

paxilliform with 5 (4 apical and 1 lateral) sensilla; galea a short frustum with 2 apical sensilla. Labium with a few short rows of minute spinules on anterior surface; palp a short paxilla with 5 apical sensilla; an isolated sensillum between each palp and the opening of the sericteries, the latter a short transverse slit.

**FIRST INSTAR LARVA.** Length (through spiracles) about 1.2 mm. Thorax stout and bent ventrally, abdomen straight; posterior end round-pointed. Anus ventral. Spiracles minute. Four feebly differentiated somites. Body hairs few. Of 2 types; (1) about 0.088 mm long, uncinete with curled tip, limited to dorsal surface of abdomen, more numerous posteriorly; (2) about 0.006 mm long, 1 on each ventrolateral surface of T1–T3. Head large, of same diameter as T1; bulging anteriorly; cranium subcircular in anterior view. Antenna small, with 3 sensilla; at midlength of cranium. Head hairs moderately numerous (44), 0.038–0.088 mm long, uncinete with curled tip. Labrum trapezoidal; anterior surface with 4 hairs and 4 sensilla; ventral surface with 4 projecting sensilla; posterior surface densely spinulose, the spinules minute and in rows radiating from the dorsolateral angles. Mandible feebly sclerotized, semicircular in anterior view, with a short sharp tooth projecting ventrally; anterior and posterior surfaces with a few short longitudinal rows of minute spinules. Apex of maxilla paraboloidal and with short rows of minute spinules; palp an irregular knob with 5 sensilla; galea a stout frustum with 2 apical sensilla. Labium with a few short transverse rows of minute spinules; palp a slightly raised cluster of 5 sensilla; opening of sericteries a short transverse slit. Hypopharynx spinulose, the spinules minute and in rows radiating from the dorsolateral angles.

**EGG** (containing 1st instar larvae). Ellipsoidal; 0.9 by 0.4 mm.

**SEXUAL** (removed from cocoon). Length (through spiracles) 6.7 mm. Body hairs of 4 types: (1) 0.05–0.1 mm long, palmately 2- to 5-branched, a few of longest on each somite; (2) about 0.1 mm long, unbranched, smooth, a few on each somite; (3) about 0.1 mm long, uncinete, on dorsum of AI–AVI; (4) about 0.1 mm long, with a few long denticles, a few on dorsum of thorax. Cranium subheptagonal, broader than long. Head hairs moderately numerous (86). Of 2 types: (1) 0.05–0.125 mm long, unbranched, smooth; (2) about 0.055 mm long, few, 2- or 3-branched. Otherwise similar to submature worker.

*Material studied.* 7 larvae from Panama—Barro Colorado Island, 20-XI-1982, courtesy of Diana E. Wheeler.

Hölldobler and Wilson, 1983: The larvae are used by the workers to supply silk for reinforcing the carton of the nest-walls.

#### Genus POLYRHACHIS F. Smith

Hölldobler and Wilson, 1983. Colored photograph of a worker of *P. sp.* (cf. *doddi*) using a larva as a shuttle to weave silk for nest construction. SEM of *P. sp.* labium showing opening of silk glands.

#### *Polyrhachis lamellidens* F. Smith

Kôriba, 1963: 4 instars, each described. Duration of stages given. Figure 4 first instar larva.