

nests of *Leptothorax* C and D, and *L. retractus* from various sites throughout British Columbia and Alberta. It thus appears that sexuals of *D. pocahontas* eclose and mate earlier than those of sympatric *Leptothorax* species.

Results of laboratory rearing

Field colonies # 4 to # 10 were kept in the laboratory for up to 10 breeding cycles within 5 1/2 years. The results are summarized as follows:

4: Collected Aug. 16, 1979. Colony survived for five artificial cycles, the queen died during the third "summer". Workers were reared during the first three cycles, males and workers during the fourth, and only males, probably as worker offspring, during the last cycle. Workers had a comparatively wide postpetiole and dark coloration. They were suspected to be *D. pocahontas* workers.

5: Collected Aug. 16, 1979. The queen died towards the end of the first "summer". During the second cycle, only workers with wide postpetioles, and a single gyne were reared. Worker-laid eggs did not hatch during the third cycle.

6: Collected Aug. 16, 1979. Queen died during the third cycle. Workers were produced during cycles 1 to 4, males during cycles 3-5. One gyne eclosed in cycle 4. During the second cycle, two "intermorphs" were reared, similar to the one described by Buschinger (1979) from a field colony. Each intermorph had six ovarioles (workers have two ovarioles), a receptacle, and three ocelli, similar to gynes, but thoracic sutures were greatly reduced and wings lacked completely.

7: Collected Aug. 17, 1979. Colony survived for ten artificial cycles (from August 1979 to February 1985). The original queen died during the 5th summer, but was replaced by one of her daughters. Male and female sexuals, as well as workers, were reared until the 6th cycle. Though a physogastric queen was observed until the 10th cycle, only males were reared during cycles 7 to 10. Sexual offspring reared in this colony during cycles 3 to 5 were used to study sexual behavior and colony founding. Whereas the old queen was a "typical" shiny *D. pocahontas* queen, many of the produced gynes were intermediate in coloration and sculpture between *D. pocahontas* queens and those of the presumed host species ("dull" phenotype).

8: Collected Aug. 18, 1988. This colony was collected without queen and produced two males, five "dull" gynes and numerous workers in the cycle following collection.

9: Collected Aug. 18, 1988. Colony reared one male, eight "shiny" gynes, and numerous workers during the breeding cycle following collection.

10: Collected Aug. 18, 1988. Colony produced numerous workers for one cycle and was later used for electrophoretic studies. Specimens from this nest were deposited in the ant collection of the Museum of Comparative Zoology, Cambridge, Mass.

Compared to similarly treated laboratory colonies of *Leptothroax* (s.str.), those of *D. pocahontas* were not very productive. In all colonies, in addition to male and female sexuals brown workers with short pilosity and a narrow postpetiole were reared, which closely resembled the presumed "host workers" in the field colonies. At least those workers which eclosed three or four breeding periods after the colony had been transferred into the laboratory evidently were offspring of a *D. pocahontas* queen, hence *D. pocahontas* workers. A close examination of presumed "host workers" in the field colonies of 1977 and 1988 suggested that these also were *D. pocahontas* workers. At least in orphaned colonies, workers appear to be capable of producing males.

Some female sexuals produced by *D. pocahontas* queens were different in coloration, sculpture, hair length, and other morphological characters from their mothers and appeared "intermediate" between typical, shiny *D. pocahontas* queens (Fig. 1) and queens of *Leptothorax* C (Fig. 8 in Buschinger, 1979), i.e., they more