

ABSTRACT

The accessory reproductive glands of the male desert locust were studied by histological, histochemical, and phase-contrast techniques. It was found that the characteristics of the glandular epithelium and their corresponding secretions permit the division of the accessory glands into nine distinct types. Three types produce coarsely granular mucopolysaccharide secretions (glands 1, 11, and 12); three types produce finely fibrous mucopolysaccharide secretions (glands 2, 4, and 7-10, 13-15); one type produces a globular mucopolysaccharide or mucoproteinaceous secretion (gland 6); one type produces an acidic lipoprotein complex (glands 3 and 5); and one is the functional seminal vesicle (gland 16). Consequently, the various secretions are separated as a result of a vertical segregation of the various cell types that are responsible for glandular activity.