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).

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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