



ELK ROCK!



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Goals

- Students will learn educational facts in regards to Rocky Mountain Elk in New Mexico along with key biological concepts and definitions and what elk sign looks like.

Objective

- Students will learn basic facts about Rocky Mountain Elk in New Mexico.
- Students will be able to identify elk sign.
- Students will learn the four components of habitat.
- Students will learn the definition of carrying capacity.
- Students will learn the life cycle of Rocky Mountain Elk in New Mexico in relation to the four seasons of the year.



Definitions

Below are some good definitions to know as we begin...more will be discussed in this presentation.



- Carrying capacity - the amount of a particular species the land can support throughout the year. This can vary every year.
- Conservation - the wise use of our natural resources.
- Extinct - no longer in existence.
- Extirpated - no more species are found in a geographical area, but exist in other locations.
- Mammal - warm-blooded (endotherm), vertebrate animal, often covered with hair or fur; females produce milk for young, and typically give live birth.
- Preservation - the non-use of our natural resources.

ELK IN NEW MEXICO



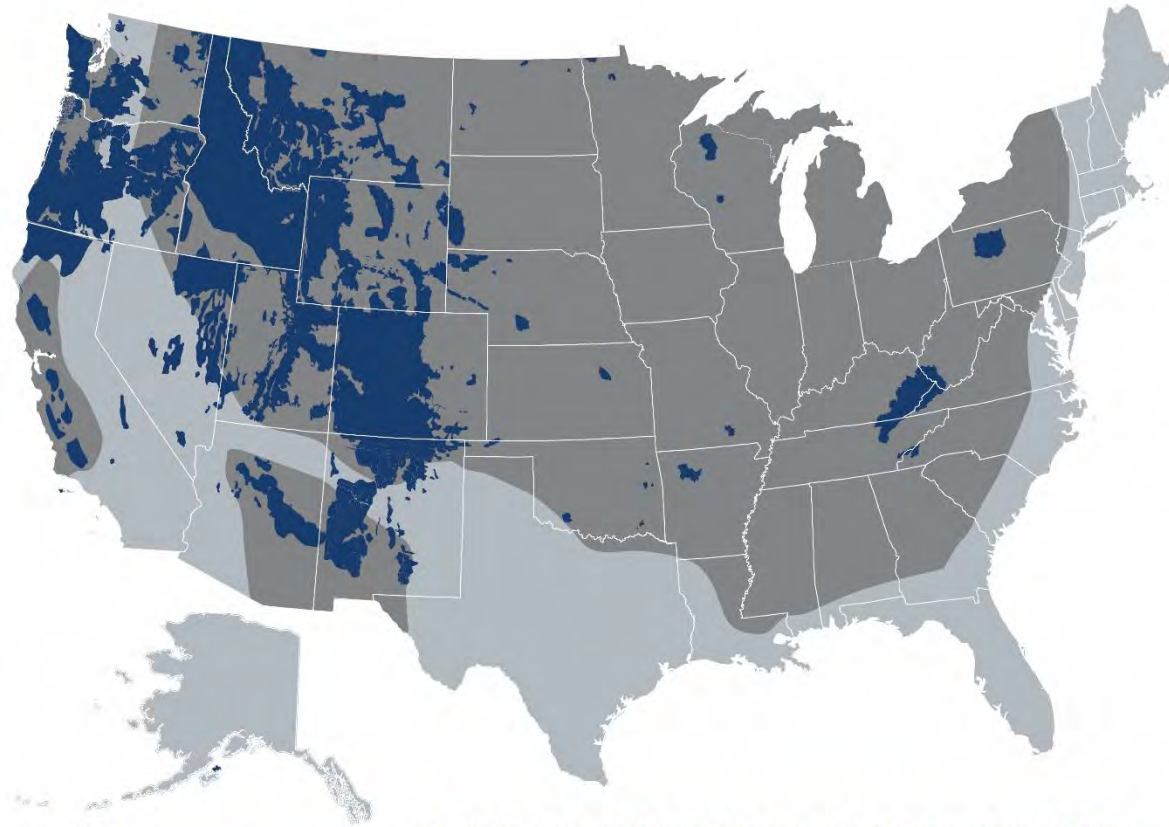
- Elk herds were extirpated by unregulated market hunting in the late 19th century into early 20th century.
- Conservation efforts starting around 1910 and have brought elk back into New Mexico. Currently elk numbers are at approximately 70,000 animals in the state today.
- Funded mainly by monies being provided by hunters, anglers and trappers (license sales) and Pitman-Robertson Excise Tax.
- North American Model of Wildlife Conservation has played pivotal role in success.
- What a success story in conservation! Hunting regulations, reintroductions, and habitat work have aided in their success story.
- Currently, Rocky Mountain elk are the subspecies of elk found in New Mexico
 - There are three other subspecies in North America: Tule, Manitoban and Roosevelt. The Eastern and Merriam's elk subspecies went extinct. Roosevelt is the largest species.

