

Pollen analyses for pollination research, unacetolyzed pollen

By Gretchen D. Jones

USDA-ARS, APMRU, 2771 F&B Rd, College Station, TX 77802, U.S.A.

Pollinators feed on the pollen, nectar, and other plant liquids that are associated with flowers. As a result of this feeding activity, pollen becomes attached to them (Figure 1). Analysis of this pollen can tell us what they eat, their dispersal patterns in and around cropping systems, and their role in pollination. However, finding pollen on and or in a pollinator depends on the technique used to recover pollen. Two very easy techniques are described in detail that have been used to recover pollen from a variety of pollinators including beneficial and harmful insects, spiders, bats, and other pollinators. These techniques can be used to recover pollen from internal tissues (gut, crop, etc.), external tissues (mouth parts, legs, eyes, etc.), or both. By using the proper technique, better pollen recovery can be made and more knowledge can be obtained about the pollinators, the foods they eat, the plants they pollinate, their migration routes and their source zones.



Figure 1. Plasterer Bee (*Colletes compactus*, Colletidae) Camelot Park, Bryan, TX. The bee is about 10-12 mm long and is foraging on cowpen daisy (*Verbesina encelioides* (A. Cavanilles) G. Bentham & J. Hooker ex A. Gray). Photograph courtesy of Stanley D. Jones.

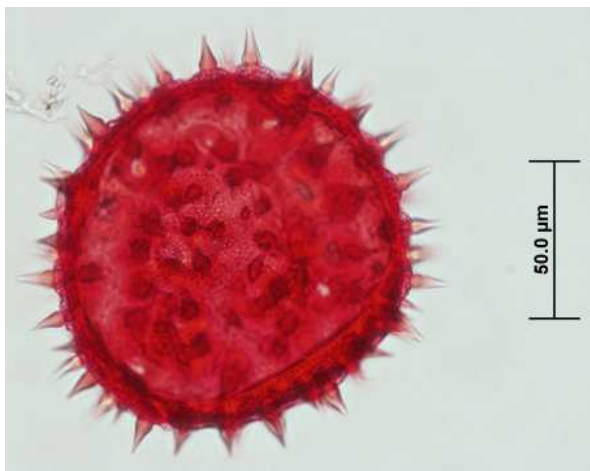


Figure 2. Cotton (*Gossypium hirsutum* C. Linnaeus) pollen taken with a compound light microscope. Bar = 50 micrometers. The ring of pores that occur near the polar end of the pollen grain can be seen in the micrograph.