

OSU Extension Service Mission Statement

The Oregon State University Extension Service engages the people of Oregon with research-based knowledge and education that focus on strengthening communities and economies, sustaining natural resources, and promoting healthy families and individuals.



OSU Extension *is...*

Check us out online at:
extension.oregonstate.edu

Wildlife on your land:

Boon or bane?

Oregon State
UNIVERSITY

Extension
Service

Dana Sanchez

Asst. Prof. in Dept. of Fisheries and Wildlife
& Extension Wildlife Specialist

Dana.Sanchez@Oregonstate.edu



Roadmap

- Useful concepts and reminders
- How conflicts might arise
- Basics on how we can manage conflicts
- Usual suspects and some specific strategies
- How we can provide opportunities



Broad scale benefits of functioning systems

- Nutrient cycling
- Pollination
- Germination
- Seed dispersal
- Soil generation
- Habitats & niches
- Predators on pests
- Excrete natural fertilizer
- Wildfire risk reduction
- Soil stabilization
- Water quality, quantity, runoff storage



However...

Sometimes animals don't
comply with our plans!

Let's remember what
"motivates" animals



Habitat, a biological definition

Habitat is the combination of factors

- biotic
 - abiotic
- necessary to produce
- Occupancy, survival, and reproduction by members of a given species

Needs provided by habitat:



- Food
- Water
- Cover
- Other species-specific needs

Native species and species habitat requirements

- Each species' habitat requirements reflects the native communities in which the species evolved
- Our efforts to provide habitat for native species will be most successful when we can provide native plants, structures, and habitat elements
- Our efforts to exclude animals should be based on the same framework, but in reverse

Build it (or protect it) and they will come...

>>We can provide necessary elements of habitat
for native species...

>>We sometimes provide habitat "opportunities"
for guests we do not want...



Keep Wildlife WILD!



Habituation can be deadly, damaging, and dangerous

- “Fed bears are dead bears”
- A wild animal is always a wild animal
- Habituation often centers on food
 - Decreased fear of humans
 - Increased aggressiveness for food or space
 - Competition/elimination of domestic “competitors”
 - Disease or waste products
 - Prey species attract predators
 - Other risks...

What about you?

- Main interest is in managing wildlife damage in:
 - Home or other structures
 - In yard or garden
 - In field crops and/or forestry
 - In livestock operation
- Main interest is in managing to enhance wildlife
- Would like to have wildlife present on land “up to a point”

Conflicts arise when:

- Animals get into & occupy structures
- Animals eat what we don’t want them to:
 - Ornaments
 - Personal food
 - Production crops (plant or animal)
- Animals cause structural damage or loss
 - Structures or crops
- Animals pose a physical risk
 - direct or indirect

Basic tactics

- Block
- Deter
- Remove the animal(s)
- Change the game –
 - Remove the “draw” or increase the risks/costs to the animal



How do you prevent wildlife damage?

- Learn about the life cycle of wildlife species
- Assess your level of tolerance, resources, and possible neighborhood solutions
- Think ahead and implement exclusionary measures for long-term success
- Utilize multiple tools tailored to your home, garden, or operation

For prevention of all wildlife conflicts...

- Institute exclusion solutions before the problems develop
 - Primary access point
 - Border of entire area
 - Around specific area of concern
- Keep all food and garbage indoors or in wildlife-proof containers
- Do not leave pet food out unattended
- Consider short- and long-term solutions. Remember that hazing and/or trapping are only temporary solutions

Assessment

- How serious is the problem?
 - insignificant, tolerable, beyond acceptable?
- Are there health or safety concerns?
- What is the context?
 - For example is the problem limited to certain seasons?
- Is the conflict or problem likely to reoccur?

