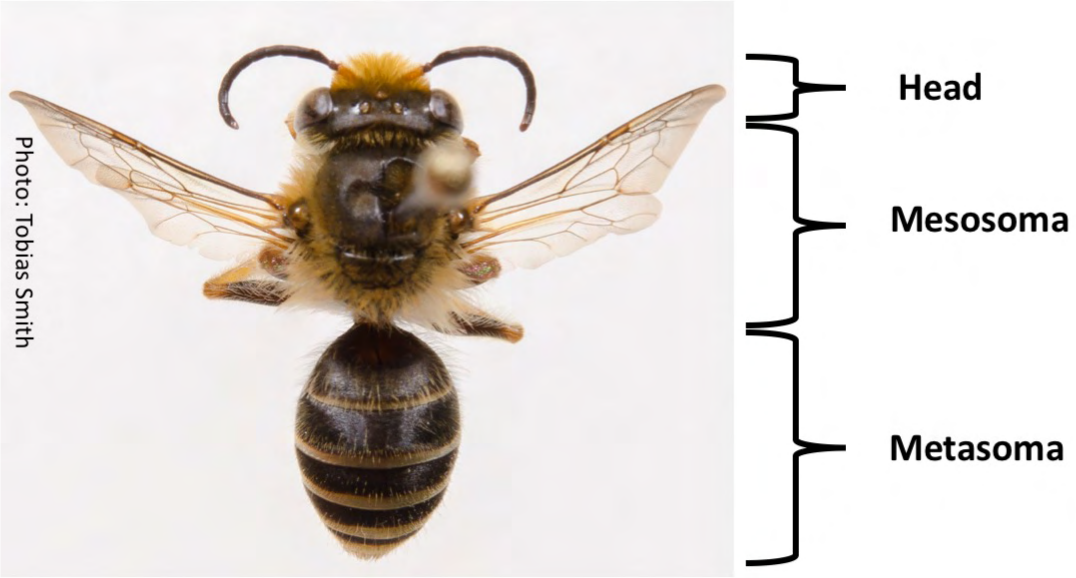
Bee Anatomy and Terminology

This annotated key should not need much reference to anatomical images outside of those presented on the page of each couplet. However, being familiar with bee anatomy and the specialist terms associated with it is important, particularly as you move on to other non-annotated keys beyond this one. To get the most out of this annotated key, it should be used in conjunction with the full anatomical descriptions in Michener 2007. Below are the basics of bee anatomy that are needed before embarking on this key. On the following pages are anatomical diagrams that are presented repeatedly, in part, throughout this annotated key.



With bees (and wasps and ants) we use the terms **mesosoma** and **metasoma**, rather than the thorax and abdomen as we do in other insects. This is because the first abdominal segment, the propodeum, is fused with the thorax in bees. Therefore, the thorax plus the fused propodeum becomes the mesosoma, and what is left of the abdomen is referred to as the metasoma. The mesosoma and metasoma are distinct from one another because of a constriction between them. An easy way to remember the order of these terms is that 'S' (in mesosoma) comes before 'T' (in metasoma) in the alphabet.

