Managing Wildlife

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UNIVERSITY OF MARYLAND EXTENSION

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Overview

- Identify
  - Main species of concern
- Manage
  - Integrated pest management

IDENTIFY

Identify – Main culprits

- Deer
- Groundhogs
- Canada geese (resident & migratory)
- Raccoon
- Rabbits
- Beaver
- Voles
- Bear (Western MD)
- Foxes
- Moles
- Snakes (won't hurt your garden, can definiitely hurt your backyard livestock)

USDA National Agricultural Statistics Service (NASS) 2012

Region	Estimated Economic Loss	Percent of Loss by Species						Amount Spent on Preventative Measures
		Deer	Resident Geese	Migrant Geese	Bear	Ground -hogs	Other Species[2/]	
	Dollars	*Percent*						*dollars*
Western (Allegany, Garrett)	200,000	70	4	1	14	7	4	10,000
North Central (Baltimore, Carroll, Frederick, Harford, Howard, Montgomery, Washington)	4,300,000	80	5	1	[1/]	13	[1/]	175,000
Southern (Anne Arundel, Calvert, Charles, Prince George's, St. Mary's)	3,400,000	80	3	5	[1/]	11	[1/]	50,000
Northern Eastern Shore (Cecil, Caroline, Kent, Queen Anne's, Talbot)	1,200,000	65	10	19	[1/]	5	[1/]	125,000
Southern Eastern Shore (Dorchester, Somerset, Wicomico, Worcester)	900,000	80	7	4	[1/]	5	3	50,000
Maryland	10,000,000	77	5	6	[1/]	10	[1/]	410,000

[1/] Data not published due to insufficient number of reports.
[2/] Other Species include fox, beaver, muskrat, squirrel, vole, black bird, other birds, raccoon, and coyote. Data do not include potential crop losses due to stink bugs or other insects.

Identify

- If you don’t catch animals in the act.
- Look for clues
  - Tracks
  - Scat
  - Damage characteristics

