

Collecting Honey Bee Samples for DNA Analysis

1. Prepare clean containers of glass or plastic sufficient to hold at least 6 pupae with lots of room to spare. One container per hive sampled. Fill the container with enough alcohol to ensure the pupae are immersed at all times. Use at least 75% ethanol as a preservative. If you don't have ethanol you may use Everclear, a 95% pure grain alcohol. Do **NOT** use rubbing alcohol (isopropanol).

2. Label the sample container with the information itemized below using a permanent marker (Sharpie):
 - i. Hive number or name. If the hive is not labeled then using the permanent marker, write the container label on the hive. This is critical when collecting from more than one colony.
 - ii. Beekeeper's name or code.
 - iii. Date of collection.
 - iv. Location.
 - v. Name of collector.

3. Prevent DNA cross-contamination by cleaning with alcohol between hives. Wear clean latex gloves to handle the sample. With alcohol cleaned forceps collect **6** dark-eye pupae per hive. Plunge pupae into the alcohol. Do not allow pupae to die prior to immersing in alcohol. Thoroughly clean the forceps with alcohol between hives to prevent cross contamination. If you get any bee material on your gloves, then clean them with alcohol before moving to the next hive.

4. Short-term storage in alcohol prior to DNA extraction may be at room temperature. For 24 hours or more place vials in a - 20°C freezer.

5. If you have questions contact Dr. Tanya Pankiw, Department of Entomology, Texas A&M University, College Station, TX 77843-2475, Ph: 979-458-0837, Email: tpankiw@tamu.edu.