



## Grassland: Orchard

### Description

Orchards are agricultural lands with fruit-bearing trees or vines or linear rows of early harvested trees (e.g., tree nurseries) within a managed (usually well-mowed) grassland.

### General Condition of Feature

Most of the orchards in the Southern Lower Peninsula are considered to be in fair to good condition as wildlife habitat (~70%). Most of the remainder is considered degraded or very degraded (~25%).

### Associated Natural Communities

N/A – no native natural communities

### Associated Species of Greatest Conservation Need

#### REPTILES

eastern hognose snake (*Heterodon platirhinos*)

#### BIRDS

Yellow-billed Cuckoo (*Coccyzus americanus*)

Northern Flicker (*Colaptes auratus*)

Eastern Kingbird (*Tyrannus tyrannus*)

Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*)

#### BIRDS cont.

Northern Mockingbird (*Mimus polyglottos*)

#### MAMMALS

least shrew (*Cryptotis parva*)

prairie vole (*Microtus ochrogaster*)

woodland vole (*Microtus pinetorum*)

### Associated Threats

#### MODIFICATION OF NATURAL PROCESSES

- Grazing and mowing patterns: A lack of maintenance can lead to succession and a decline in orchard quality.

#### HABITAT CONVERSION

- Industrial, residential, and recreational development
- Incompatible natural resource management: Michigan Department of Agriculture regulations (Destructive Insects and Plant Disease Act No. 72, Public Acts 1945) require that old and untended orchards in close proximity to active orchards be removed to reduce the likelihood of disease and pest transmission.

#### POLLUTION

- Pesticides and herbicides

#### BIOLOGICAL INTERACTIONS

- Invasive plants and animals

### Conservation Actions Needed [Threats addressed]

#### LAND, WATER & SPECIES MANAGEMENT

- Develop disturbance regimes that prevent establishment of additional woody vegetation. This is likely to primarily involve mowing. [Grazing and mowing patterns; Invasive plants and animals]
- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals]
- Promote pest management techniques that are less chemical dependent. [Pesticides and herbicides; Incompatible natural resource management]

#### LAW & POLICY

- Work with municipalities to promote planning and zoning to protect orchard areas from development or to convert it to features that have greater value to wildlife. [Industrial, residential, and recreational development]

#### CAPACITY BUILDING

- Coordinate with Department of Agriculture staff to minimize destruction of abandoned orchards that have value to wildlife. [Incompatible natural resource management]

### Research and Survey Needs

- An inventory needs to be conducted to determine the location, condition, and size of orchards.
- Study the effects of timing and intensity of orchard management on the value to wildlife of these systems. Are there other variables associated with orchard management that affect their value to wildlife?
- Examine economic and wildlife impacts of changes in management techniques.
- Determine how orchard management has changed since its inception in the Southern Lower Peninsula. Have the species planted or management techniques changed? How has this altered the value of orchards for wildlife?
- Evaluate the impact of wildlife depredation on orchard plants. Develop techniques to reduce depredation and quantify their effectiveness.
- Assess the importance of orchards as wildlife habitat.

**MICHIGAN'S WILDLIFE ACTION PLAN**  
**TERRESTRIAL SYSTEMS: SOUTHERN LOWER PENINSULA**

- Evaluate the fate of orchards after establishment. How often do Christmas tree plantings get neglected, remain unharvested, and transition to forested feature types? How does the value to wildlife of orchards change as they age?
- What is the impact of Destructive Insects and Plant Disease Act No. 72, Public Acts 1945 on the value of orchards to wildlife?

Monitoring

- Track acreage and distribution of orchards using collected county agriculture statistics.
- Track changes in species selected for cultivation. Changes to dwarf varieties may effect the value to wildlife of orchards.
- Track changes in timing and method of harvest.