Crop Damage

- Deer
- Canada geese
- Rabbit
- Groundhog
- Beaver

Herbaceous damage

Deer

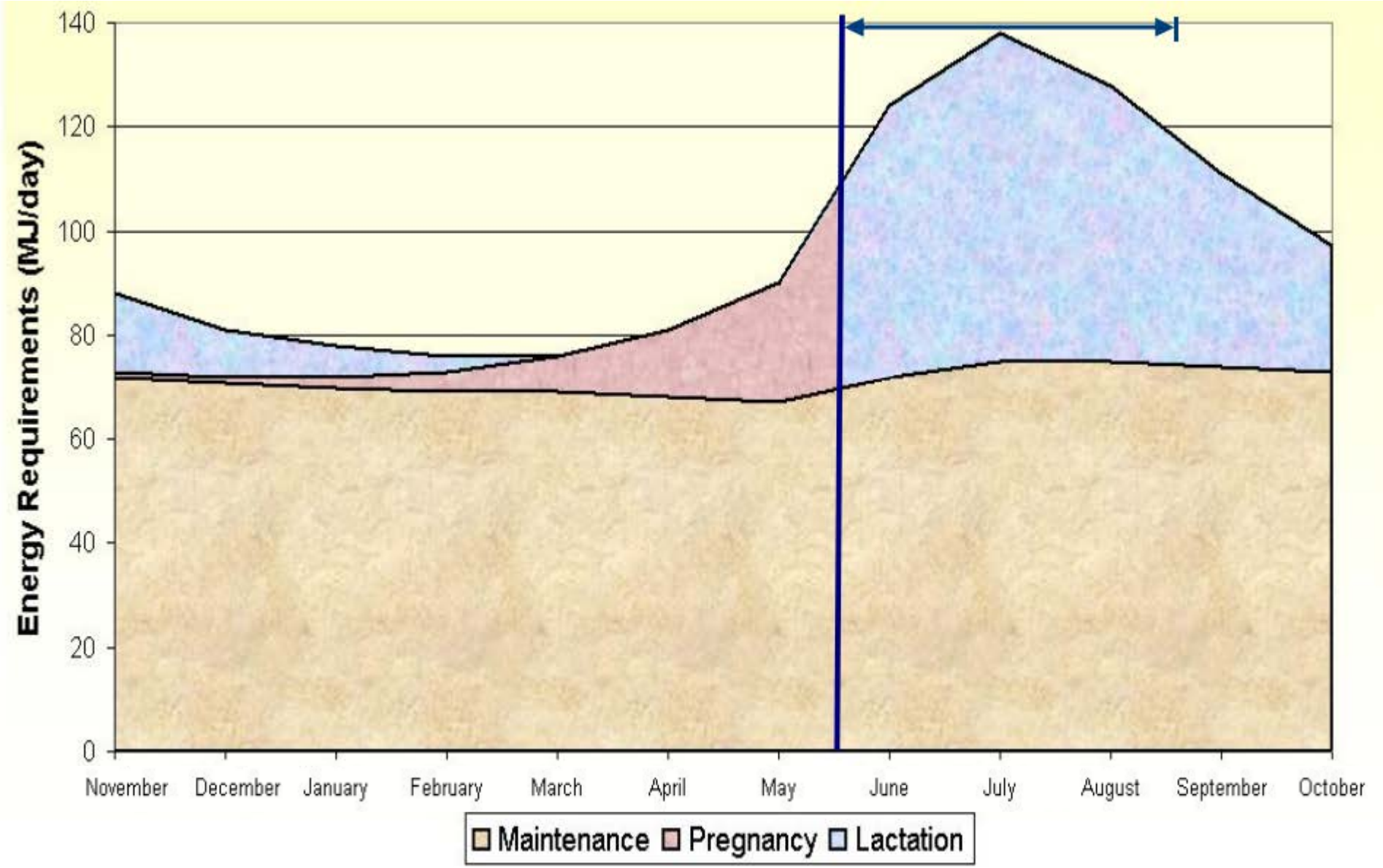
Rabbit

Unlike horses or rabbits, deer don’t have top front teeth.

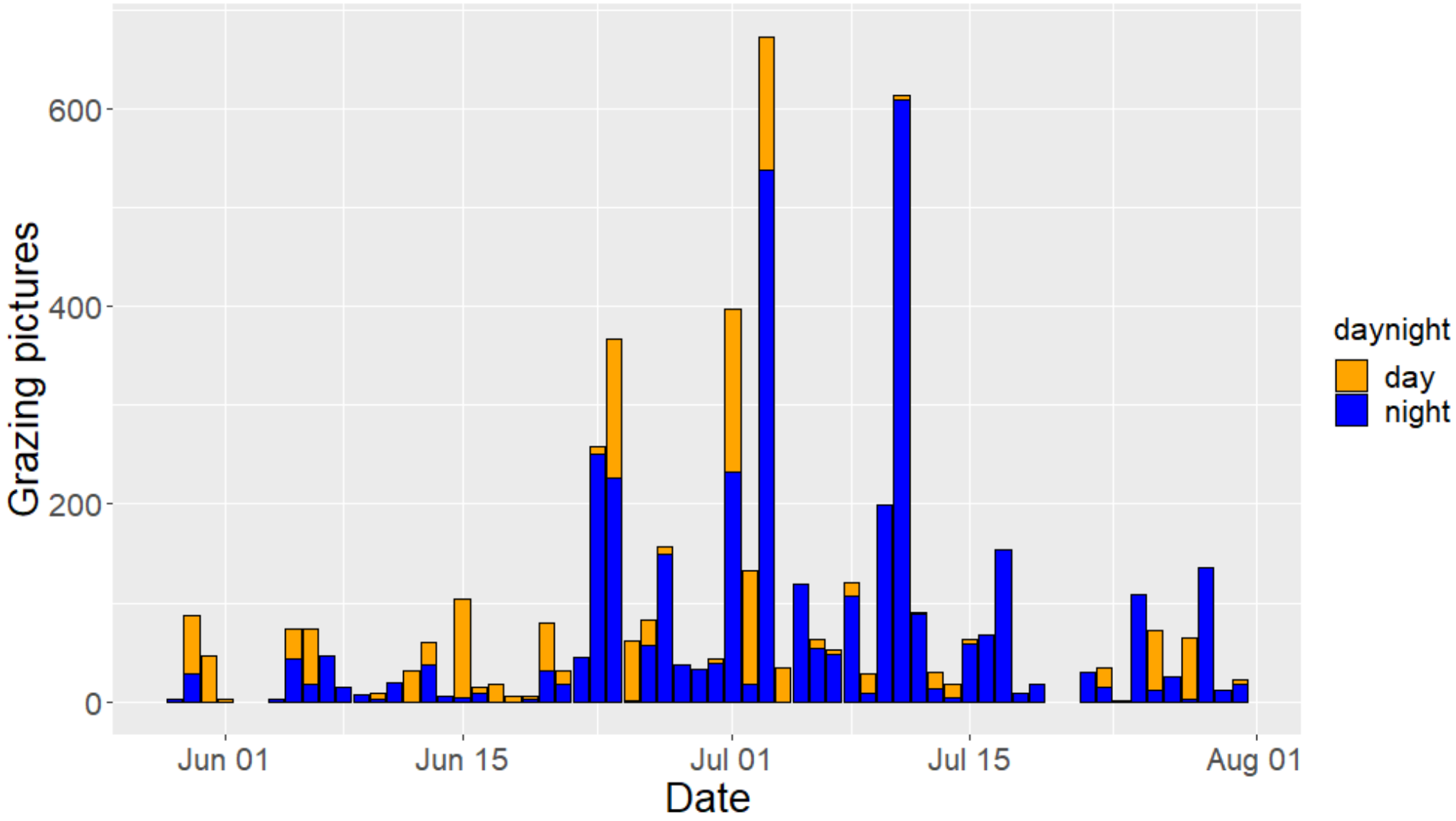
Deer

Rabbit

Energy needs increase in late spring / summer



Deer activity in soybean field (2021)



Twig/sapling damage

Rabbit

Beaver

Bark damage

Rabbit

Voles

Photo: Terry Kem

Rabbits above snowline, voles beneath

Underground root damage

Root damage must be a…

Voles are vegetarians, moles eat meat!