North American Model of Wildlife Conservation

The North American Model has seven general tenets:

1. Wildlife Resources Are a Public Trust;
2. Markets for Game Are Eliminated;
3. Allocation of Wildlife Is by Law;
4. Wildlife Can Be Killed Only for a Legitimate Purpose;
5. Wildlife Is Considered an International Resource;
6. Science Is the Proper Tool to Discharge Wildlife Policy;
7. Democracy of Hunting Is Standard.

Elk Range in US



CURRENT VS. HISTORIC ELK RANGE

● CURRENT | ● HISTORIC

Courtesy of RMEF

SOME FACTS



Photo credits: Storm Usrey



- Elk are mammals and part of the deer family Cervidae
- Males are called bulls
- Females are called cows
- Young are called calves
- Bulls grow antlers, not horns (fastest growing bone)
- Antlers are shed in late winter and early spring and finish growing by late summer
- Antlers are protected by “velvet” in summer months and is rubbed off around August
- Elk are primary consumers and are herbivores meaning they eat vegetation
- Elk are primarily grazers and they eat grass
- Elk are ruminants and have a four chambered stomach
- They can browse on leaves, brush, aspen bark, etc.
- Some elk herds migrate in New Mexico while some do not need to given the area they live

Other members of Cervidae in New Mexico

Mule Deer

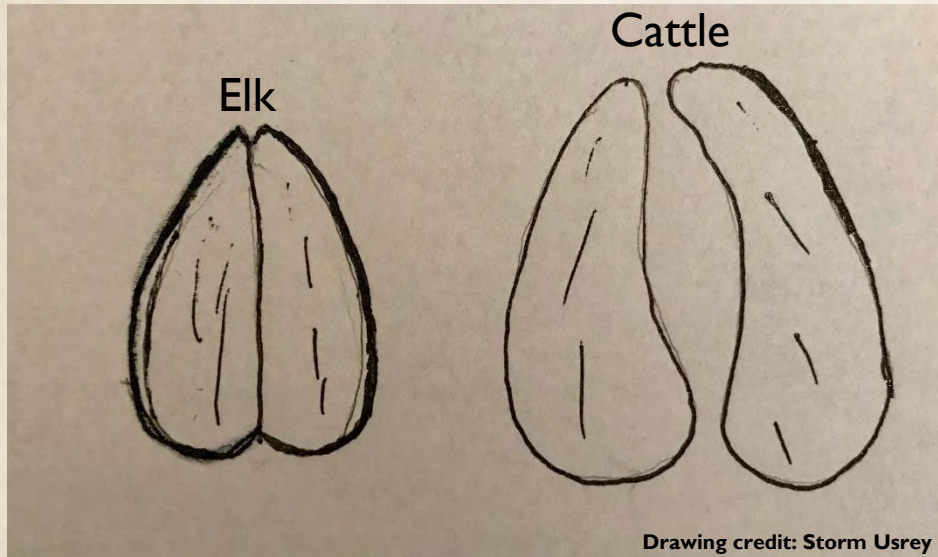


White-tailed Deer



Elk Sign

TRACKS



RUBS



Elk tracks will be approximately 4 1/2" in size, but can vary depending on the sex and age of the elk. Cattle tracks are much larger and more blocky in appearance.

