

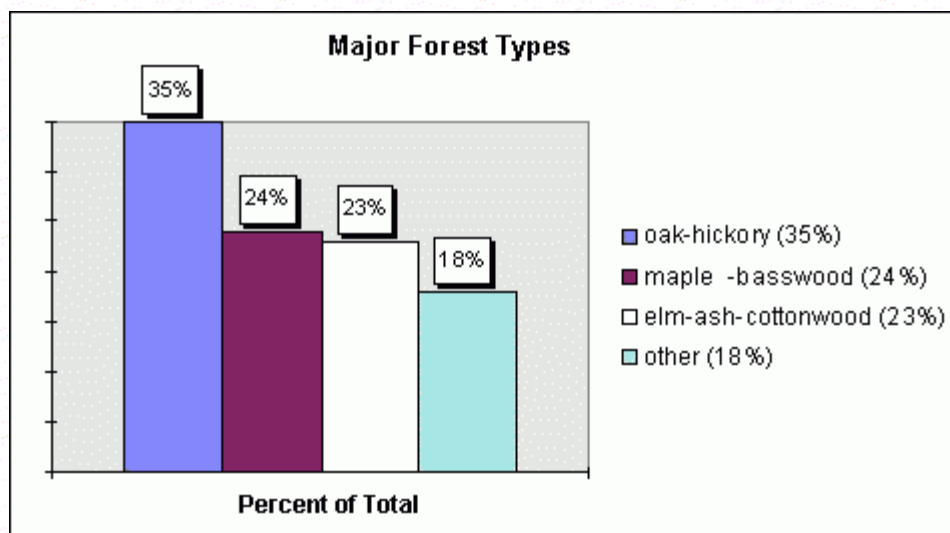
# 1998 Forest Health Highlights

## Iowa

### The Resource

Over 5 percent (2.1 million acres) of Iowa is covered by trees and forests. Our forests have significant impacts on our agricultural-based economy, protection of our drinking water supply, critical wildlife habitat and overall enjoyment of the place that we call Iowa. Wood industries employ over 7,000 Iowans, producing lumber and high quality wood products. Trees in our small and large communities, our “urban forests,” increase property values and conserve cooling and heating energy. Our forests are vital to our state’s future.

Because our forest resources are valuable to the citizens of Iowa, the Forestry Division of the Iowa Department of Natural Resources (DNR) began monitoring forest and tree health conditions in the late 1970’s. This monitoring effort today is used to determine overall forest and tree health conditions, the status of natural and exotic insect and disease problems, and to provide up-to-date information for private and public managers to aid in the sustained management of Iowa’s forest resources.



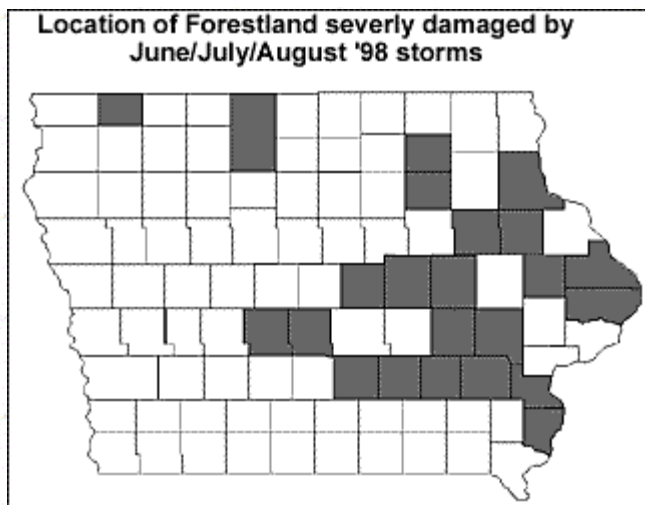
### **Monitoring Efforts for 1998**

Estimates of serious forest and tree insects, diseases, and weather impacts, were determined by aerial surveys of over 141,832 acres of representative forested areas across the state conducted during the Summer of 1998. Visual surveys from DNR Foresters, municipal foresters, and trained volunteers were also evaluated, as well as aerial survey assistance from the USFS, in determining forest and tree health conditions and locations of pest problems. Potentially the greatest threat to our forests is from the famous “Gypsy Moth,” (not yet established in our state, but potentially serious) which required placement of 6,000 pheromone survey traps by the IDALS State Entomologist's Office and selected volunteers to determine infestation areas and sites in need of quick eradication efforts.