Mole?

No, moles are insectivorious

Probably a vole

Strip roots and leave pointed tips.

Poultry / Livestock Kills

- Raccoon
- Skunk
- Red fox
- Coyote
- Weasel / Mink
- Snakes
- Domestic dogs
- Domestic cats

Raccoon

- Often eat crop and entrails
- Bite heads
- Pull heads through chicken wire

CAMERA 1
03-08-2022 06:59:46
tasco

CAMERA 1
03-21-2022 07:16:21
tasco

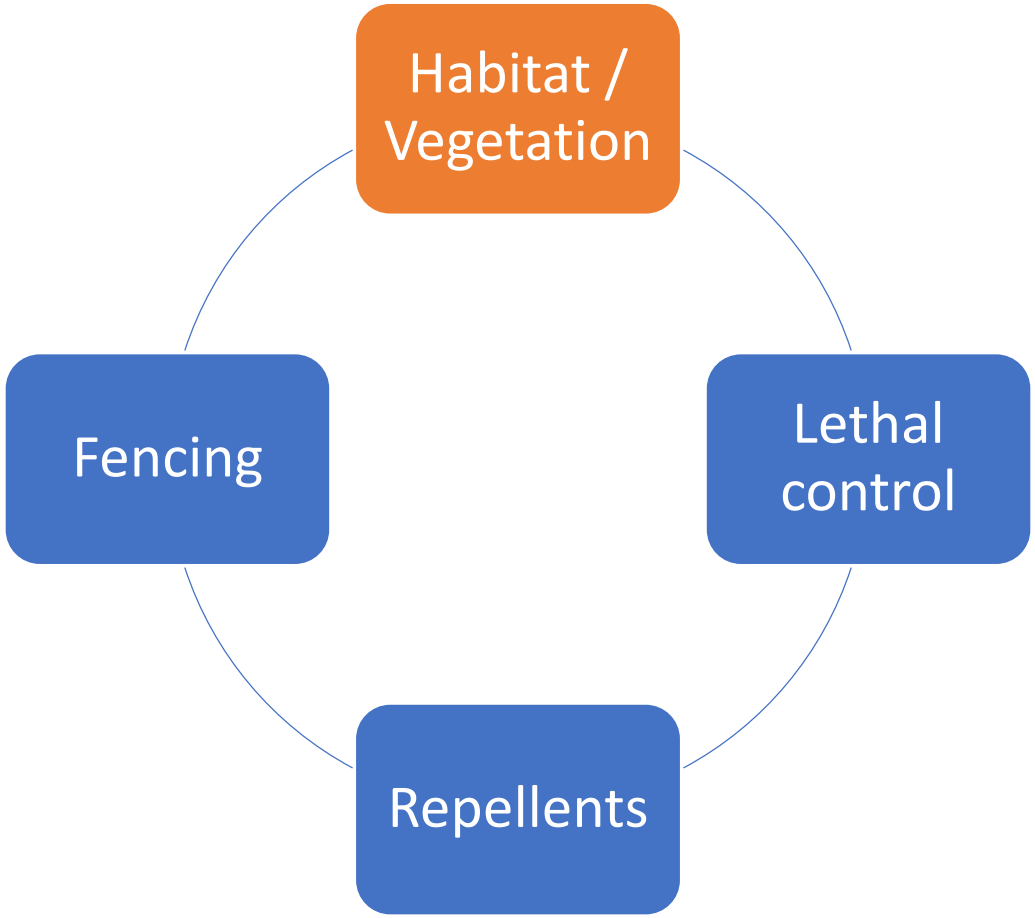
Rat snakes

MANAGE

Legal highlights

- Relocation of rabies-vector species (raccoon, skunk, and fox) is prohibited
- Outside of legal hunting and trapping seasons (where you would need your appropriate licenses), usually need a landowner permit obtained over the phone
- Hotline: US Department Agriculture (USDA), Wildlife Services
  Toll-free in Maryland: 1-877-463-6497.
  If outside of Maryland: 410-349-8130.

