# Science Round-up

## Some impressions of Apimondia 2003

**Norman L Carreck**

Slovenia – a varied central European country stretching from the Alps to the Adriatic Sea. Slovenia – a country the size of Wales with a population of only 2 million people but 8000 beekeepers, 200 beekeeping organizations and 160 000 hives. Slovenia – an independent country for only the last 12 years, but which has preserved its own language and strong cultural identity throughout periods of being part of the Roman Empire, the Austro Hungarian Empire, Yugoslavia and occupation during the two World Wars. Ljubljana – one of the world's smallest capital cities, with the old city close by the river and dominated by a medieval castle, featuring a mixture of Roman remains, medieval, baroque, 19th century and some very tasteful early 20th century architecture. Ljubljana – a clean, safe city inhabited by polite, friendly people. Ljubljana – the venue for Apimondia 2003.

For those unfamiliar with Apimondia, it is the International Federation of Beekeepers' Associations, founded in 1949, and successor to the International Apiarist Congress Secretariat founded in 1895. Apimondia 2003 was the 38th congress. Altogether there were 220 oral papers in 17 scientific sessions and 224 posters, organized by the presidents of the seven standing commissions covering apitherapy, bee biology, bee pathology, beekeeping economy, beekeeping for rural development, beekeeping technology and equipment, and pollination and bee flora. Naturally, with concurrent sessions, one misses much of interest, so I cannot describe the full range of contributions at each of the sessions, but hopefully I can give a general overview of the primary themes.

Central Europe is the area that has had the longest experience of living with *Varroa destructor*, but it still remains a focus of research effort. It is not surprising, therefore, that there were several sessions that included substantial contributions on this mite, and it was encouraging to note that new approaches were providing different perspectives to the problem. One discussed bee management orientated towards ecological honey production, including the possibilities for organic apiculture and alternative means of mite control. This was followed by a session which discussed viruses and other pathogens associated with *V. destructor* infestation. New information on deformed wing virus was provided from the USA and several parts of Europe. Although new techniques will enable the rapid identification of pathogens associated with the mite, this must be accompanied by an understanding of their natural history and epidemiology


**FIG. 1. A small bee house for *Bombus muscorum* colonies.**

if we are to improve strategies for dealing with the parasite and its damaging effects. Breeding and selection programmes aimed at increasing the tolerance of bee populations to a variety of their pests and pathogens offer another means of limiting the use of chemicals. Two further varied sessions considered the control of bee diseases; primarily alternative means of controlling *V. destructor*, but also considering novel approaches to limiting the impact of *Nosema apis*, the small hive beetle, *Aethina tumida*, and European and American foulbroods.

## *"Slovenia… a 'hot spot' for bumble bee biodiversity"*

Tuesday began with a session on biodiversity in honey bees and the maintenance of indigenous honey bee subspecies. This included work on drones and their congregation areas. One point that emerged was that worker honey bees are able to metabolise starch in flight whilst drones are unable to do so. Work was also presented on the genetics of honey bees, our understanding of which will surely increase greatly in the next few years. Non-*Apis* bees are also an important part of Apimondia, and an afternoon session on bumble bees covered their ecology in Slovenia, which is in an area considered a 'hot spot' for bumble bee biodiversity, and participants shared experiences of rearing various species in captivity. We were shown a charming bee house containing about 30 nests of *Bombus muscorum*, a species now very scarce in the UK (fig. 1). Another session on the importance of bee species other than *Apis mellifera* for pollination purposes discussed the management of *Megachile, Osmia*, and *Bombus* species together with *Apis cerana* and *A. dorsata* for the pollination of a variety of crops in Europe, Asia and the Americas.

Wednesday morning's session on beekeeping as a means of alleviating poverty began with a practical demonstration of various hive designs suitable for use in developing countries. It was stressed that describing all top-bar hives as 'Kenyan' is a misnomer since several different suitable top-bar hive designs are currently in use. Many reports from both Africa and Asia demonstrated how successful beekeeping projects can be used to contribute greatly to the economy of rural areas.

The congress venue itself was an impressively large building on several floors that provided generous space for the many and varied exhibitors and for the scientific and technical sessions. The staff manning the registration desks and information centre were all extremely helpful, and the sessions were free from the computer problems and consequent delays that had plagued the previous Durban congress. However, in talking to other visitors, a serious problem that did afflict a number of sessions was the non appearance of speakers. It seems likely that some may have had visa difficulties or had been unsuccessful in securing sufficient funds to travel, but other absences seemed inexplicable. This is a problem which the organizers of the next Apimondia, to be held in Dublin, Ireland, from 21–26 August 2005 will have to address.

I think all who attended will have been struck by the hospitality of our Slovenian hosts. An abiding memory for me will be, as UK delegate to Apimondia, and having sat through the three and a half-hour General Assembly meeting, arriving very late at the reception hosted by the Slovenian Beekeepers Association's at their magnificent new headquarters at Brdo (fig. 2). We

**FIG. 2. The Slovenian Beekeepers' Association headquarters at Brdo.**

were greeted by the sight of over 1600 assorted happy beekeepers and bee scientists, all having been adequately fed, watered and entertained, and although not necessarily being able to speak each other's language, managing to successfully converse through the universal medium of bees. I am sure that, given the taster of the 'Irish Evening', Apimondia 2005 will prove to be a very well attended and very sociable occasion.

At the conclusion of the Bee Pathology session on Wednesday 27 August, a fledgling European Bee Pathologist's Group was formed with an initial Steering Committee of Brenda Ball (UK), Ingemar Fries (Sweden) and Wolfgang Ritter (Germany). Its intention is to draw together bee pathologists across Europe in order to improve communication and to better co-ordinate activities; an effective working group will ultimately be able to make best use of available funding opportunities. The first priority is simply to compile an up to date directory of European bee pathology researchers. Those interested in being included should e-mail me as acting Secretary with a 'contact card' available in Microsoft Outlook, including details of your name, position, current research interests and/or advisory and extension activities and details of a maximum of five recent publications. The European Pathologist's Group will be having its first discussion meeting under the overall umbrella of EurBee at the European Conference of Apidology to be held at Udine, Italy in September 2004.

**NORMAN L CARRECK**

Plant and Invertebrate Ecology Division, Rothamsted Research, Harpenden, Hertfordshire, UK, AL5 2JQ

norman.carreck@bbsrc.ac.uk