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GALL-LIKE SCALE INSECTS (KERMES SPP.)

(HOMOPTERA:COCCOIDEA:KERMESIDAE)[1]

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INTRODUCTION: Species of the genus *Kermes* infest only oaks (*Quercus* spp.) and have a worldwide distribution. Twenty-nine species occur in the U.S., and 3 of these are recorded from Florida. They are *K. galliformis* Riley, *K. kingi* Cockerell, and *K. petteti* Ehrhorn. Identifications are generally based on size and color patterns of old females; however, accurate identifications to species are nearly impossible using these characters. Adult females of most *Kermes* species in the U.S. are found at the base of leaf petioles. One generation is produced each year in the 2 North American species studied (McConnell and Davidson, 1959; and Hamon, Lambdin, and Kosztarab, 1976).

DESCRIPTION: Old adult females (fig. 1) are gall-like in shape, 3-5 mm in diameter, heavily sclerotized, and may resemble galls of cynipid wasps. Their color is bone or light brown and are sometimes marked with darker longitudinal lines. Young immature females (fig. 2) are yellowish orange and have short wax projections covering most of the body. Young adult females (fig. 3) are reddish brown and are much like old adult females but are not heavily sclerotized. Young adult females should be collected and preserved in alcohol for accurate identifications. Males are 2-3 mm long, 2-winged, and live only a short time. The male pupal cases (fig. 4) are found on the tree trunk and debris under the tree.

DISTRIBUTION: *Kermes* spp. are recorded from Alachua, Baker, Broward, Columbia, Dade, Hillsborough, Leon, Marion, Pinellas, Polk, and Sarasota counties, but are probably present in most Florida counties where oaks occur.

ECONOMIC IMPORTANCE: McConnell and Davidson (1959) reported damage to oaks, in the form of flagging (drooping or weakening), in Maryland. Heavy damage in the form of retarded development and destruction was reported on forest trees in Hungary (Kozar, 1974). Hamon et al. (1976) observed moderate flagging on oaks in Blacksburg, Virginia. Recently, moderate to heavy flagging has been reported in Fort DeSoto Park, Pinellas County, Florida.

CONTROL: No chemicals are currently labeled for the control of this pest.

REMARK: Dr. Michael Kosztarab, Mr. R. G. Baer, and Mr. S. W. Bullington at Virginia Polytechnic Institute and State University, Blacksburg, Virginia, are in the process of revising the genus *Kermes* in North America. When this revision is completed it will be possible to accurately identify the species of *Kermes*.

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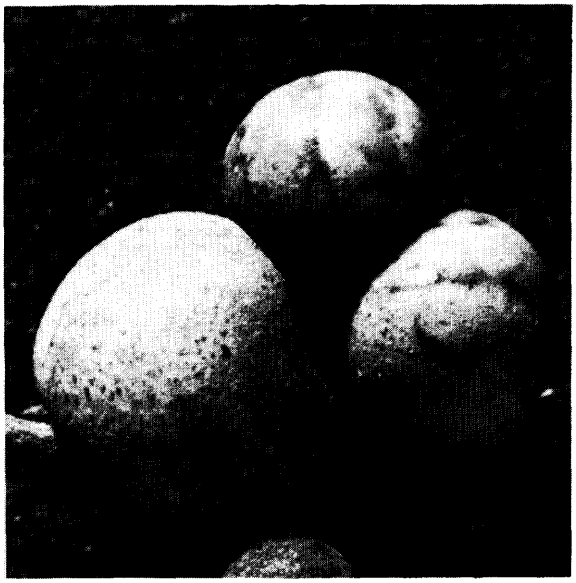

Fig. 1. *Kermes* sp. Old adult females (7X).

Fig. 2. *Kermes kingi* Cockerell. Young immature females (3X). (From Hamon et al. 1976).

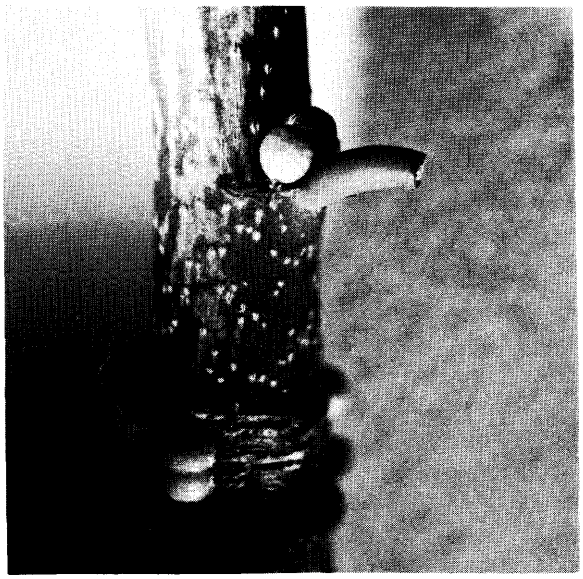

Fig. 3. *Kermes* sp. Young adult females (2X).

Fig. 4. *Kermes* sp. Male pupal cases (30X).