Integrated Pest Management



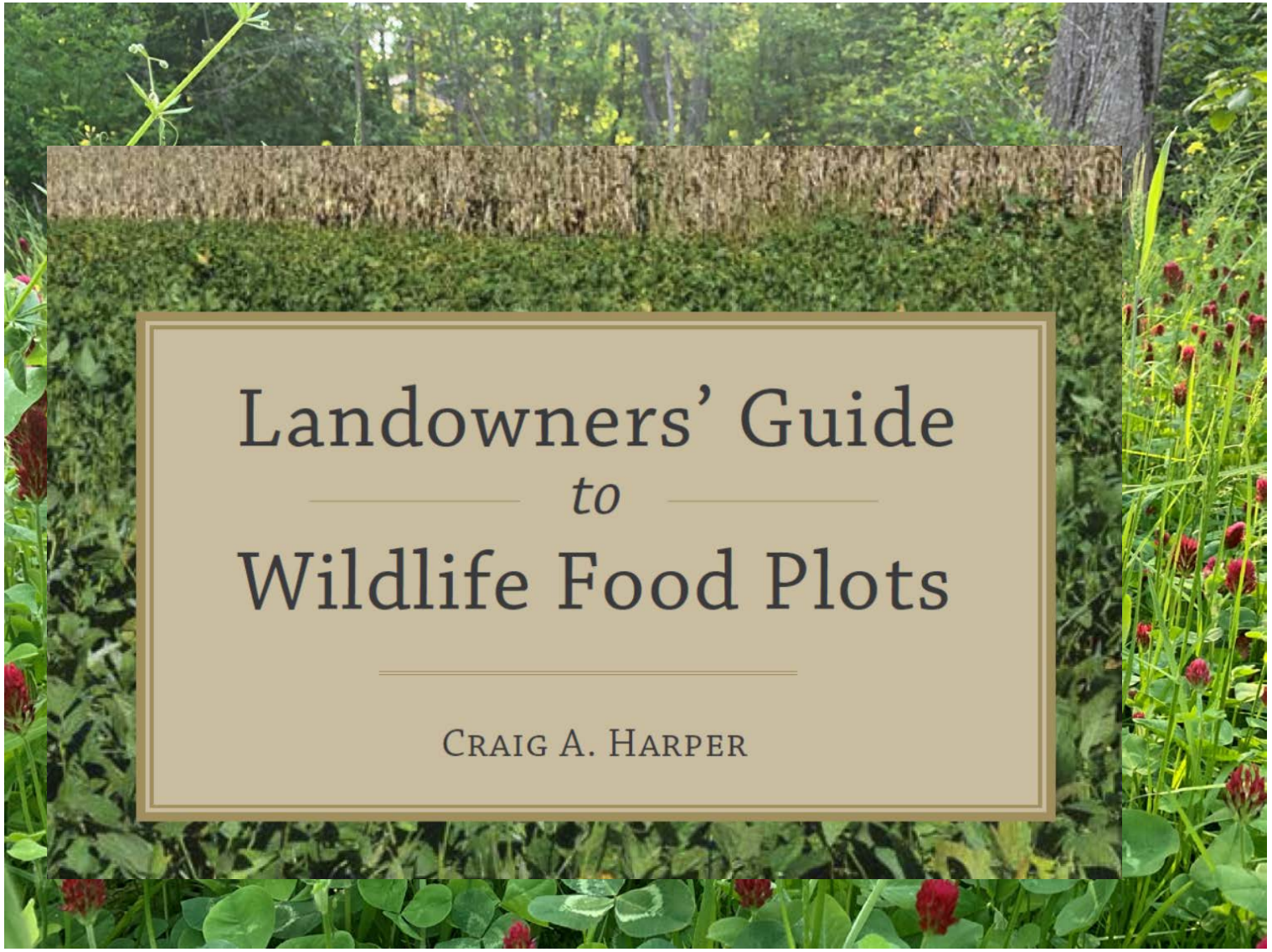
Manage habitat

Look at the needs of the species of concern

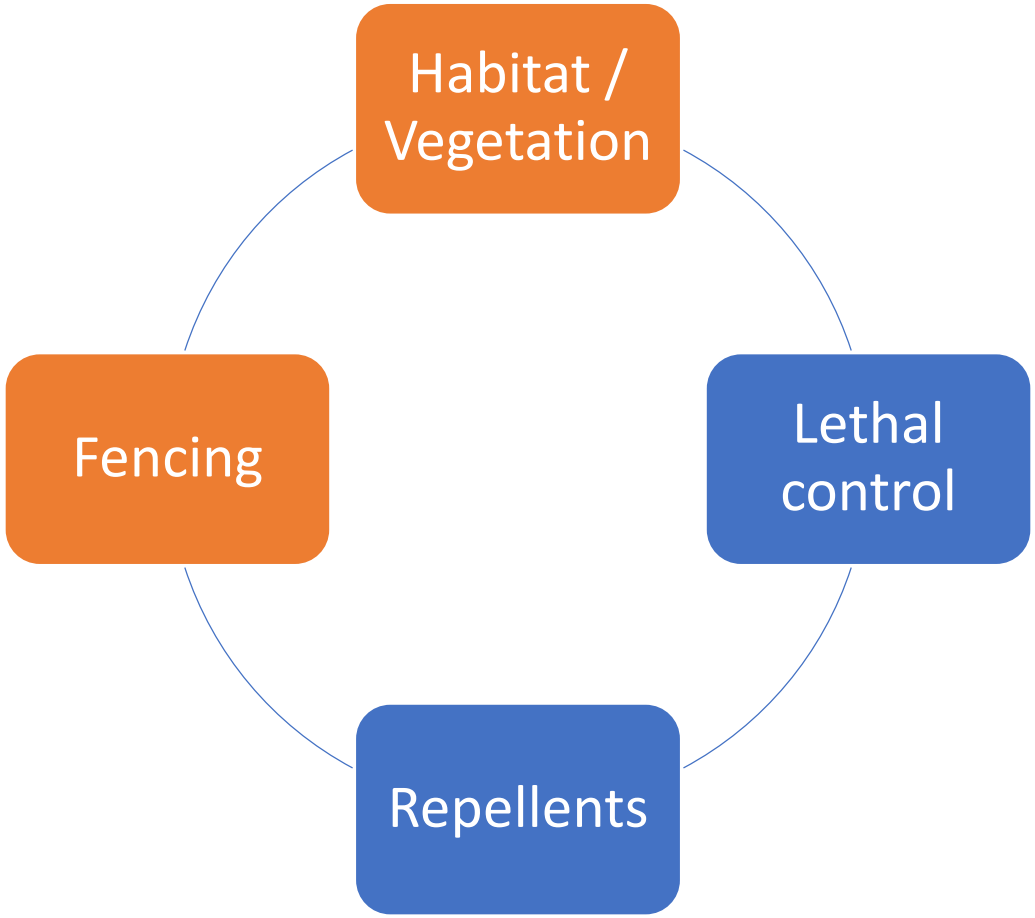
- Rabbits love brushy cover
- Voles like taller grass and mulch
- Deer like palatable broadleaf plants
- Geese need space to take off

