The West Indian sugarcane fulgorid, Saccharosydne saccharivora (Westwood). —This insect was collected in Florida by Van Duzee in 1909. It was not again reported from that state until it was found at Fellsmere in September, 1936. It was subsequently found distributed in the cane in the Everglades area. Careful searches in experiment station cane plantings and in random commercial fields did not reveal its presence elsewhere in Florida. It has not been found on sugarcane elsewhere in the continental United States, except that a single specimen was collected from grass and weeds in a peach orchard in Peach County, Ga., on August 28, 1937, by W. F. Turner, indicating either that it is distributed in sparse numbers over a large area or that it was accidentally introduced to that section from southern Florida or from other infested countries.

The adult of this insect is pale green and has transparent wings. The nymph is of somewhat the same color and bears a characteristic long white filament at its caudal end. The eggs are laid in a slit in the midrib of the leaf on the under side and are covered with a cottony fluff. Nearly all the insects are found on the under sides of the leaves, although they are sometimes found in the central whorl and rarely on the upper leaf surface. In addition to sugarcane, this insect was found in small numbers on three other grasses, namely, *Digitaria sanguinalis*, *Dactyloctenium aegyptium*, and *Paspalum urvillei*.

Varying degrees of injury have been reported as caused by this insect in other countries. In some fields of the variety Co. 290, at Fellsmere in September, 1936, the injury was greater than that from any other insect present. Many of the heavily infested leaves were withering and dying, and the leaves were covered with a sooty mold resulting from fulgorid feeding. The mold, of course, is a fungus which grows on the honeydew given off by this fulgorid. Red rot was appearing in oviposition slits. It seemed that a loss of at least 10 per cent would result. The variety Co. 281 showed only a small amount of injury. In September, 1937, injury was much less than in 1936.

Both nymphs and adults have been observed to be heavily parasitized by a dryinid, *Gonatopus* sp. Parasitized individuals are conspicuous owing to the black larval sac of the parasite which appears on the side of the insect. In September, 1937, a mirid bug determined as *Cyrtorhinus pellicia* (Uhler) was observed ovipositing in an egg cluster. No parasites were reared from 103 egg clusters collected and observed.

It would undoubtedly be of value to introduce the parasites *Stenocranophilus quadratus* Pierce and *Anagrus armatus* (Ashmead), which are of value in con-

trolling the fulgorid in the West Indies. The former is listed by G. N. Wolcott as the most effective parasite of *Saccharosydne saccharivora* in Puerto Rico.

In examining variety-test field plantings it appeared that the fulgorids showed a preference for the broad-leaved varieties. It, therefore, seems that injury could perhaps be reduced by growing narrower-leaved varieties in areas which usually suffer damage.

The West Indian sugarcane mite, Tarsonemus bancrofti Michael.—In January, 1936, an infestation of this mite was found in a 9-acre field of commercial sugarcane and in experimental plantings adjoining at Canal Point. In September, 1936, an infestation was found on a few stalks of cane in experimental plantings at Belle Glade. This mite has not been found elsewhere in Florida or in continental United States except in experimental plantings at Houma, La. It has apparently been eradicated at Houma, where it was present on only a small area. The small infestation at Belle Glade also appears to have been eradicated. At Canal Point, in September, 1937, the infestation had spread to an 8-acre field of cane.

The nymphs of the mite are colorless or pale white and small. They are most often found between the leaf sheath and the cane stalk on the more tender upper parts of the plant. The older stages are found embedded in the stalk rind, cane bud, and leaf sheath, where they form roundish, blisterlike exudations on the surface. These blisters are light amber in color, darkening to reddish brown with age, and there is usually a craterlike depression in the center of each. The presence of the mite is most easily recognized by these blisters.

Damage from *Tarsonemus bancrofti* apparently varies widely with local conditions and varieties. Observations to date indicate that the mite has a marked preference for varieties having barrels of large diameter. Reports from some foreign countries indicate that losses from it are heavy, while from others little injury is reported. From examinations of mite injury it is apparent that there would be some direct loss and, in addition, an indirect loss from red rot and other disease organisms entering mite lesions on the stalks and leaf sheaths. The mite appears to be a minor pest on most of the commercial varieties now grown in the United States, but the amount of injury to these varieties makes it desirable to restrict its spread. All cane from mite-infested areas should be treated with hot water before being moved to new areas. F. F. Smith, of the Bureau of Entomology and Plant Quarantine, found that all stages of the mite were killed by soaking in water held at 115° F. for 30 minutes. In most cases it will be advisable to treat the cane for other pests at 122° F. for 30 minutes, and it is, therefore, recommended that treatment at this higher temperature be used for mite-infested canes. Special caution is necessary to prevent reinfestation of the treated material.

The sugarcane mealybug, Pseudococcus boninsis (Kuwana).—The sugarcane mealybug is found throughout southern Florida and in some fields in other parts of the state. The mealybugs are most often found feeding on the plant between the leaf sheath and the stalk. Injury results from the fact that the insects suck the plant juices. While usually considered a minor pest the mealybug causes a certain amount of direct loss through its feeding and, in addition, the presence