

A GALL- AND CANKER-CAUSING FUNGUS, KUTILAKESA PIRONII

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The fungus, *Kutilakesa pironii* Alfieri (1) [perfect state *Nectriella pironii* Alfieri and Samuels (4)], causes stem galls on croton, *Codiaeum variegatum* Blume, stem cankers on *Clerodendrum bungei* Steud., and leaf and stem galls on the zebra plant, *Aphelandra squarrosa* Nees (3). Previously referred to as *Cephalosporium*, *Volutella*, and *Nectria*, this fungus was believed to be *Kutilakesa madreeya* (5,6) in an earlier report (2). This fungus has been established as a wound pathogen (3), and when sporulating on infected tissues, appears as orange-colored sporodochia (spore-bearing structures) that are generally easily seen with a 10X hand lens.

SYMPTOMS. Stem galls on croton, first noted in Florida as early as 1955 [(7), Plant Disease Records, Bureau of Plant Pathology, Division of Plant Industry (DPI), Florida Department of Agriculture and Consumer Services (FDACS)] occur as large (up to 2 inches or 48 mm), subspherical, corky, roughened proliferations of callus tissue along the stems, particularly where cuttings were taken and at leaf axils where abscission had occurred (Fig. 1A).

Stem cankers on *Clerodendrum bungei*, one of the glorybowers, appear as deep, roughened craters with raised, irregularly formed callus tissue at the margins of the canker (Fig. 1B). This disease was first noted in Florida in 1968 [(7), Plant Disease Records, Bureau of Plant Pathology, DPI, FDACS].

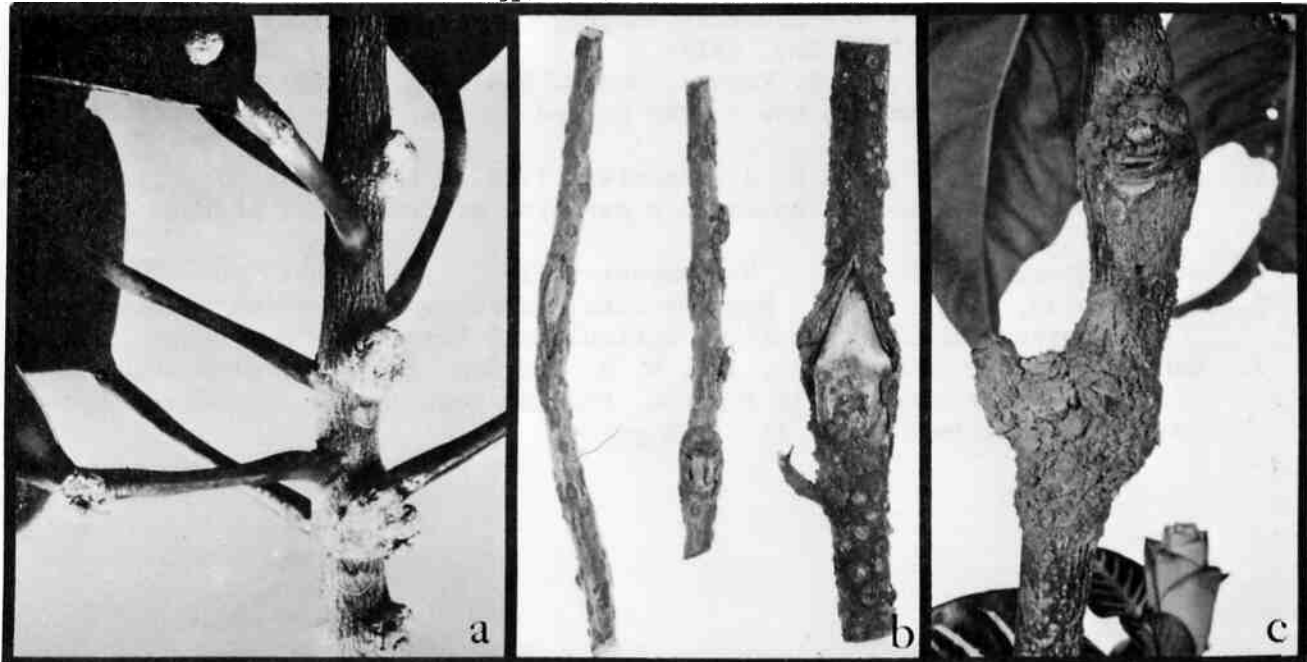


Fig. 1. Stem galls and cankers caused by *Kutilakesa pironii*: A) galls on stems, petioles and leaves of croton, *Codiaeum variegatum*; B) stem cankers on *Clerodendrum bungei*, and C) stem galls on zebra plant, *Aphelandra squarrosa*.

More recently, stem galls on the zebra plant, *A. squarrosa*, a popular ornamental foliage plant, were first noted in Florida in 1976. They occur as raised, rough-textured, corky, longitudinally-oriented growths at nodes and cut ends of stems (Fig. 1C). Occasionally, smaller, similar galls approximately 1/4 inch (6 mm) in diameter occur on petioles and midveins of leaves, as seen also at times on leaves of croton (Fig. 1A).

CONTROL. Since no controls have been experimentally established, suggested general recommendations for disease control would include 1) roguing and discarding severely infected plants, 2) pruning lightly infected plants only after applying an effective fungicide such as mancozeb (1 ½ lb) or benomyl (1/2 lb) (or a mixture of both) plus a spreader-sticker (e.g., Plyac 2 oz) and disinfecting the pruning tools between each cut, and 3) applying a fungicide plus a miticide such as Pentac (1/2-3/4 lb) on a weekly basis, since phytophagous mites are believed to aid in disseminating the fungus (3). As disease is controlled, biweekly applications of fungicide and miticide are suggested. All rates for disease and mite control are based on 100 gal water.

SURVEY AND DETECTION. Look for galls or cankers on stems, at cut ends of stems, and at leaf axils where abscission has occurred. Galls can also occur on leaves (petioles and veins, usually midveins) of croton and *Aphelandra*. Orange-colored, gelatinous masses of spores in sporodochia are often present on the surface and in crevices of the callus tissues and can be seen with a 10X hand lens.

Literature Cited

1. Alfieri, S. A., Jr. 1979. *Kutilakesa pironii* sp. nov., A stem gall- and canker-inciting fungus, new to the United States. *Mycotaxon* 10(1):217-218.
2. Alfieri, S. A., Jr., J. F. Knauss, and C. Wehlburg. 1977. *Kutilakesa madreeya*, a stem gall- and canker-inciting fungus, new to the United States. (Abstr.) *Proc. Am. Phytopathol. Soc.* 4:175.
3. Alfieri, S. A., Jr., J. F. Knauss, and C. Wehlburg. 1979. A stem gall- and canker-inciting fungus, new to the United States. *Plant Dis. Reprtr.* 63(12): 1016-1020.
4. Alfieri, S. A., Jr., and G. J. Samuels. 1979. *Nectriella pironii* sp. nov. and its *Kutilakesa*-like anamorph, a parasite of ornamental shrubs. *Mycologia* 71(6):1178-1185.
5. Subramanian, C. V. 1956. *Hyphomycetes* II. *J. Ind. Bot. Soc.* 35:446-494.
6. Subramanian, C. V. 1971. *Hyphomycetes: An account of Indian species except Cercosporae.* Indian Council of Agricultural Research. New Dehli 930 p.
7. Wehlburg, C., S. A. Alfieri, Jr., K. R. Langdon, and J. W. Kimbrough. 1975. Index of plant diseases in Florida. Florida Dept. Agric. and Consumer Serv. Div. of Plant Ind. Bull. 11. 285 p.