bronze bug started soon after the dispersal of the pest into Brazil and Uruguay was confirmed. Here, we present the main achievements of this collaboration in four main topics: 1) biology of the pest, 2) monitoring, 3) biological control, and 4) cooperative networks. Two mass rearing procedures have been implemented in the region with relative success, allowing basic biological studies on the pest. Continuous monitoring in the region for >5 years has provided a reasonable knowledge on seasonal patterns of *T. peregrinus*. Biological control strategies developed include the use of local natural enemies of *T. peregrinus*, the development of biopesticides, and the introduction of *Cleruchoides noackae*, an egg parasitoid of *T. peregrinus* from Australia. We review the main achievements in each country. Finally, a regional network of institutions, researchers, and students has strengthened in the region, providing a solid background for future collaboration.

Lessons from successful classical biological control in Israel of *Leptocybe invasa* and *Ophelimus maskelli*. Mendel, Z., Protasov, A. (*Agricultural Research Organization, Israel; zmendel@volcani.agri.gov.il; protasov@volcani.agri.gov.il*), Brand, D. (*Keren Kayemeth LeIsrael, Israel; davidb@kkl.org.il*), Branco, M. (*Technical University of Lisbon, Portugal; mrbranco@isa.utl.pt*).

Two gall wasps were the targets of a biological control project in Israel. Approximately a decade after the liberation of seven parasitoid species, both gallers have become quite rare. In each galler case, it was eventually difficult to predict which parasitoid species might be the best agent for biocontrol. Here, the dominant parasitoid species during the early stage of colonization and the outbreak situation was not necessarily the common species when the galler population had reached the latent phase. Another question is how many and what groups of parasitoids are required to achieve desirable and stable biological control. It is interesting to note that local parasitoid species adopted the gallers as new hosts. The question whether the above-mentioned imported natural enemies may have a negative impact on populations of non-target indigenous galler species needs to be addressed. Importation of alien parasitoids and testing their host specificity were revealed as major challenges. Among these were reluctance of the quarantine authority to issue an introduction license for unidentified species, the problematic mass rearing of the host galler, and the selection of appropriate species for testing non-target organisms. Another important take-home lesson is that the accomplishment of such biological control programs depends very much on international collaboration. All these and other related issues will be discussed.

The Californian experience of eucalypt insect biological control with special emphasis on the red gum lerp psyllid *Glycaspis brimblecombei*. Paine, T. (*University of California, USA; timothy.paine@ucr.edu*).

Although insect free for almost 150 years in California, eucalyptus has accumulated approximately 20 insect herbivores in the last 2 decades. Biological control efforts have been attempted against two wood borers, two folivores, and four fluid-feeding insects. The introduction of two strains of an encyrtid egg parasitoid has resulted in complete or nearly complete biological control of two cerambysid borers. Complete biological control of a leaf feeding weevil was achieved with the introduction of another egg parasitoid and this has been maintained for more than a decade despite breaking down in other parts of the world. Attempts to establish biological control of a chrysomelid leaf beetle with a fourth species of egg parasitoid failed. Complete successful biological control of one psyllid was achieved with intentional introduction of a parasitoid and partial success has been observed against two other psyllids following the serendipitous invasion of two parasitoids and, unfortunately, their hyperparasitoids. The biological control of red gum lerp psyllid following introduction of a hymenopteran parasitoid has been very successful in some parts of California and less successful in other regions. The reasons for the differences in success are not clearly resolved but may include different responses to local climate and the presence of an endosymbiotic bacterium in the psyllid.

Biological control of the bronze bug, *Thaumastocoris peregrinus*, in eucalyptus plantations in Brazil. Wilcken, C. (*São Paulo State University, Brazil; cwilcken@fca.unesp.br*), Barbosa, L. (*EMBRAPA, Brazil; leonardo.r.barbosa@embrapa.br*), Zache, B., Firmino, A. (*São Paulo State University, Brazil; bzache@bol.com.br; anacarfir@gmail.com*), Sa, L. (*EMBRAPA, Brazil; luiz.sa@embrapa.br*), Zanuncio, J. (*Federal University of Viçosa, Brazil; zanuncio@ufv.br*), Junqueira, L. (*Forestry Science and Research Institute (IPEF), Brazil; renato@ipef.br*).

The bronze bug *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae) was detected in Brazil in 2008 and infested >180 000 ha of eucalyptus plantations in 2011. The bronze bug can cause a reduction of 10–15% in wood productivity after 2 years of heavy infestation. Although there is not an effective control method known, biological control is the main control strategy studied. An exotic egg parasitoid, *Cleruchoides noackae* (Hymenoptera: Mymaridae), was imported from Australia in 2012, reared in a laboratory and released in three Brazilian regions. Parasitoids were recovered at release points after 20–30 d. In 2013, preliminary evaluations demonstrated parasitoid establishment in these areas, and the parasitoid was recovered in adjacent areas after 1 year of release. Bioassays confirmed egg parasitism of 15–20% by *C. noackae*. Other native natural enemies were studied. We found green lacewing *Chrysoperla externa* and predatory bugs *Supputius cincticeps* and *Atopozelus opsimus* preying on nymphs and/or adults of *T. peregrinus*. Another promising possibility is entomopathogenic fungi. Commercial formulations of *Beauveria bassiana* were tested with success in lab and field conditions. *Fusarium proliferatum* and *Paecilomyces cateniannulatus* caused mortality of *T. peregrinus* in natural epizooties. After 5 years of research, it is possible to develop an integrated pest management system (IPM) for eucalyptus plantations based on biocontrol strategy for bronze bug.

An island downwind of Australia has a unique experience of eucalyptus pest biological control: the New Zealand story. Withers, T., Sopow, S. (*Scion, New Zealand; toni.withers@scionresearch.com; stephanie.sopow@scionresearch.com*), Murray, T. (*University of Canterbury, New Zealand; tara.murray@canterbury.ac.nz*).

Eucalyptus trees are not native to New Zealand, but since the 1860s, Australian insects have steadily colonised them. Currently there are 30 specialist eucalypt insects established in New Zealand which is 1 800 km downwind from Australia across the Tasman Sea. In some cases, the major insect pests are those shared by other countries (e.g., *Gonipterus platensis* and *Thaumastocoris peregrinus)*. Some other important insect pests have been rare or not described from Australia, prior to their appearance as a pest in New Zealand (e.g., *Paropsis charybdis, Nambouria xanthops*, and *Ophelimus eucalypti).* Of most interest has been the introduction of biological control agents. In some cases the natural enemy arrived with its host (e.g., *Psyllaephagus pilosus*