Deductions

The observed pattern of changes suggests the following deductions:

First, the living puparia have the capacity to vary sharply in weight, the increases noted here being due to the absorption of environmental water, and the decreases to the evaporation of body fluids through the cuticla.

Second, the fact that the weight achieved at the termination of the seven-day wet period fell short, by 12.29 per cent of the initial weight, indicates the puparia tend to lose some of their capacity to regain by absorption. However, since mortality in puparia is not readily detected, it is possible that some of this loss of ability to regain all the previously lost weight was apparent, not real.

Third, a change in color, texture and specific gravity accompanies the variations in weight that arise from alternate wetting and drying. When newly pupariated, the puparia were normally dark ocherous and rubbery, tough; when they reached the extreme of dryness imposed in the treatment, they had turned pale stramineous, rigid and fragile. The darker flexible condition is restored with wetting. Dry puparia float lightly on water; wet ones float deeply.

Fourth, these variations in color, texture and weight, or specific gravity, are extrinsic and inconstant, hence have only negative taxonomic significance for segregation of species in the puparial stage.

Distribution and Variation of the Ant Formica dakotensis Emery

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Our understanding of *Formica dakotensis* Emery has been advanced considerably by Creighton (1950, Bull. Mus. Comp. Zool. 104: 480, 484–486) who cites data and references I need not repeat here. The easternmost record for *dakotensis,* doubted