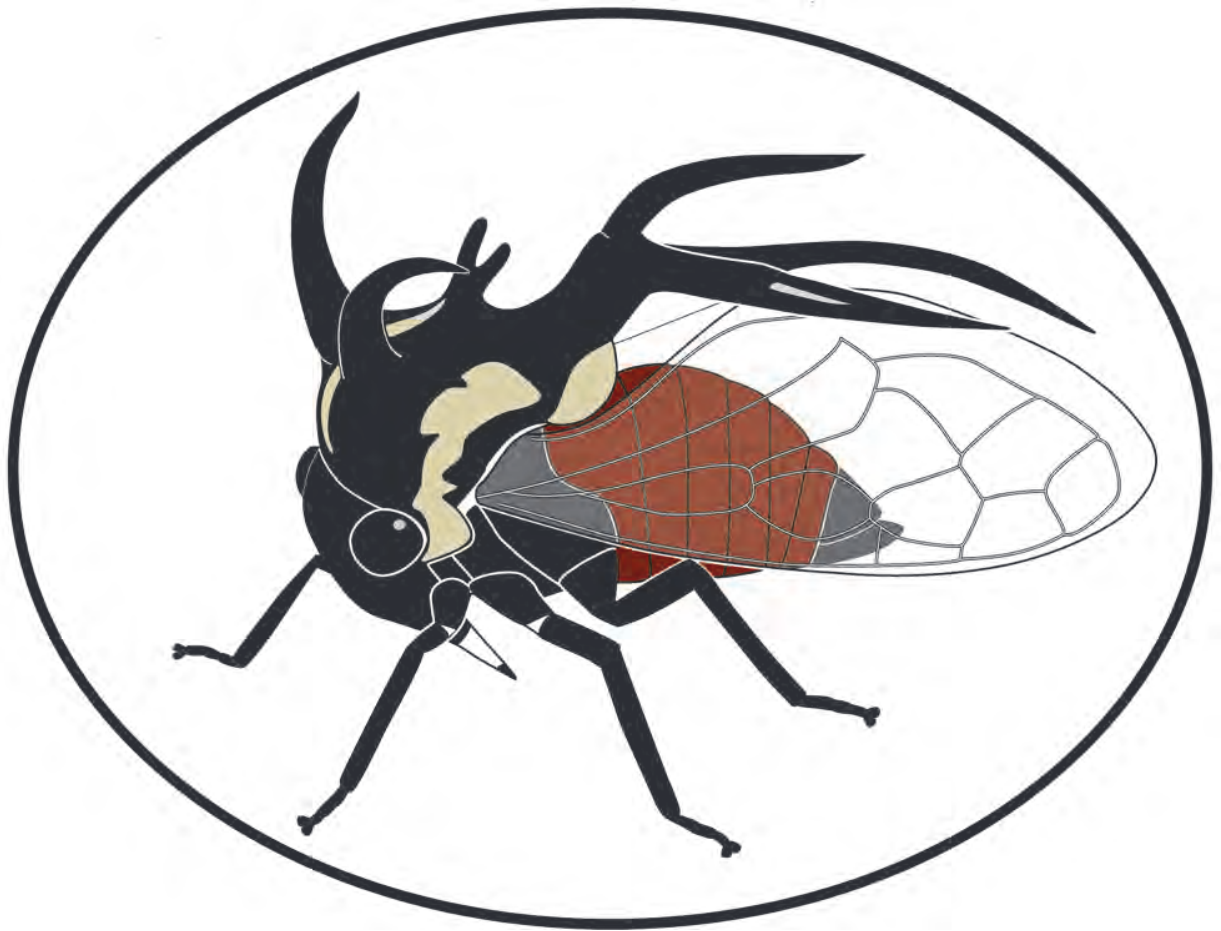


XV International Auchenorrhyncha Congress



2017

Brazil

PROGRAM AND ABSTRACTS BOOK



15th International Auchenorrhyncha Congress and 10th International Workshop on Leafhoppers and Planthoppers of Economic Importance

Foreword

On behalf of the Organizing and Scientific Committee, it is our pleasure to welcome you to the 15th International Auchenorrhyncha Congress (IAC) and the 10th International Workshop on Leafhoppers and Planthoppers of Economic Importance. The IAC is a triennial conference that congregates international experts on several biological disciplines focusing on auchenorrhynchous insects since 1973. Past IAC editions were held in China, France, Germany, United States, United Kingdom, Australia, Greece, Italy, Switzerland, Finland, and the Netherlands.

