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NECTRIELLA (KUTILAKESA) PIRONII, A PATHOGEN OF FICUS CARICA

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The common edible fig (Ficus carica L.) belongs to the mulberry family Moraceae. It is a deciduous shrub or tree 5 to 10 m tall and a native of the Mediterranean region. It is grown chiefly for its fruits but also is attractive in ornamental plantings (6). It is a popular dooryard fruit particularly in North Florida, and some figs are grown for local sales (7).

In 1982, Nectriella (Kutilakesa) pironii Alfieri & Samuels was isolated from a naturally infected fig plant in Gainesville, Florida. The fungus was recovered from stem cankers of a relatively young fig plant (1.2 m tall), ca. 2 m from a K. pironii-infected Texas sage plant, Leucophyllum frutescens (Berl.) Johnston. Both the perfect state Nectriella and the Kutilakesa imperfect state were present on corky callus tissues of the cankers on both hosts. This appears to be the first report of K. pironii Alfieri occurring on fig. The generic name Kutilakesa Subram is a synonym of Sarcopodium Ehrenb. ex. Schlecht. according to Sutton (8).

Six of the more popular cultivars of fig were tested to determine their relative susceptibility to the fungus (3). They were 'Celeste' = 'Malta', 'Conadria' a selection from 'Adriatic', 'Green Ischia' = 'Verte', 'Kadota', 'Lemon' = 'Blanche', and 'Osborn Prolific' (5).

CAUSAL AGENT AND DISTRIBUTION. All 6 cultivars were susceptible to K. pironii, when inoculated via an oblique stem incision (3). The fungus did not infect stem tissues of any cultivar in the absence of wounds (3). This fungus has a wide host range (4) and has thus far only been reported in Florida in the Western Hemisphere which suggests that it may be restricted to relatively mild climates (3).

SYMPTOMS. All of the 6 cultivars of fig produced galls (Fig. 1 and 2) except 'Conadria', which reacted with the formation of cankers. Some differences in stem gall proliferation from the stem surface were observed (3). 'Kadota' and 'Lemon' produced larger galls. Twelve weeks following stem wound inoculation with K. pironii, 'Lemon' produced galls up to 9 mm, followed by 'Kadota' (6 mm), 'Osborn Prolific' (5 mm), 'Green Ischia' (4 mm), and 'Celeste' (3 mm) (3).

CONTROL. Kutilakesa pironii has the potential of becoming a serious problem throughout a wide range of crops (1,2), particularly where wounding is common-place, such as in vegetative propagation. In such instances, the application of an appropriate and effective fungicide before and/or after pruning or taking cuttings would be most desirable to prevent infection by this fungus or any wound pathogen that might be present.

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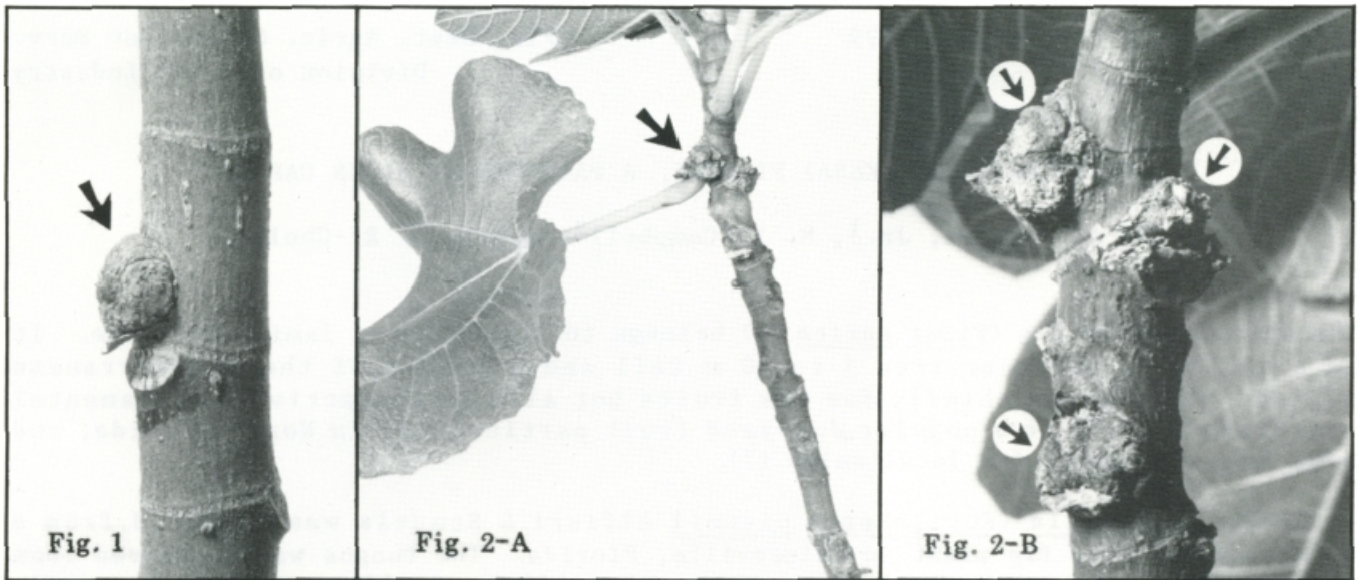

Fig. 1. Gall on Ficus carica 'Kadota' (ca. 1.5X) 12 wk following stem wound inoculation with Kutilakesa pironii. (DPI Photo #702908-11 by V. Jane Windsor).

Fig. 2. Ficus carica 'Lemon' infected by Kutilakesa pironii. A) A stem gall at the leaf axil (0.3X). DPI Photo #702891-1 by V. Jane Windsor. B) Closeup of three stem galls at leaf axils after leaves have abscised (DPI Photo #702915-10 by V. Jane Windsor).

SURVEY AND DETECTION. Look for galls or cankers on stems, at cut ends of stems, and at leaf axils where abcission has occurred. Orange-colored masses of spores in sporodochia are often present on the surface and in crevices of the callus tissues and can be seen with a 10 X hand lens.

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