Elk Sign



Top left: Elk rub on a pine tree; Right: Elk track when running in the mud. Dew claws are present; Bottom left: elk track in dry soil.

Elk Sign



Photo credit: Paul Spiros

E
L
K

R
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B
S



Photo credit: Clovis Rivera

Elk Sign

DROPPINGS



Drawing credits: Storm Usrey

Elk droppings on the left are pelleted. Drawing on the right is of clumped elk droppings, when they have more water in their diet or in their system. This can occur in the summer months. Pellets are usually the size of a nickel to quarter sized. Clumped droppings would fit in the palm of your hand.

Elk Sign

SHED ANTLERS



ELK SOUNDS



- Bulls **bugle** (aggressive type call primarily in fall when rut is taking place, feeling of “excitement” during other times of year). Amount of light hitting the retina of an elk’s eye will trigger hormones and timing of the rut or breeding season.
- Cows, calves and spikes can **mew** (locator, contentment, excitement)
- Cows and bulls both **bark** (this is an alarm call)

Note: You can find great examples of elk sounds on YouTube.

The four seasons of the year and what they mean for elk



Photo credit: Storm Usrey

FOUR SEASONS



- **Spring** = Calves are born.
- **Summer** = Calves get bigger and eventually no longer need mother.
- **Fall** = Rut begins and bulls will join and form herds of cows. Hunting season is at this time. Hunting is a management tool and generates money for wildlife management.
- **Winter** = Bulls generally head to rough and rugged country and cows form larger herds. Can be a time of highest mortality as there are less resources on landscape.

WHAT IS HABITAT?



Photo credits: Storm Usrey



HINT: There are four components.

Think of what you need everyday....



FOUR COMPONENTS ARE...

1. Food
2. Water
3. Space
4. Cover

AND the arrangement of all is important...

Arrangement!