Attract or divert deer

- Cool season perennials
  - Clovers
  - Alfalfa
  - Chicory
- Cool season annuals
  - Oats
  - Wheat
  - Winter pea
  - Brassicas (turnip, rape, radish)
- Warm season
  - Soybean
  - Corn
  - Cowpeas
  - Lablab
  - American Jointvetch



Integrated Pest Management



Small areas

- 3x5” mesh wire
- 4’ step-in stakes
- <10’ diameter circle best

Plastic mesh – works for deer, not for rabbits

Cornell University
Cooperative Extension

Forest Connect

Supporting Sustainable Management of Private Woodlands

An Extension Publication of the Department of Natural Resources, New York State College of Agriculture and Life Science, a Statutory College of the State University at Cornell University, Ithaca, New York

Low-Cost Fence Designs

– to Limit Deer Impacts in Woodlands and Sugarbushes

Peter Smallidge, NYS Extension Forester, Cornell University; Brett Chedzoy, Cornell Cooperative Extension Educator of Schuyler County; and Emily Staychock, Cornell Cooperative Extension Educator of Yates County

The white-tailed deer (Odocoileus virginianus) can significantly influence the diversity, longevity and sustainability of rural woodlands, forests and maple syrup sugarbushes. As selective browsers (Figure 1), deer will eat some plants more readily than they eat other plants. Many of the tree species deer prefer to consume are valued by owners as sources of timber, maple syrup, or as food-producing trees for wildlife, such as oak and maple. Deer also eat many native wildflower and understory plants.

Figure 1. Browse impact of deer on stump sprouts.

The effects of deer browsing on woodlands and sugarbushes can have long-lasting effects (called "legacy" effects) that persist for decades after deer impacts are reduced. In areas with a history of deer overabundance, the failure to establish and grow new, young trees is having a detrimental effect on woodlands and the potential to keep these areas healthy and diverse.

Under high deer impact, deer eat the plants that are used to assess if there is a problem. As deer impact increases, the evidence for deer impact decreases (Figure 2). To an untrained eye, a heavily browsed woods may appear, open, park-like and picturesque rather than degraded and impoverished. In woodlands, the evidence for the over-abundance of deer include one or more of these features:

- Park-like appearance in the woods (Figure 3)
- An understory dominated by invasive shrubs

Figure 2. Small exclosures are simple and relatively inexpensive tools to assess the impacts that deer have on forest vegetation. By excluding deer, vegetation may be able to respond and illustrate the intensity of deer browsing. (Photo courtesy of Paul Curtis)

