8.17 First Report of a New Host (*Pithecellobium lucidum* Benth) of the Citrus Huanglongbing Bacterium, *Candidatus Liberibacter asiaticus*

Fan, G.-C.¹, Cai, Z.J.¹, Weng, Q.Y.¹, Ke, C.¹, Liu, B.¹, Zhou, L.J.², Duan, Y.-P.²

¹Citrus Huanglongbing Research Center of Fujian Academy of Agricultural Sciences, Fuzhou, China
²USDA-ARS, Fort Pierce, FL, USA

Most, if not all, host plants of *Candidatus Liberibacter asiaticus* are members of the Rutaceae family due to the feeding preference of its insect vector, *Diaphorina citri* (Halbert and Manjunath, 2004). A shrub of non-Rutaceae plants showing yellow shoots, mimicking the symptom of citrus huanglongbing (HLB), was observed in October 2008 in a citrus orchard in Fujian, China, where citrus plants were severely infected by HLB. The tree was identified as *Pithecellobium lucidum* Benth. Samples collected from symptomatic and asymptomatic branches of the tree were subjected to DNA isolation using midrib and CTAB method. Ca. *L. asiaticus* was detected by conventional PCR using 16S rDNA-based primer set (CG03F/CG05R) (Zhou et al., 2007) and nested PCR using β-operon-based primer sets (F1/R1 and F2/R2) (Ding et al., 2005). Sequence analysis revealed that the PCR amplicons (ca. 800 bp and 400 bp) showed 99% identity with Las 16S rDNA and 100% identity with Las β-operon, respectively, at the nucleotide level. In addition, a few Las-like bacterial cells were observed in the sieve cells of infected samples as seen with electron microscope. This is the first report of *P. lucidum* as a naturally infected new host of *Ca. L. asiaticus*. The results of low Las bacterial titer and that the psyllid did not propagate in this host plant indicate that the new host is an opportunistic host of HLB.

References

