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The bayberry whitefly, *Parabemisia myricae*, in Florida (Homoptera: Aleyrodidae: Aleyrodinae)[1]

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INTRODUCTION: The whitefly, *Bemisia myricae*, was described by Kuwana (1927) from Japan on the hosts *Myrica rubra*, *Morus alba*, and *Citrus*. Takahashi (1952) transferred this whitefly to the genus *Parabemisia* because of long marginal setae on the so-called "pupal" case and blunt lateral tubercles at the base of the lingula (Fig. 1).

Bayberry whitefly was first discovered in the U.S. by California agriculture officials in 1978 (Rose et al. 1981), and in Florida by agriculture officials in early 1984 (Hamon 1986). Early dense populations caused defoliation in California citrus (Rose et al. 1981) but this has not happened in Florida. The early finds in Florida were under natural biological control by hymenopterous parasites, including *Eretmocerus* sp. Apparently, the parasites were introduced with the whitefly. According to Mike Rose (personal communication) the *Eretmocerus* species present in Florida is the same as that found in California.

It was not until 1989 that any population in Florida was large enough to cause damage. This occured in a nursery/greenhouse of the United States Sugar Corporation, Clewiston, Florida, on small citrus seedlings. A chemical control program was being carried out which eliminated the *Eretmocerus* sp., but not the bayberry whitefly. Outdoors this whitefly is under biological control in Florida, and is only a problem in situations where natural balances are disturbed by the use of chemicals.

DESCRIPTION: The fourth nymphal skin has 30-32 marginal setae including the caudal setae (Fig. 1). The anterior spiracular furrows are scarcely visible, but the caudal furrow is slightly ridged longitudinally. The vasiform orifice (Fig. 2) is elongate triangular with the lingula included. The lingula (Fig. 2a) has 2 blunt lateral tubercles and 2 long caudal lingular setae. The operculum (Fig. 2b) covers only the anterior one-third of the vasiform orifice. In vivo the nymphs are surrounded by a marginal fringe of clear wax (Fig. 3). The adult (Fig. 4) is a small whitish-yellow moth-like insect that flits about when disturbed. The adults have a strong ovipositional preference for very young foliage in the "feather" stage (Walker & Aitken 1985). The adult will frequently place eggs along the leaf margin. At first the eggs are white, but turn black in a few days.

HOSTS: *Camellia sinensis, Chiococca alba, Citrus* spp., *Diospyros kaki, Elaeocarpus serratus, Ficus carica, Gardenia jasminoides, Machilus* sp., *Maesa japonica, Morus alba, Myrica rubra, Prunus mume, Prunus persica, Prunus triflora, Psidium guajava, Quercus serrata, Rhododendron* sp. *Salix babylonica,* and *Salix gracilistyla.* The most favored hosts are *Citrus* spp. and gardenia.

DISTRIBUTION: In the U.S. this whitefly is only known from California and Florida. Foreign distribution includes China, Hong Kong, Israel, Japan, Taiwan, Malaysia, and Venezuela.

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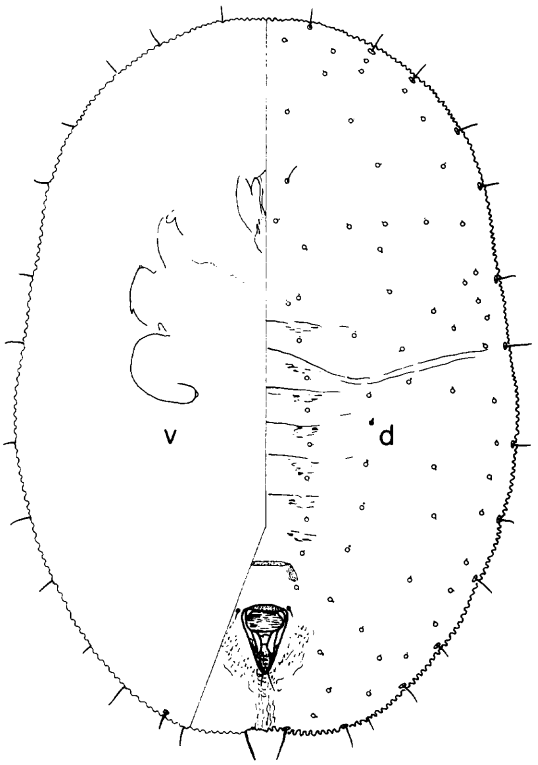

Fig. 1. *Parabemisia myricae*, fourth nymphal skin "pupal case," v=ventral, d=dorsal.

