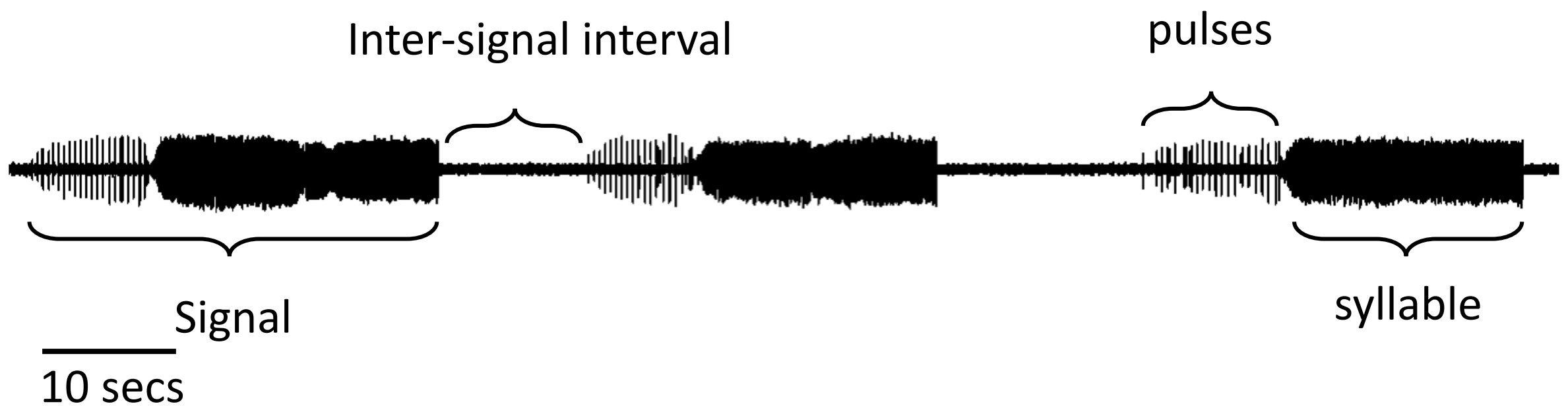


# Acoustic mating disruption of pear psylla as a new IPM tool

**Problem:** Pear psylla is a key pest of pears in the PNW, causing defoliation and reduction of marketable fruit. This pest requires multiple insecticide sprays, and has become resistant to many. A non-insecticidal tactic for control is needed to combat it.

**Project Goal:** Develop a pest management strategy that uses acoustic signaling to disrupt psylla mating that is compatible with biological and chemical control measures.

## 1. Learn about acoustic signaling in males and females

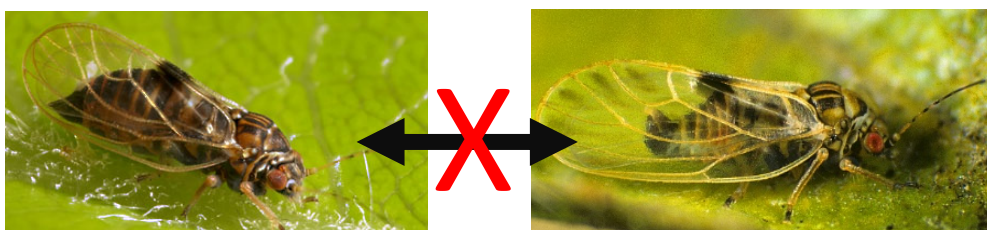


- Male courtship songs are composed of variable groups of signals that have two parts; the pulses and the syllable (as shown above).



- Females respond to these courtship songs by sending out their own pulses that indicate willingness to mate and a sort of location beacon for males to follow.

## 2. Find a way to disrupt mating behavior to decrease mating success



- Playback devices will enable us to play disruption acoustics to slow or prevent mating.

## 3. Develop a way to implement this disruption in an orchard

- Install playback devices in orchards (buzzers/sound transducers in each tree or along a trellis if applicable).
- This playback treatment should be applied during peak adult population within each generation.



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