T

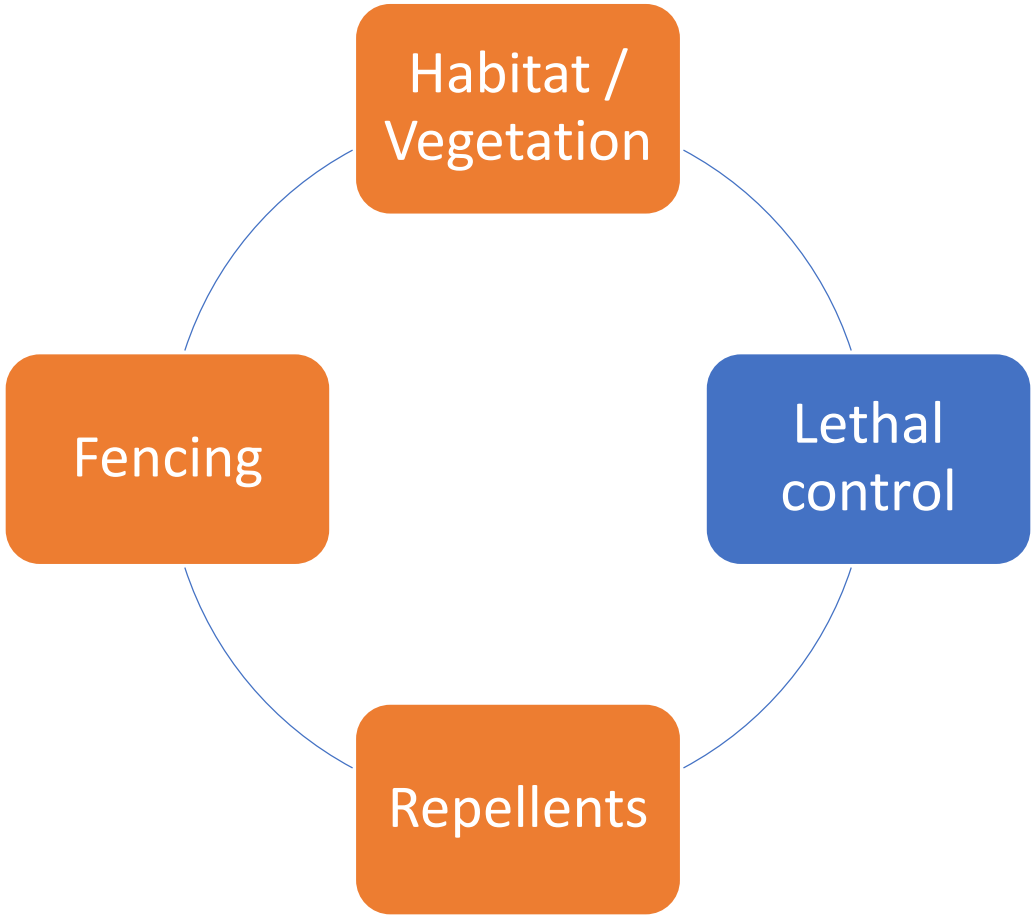
Electric fencing

- Two tiered – deer have poor depth perception

https://lgpress.clemson.edu/publication/managing-deer-damage-using-a-two-tiered-fence-system/

Birds, raccoons, squirrels

Integrated Pest Management



Repellents

MARYLAND COOPERATIVE EXTENSION
UNIVERSITY OF MARYLAND
COLLEGE PARK•EASTERN SHORE

Fact Sheet

Fact Sheet 810

Using Commercial Deer Repellents to Manage Deer Browsing in the Landscape

Damage to ornamental plants by white-tailed deer (*Odocoileus virginianus*) has increased dramatically over recent years. Deer damage to home landscapes and gardens is the number one complaint in suburban areas. An integrated approach to deer damage management can often be the most optimal way to deal with the problem. Using any one or a combination of strategies including population management, fencing, vegetation management, and commercial repellents or scare tactics is the best approach to minimize negative impacts from deer. Commercial deer repellents have become increasingly popular with residential homeowners as a means of keeping deer damage at tolerable levels. For more information on deer man-

erally more effective when the following conditions exist:

1) Low to moderate deer pressure
2) Light to moderate feeding damage
3) Small acreage
4) Repellents are not being used on adjacent properties
5) Alternative food sources are available

If any of the above conditions are not typical of your situation, then you should compare the cost of using repellents to fencing systems or other available deer management practices.

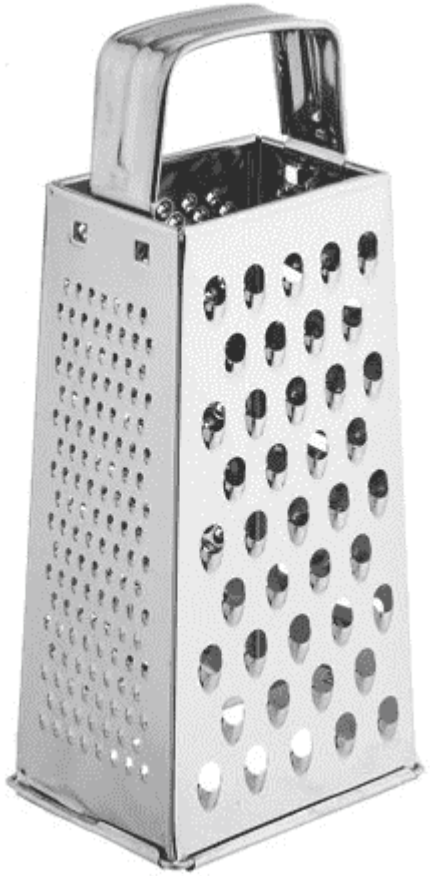
How Repellents Work

Taste-based (also known as contact) repellents are applied directly to plants and repel deer due to their foul taste. Taste-

Table 2. Cost of Commercial Repellents from Ready-To-Use (RTU) Sources or Derived from Concentrate Formulations (2002).

