

**GENERAL INSECT MORPHOLOGY**  
**Labs 11 - A study of the respiratory system in the cockroach**

- A. Ventral Aspect. Obtain a live cockroach specimen and quickly remove all six legs and the wings. Cut off the entire sternum close to the spiracles, but without damaging them, and carefully remove the alimentary canal. As you do this, notice the **visceral segmental tracheae** and their origins. Locate the **spiracles** and make as accurate a diagram of the **lateral** and **dorsal tracheal system** as you can. Label: **spiracle, spiracular tracheal, lateral plurisegmental tracheal trunk, dorsal commissure, visceral segmental trachea, dorsal plurisegmental tracheal trunk, and the dorsal segmental trachea.**
- B. Dorsal Aspect. Examine the preparation of the cricket dissected from the dorsal aspect so you can see the ventral and lateral respiratory tracheae. Note the **ventral commissure**, the **ventral plurisegmental tracheal trunk**, and the **ventral segmental trachea.**
- C. Cross-section Aspect. Reconstruct from your experience with A and B above the cross-sectional appearance of the respiratory system at the level of abdominal segmental 3. Label all of the appropriate structures.