NEODIPRION MERKELI FROM SOUTH FLORIDA

R. C. WILKINSON
Florida Agricultural Experiment Station, Gainesville, Florida

Ross (1961) described Neodiprion merkeli from Fort Myers, Fla., but no additional information on this species has been published. In the present study, adults were reared in the laboratory from final feeding stage larvae collected during November 1960 on South Florida slash pine, Pinus elliottii Engelm. var. donae Little and Dorman, planted near Immokalee, Fla. Additional material was reared from larvae collected by Mr. E. P. Merkel, U. S. Forest Service, at the same location during December 1960.

The egg pockets in a collected shoot were made in rows in the needle tissue, adjacent to the flat sides of the needles. The opening slits of the egg pockets were twice as long as the interval between slits. In lateral view, the egg pockets' shape was irregularly and deeply rectangular, occupying almost the full width (1.2 mm) of the flat side of a needle. The egg pockets were present in the apical half of needles growing adjacent to the winter bud. Each infested needle contained a single row of egg pockets and 1, 3, 9, 9, 10, 10, 11, 11, 19, 13, 13, and 20 empty egg pockets per row were present in the infested needles of the collected shoot. Considerable resin had exuded from the oviposition wounds, but had not inhibited development within the egg or larval eclosion.

As discussed by Ross (1961), the head in the last larval feeding stage of this species differs from described forms by being reddish above the eyes and almost a sooty black below the eyes. The contrast of these colors was most pronounced in larvae collected during December (vs. November) 1960. The feeding larvae were nearly mature at the time of collection and in most cases exceeded 30 mm in length. Mean head capsule width was 2.2 mm both in 12 feeding penultimate stage larvae, and in 3 non-feeding ultimate stage larvae.

The larvae spun reddish brown cocoons within one week's time after collection in the field and only females emerged from the cocoons four to six weeks later. The seven cocoons from which females emerged had a mean length of 10.9 mm and mean width of 5.3 mm.

The eggs were green within the abdomen of newly emerged females, but turned yellow after preservation in 70% ethyl alcohol. Five females contained an average of 88.8 eggs, with a range of 74 to 99 eggs. The eggs were quite uniform in size and all eggs appeared to be mature. Twenty-five eggs (five per female) averaged 1.8 mm long by 0.5 mm wide following preservation in 70% ethyl alcohol.

N. merkeli may be capable of completely defoliating South Florida slash pine, since the larvae fed on all ages of foliage. Further information is needed on the biology of this potentially damaging species.

LITERATURE CITED


The Florida Entomologist 48(4) 1965