EMERGING FOREST HEALTH RISKS: A STATE PERSPECTIVE

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Florida's struggle with *forest health* has long since graduated from historical/traditional *tree health* issues (fusiform rust, pitch canker, bark beetles, root rots, defoliating insects, etc.) to a more comprehensive systems perspective. While tree diseases and insect pests are still components of the state's forest health equation, Florida's diverse and often fragile forest systems are under siege from a host of other non-traditional factors, the impacts of which are increasingly beginning to emerge. Today, Florida's forest health paradigm is obliged to include staggering human population growth, associated forest fragmentation, groundwater drawn down, surface water management (use, redirection, impoundment), sea-level rise, climate change, fire ecology and impacts, threatened and endangered species, wildlife, traditional and exotic insects and diseases, and noxious invasive non-native pest plant species. This list of factors may (and will?) be further complicated by the fact that traditional forest/tree pests will likely behave differently in different forest contexts (i.e., forests exposed to climate changes, forests and/or wood crops grown under novel, high-input or different management regimes).

Recent episodes of impaired forest health in Florida provide evidence of novel forest health issues that are here, and could intensify over time. For example, forest health specialists have been confronted repeatedly with forest health problems related to the use (or misuse) of water. In one location, an estimated 1200-1600 acres of pristine wetland forest (*Taxodium* spp.) is in various stages of decline due to "legally authorized and permitted" impoundment of water. In another location, nearly 2000 acres of bottomland hardwood forest is dead, apparently due in part to excessive accumulation of agricultural irrigation water. Along Florida's coastline, nearly one quarter of a million acres of forest are reverting to a treeless coastal marshland due to sea-level rise (Williams *et al.* 1999). And, Florida's relentless population growth (nearly 700 people move into Florida everyday) creates almost immeasurable pressures on the integrity and health of the state's forest lands and resources. University of Florida economist, John Reynolds has estimated that 130,000 acres of rural land in Florida will be converted to urban uses each year for the next 20 years (UF/IFAS 1999).

Over the past 25 years, the state of Florida has made aggressive efforts to protect vital forest and natural resources through the purchase of over 2 million acres of land threatened by *development* and associated health losses at a cost of over $2 billion. Additional lands will be purchased, and the monumental tasks of restoration, preservation, and protection will continue to be a major agenda for decades to come.

LITERATURE CITED

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