SCIENTIFIC NOTE

Gray Pineapple Mealybugs, *Dysmicoccus neobrevipes*
Beardsley (Homoptera: Pseudococcidae), Inside Closed
Pineapple Blossom Cups

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ABSTRACT. Gray pineapple mealybugs, *Dysmicoccus neobrevipes*, were found inside
the closed blossom cups of pineapple fruit. This phenomenon may have serious implica-
tions for the spread of mealybugs and wilt disease. Current pineapple quarantine proce-
dures only require inspection of the fruit exterior to check for insect infestation.

INTRODUCTION

The gray pineapple mealybug, *Dysmicoccus neobrevipes* Beardsley, and the pink
pineapple mealybug, *Dysmicoccus brevipes* (Cockerell), are of major economic impor-
tance in Hawai‘i because of their association with mealybug wilt disease of pineapple
(Rohrbach et al. 1988). These mealybugs have a symbiotic relationship with the fire ant
(*Solenopsis geminata* Fabricius), Argentine ant (*Iridomyrmex humilis* (Mayr)), and big-
headed ant (*Pheidole megacephala* (Fabricius)) (Beardsley et al. 1982; Carter 1967; Ito
bugs feed internally in the blossom cavities (i.e., blossom cups) of pineapple. Which
mealybug species he was referring to is not known because he grouped the gray and pink
pineapple mealybugs as the species *D. brevipes*. Apparently, Petty was unaware that
Beardsley (1959) separated the gray and pink pineapple mealybugs into 2 different
species. James Koga, Agricultural Research Division of Maui Pineapple Company, Ltd.,
showed me live gray pineapple mealybugs inside the closed blossom cups of pineapple
fruit at Honolulu, Maui, Hawai‘i. John W. Beardsley also observed *D. neobrevipes* in
closed pineapple blossom cups on Molokā‘i in 1979 (pers. comm.). I examined 30 unripe
pineapple fruits from an abandoned field in Honolua. All fruits contained live mature
and immature *D. neobrevipes* in over half of their blossom cups. Presumably the mealybugs
enter the open blossom cups during anthesis, as indicated by immature mealybugs inside
of open blossom cups. Some green pineapples had openings in the fruitlets, which were
plugged with soil. When soil plugs were removed, live big-headed ants and live gray
pineapple mealybugs were found inside the fruitlets. It is not known if ants prevent
fruitlets from closing, if ants dig burrows to the enclosed mealybugs, or if ants find and
cover those fruitlets that have not closed for some other reason. The occurrence of *D. neo-
brevipes* inside closed pineapple blossom cups may have serious implications for the
spread of mealybugs and wilt disease. Current quarantine procedures only require exter-
nal inspection of pineapple fruit.

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LITERATURE CITED


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