A GRASS-INFESTING FLY, *CHLOROPS* N. SP. (DIPTERA: CHLOROPIDAE), AND ITS PARASITE, *EURYTOMA* N. SP. (HYMENOPTERA:EURYTOMIDAE) IN SOUTH FLORIDA[1]

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ABSTRACT

A new species of *Chlorops* near *melleus* Loew was reared from a gall-like growth on the stems of a grass, *Aristida gyrans* Chapman, in south Florida. This is a new host genus record for the grass-infesting flies. The rearing of *Eurytoma* n. sp. from the genus *Chlorops* is the first known record of any eurytomid from *Chlorops*. A single female of a probable new genus of the family Eurytomidae was also reared from *C.* near *melleus*.

The host plants for many of the phytophagous, grass-infesting flies (Chloropidae) are poorly known in Florida. Some of the primary invaders of grass stems produce small gall-like growths in the stems of certain grass genera. Other grass or plant-infesting chloropids may feed in a secondary manner upon decaying plant tissue or perhaps upon fecal deposits left by some primary insect invader.

Narchuk (1965) described a new genus, *Gallomyia*, in Siberia. *G. miscanthi* Narchuk produces a gall-like formation in the stems of *Miscanthus sacchariflorus* (Maxim) Hack, a grass. Narchuk clarified the biology of another grass-infesting species, *Chlorops riparia* E. Sm., which infests the grass genus *Agropyron*, while Blair (1932) conducted studies on the genus *Lipara* Mg.

Narchuk (1956) cited additional information on the host plant range of *Oscinella* spp. in the European portion of the USSR. Sabrosky (1965) reported various genera and species of the family Chloropidae and their distributions.

Wilbur and Sabrosky (1936) conducted studies on various grass-infesting chloropids in the pasture-grasses of Kansas. A photograph of the destruction of the grass-fly, *Anthracophaga ingrata* (Will.), which causes a broomlike growth of the lateral branches of *Muhlenbergia racemosa* (Michx.), is included in the paper. They reported the larval feeding habit is very similar to that of the wheat stem maggot, *Meromyza americana* Fitch.

A recent paper by Valley, Wearsch, and Foote (1969) cited valuable host information on the larval feeding habits of 26 Nearctic chloropid species; however, only 10 were found to be primary invading species. Stegmaier (1966, 1967) reported rearings of *Hippelates nobilis* Lw. and *H. proboscideus* Williston from south Florida, infesting *Crinum* and *Hymenocallis* leaves in a primary manner.

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On 26 October 1967, Mr. Frank D. Matthews noted small insect emergence holes on a gall-like structure on the upper portion of the stem of the corkscrew 3-awn. The author opened several of the gall formations and found empty pupal cases; each gall contained a single pupal case. A single collection of the plant, *Aristida gyrans* Chapm., was made and about 12 plants were confined to a single rearing container. The recorded data are as follows:

Chlorops sp., nr. *melleus* Lw. Three reared adults (det. C. W. Sabrosky). 26 Oct. 1967, Miami, Fla., by Frank D. Matthews and C. E. Stegmaier, Jr.

Chlorops sp. One larva (det. C. W. Sabrosky). Same data as above.

Chlorops sp. Three pupae excised from the gall-like growths plus 1 reared adult (det. C. W. Sabrosky). Same data as above.

Eurytoma sp. (Hymenoptera:Eurytomidae). Two reared adults (det. B. D. Burks). Same data as above.

Eurytomidae: possibly new genus. One female (det. B. D. Burks). Same data as above.

Dr. Burks (personal communication, 17 Nov. 1967) found the reared hymenopteron to be of unusual interest. Even though the genus *Eurytoma* had been revised recently, he was unable to determine the specimens to species. It is probably the first record of any *Eurytoma* parasite reared from the genus *Chlorops*.

Dr. Sabrosky (personal communication, 8 Nov. 1967) reported that he could find no previous report of chloropid infestations from the grass genus *Aristida*. Further, he remarked that the following genera of grasses were known host plants for the grass-feeding flies: *Distichlis, Muhlenbergia, Phragmites, Poa*, and *Sporobolus*. Valley, Wearsch, and Foote (1969), in addition, reported other grass genera as chloropid hosts; they are as follows: *Carex, Eleocharis, Hordeum*, and *Phalaris*.

Ward (1968) reported the number of species of each genera of potential hosts for the phytophagous chloropids in his paper, "Checklist of the vascular plants of Florida, Part 1." I shall list here the number of each potential chloropid host species in parentheses following the genus: *Aristida* (19), *Carex* (69), *Distichlis* (1), *Eleocharis* (29), *Hordeum* (1), *Miscanthus* (1), *Muhlenbergia* (3), *Phalaris* (4), *Phragmites* (1), *Poa* (6), and *Sporobolus* (10).

Further research is needed to enrich our basic plant-insect knowledge of the grass-infesting chloropids and their parasites from Florida and nearby areas.

ACKNOWLEDGMENTS

I wish to thank the following persons for their help in making this paper possible: Dr. B. D. Burks, for the Eurytomidae determinations; Dr. D. B. Ward, for the determination of the plant *Aristida gyrans*; Dr. C. W. Sabrosky, for the determination of the *Chlorops* sp., and especially I should like to thank Dr. C. W. Sabrosky and Karl Valley for their help in the critical evaluation of this manuscript.

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