

Impacts of Russian olive



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Outline: Impacts of RO on three scales

1 Trees

2 Populations (three types)

- Windbreak
- Savannah**
- Problem (or, closed canopy)

3 In landscapes



Impact of individual trees

- Structural
 - Perches
 - Shade
 - Windbreak
- Biological
 - Adds N to system
 - FOOD

*Impact depends on if N is
limiting in the landscape*



FOOD

- Eat fruit on tree
 - Non-disperser
 - Rodents
- Eat entire fruit, seed passes through
 - Disperser
 - Coyote, starling, pheasant, raccoon
- Eat seeds, destroying them
 - Predator
 - Larval flies



Impact of individual trees

- Structural
- RO often grows where there are no native trees of its stature
 - Perches
 - Shade
 - Windbreak



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windrow



Impacts of windbreak populations

- Soil stabilization
- Reduce plant dessication
- Humans:
 - Reduced noise
 - Increased comfort
- Seed donor to problem populations?

savannah



Impact of Savannah populations

- Seed donor to problem populations?
- Incipient problems themselves?
- Increased perennial weeds
- Otherwise, function as individual trees
 - Structural
 - Biological



problem



Problem populations

- Closed canopy
- Excludes Cottonwood and willow
- Almost no understory forage for livestock



Problem populations and birds

- No place for cavity nesters:
 - tree swallows, chickadees, woodpeckers, bluebirds
- Provides magpie nesting sites
- Poor habitat for
 - wood ducks
 - turkeys



RO may contribute to biotic resistance to Tamarisk in Savanna and problem populations

- Woody plant diversity excludes Tamarisk
- More than 2 woody plant species, no Tamarisk
- Only 2 and Tamarisk will invade
- RO functions as a native species

RO is a structural element

Before



After



Removal + flooding = cottonwood