### **Weather**

A mild Winter to a wet Spring, leaf flush occurred statewide by the 1st week in May. Signs of tattered leaves was reported across the northern portions of the state on hackberry *Celtis occidentalis* and bur oak

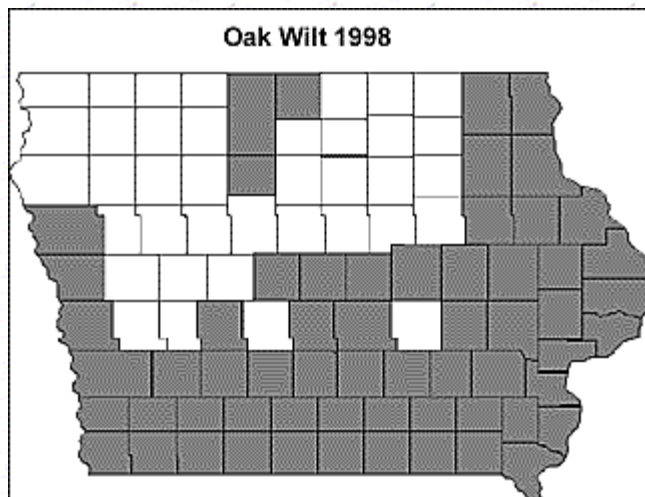
*Quercus macrocarpa*. Heavy rains caused extensive flooding in the Nishnabotna River valley. From June 13th to August 24th, a large portion of the state was battered by a series of severe storms. These storms involved 78 tornadoes, 100+ mph straight winds, large hail and heavy rain.



Trees within 54 cities and on 20,694 acres of forest were twisted broken and blown completely over. A total of 34 counties were declared federal disaster areas eligible for public assistance and 81 counties became eligible for federal individual assistance due to these storms. A total of 65 million board feet of private timber worth approximately \$20 million was severely damaged.

### Forest Insects & Diseases

Oak Wilt, caused by the fungus *Ceratocystis fagacearum*, invades the water-conducting tissues (xylem) of oak trees and causes the foliage to wilt and die. This continues to be the most serious tree disease in Iowa impacting 2,607 new acres. Although all species of oaks are susceptible, the red oak group, especially black oak (*Quercus velutina*) and red oak (*Quercus rubra*) often die within weeks of infection. The White Oak family continues to show signs of decline due to the droughts of the late 1980's and saturated soils of the early 90's.



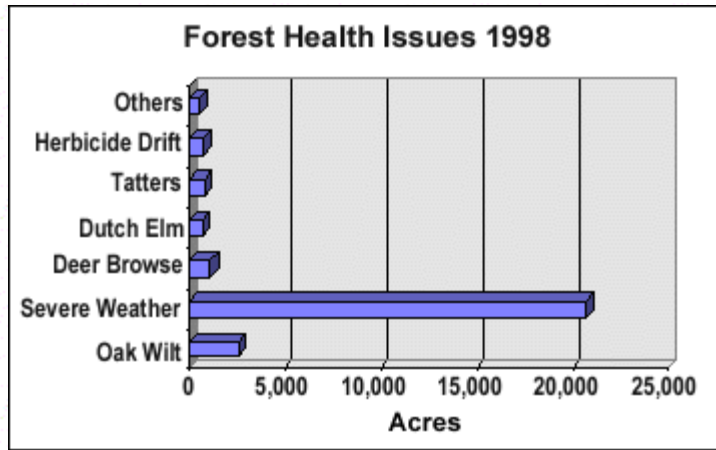
Secondary diseases such as Armillaria Root Disease (*Armillaria spp.*) and secondary insects like Two-lined chestnut borer (*Agilus bilineatus*) impacted over 170 acres statewide.

Dutch elm disease (DED), caused by the fungus *Ophiostoma ulmi/novo-ulmi*, has reestablished itself across Iowa impacting 727 acres of American elm (*Ulmus americana*) and red elm (*Ulmus rubra*). Lack of sanitation and removal of infected trees has contributed to the increase by providing breeding sites for fungus carrying bark beetles.

Browsing damage by White-tailed deer *Odocoileus virginianus* impacted 1,150 acres of newly established forest and Christmas tree plantations in 93 counties according to DNR foresters.