Arrangement example



Mosaic Pattern



Let's talk about Carrying Capacity

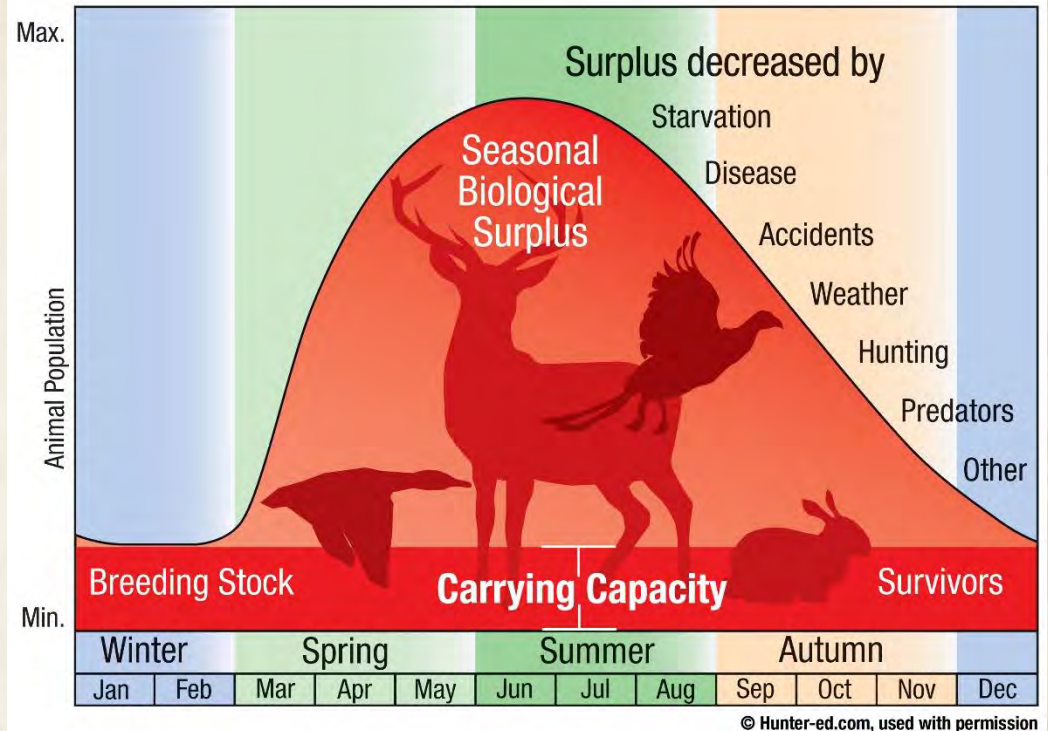
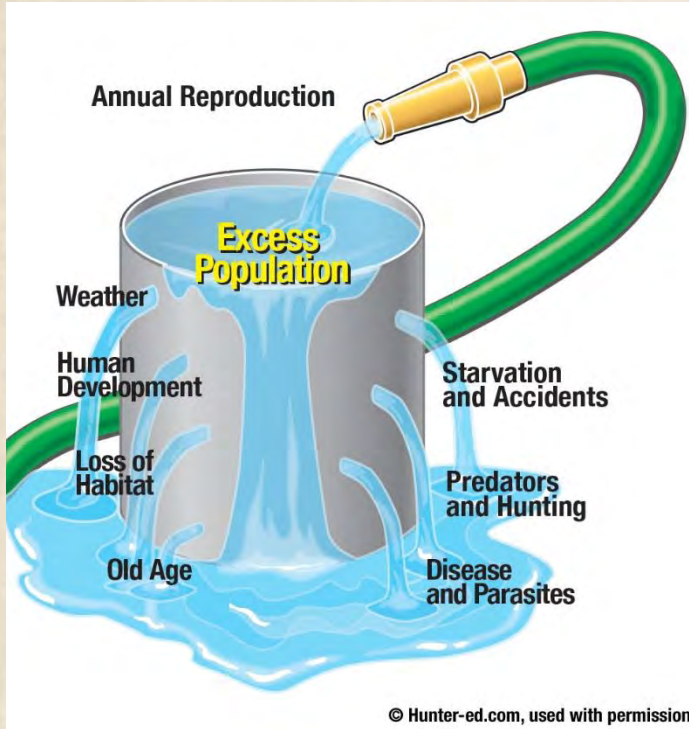


Carrying Capacity

- **Carrying capacity** is the amount of a particular species the land can support throughout the year. This can vary every year.
- Limiting factors on an elk population can be predators, habitat loss, disease and hunting (to name a few). Limiting factors decrease numbers in a population.
- The best thing a wildlife biologist can do to increase the amount of elk in an area would be to improve the habitat which includes: food, water, space and cover.
 - When do you think an elk herd is at its lowest of the four seasons? And when do you think it is at its highest? Explain why.



Diagrams of Concepts



Top Left: Water filling up a container is annual reproduction. Over time, the population can lose members because of old age, disease, weather, predation, hunting, etc., and these are limiting factors on the population. Top Right: Carrying capacity is the number of animals the landscape can sustain over the course of the year. Breeding stock replenishes the population while limiting factors decrease numbers, only to be replenished.