This year, the IAC will be held at *Centro Marista São José das Paineiras* in Mendes, Brazil, from July 9th to 15th 2017. Seventy confirmed delegates from 17 countries – Argentina, Australia, Brazil, Canada, China, Colombia, Czech Republic, France, Italy, Japan, Mexico, Pakistan, Poland, South Africa, Turkey, USA, and Vietnam – will be presenting their latest research on Auchenorrhyncha. The conference program includes 79 oral and poster presentations divided into four major themes: (1) Taxonomy, Phylogeny, and Biogeography; (2) Databases and regional inventories; (3) Ecology and Behavior; and (4) Vector interactions and resistance. We are also glad to inform that the Scientific Committee will award prizes to outstanding oral and poster student presentations.

The scientific program will be complemented with a visit to Itatiaia National Park, the oldest National Park in the country, established in 1937. This trip will offer participants the unique opportunity to experience the Brazilian Atlantic Rainforest. Itatiaia is a wonderful place to observe and learn about the diverse local wildlife, which encompasses several endemic species. The National Park is amongst the best studied areas in Brazil with regard to its biodiversity. So far, 22 species of medium and large-sized mammals, 51 reptiles, 260 birds, 145 species of spiders, 690 species of longhorn beetles, and 75 species of sharpshooter leafhoppers have been recorded for this region. The Park sector to be visited is renowned for its scenic landscapes covered in exuberant vegetation, as well as natural pools and waterfalls with designated areas for swimming.



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The oviposition pattern of *Dalbulus maidis* (Hemiptera: Cicadellidae): why Argentinian populations differ from Mexican populations?

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In the Americas, the corn leafhopper, *Dalbulus maidis* (DeLong) (Cicadellidae), causes great damage to corn crops (*Zea mays* L.) because it efficiently transmits three important pathogens that adversely affect the crop: Corn stunt Spiroplasma (CSS), Maize bushy stunt phytoplasma (MBSP) and Maize rayado fino virus (MRFV). *Dalbulus maidis* is a specialist herbivore feeding only on plants of the genus *Zea* (maize and teosintes) (Bellota *et al.* 2013). The eggs of *D. maidis* are imbedded in the corn tissues, mostly along the midrib (Pitre 1967; Heady *et al.* 1985; Bellota *et al.* 2013); even though the last statement does not coincide with observations carried out with Argentinian populations where, although laying eggs in the midrib, females also deposit eggs in the blade of the leaves. The aim of this contribution is to characterize the oviposition sites of a local population of *D. maidis* in young corn plants, in order to verify the hypothesis that the Argentinian vectors display a different oviposition strategy.

Materials and methods

Dalbulus maidis colony was established with individuals collected in Tucumán, Argentina (26°42'S - 65°13'W; 588 m asl). The colony was reared in greenhouse conditions, and the maize variety "Leales 25 plus" was used both for the maintenance of the vector population and for all the assays. A total of 18 plants in V3 phenological stage (three fully unfolded leaves) and 18 plants in V4 (four unfolded leaves) were located individually in cages covered with nylon mesh. Each plant was exposed during 24 h to 4-6 females of *D. maidis*; then plants were checked for eggs. Two data analyses were performed: a) general and descriptive, where the mean and SD of the number of eggs laid were calculated for the set of leaves considering: sheath, blade and midrib; b) considering the following sectors: fully unfolded leaves (with leaf collar) and those with no visible collar forming the whorl (folded); into each leaf: leaf sheath or blade; and into the leaf blade: distal and proximal region including eggs laid in the midrib or those in the blade. The variation in number of eggs was analyzed using generalized linear mixed models (GLMM) for zero-inflated data structure with negative binomial error structure.

Results

General analysis: from the 187 eggs of *D. maidis* obtained in the V3 plants, 10.7% were in the sheaths, 28.3% in the midribs and 61.0% in the leaf blades; in V4 plants a total of 495 eggs were counted and 9.3% of them were laid in the sheath, 40.0% in the midrib, and 50.7% in the leaf blades. When the analysis comprised the localization of eggs into different sectors of the plant, more eggs were laid in the apical blade of V3 plants, followed by those laid in the basal midrib sector, both in unfolded leaves; but in V4 plants, eggs were laid mostly in the basal midrib sector, followed by those laid in the apical blade sector, in unfolded leaves. The variation

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