KEY TO MAJOR TAXONOMIC UNITS OF NORTH AMERICAN MUSCOID AND CALLIPHORID FLIES

1. Second antennal segment without a laterodorsal longitudinal seam; thorax without a complete transverse suture on dorsum anterior to wings; abdominal spiracles 1 to 5 located in membrane (except in Chloropidae and Ephydridae); lower calypter normally undeveloped; posthumeral bristles absent; postalar callosity normally undeveloped; anterior orbits usually separated above from laterovertical plates or latter alone are developed and bear frontoorbital bristles (if frontoorbital bristles are located on orbits, the lower bristles are closer to eye margin than upper); subcostal vein often incomplete or imperfect; fourth vein usually straight.....Acalypteratae.

   Second antennal segment with a complete laterodorsal longitudinal seam; thorax normally with a complete transverse suture on dorsum anterior to wings; abdominal spiracles 2 to 5 located in tergites (except in Glossinidae); lower calypter usually large; posthumeral bristles usually present; postalar callosity usually developed; anterior orbits not separated above from laterovertical plates and bearing a row of converging frontoorbital bristles which are more distant from eye margin toward lunule than toward vertex; subcostal vein always distinct and ending in costal vein.....Calypteratae....2

2. Hypopleuron usually without hairs or bristles below metathoracic spiracle; pteropleuron usually without vestiture; when three sternopleural bristles present, these usually arranged 1 + 2; ventral abdominal membrane more or less exposed, usually distinct; fourth longitudinal vein straight or but slightly curved, and usually extending to wing margin behind wing apex.....Anthomyiaria.

   Hypopleuron usually with hairs or bristles in one or more rows below the metathoracic spiracle; pteropleuron usually pilose or setose; when three sternopleural bristles present, these usually arranged 2 + 1; ventral abdominal membrane usually hidden; fourth longitudinal vein curving or bending forward, most often narrowing the apical cell .....Oestromuscaria. 3