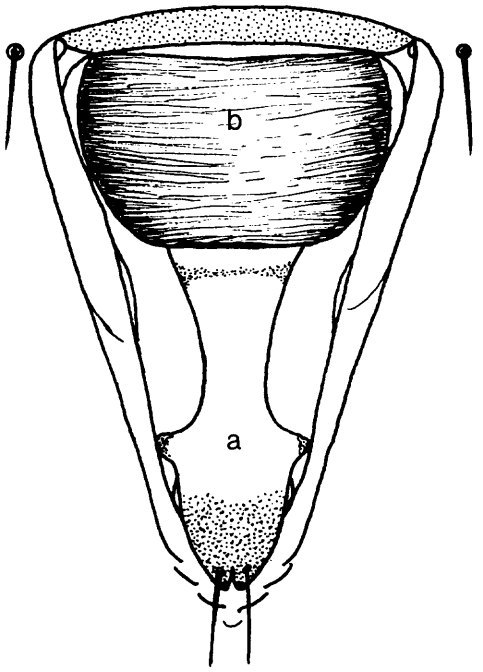

Fig. 2. *P. myricae*, vasiform orifice. a) lingula, b) operculum.

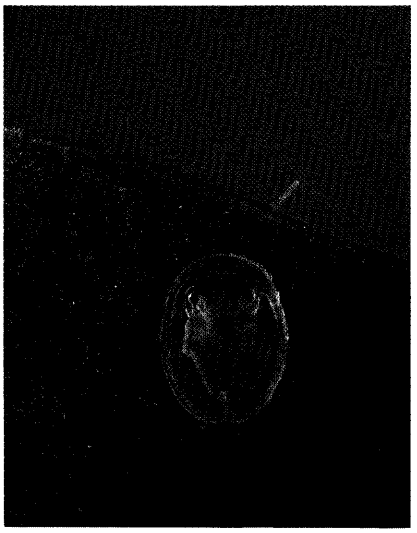

Fig. 3. *P. myricae*, nymph. Photo by Jeff Lotz, DPI.

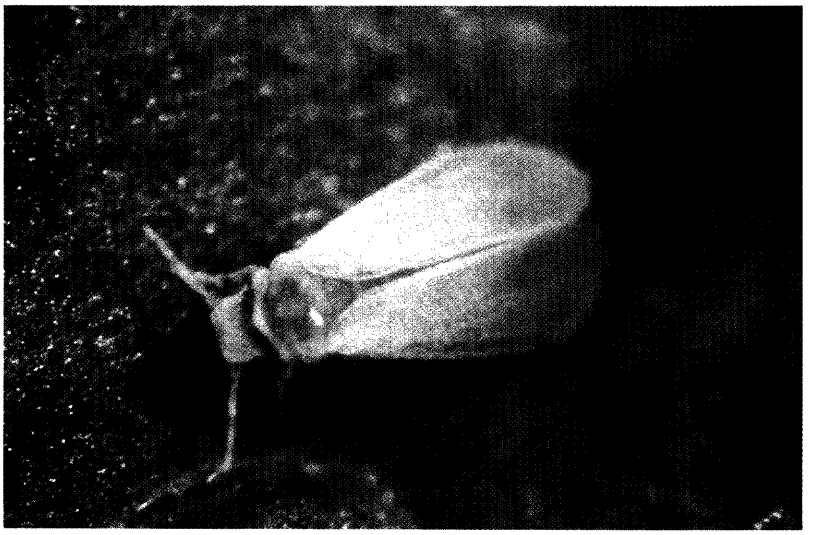

Fig. 4. *P. myricae*, adult. Photo by Harold Browning, IFAS.

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