

## FOREST AND SHADE TREE PESTS

Leaflet Number 3  
Published May 1984  
Republished for the Internet May 2008

### Butt Rot of Palms

#### SIGNIFICANCE

The decline and death of palms are of great concern to Floridians because of the deadly and well-publicized palm disease known as “lethal yellowing”. While it is true that lethal yellowing has indeed resulted in the death of hundreds of thousands of palms in southern Florida, it is equally true that not all dead and dying palms are victims of this particular disease. Palms often fall prey to a variety of other natural enemies. Butt rot, a disease caused by a fungus known as *Ganoderma zonatum*, is one such natural enemy. There is no treatment for butt rot, only prevention.

#### RECOGNITION

The first symptoms of butt rot in palms are likely to be varying degrees and patterns of foliage discoloration, wilting, and/or defoliation. Note, however, that foliar symptoms alone are not specifically diagnostic for butt rot, and may be easily confused by the layman with those associated with other diseases such as bud rot or lethal yellowing, or perhaps certain nutrient deficiencies. The most definitive indicator of butt rot is the occurrence of characteristic fungus “conks” (fruiting bodies or sporophores) at or near the bases of infected palms (Fig. 1). Sporophores may be stalked (on the soil surface) or hoof-like or shelf-like (attached to the base of infected palms). They are tough and leathery or rubbery in texture and vary in color from shades of yellow to reddish brown, brown or deep mahogany-red at maturity. Immature sporophores and the growing margins of older sporophores may appear white or yellowish to yellow-brown. Undersurfaces are white to yellowish or dull brown and minutely porous. Upper surfaces of mature sporophores and sporophore stalks are often coated with a thin layer of a shiny, “varnish-like” substance. However, it is important to realize that sporophores are not necessarily always present on palms infected with butt rot. In such cases laboratory analysis by a qualified pathologist is essential for confirmation of diagnoses.



**Fig. 1. “Conks” (fruiting bodies or sporophores) of *Ganoderma zonatum* in various stages of development at the bases of infected palms.**

## THE DISEASE

Butt rot, as its name implies, is a progressive rotting or decaying of the base of infected plants. The fungus which causes butt rot of palms is disseminated primarily by microscopic, airborne spores which are produced in the fungal sporophores at or near the base of infected plants. Spores are deposited at the bases of susceptible hosts. New infections occur when moisture and temperature conditions are suitable. Infections are aided by mechanical damage to palm bases and/or roots which provides easier entry for the fungus. As infections proceed, the physiological and structural integrity of the roots and bases of the infected plants are progressively destroyed. Death of infected plants is usually inevitable and often quite rapid. Butt rot reportedly affects palms in more than 30 genera in the United States and is often especially damaging where the palms are densely shaded by other vegetation or planted in damp environments.

## CONTROL

Prevention is the key to control of this disease. Avoid planting palms in particularly damp environments or in locations where they will be subject to dense shading by other landscape plants or structures. Minimize mechanical damages to palm bases and roots during planting, gardening, or construction operations. Do not plant palms in areas where others have succumbed to butt rot without first a.) removing residual palm stumps and roots, b.) treating the soil with an appropriately registered soil fumigant or fungicide, and c.) providing environmental modifications such as shade removal and drainage as necessary.

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