A recent discovery of Pecan Case Bearer *Coleophora laticornella* was

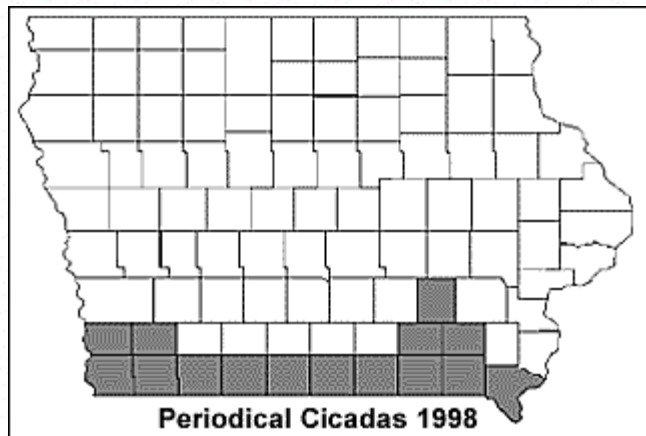
confirmed in 5 extreme NE Iowa counties on black walnut *Juglans nigra*. Visual observations found approximately 75 acres of 3 to 7 year old plantation showing symptoms of severe stem deformation.



Continued research by Iowa State University on the cause of wide spread Ash Decline of native woodland white ash *Fraxinus americana* and green ash *Fraxinus pennsylvanica* has confirmed that it is not Ash yellows, rather a new organism. Further study is ongoing, but recommendations of planting ash should include avoiding pure stands, diversify as much as possible and plant trees in appropriate soil types.

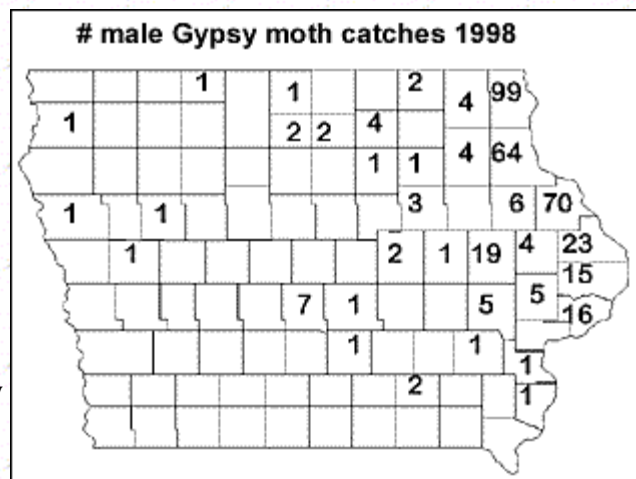
Other pests noted in limited numbers included outbreaks of the Yellow necked caterpillar *Datana ministra* impacting ornamental oaks. Anthracnose *Gnomonia* and *Gloeosporium* was heavy on hard and soft maples across the state during Spring due to wet and humid conditions. This foliage disease of leaf blights and spots may appear to be serious, but does not seriously harm established trees.

The 17 year locusts or cicadas *Magicicada septendecim* made another appearance in 1998, this time in areas around Shendandoah/Sidney and Ottumwa/Centerville. These non feeding adults although noisy, cause only small limb damage to approximately 1,000 acres due to their egg laying habits.



### Gypsy Moth in Iowa

The Gypsy Moth (*Lymantria dispar*) is a potentially serious insect defoliator of Iowa's native deciduous trees and forests. Several eradication projects were conducted by the State Entomologist of the Iowa Department of Agriculture and Land Stewardship (IDALS) in cooperation with USDA APHIS within Cedar Rapids and Des Moines Metro areas during May, 1998. Infested nursery stock was unknowingly received from Ohio by several private garden centers and a new Cedar Rapids residents moved from Detroit brought Gypsy moth pupa cases with his picnic table. Detection surveys in 1997 located these sites and successful treatments eliminated Gypsy



moth from these sites.

During 1998, IDALS coordinated Gypsy moth survey trapping involving 6,600 pheromone traps. This yielded 372 male moths an increase of over 200% from 1997. Gypsy moth populations are building in neighboring states to the east in Illinois and Wisconsin. NE Iowa counties, including Yellow River state Forests border these states and showed the majority of increased moth catches. No immediate dangers exist, but it is critical to remain vigilant and from Gypsy moth populations while small through survey trapping and eradication to prevent serious damage to the forest resources.

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