Trade Name	Cost/Gallon RTU	Cost/Ounce RTU	Cost/gallon from concentrate	Cost/ounce from concentrate
Plantskydd	$92.16	$.72	$17.12	$0.13
Deer Off	$88.32	$.69	$29.95	$0.23
Hinder	$85.76	$.67	$ 3.66	$.03
Deerbusters Deer I	$79.36	$.62	$20.74	$.16
Deer-Away BGR	$79.36	$.62	$24.95	$.19
Deer Blocker	$76.80	$.60	$11.99	$.09
Bobbex	$71.68	$.56	$13.25	$.10
Scoot Deer	$67.84	$.53	n/a	n/a
Plant Growth Stimulant	$67.84	$.53	$ 6.65	$.05
MGD Deer & Insect Repellent	$67.84	$.53	$18.36	$.14
Shotgun Deer and Rabbit Repellent	$66.56	$.52	n/a	n/a
MGD Deer Repellent	$65.28	$.51	$22.95	$.18
Repellex	$64.00	$.50	$23.62	$.18
Ropel	$60.16	$.47	n/a	n/a
Tree Guard	$57.60	$.45	n/a	n/a
Liquid Fence	$39.68	$.31	$8.75	$.07
Not Tonight Deer	n/a	n/a	$1.99	$.02
Rejex-it Deer Chaser	n/a	n/a	$5.99	$.05
Deerbusters Deer & Rabbit Repellent	n/a	n/a	$2.00	$.02
Miller's Hot Sauce + Vapor Guard	n/a	n/a	$ .46	Less than $.01

Home-based repellents for most mammals

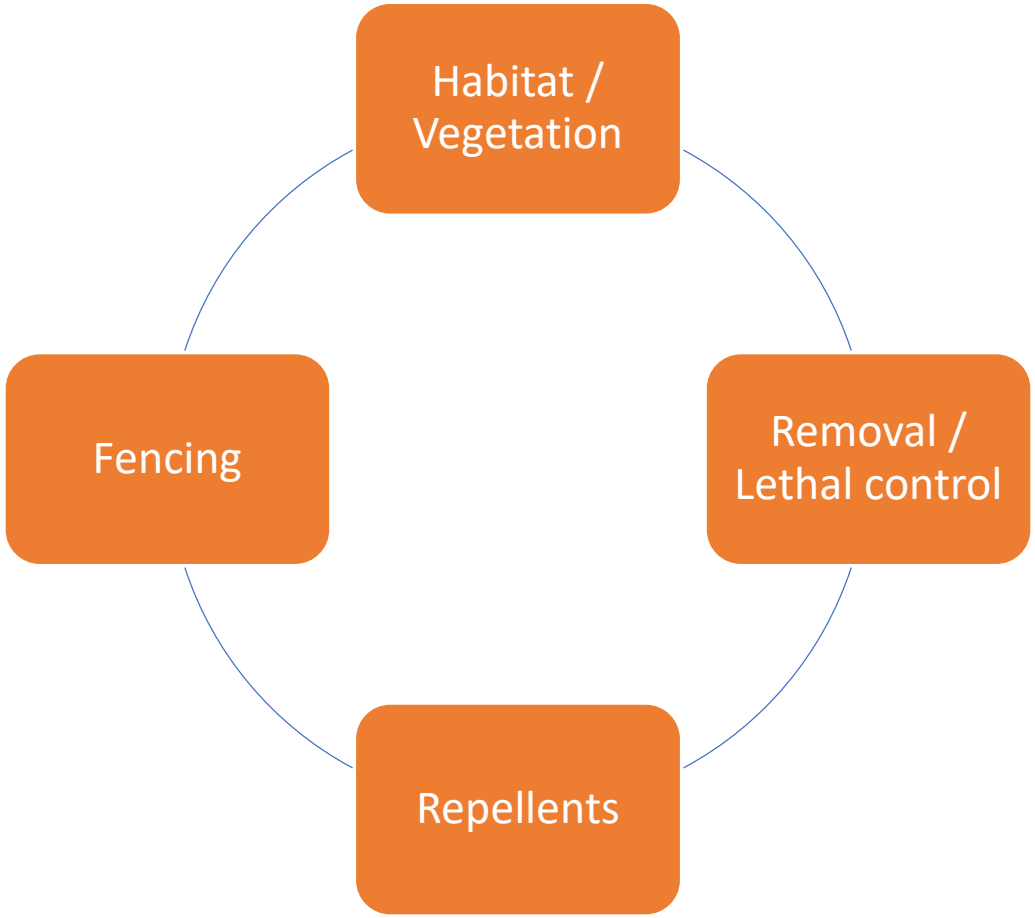


Scare ‘repellents’

Dog repellents

- Need to be out at night

Integrated Pest Management



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Wildlife Damage Control Operators

- http://webapps02.dnr.state.md.us/WHS_Websites/(S(a0b0v13ne3dqhlwj1iwj4dou))/WCCQuery_RWD.aspx

LNAME	FNAME	WPHONE	City	Species
Ardizzone	Paul	301-681-3965	SILVER SPRING	Birds,mammals, including bats,reptiles and amphibians
Ardizzone	Phil	301-681-3965	SILVER SPRING	Birds,mammals, including bats,reptiles and amphibians
Ataras	Anastasia	301-257-6330	MARLBORO	Birds,mammals, including bats,reptiles and amphibians
Barnes	Craig	410-266-6611	ANNAPOLIS	Birds,mammals, including bats
		240-876-		mammals, excluding

Managing populations

- Hunting caused declines, then funded wildlife recovery
- Hunting licenses and firearm/ammunition sales supports ~99% of Maryland Department of Natural Resources

National Deer Association

Crop Damage Permits

- Antlerless harvest year-round

How to hunt and trap

Hunter Education

DNR In-Person Safety Education and Certification Classes Will Resume

HOW TO CONTACT US

The Maryland Hunter Education Course takes 12 to 14 hours to complete. Students must attend all sessions of the class to pass. Most courses require that youngsters under the age of 14 be accompanied by a participating adult.