Homes and buildings, Plan A

- Prevent your house/structure from being a shelter opportunity
 - Plan blocking efforts with particular species in mind
- Do not provide food that “advertises” your place

Homes and buildings, Plan B

Once you have unwanted visitors –

- Evict
 - Physical trap & remove live animals
 - Drive out & Deter – Make your home unbearable to them
 - Lethal trap or poison
 - If seasonal visitors, wait until they (and their kids) leave
- Once clear, go back to Plan A to exclude

Some examples



With many thanks to Nancy Taylor
Oregon Dept. of Fish and Wildlife
541 757-4186 ext 226
nancy.c.taylor@state.or.us

How to keep raccoons out

- Install hardware cloth
 - bury at least 6 inches down and 6 inches out from the building
- Replace and reinforce damaged screen vents
- Keep crawl spaces tightly covered
- Secure pet doors at night or use electronic pet doors. Use one-way doors.
- Secure openings in chimney caps
- Adopt a noisy dog to patrol the yard



Move cat & dog food indoors!



Remember...

- ❖ In Oregon, raccoons are classified as a Furbearing Mammal and are therefore protected (OAR 635-050-0052)
- ❖ A permit from ODFW is available for live trapping. Transported raccoons are required to be euthanized after transport. Most folks use a .22 while it's in the live trap.
- ❖ Wildlife diseases prevent ODFW from allowing relocation (e.g., distemper)

Raccoon Denning Deterrent

- A radio set to a talk station and /or
- a strobe light placed in an attic or crawl space
- often sufficient to cause a raccoon to move from the area and take her young

Raccoon juveniles

- Most young born March-June
- Weaning occurs 3-4 months of age
 - Juveniles may start moving out July-Sept

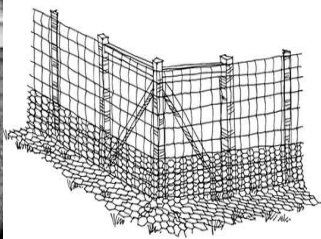


Skunk Exclusion

Skunks don't climb high fences



• Seal off foundation openings



• Use wire mesh fence around garden and bury 1-2 feet in ground

Other skunk control methods

- Remove lumber and junk piles
- Store garbage in tightly sealed cans
- Bring in pet food and water at night
- Use insecticides to control grubs in lawn
- Restrict use of bird seed
- Institute rodent control program
- Never leave out food for wild animals
- Remove downed fruit
- Place ammonia soaked towels in den

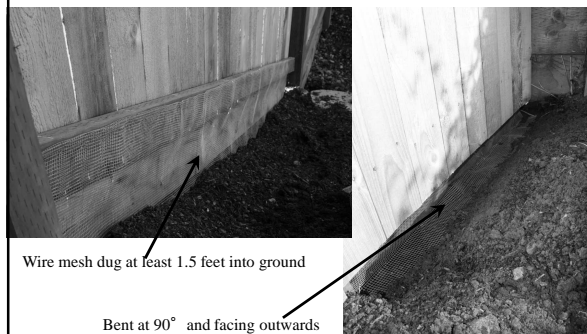


Trapping Skunks...

- Use live traps near den entrance
- Traps should be solid sided if open, plan on using a tarp so that you don't get sprayed
- Mayonnaise, peanut butter, & dried fruits are good baits that don't attract cats
- Treatment for skunk spray :1 qt 3% hydrogen peroxide+ ¼ cup baking soda+ 1 tsp liquid soap



Rodent Exclusion



Wire mesh dug at least 1.5 feet into ground

Bent at 90° and facing outwards

Rodent Control:

- Control vegetative cover and refuse: a messy garden and fermenting compost pile is attractive to rodents
- Flood burrows/tunnels with garden hose
- Let your pets do some of the work!
- Bittering Agents: Thiram and Ro Pel
- Trapping, but must locate the active tunnel
- Fumigants or gas cartridges, when lit, burn through rodent tunnels producing carbon monoxide which kill rodents. This technique commonly used on large farms.
- Please keep in mind secondary impacts of pesticides:
 - 2 years ago Zinc phosphide bait for voles killed several hundred geese

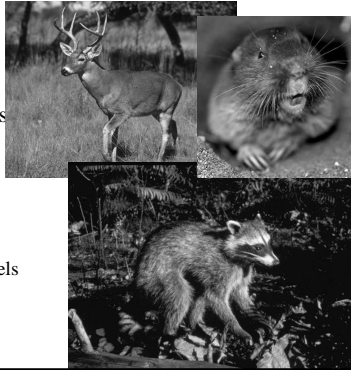


Yard and garden

- Same basic strategies
 - but broader spatial scales and size of animals increase the challenges

