Entomology Circular No. 244
November 1982

Fla. Dept. Agric. & Consumer Serv.
Division of Plant Industry

Anacamptodes pergracilis (Hulst), a cypress looper

(LEPIDOPTERA:GEOMETRIDAE)[1]

Wayne N. Dixon[2]

INTRODUCTION: Anacamptodes pergracilis (Hulst), commonly known as the cypress looper, drew considerable attention in late summer of 1980 with the unexpected defoliation of nearly 28,000 ha of cypress trees in USFS-NPS Big Cypress National Preserve (Collier and Monroe counties). Currently, cypress looper populations are at low levels, even in the Fisheating Creek (Glades County) area, a perennial generator of significant cypress looper defoliation over the past 20 years.

DESCRIPTION: Adult moth is white to grayish white with a body length of 6-10 mm and a wingspan of 22-36 mm. Forewings of both sexes are grayish white with blackish brown cross lines and interspersed brown scales (fig.1). Egg is small, bright green in color, and spherical to keg-shaped. Young larva is uniformly green, similar to foliage color; mature larva is mottled gray-brown-black, closely resembling a twig in coloration and shape. Late instar larva is approximately 25 mm long (fig. 2) (Carothers and Ghent, 1980; Rindge, 1966).

DISTRIBUTION: The cypress looper has been recorded from Florida, Georgia, Louisiana, Maryland, Texas, and Virginia and likely occurs throughout the range of its host plants, an area of nearly 2 million ha (Rindge, 1966; Williston et al., 1980). In Florida, it has been reported from the following counties: Charlotte, Collier, Dade, Escambia, Glades, Hendry, Lee, Martin, Monroe, Orange, and Palm Beach (Kimball, 1965).

Fig. 1.

Adult Anacamptodes pergracilis (Hulst) (2.4X). Original color photograph provided courtesy of W. A. Carothers; b&w renditions by V. J. Windsor, FDACS-DPI, Gainesville, Florida: negative numbers 702185-2 and 702186-5.

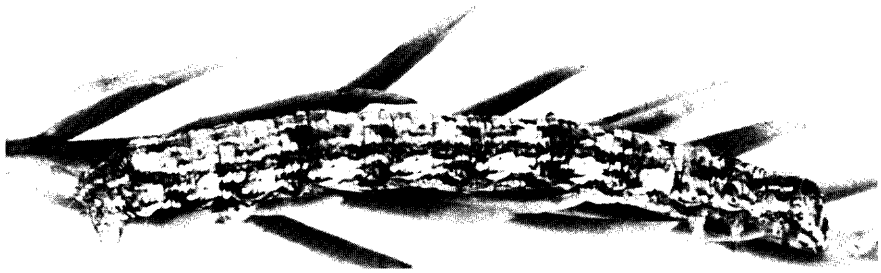

Fig. 2.

Late instar larva of A. pergracilis (4.0X).

1/ Contribution No. 551, Bureau of Entomology.

2/ Forest Entomologist, Division of Forestry, P.O. Box 1269, Gainesville, FL 32602.

HOSTS: Baldcypress, Taxodium distichum (L.) Rich., and pondcypress, Taxodium distichum var. nutans (Ait.), are the host plants.

BIOLOGY: In southern Florida, adult moths are present year-round. Female moths deposit small clusters of eggs in bark crevices or under bark flaps. Eggs hatch in 9-12 days. Larvae consume parts of or entire leaves. Approximately 3 weeks are required for larval development. Prior to pupation, last instar larvae chew shallow depressions into the bark and form a cocoon of silk webbing and bark fibers. Pupation occurs on tree stems and branches and not in the soil as an apparent behavioral adaptation to usual presence of standing water. Adult moths emerge during the night approximately 7-13 days after the onset of pupation. In general, a complete life cycle requires 1 to 1½ months (Carothers and Ghent, 1980; Kimball, 1965; Wilkening, 1980).

SURVEY AND DETECTION: Reddening and/or defoliated tree crowns usually become evident by July or August. A close examination of branches with red foliage will reveal partially consumed needles - the red color, a result of leaf desiccation. Early instar larvae blend in well with foliage due to matching colors; late instar larvae, when immobile, closely resemble lichen-covered twigs and shoots. Adult moths are attracted to standard blacklight field traps during nocturnal hours; heaviest catches occur after 2200 hours. Severely defoliated trees will refoliate within weeks after looper feeding; however, branch dieback will be present. In the Big Cypress outbreak, some trees were defoliated 3 times and 1.5 m of dieback were observed in the spring of 1981. The leaves of the last crop were smaller and yellowish.

CONTROL: The environmental hazards of an insecticide preclude use in a cypress strand, which is the typical habitat of the cypress looper. A biological insecticide deserves consideration, e.g., Bacillus thuringiensis Berliner as the active ingredient; however, no efficacy data is available. Natural enemies may play an important regulatory role in cypress looper populations. Intensive sampling of the Big Cypress outbreak revealed most overwintering pupae were parasitized; predominant parasites were Ichneumon navus Say (Hymenoptera: Ichnuemonidae) and Syntomosphyrum clisiocampae (Ashm.) (Hymenoptera: Eulophidae). Tree swallows, warblers, and insect predators (Hemiptera: Reduviidae) were also observed preying on cypress looper caterpillars during the summer months.

LITERATURE CITED:

Carothers, W. A., and J. Ghent. 1980. Biological evaluation of the cypress looper outbreak in the Big Cypress National Preserve in Florida. USFS-S&PF, SE Area, Atlanta, Georgia. Rpt. #81-1-14. 17p.

Kimball, C. P. 1965. Lepidoptera of Florida. Florida Dept. Agr., Div. Plant Ind., Arthropods of Florida and Neighboring Land Areas. 1:1-363.

Rindge, F. H. 1966. A revision of the moth genus Anacamptodes (Lepidoptera: Geometridae). Bull. American Museum Natural History 132 (3): 178-243.

Wilkening, A. 1980. Report on Anacamptodes rearing project. University of Florida, Dept. of Entomology and Nematology, Gainesville, Florida. 12p. (unpublished).

Williston, H. L., F. W. Shropshire, and W. E. Balmer. 1980. Cypress management: a forgotten opportunity. USFS-S&PF, SE Area, Atlanta, Georgia. Forestry Rpt. SA-FR8. 8p.