Photo: Tobias Smith

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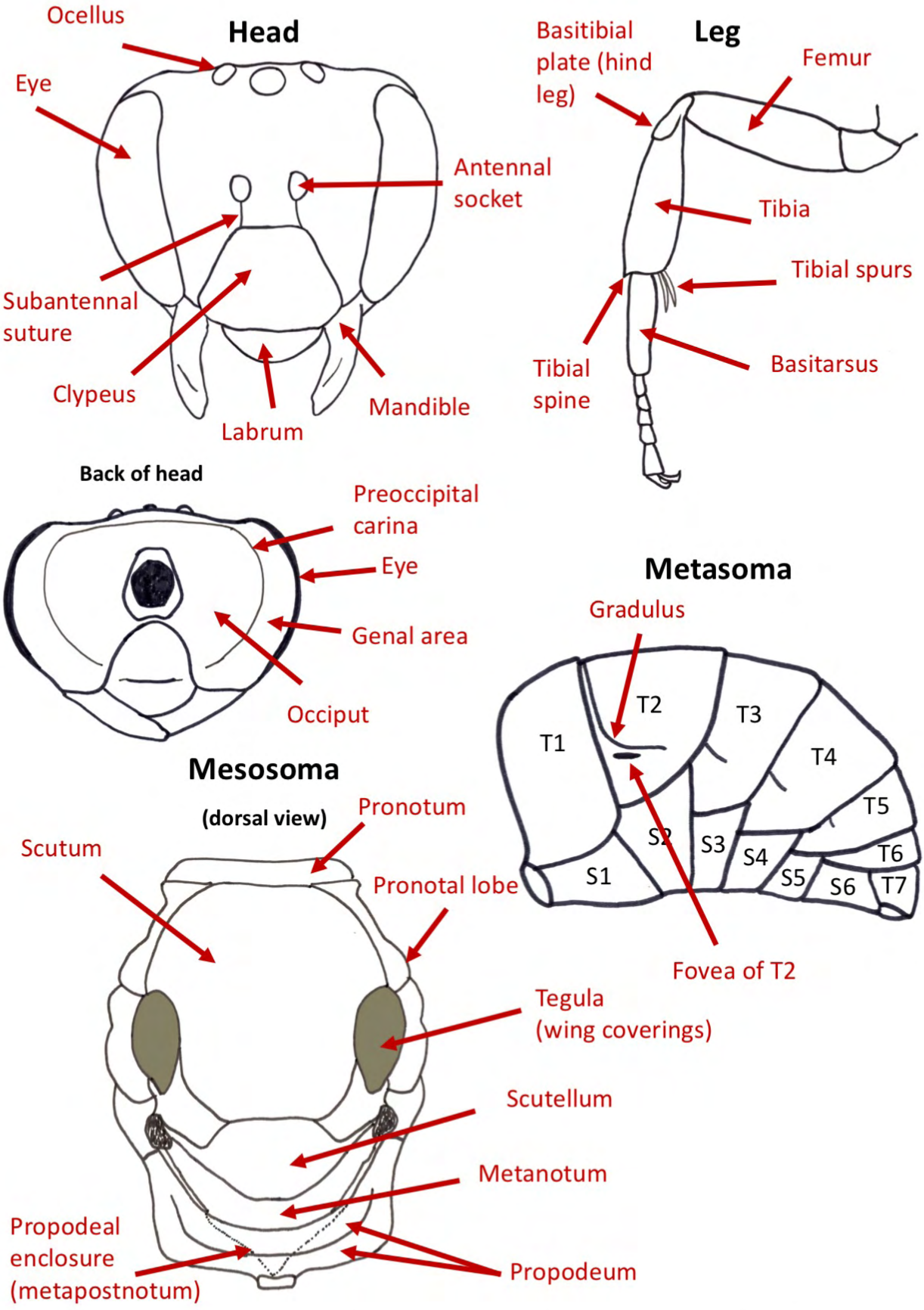

Line drawings by Tobias Smith (back of head & mesomoa based on diagrams by E.R.S. Hodges in Michener, McGinley & Danforth, 1994, metasoma based on diagram in Michener 2007)

