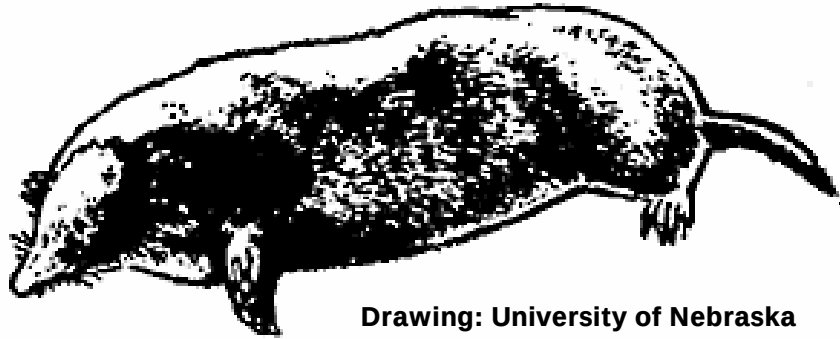




University of Nebraska—Lincoln
Extension



Moles



Drawing: University of Nebraska



Photo: Steve Hahus, All Wild About Kentucky's Environment



Photo: University of Nebraska



Eastern Mole

- ❖ Short, velvet fur
- ❖ Black, gray, or brown
- ❖ 4-7 inches long
- ❖ Short tail
- ❖ Very small eyes and ears
- ❖ Long naked snout
- ❖ Wide mitt like front paws
- ❖ Large claws in front only
- ❖ Small pointed teeth



Photos: University of Nebraska



Drawing: University of Nebraska



The Eastern Mole

❖ Life Style

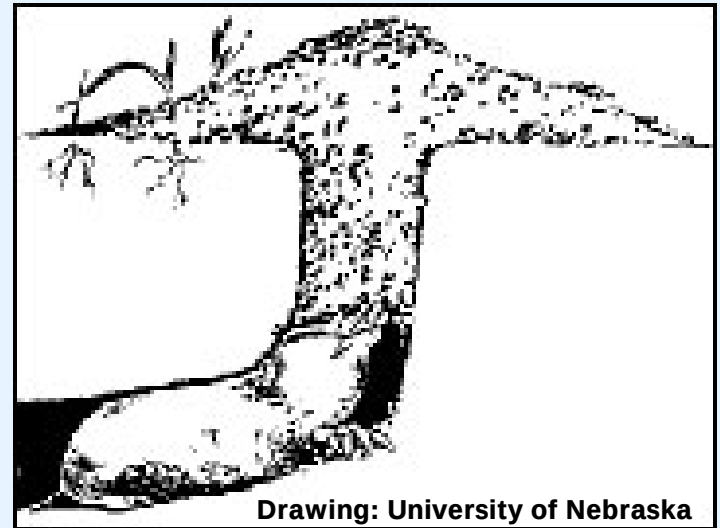
- Tolerate low oxygen levels
- Fossorial-live underground

❖ Habitat

- Prefer moist, loose soil
- Prefer less disturbed areas

❖ Reproduction

- Once/year (May-June)
- 2-5 young in deep nest



The Eastern Mole

❖ Feeding

- Insectivorous
- 70% Earthworm
- Consume 45-50 lbs annually

❖ Foraging

- 50 -75 ft of surface tunnels per day
- Moist, shaded areas

❖ Movement

- Travel 80 ft per minute in burrows
- Males - 3A Females - 0.66A



Photo: University of Nebraska



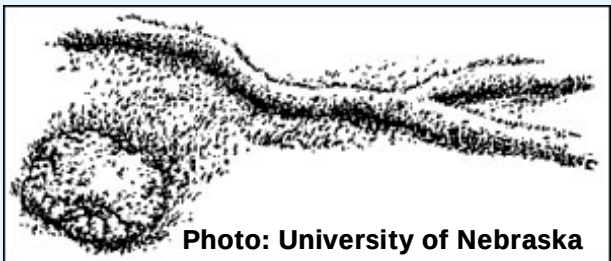


Photo: University of Nebraska

Mole Signs and Damage

❖ Burrowing

- Runs: Moles push up sod just under the surface; tear turf roots
- Mounds: Made when moles go deep, round and conical about 8" across and 6" high. Cover and smother grass
- Nests: In deep burrows 18-24" below the surface



UC Statewide IPM Project
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Used with permission by University of California Statewide IPM Program, J.K. Clark, photographer



