

acters only. Certain taxa were distinguished primarily on differences in surface detail, and scanning electron microscopy is ideally suited to reveal these differences. In an effort to better define some of these characters, an SEM study was undertaken.

#### MATERIALS AND METHODS

Sixteen taxa, representing both subgenera of *Pogonomyrmex* and all four complexes of the nominate subgenus were available for study. The collection data, museum and figure numbers for these samples follow (TTU# = catalogue number of voucher series in the entomological collection of The Museum, Texas Tech University):

##### Subgenus *Pogonomyrmex* Mayr *badius* complex

*Pogonomyrmex badius* (Latreille). Figs. 2–6; Florida: Leon Co., Tallahassee. 25 September 1985, TTU# 6957.

##### *barbatus* complex

*Pogonomyrmex apache* Wheeler. Figs. 11–12; Arizona: Yavapai Co., Clarksdale. 1 July 1985, TTU# 6831.

*Pogonomyrmex barbatus* (Smith). Figs. 13–16; Texas: Brazos Co., College Station. 2 June 1985, TTU# 6964.

*Pogonomyrmex desertorum* Wheeler. Figs. 7–10; Arizona: Cochise Co., 4.8 km E Portal. 20 June 1985, TTU# 6754.

*Pogonomyrmex rugosus* Emery. Figs. 17–20; Texas: Garza Co., 4.8 km E Southland. 27 August 1985, TTU# 6949.

##### *maricopa* complex

*Pogonomyrmex californicus* (Buckley). Figs. 41–45; California: Kern Co., Bakersfield. 28 June 1985, TTU# 6925.

*Pogonomyrmex californicus* [*estebanius* sensu Pergande]. Figs. 46–47; California: San Bernardino Co., 4.8 km E Apple Valley. 29 June 1985, TTU# 6802.

*Pogonomyrmex comanche* Wheeler. Figs. 1, 31–37; Texas: Houston Co., Grapeland. 24 September 1985, TTU# 6953.

*Pogonomyrmex magnacanthus* Cole. Figs. 48–49; California: Riverside Co., 1.6 km W Indio. 30 June 1985, TTU# 6825.

*Pogonomyrmex maricopa* Wheeler. Figs.

38–40; Texas: El Paso Co., 30.4 km E El Paso. 19 June 1985, TTU# 6746.

##### *occidentalis* complex

*Pogonomyrmex brevispinosus* Cole. Figs. 25–27; California: Kern Co., 17.6 km E Shafter. 28 June 1985, TTU# 6782.

*Pogonomyrmex montanus* MacKay. Figs. 28–30; California: San Bernardino Co., 9.6 km E Fawnskin. 29 June 1985, TTU# 6927.

*Pogonomyrmex occidentalis* (Cresson). Figs. 21–22; New Mexico: Grant Co., 17.6 km W Jct. US 180 & NM 78. 2 July 1985, TTU# 6834.

*Pogonomyrmex subnitidus* Emery. Figs. 23–24; California: Los Angeles Co., 8 km S Palmdale. 27 June 1985, TTU# 6763.

##### Subgenus *Ephedomyrmex* Wheeler

*Pogonomyrmex huachuicanus* Wheeler. Figs. 55–58; Arizona: Cochise Co., Huachuca Mts., Miller Canyon. 21 June 1985, TTU# 6696.

*Pogonomyrmex imberbiculus* Wheeler. Figs. 50–54; Arizona: Cochise Co., 4.8 km E Portal. 20 June 1985, TTU# 6745.

The insects were preserved in 80% ethanol and were thoroughly dried before mounting. Representatives of the worker castes were fixed to aluminum stubs, coated with gold/palladium in a sputtering device, and placed in the vacuum chamber of the microscope. A Jeol JSM-25S scanning electron microscope and a Polaroid camera using Polaplan 4 × 5 Land Type 52 Film were used to photograph the ants. The head and thorax of each species were photographed, and additional distinctive or illustrative features were selected from certain taxa. The characters and general morphology (Fig. 1) discussed are those considered important in the revision of the genus (Cole, 1968). Terminology generally follows that used by Cole, but occasional use was made of works by Torre-Bueno (1962) and Harris (1979).

#### RESULTS AND DISCUSSION

The sculpturing of the head and thorax as well as the appearance of the spaces between the rugae covering these structures