The course covers: hunter responsibility, firearms and

Hunting & Shooting Sports Outreach Program

The primary goal of this program is to provide the 'next step' for novice hunters and shooters such that they will feel comfortable moving forward in the shooting and hunting sports as a result of their experience in the workshop. The program will be a series of 'mini-workshops' in partnership with public shooting ranges and other appropriate venues. These mini-workshops are designed to be as hands-on as possible, giving participants enough knowledge to further pursue their interests once the workshop is concluded. Hunter safety is NOT required before taking these workshops.

Becoming an Outdoorswoman - Maryland

Trapper Education Program

Who Must Have a Certificate of Trapper Education?

Effective August 1, 2007 any person who is trapping or attempting to trap furbearers (muskrat, beaver, raccoon, red and gray fox, opossum, mink, skunk, river otter, fisher, long-tailed weasel, and coyote) under the authority of a Furbearer Permit must first obtain a Certificate of Trapper Education from the Department unless the person held a Furbearer Permit during the 2006-2007 trapping season (prior to August 1, 2007).

How Can I Obtain a Certificate of Trapper Education?

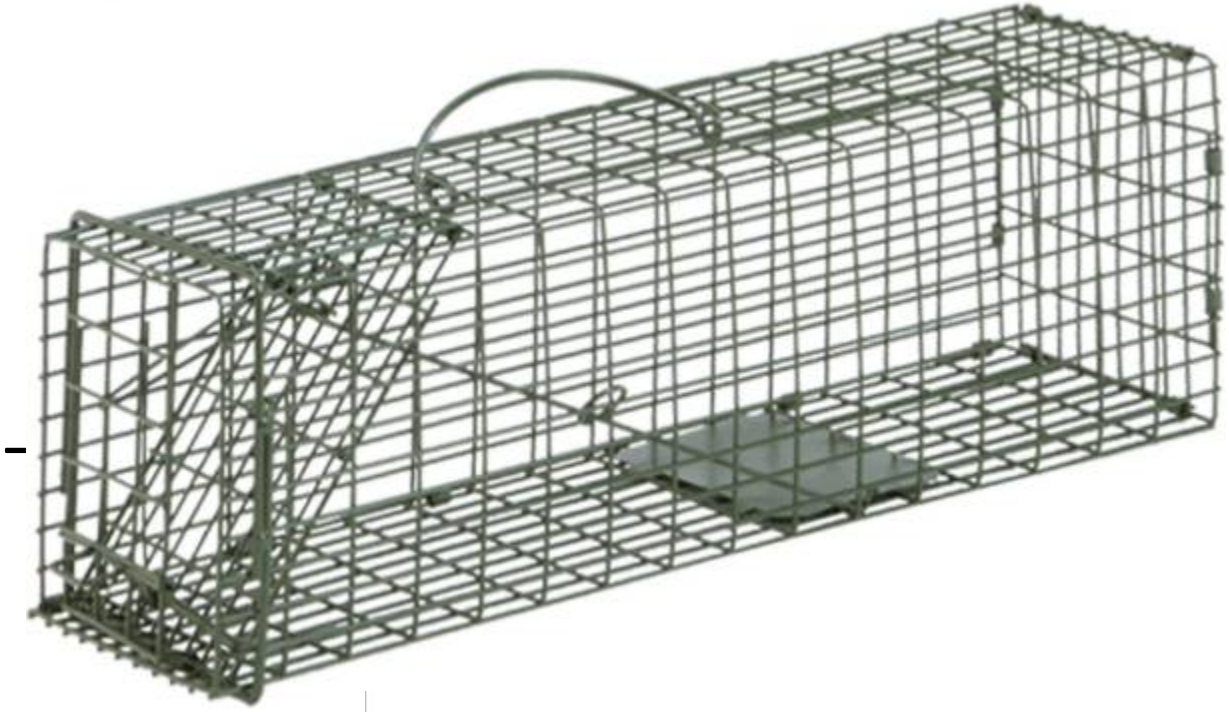
The first thing you must do is obtain...

- Maryland Trapper Education Student Manual

Maryland Mentored Hunt Program

Trapping

- Rabbits, raccoons & skunks: box traps - safe to use
- Voles: mousetraps on runways
- Groundhogs: Connibears – must be 8” or smaller in, on, or under a building, or in wetland areas. Risk of killing non-target wildlife, or pets



Thank you

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Your feedback helps us improve.

- https://go.umd.edu/ENRTEACH

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