

## ***Nymphocixia caribbea* (Fennah) (Homoptera: Cixiidae) potential candidate as coconut lethal yellowing vector in the Caribbean**

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Phytoplasmas are associated with coconut lethal yellowing (CLY), a devastating disease of palms in the Caribbean, from Florida to Honduras (actual southwest limit) and Nevis (eastern limit). Only in Florida an insect vector, *Myndus* (*Haplaxius*) *crudus* (Homoptera: Cixiidae) was claimed to be the vector of CLY (Howard *et al.*, Tropical Agriculture, 60, 168-171. 1983). However, to date, all experimental trials to transmit CLY by *M. crudus* in Jamaica and Mexico failed. In Cuba, in the province of Granma, on the narrow coast line overlooked by the hills of the Sierra Maestra, coconut plantations have been severely affected by CLY since the beginning of the 2000s. In 2005 we detected for the first time in Cuba, the cixiid *Nymphocixia caribbea* (Fennah) in an affected plantation, in the locality of Pilon. In 2005, the same species was found in Jamaica, in regions severely affected with CLY. Between 2006 and 2009 several *N. caribbea* were screened by direct PCR using Caribbean CLY non-ribosomal primers (Harrison *et al.*, Plant Pathology, 43, 998-1008. 1994), and/or direct PCR using P1/P7 and if required, nested-PCR. Cloning and sequencing showed that sequences obtained from the insects matched the sequences of some phytoplasmas isolated from LY affected palms from Cuba. The phytoplasmas detected in the insects could have originated in the alimentary bolus of insects feeding on diseased coconuts. However, the lack of success of experimental transmissions with *M. crudus* in several regions of the Caribbean outside Florida, the large quantity of *N. caribbea* found in focuses of CLY in Pilon area, the important number of insects harbouring the LY phytoplasma, are in favour of their involvement in the transmission of the disease, at least in the Granma state of Cuba. Preliminary data (not published) showed there are different sub-groups of CLY phytoplasmas in Cuba, which are different from Florida phytoplasmas. It is therefore possible to speculate that there could be different vectors, especially in such ecosystems like the narrow cost line in Pilon region.