensic Sciences*, Academic Press, New York, 2000, pp. 699–705.
- [8] P. Nuorteva, *Sacrophagous insects as forensic indicators*, in: C.G. Tedeschi, W.G. Eckert, L.G. Tedeschi (Eds.), *Forensic Medicine, A Study in Trauma and Environmental Hazards*, Vol. II, Saunders, Philadelphia, 1977, pp. 1072–1095.
- [9] K.G.V. Smith, *A Manual of Forensic Entomology*, The Trustees of the British Museum, Natural History, London and Cornell University Press, Ithaca, 1986.
- [10] J. Snyder Sachs, *Corpse: Nature, Forensics and the struggle to Pinpoint Time of Death*. Perseus Books, Cambridge, MA, 2001.

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