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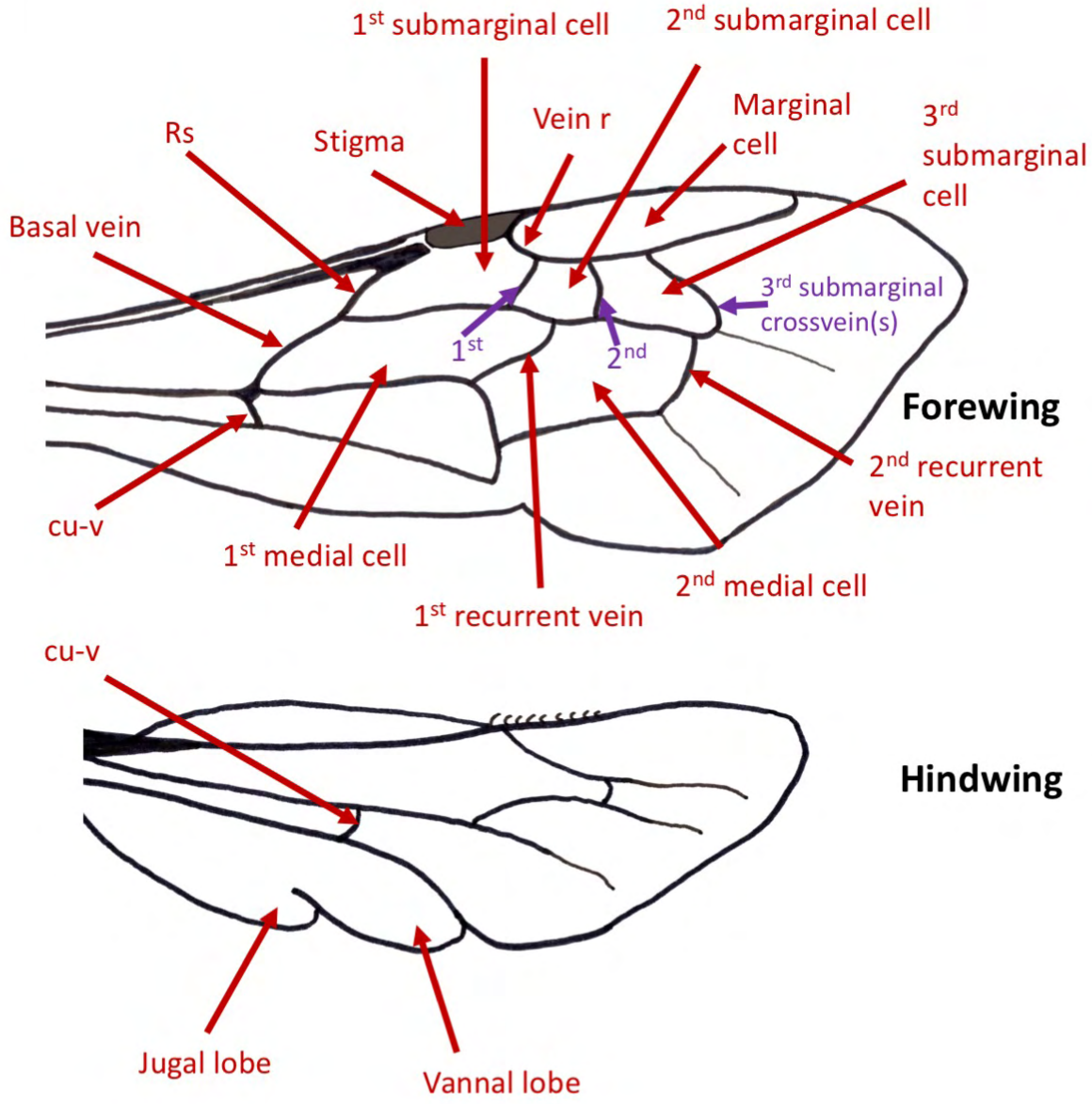
Bees have two pairs of wings, the forewings and the hindwings. The cells and veins in the wings are frequently used as distinguishing characters in bee identification keys. Bee wings are often referred to with unique bee cell and vein names, but they are sometimes also referred to by standard insect wing vein and cell terminology. Highlighted below are some cell and vein terms, and others are highlighted on relevant pages on which terms are mentioned. For simplicity, the wing terminology used in this annotated key follows Michener 2007. There is, however, a movement in bee taxonomy to revert to standard insect wing terminology for bees.



Note: For illustrations and detailed explanations of all anatomical terms see Michener 2007.

Line drawings by Tobias Smith (hind based on diagram by E.R.S. Hodges in Michener, McGinley & Danforth, 1994)