GENOME

THE ASIAN CITRUS PSYLLID

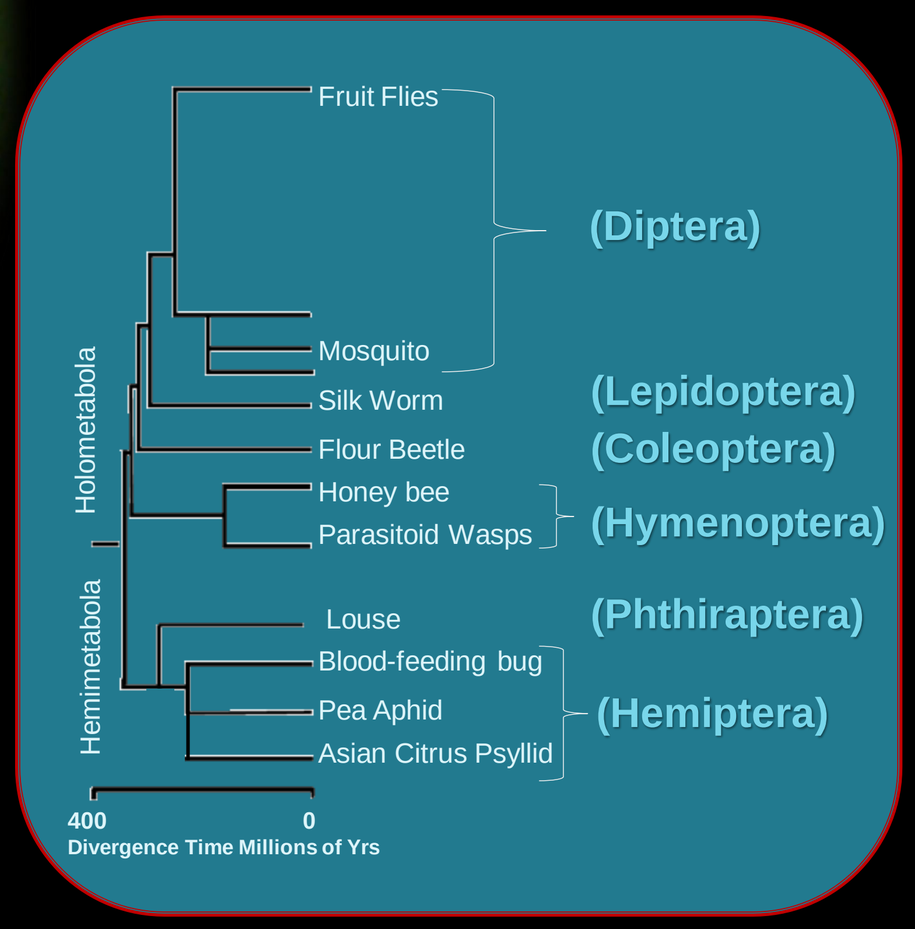
A Model for Development

Insights into Gene Regulation

The Genome

Beyond the Genome

Milestones in Psyllid Research



Arthropod Genomes: **http://arthropodgenomes.org/wiki/Diaphorina_citri**

The International Psyllid Genome Consortium:
http://www.uttyler.edu/biology/faculty/bextine/psyllid_consortium/index.php

http://www.ncbi.nlm.nih.gov/genomeprj?Db=genomeprj&cmd=ShowDetailView&TermToSearch=29473

Milestones in Psyllid Research

1998–2005

Invasion of psyllid In Florida, 1998.

Detection of Huanglongbing in citrus trees 2005.

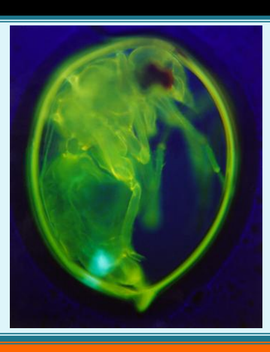
Halbert 2001
Halbert & Manjunath 2004

2005–2006

First Psyllid EST's, Expressed sequence tags produced from psyllids.

Adults, Nymphs, Midgut, Testes,

USDA, ARS, Hunter, et al., 2005 , 2006, 2008.



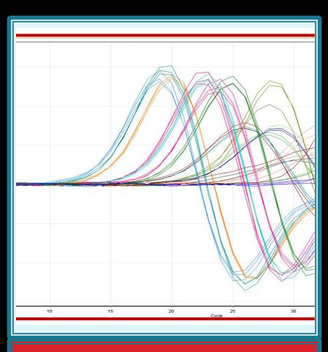
2007–2008

International Psyllid Genome Consortium established- 2008

Hunter, W., & Bextine, B.

Gene expression studies, Cell Culture, microsatellites

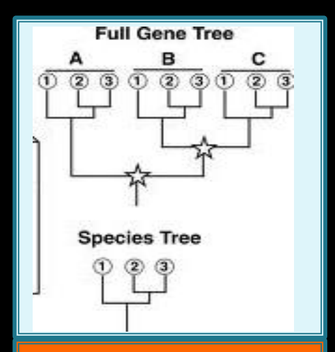
Boykin et al, 2007, 2008
Hert, et al., 2008
Hunter et al, 2008



2009

Gene expression studies-
Metagenome, Heat shocks, Insecticide resistance, Pathology,
Marutani-Hert et al., 2009.
Hunter et al, 2009.

RNA interference, demonstrated in psyllids.
Hunter et al, 2009.



2010

Application of Molecular markers reveal biotypes

Boykin et al., 2010

Psyllid RNAi research expands.

Shatters et al, 2010,2011
Hunter et al, 2010.-2011.
De Leon, et al, 2010,.

2011

Asian citrus Psyllid sequenced
Genome, Transcriptome, Metagenome

Hunter, W, Shatters, R, D. Hall, US. Horticultural Research Lab, Ft. Pierce, FL.

USDA,ARS, USHRL, Subtropical Insects Res. Unit, Funded Project.

Author: Wayne B. Hunter, USDA, ARS