Common Yard & Garden Culprits

- Raccoons
- Skunks
- Non-burrowing rodents
- Deer
- Nutria
- Burrowing rodents
 - e.g., moles, voles, gophers, ground squirrels
- Turkeys



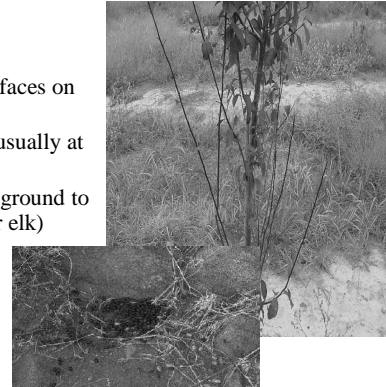
And in broader expanses...

- elk
- black bear
- mountain beaver, or “boomers”
- voles, again



Signs of Deer Damage

- Hoof prints
- Deer in yard
- Jagged or torn surfaces on leaves or stems
- Horning to trees, usually at waist level
- Damage from the ground to 6' high (higher for elk)
- Deer scat



- Prefer heavily fertilized ornamental and garden plants
- Browsers = use growing tips of shrubs, vines, and small trees
- Favorite native foods are trailing blackberry, red huckleberry, grasses, forbs, thimbleberry, mushrooms, nuts, lichens and cherry
- Does will deliver twins when both her body condition and forage quality are high (weather dependent and land mgmt. dependent)

Plants that deer don't like:

- | | |
|-----------------|-------------------|
| • Barberry | • St. John's Wort |
| • Buffalo berry | • Wormwood |
| • Gooseberry | • Rhubarb |
| • Honeysuckle | • Russian olive |
| • Juniper | |
| • Lilac | |
| • Raspberry | |

They generally avoid thorny plants

Fencing

- Should be a minimum of 6 ½ feet tall
- Consider building to 8' high
- Metal fences are longer-lasting and sturdier than polypropylene
- Also:
 - Consider height
 - Topography
 - Maintenance



A single electric wire along the top discourages deer from jumping over

Charge has to be on for it to work

Fence excludes predators as well

Maintain bottom edge of fence: Fill in openings > 6"



Fencing Quality reminder



Scarecrows



- Motion activated water deterrent
- Element of surprise
- **Can be effective against birds, deer, turkeys
- May need multiple scarecrows to cover your garden area
- Assess foot traffic and wind...
- Must maintain battery

Deter by taste

- Commercial products are available
 - Most need reapplication after rain
 - Vary in effectiveness
- *Non-commercial options may be available (hydrolyzed casein)
- Check out the research by APHIS - A great source of current research!

Barriers for individual plants

- Cloches: Bell-shaped protection, built out of milk gallons, pvc tubing, or other plastic
- Tree guards



Hazing

- Water scarecrows
- Rubber bullets (permit from ODFW)
- Bangers, screamers, shell-crackers, propane cannons.
- Need a permit from State Fire Marshal, signed by ODFW biologists.
- Call Oregon State Fire Marshal at: (503) 373-1871, x272 or x274



The small burrowers

Townsend's mole

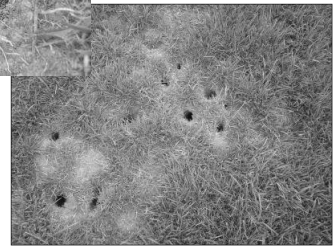


Pocket gopher

Vole (meadow mice)



Can create extensive yard damage



Moles

- Eyes not visible
- Mounds are round
- Tunnels are visible because they are shallow