Predators of elk in the Land of Enchantment

Black Bears



Photo credits: Storm Usrey

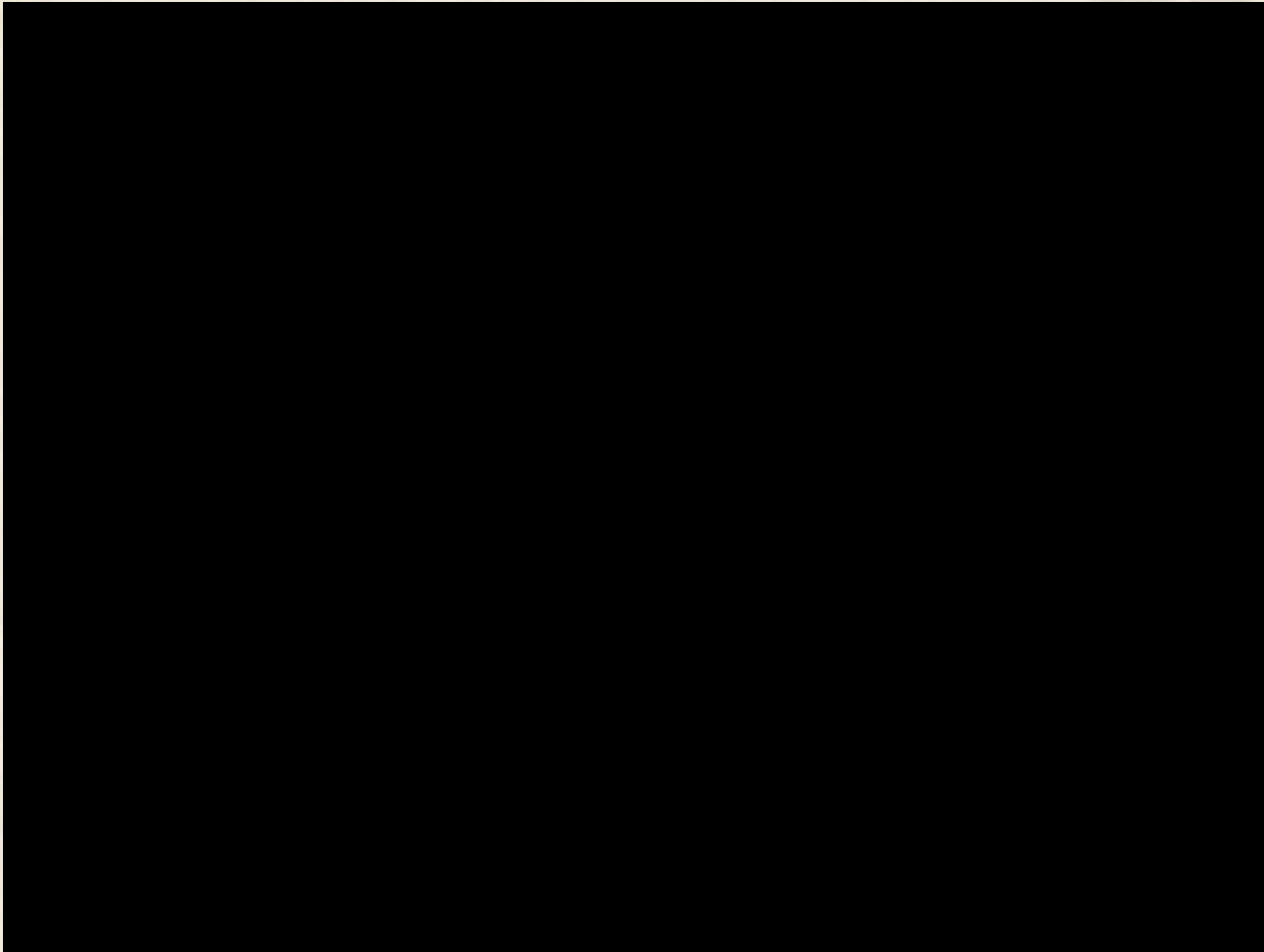
Mexican Gray Wolves

Mountain Lions



Coyotes

NMDGF Video



Find this video on the Department's YouTube Channel at
<https://www.youtube.com/watch?v=3Nlsmc6Xstk>

**Please introduce someone new to
hunting and fishing in the future!
Enjoy the Great Outdoors!**

