

# PRESS RELEASE

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## **The transmission of viruses between Western and Eastern honey bees**

New research published in the *Journal of Apicultural Research* shows that transfers of viruses between the Western honey bee (*Apis mellifera*) and the Eastern honey bee (*Apis cerana*) are rare, even if honey bees of the two species are kept together.

In parts of Asia, the native Eastern honey bee *A. cerana* has coexisted with the Western honey bee *A. mellifera* imported from Europe, for more than a hundred years. It is thought that the parasitic mite varroa transferred from *A. cerana* to *A. mellifera*, where it has since become a serious pest and is generally considered as the most serious problem affecting honey bees worldwide, mainly due to its ability to vector a number of virus diseases. Transfers of viruses between the two bee species are, however, poorly understood.

In this new study carried out in Zhejiang Province, China, Dr Orlando Yañez and colleagues from the University of Bern and Agroscope, Switzerland, and from Zhejiang University and The Jinhua Academy of Sciences, China, examined the occurrence of eight different bee viruses in apiaries where colonies of *A. mellifera* and *A. cerana* are kept together, and other apiaries where the species are kept separately.

From samples collected over a three year period, the researchers found four viruses: deformed wing virus (DWV); Israeli acute paralysis virus (IAPV); black queen cell virus (BQCV), and sacbrood virus (SBV) to occur in both bee species. They found that virus infections and prevalence were generally lower in *A. cerana* compared to *A. mellifera*, and varied over the years. The RNA of samples was sequenced, and relationships between the strains present showed evidence for transfer between the bee species of IAPV, BQCV, and DWV, but the SBV strains seemed to be species specific. The authors conclude that interspecific transfers of viruses are rare, even if honey bees are kept in close proximity.

IBRA Science Director Norman Carreck says: "*This important new study provides evidence that viruses can pass between honey bee species when kept together, but interestingly, this seems to occur less frequently than might be expected. The results are very relevant to our understanding of how bee health may be affected by man-made movement of bees around the world.*"

[Ends]

## FOR FURTHER INFORMATION AND INTERVIEWS PLEASE CONTACT

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### NOTES FOR EDITORS:-

1. The paper: "Potential for virus transfer between the honey bees *Apis mellifera* and *A. cerana*" by Orlando Yañez, Huo-Qing Zheng, Xiao-Ling Su, Fu-Liang Hu, Peter Neumann & Vincent is available here:-

<http://www.tandfonline.com/doi/full/10.1080/00218839.2015.1128145>

2. The International Bee Research Association (IBRA) founded in 1949 is the world's longest established apicultural research publishers and promotes the value of bees by providing information on bee science and beekeeping worldwide.

3. In association with the Taylor & Francis Group, IBRA publishes *Bee World*, founded by the Apis Club in 1919. This is now an accessible and topical journal containing the latest bee research, news, reviews and other relevant information for the bee scientist, beekeeper, and anyone with an interest in bees. It is published four times a year: <http://www.tandfonline.com/loi/tbee#>.

4. In association with the Taylor & Francis Group, IBRA publishes the peer-reviewed scientific journal the *Journal of Apicultural Research*, founded by IBRA in 1962. It includes original research articles, theoretical papers; scientific notes and comments; together with authoritative reviews on scientific aspects of the biology, ecology, natural history, conservation and culture of all types of bee. It is published five times a year. The ISI Impact Factor (2014) is 1.895 and the ISI 5-year Impact Factor is 1.942: [http://www.tandfonline.com/loi/tjar#.VdWK8\\_IVkp](http://www.tandfonline.com/loi/tjar#.VdWK8_IVkp)

5. IBRA publishes and sells books on bee science, bee conservation and beekeeping and also provides bee information services. IBRA is a Registered Charity, and its Council of Trustees boasts some of the world's leading bee scientists.

6. IBRA membership rates 2016:-

IBRA Membership including *Bee World* (£36 €50 \$US57)

IBRA Membership including online *Journal of Apicultural Research* (£90 €125 \$US141)

IBRA Membership including online and print *Journal of Apicultural Research* (£150 €208 \$US235)

For all IBRA membership enquiries please visit the IBRA website:-

<http://ibrabee.org.uk/index.php/2013-05-01-02-30-7/2014-12-12-12-06-01>

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