Gophers

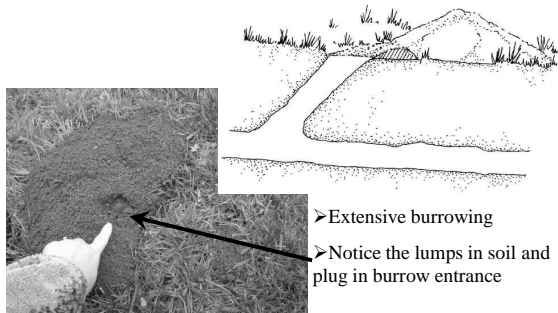
- Eyes are visible
- Mounds are crescent shaped
- Tunnels not visible
- Plug or open hole is visible in mound

Northern Pocket Gopher



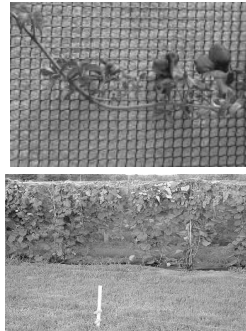
- Burrowing rodent
- Herbivores that prefer roots, bulbs, tubers
- Does not hibernate
- Young born Feb. to June

Pocket gopher mounds



- Extensive burrowing
- Notice the lumps in soil and plug in burrow entrance

Gophers



- Exclude with hardware cloth or plastic mesh <math><1/2''</math>
- Bury at least 12'' deep
- One client dug a 2' trench lined it with hardware cloth and filled it with rocks to keep gophers from accessing his yard

Moles

- Insectivores
- Prefer moist, loose soils of the sort favored by grubs and earthworms
- Townsend's Mole (8-9'' long) is likely to eat plant tubers and roots



Mole Control

- ✓ L-shaped concrete with edges 8-12'' deep
- ✓ Castor Bean or Castor oil plant; gopher plant, others
- ✓ Treat lawn for grubs to reduce main food source for the moles
- ✓ Actively harass moles so they will seek homes elsewhere (stomp on runways)



Voles



- Short lifespan: 2 to 16 months, but high reproductive potential
- Most common complaints re: gray-tailed vole
- Reach 5 to 7 inches long at maturity, dep. on the species
- Create extensive tunnel systems, or "runs"
- Damage gardens by eating tubers, seeds, and bulbs (prefer grasses)

Meeting the vole challenge

- Exclusion is difficult for larger areas of herbaceous plants
 - Creation of barriers can work, esp. around orchard trees
- Poison baiting allowed, but follow the rules!
- Let nature help – Consider increasing natural predation:
 - Raptor perches
 - Don't persecute other small- & medium-sized predators

Basic tactics

- **Block**
- **Deter**
- **Remove the animal(s)**
- **Change the game –**
 - Remove the “draw” or increase the risks/costs to the animal

Always remember...

- Any garden is a potential food & shelter resource for wildlife
- *Well-built exclusion is the best long term solution*
- *Native plant species are adapted to deal with native plant-eaters*
- Removing the resource (food) or access to it is often easier than removing the animal
- Never attempt to feed or rehabilitate wildlife yourself
- Always welcome to call ODFW for advice or hire a private wildlife control operator if you are not successful with your initial wildlife damage efforts

Go online for research from APHIS

- http://www.aphis.usda.gov/wildlife_damage/nwrc/index.shtml
- http://www.aphis.usda.gov/wildlife_damage/nwrc/research/forest_resources/publications.shtml
- APHIS Goose contact:
 - Dave Williams in Portland 503-326-2346

Other ODFW links of interest

- http://www.dfw.state.or.us/wildlife/license_permit_s_apps/wildlife_control_operator_contacts.asp
- http://www.dfw.state.or.us/wildlife/living_with/

Some of the many resources

- Prevention and Control of Wildlife Damage, Editors, Scott E. Hygnstrom, Robert M. Timm, Gary E. Larson. 1994. University of Nebraska-Lincoln. 2 volumes: <http://icwdm.org/handbook/index.asp>
- Outwitting Critters. A Humane Guide for Confronting Devious Animals and Winning. 1992. Bill Adler. The Lyons Press. NY, NY. 256 pp.
- Wildlife Control Operator Training Manual. 2007. Rick Boatner et al. Oregon Dept of Fish and Wildlife.



Oregon Conservation Strategy –

