THE CORKSCREW 3-AWN, ARISTIDA GYRANS (GRAMINEAE), AND ITS INSECT ASSOCIATES IN SOUTH FLORIDA

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ABSTRACT

_Aristida gyrans_ Chapman is a host plant for many insects and their associates in south Florida. A mealybug, _Antonina nortoni_ P. and C. is commonly found on the bases of stems of this plant. A chloropid, _Chlorops_ sp. nr. _melleus_ Loew and a cecidomyiid, _Chilophaga gyrantis_ Gagné, each produce stem galls. A spore feeding thrips, _Rhaeobothrips lativentris_ Karny is a new continental United States record. A stem infesting scolytid, _Hypothenemus_ sp., was reared. Two platygasterids, _Platygaster_ sp. and _Platygaster longiventris_ (Ashm.) and an encyrtid, _Meromyzobia_ sp., were reared from the midge _C. gyrantis_. _Eurytoma_ sp and a possible new genus of Eurytomidae were reared parasites of _Chlorops_ sp. nr. _melleus_.

Literature sources concerning the insect associates of the corkscrew 3-awn, _Aristida gyrans_ Chapman, are very scanty. My observations on the insect complex of this plant are fragmentary as most of my collections were made in the fall and spring seasons at which time the plant was not actively growing. I suggest that a more intensive study of the insect associates of all parts of the plant be conducted in all areas to obtain a more comprehensive understanding of its role as a host plant. The basic purpose of this paper is to report on the insect associates of this plant since my studies began in October 1967.

Small (1933) gave a detailed description of the corkscrew 3-awn and stated that there are about 150 species of _Aristida_ growing in the warmer areas of the world. He reported that the common names for these grasses as follows: needle-grasses, poverty-grasses, and wire-grasses. Small listed 20 species of this genus from southeastern United States and he stated that of these 20, 16 are known to occur in Florida. _Aristida gyrans_ grows in the pineyards and coastal plains of Florida and Georgia.

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COLLEMBOLA

ENTOMOBRYIDAE

Drepanocerus sp., det. D. L. Wray, Miami, Fla., 2 Feb. 1971. A single specimen was found associated with the mealybug, Antonina nortoni Parrott and Cockerell. Other specimens were seen but not collected. Deposited in the Florida State Collection of Arthropods.

PSOCOPTERA

CAECILIIDAE

Caecillus antillanus Rank, det. F. I. Mockford, Miami, Fla., 14 Dec. 1970. A single specimen was submitted for determination; however, other psocids were seen commonly associated with the corkscrew 3-awn in my rearing containers.

THYSANOPTERA

PHLAEOTHRIPIDAE

Karnyothrips melaleucus (Bagnall), det. S. Nakahara, Miami, Fla., 14 Nov. 1970. This is a predaceous species and it is cosmopolitan. Retained for the U. S. National Collection.

Nesothrips sp., det. S. Nakahara, Miami, Fla., 8 Oct. 1970. A single specimen was found in a rearing container.

Rhaebothrips lativentris Karny, det. S. Nakahara and K. O'Neill, Miami, Fla., 14 Jan. 1971. This species was found in a rearing container on 20 Jan. 1971. I swept 21 other specimens from unknown grasses on 24 Jan. 1971, det. S. Nakahara and K. O'Neill, at Miami, Fla. Nakahara (personal communication, 20 Apr. 1971) reported that the collection was a first continental United States record. The species occurs in Java, Australia, Formosa, Oceania, Guam, Wake Island, and Hawaii. A check of some incompletely determined slides in the Collection revealed that the species has been taken at quarantine from the Bahamas, Cuba, and Dominican Republic. Nakahara stated that Medina Gaud, in his "Thysanoptera of Puerto Rico", listed a Rhaebothrips sp., which Stannard determined as probably R. lativentris. Sakimura (1971) recorded the species from Jamaica, Virgin Islands, and Puerto Rico. He recorded the species from Mauritius, Java, Philippines, Formosa, southern Japan, Guam, Yap, Ponape, Solomon Islands, northern Queensland, and Hawaii. The entire collection of R. lativentris was retained for the U. S. National Collection.

HOMOPTERA

PSEUDOCOCCIDAE

Antonina nortoni Parrott and Cockerell, det. S. Nakahara and D. R. Miller, Miami, Fla., 14 Jan. 1971. About 50 females and 8 males were collected from the bases of the stems of the corkscrew 3-awn. I have observed common infestations from January through May 1971. All specimens were retained for the U. S. National Collection. Merril (1953) reported the species from grasses, Sorrento, Fla. The infestations were at the bases of the stems. Further information on A. nortoni was reported by Afifi and Kosztarb (1967), Ferris (1953), McKenzie (1967), and Riherd (1954). Fig. 1. illustrates the mealybug infestations at the bases of the stems of A. gryrana

COLEOPTERA

ANTHRIBIDAE

specimen was collected from one of my rearing containers. The specimen was retained for the U. S. National Collection.

**Scolytidae**


**Diptera**

**Cecidomyiidae**


*Chilophaga gyrantis* Gagné, Gagné and Stegmaier (1971). Six newly formed galls were found at Miami, Fla., 28 May 1972. Fig. 2 and 3 illustrate variations of the galls formed by *C. gyrantis*.

**Chloropidae**

*Chlorops* sp. nr. *melleus* Loew. Stegmaier (1971). This species forms a gall on the stems of *A. gyrans*. No infestations of this species were found 28 May 1972.

**Hymenoptera**

**Encyrtidae**

*Meromyzobia* sp., det. B. D. Burks, Miami, Fla., Gagné and Stegmaier (1971). This species is a parasite of *C. gyrantis*. It was reared in numbers only once.

**Eurytomidae**

Possibly new genus. Stegmaier (1971). The host insect is *Chlorops* sp. near *melleus* Loew.

*Eurytoma* sp. Stegmaier (1971). The species was reared from *Chlorops* sp. nr. *melleus* Loew.

**Formicidae**


**Mymaridae**


**Platygastridae**

*Platygaster longiventris* (Ashm.), Gagné and Stegmaier (1971). This is a parasite of the midge, *C. gyrantis*. Mussebeck et al. (1951) reported a single female from Jacksonville, Fla., without host data.

*Platygaster* sp., det. P. M. Marsh, Miami, Fla., 14 Jan. 1971, 3 reared adults; 2 Feb. 1971, 3 reared adults; 3 Feb. 1971, 20 reared adults. The insect host is *C. gyrantis*. Twenty-four specimens were retained for the U. S. National Collections.

**Acarina**

**Ameroseiidae**

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specimen was collected from inside a stem gall of C. gyrantis. The specimen was retained for the U.S. National Collection.

Bdellidae


Penthalesidae

*Penthales* sp., det. R. L. Smiley, Miami, Fla., 14 Jan. 1971. This species was found associated with the mealybug, *A. nortoni*, on the root system of *A. gyrans.*

Literature Cited


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Fig. 1-3, insect infestations on *Aristida gyrans*: (1) The mealybug, *Antonina nortoni*, on the bases of the stems of *Aristida gyrans*. A single mealybug, far right, became detached from the base of the stem; (2) Stem gall variations of the cecidomyiid, *Chilophaga gyrantis*, on the stems of the corkscrew 3-awn, *Aristida gyrans*; (3) More variations of the stem galls of *C. gyrantis* on *Aristida gyrans.*