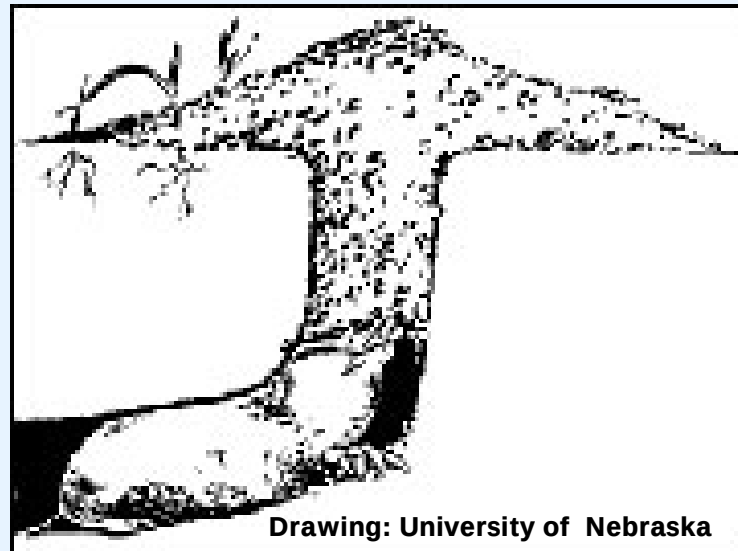
Mole Damage Identification

❖ Mole Mounds

- Caused by moles digging deep tunnels
- They literally carry the dirt to the surface



Used with permission by University of California Statewide IPM Program, Larry L. Strand, photographer

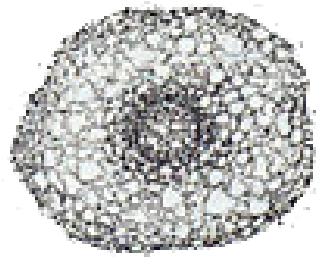


Drawing: University of Nebraska

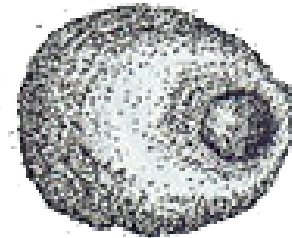


Mole vs. Gopher Mounds

Mole Mound



Pocket Gopher Mound



Top Views

Courtesy of The University of California, Davis

Mole Mound



Pocket Gopher Mound



Side View

Courtesy of the University of California, Davis



Mole Damage Identification



❖ Runs

➤ Travel Runs

- ✓ Long
- ✓ Straight
- ✓ Connect feeding areas and living areas

➤ Feeding

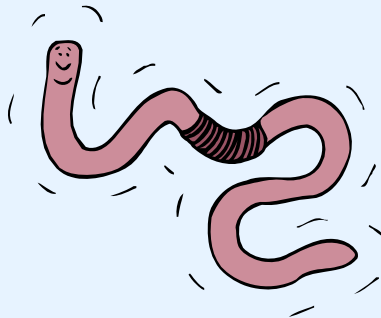
- ✓ Short
- ✓ Crooked



Mole Management

❖ Habitat Modification

- Soil conditions: Dry packed clay
- Type of ground cover or turf
- Reduction of food supply: Earth worms, not grubs



Mole Management

❖ Habitat Modification

- Install rocks, gravel, packed clay barriers: 24" deep
- Install fences or metal barriers: 24" into grade
- Natural predators: Coyotes/dogs, cats, and bull snakes



Photo: University of Nebraska





Mole Management

❖ Repellents

➤ Two types: Smell or Tactile

- ✓ Odorous repellents such as castor oil must be applied often and watered in properly
- ✓ Vibration devices must be very strong and only cover a small area.

➤ Limitations: Both these types of repellents have very limited results on deterring moles

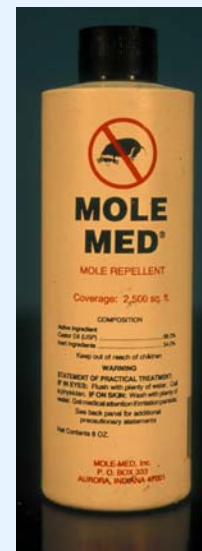
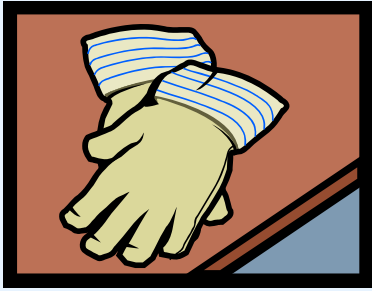


Photo: University of
Nebraska

UNIVERSITY OF
Nebraska
Lincoln



Trapping Safety

- ❖ Wear appropriate safety equipment, such as gloves when handling traps and animals
- ❖ Avoid setting traps in areas with high human/pet traffic
- ❖ Check traps daily. Don't set them if you can't check them the next day



Mole Management

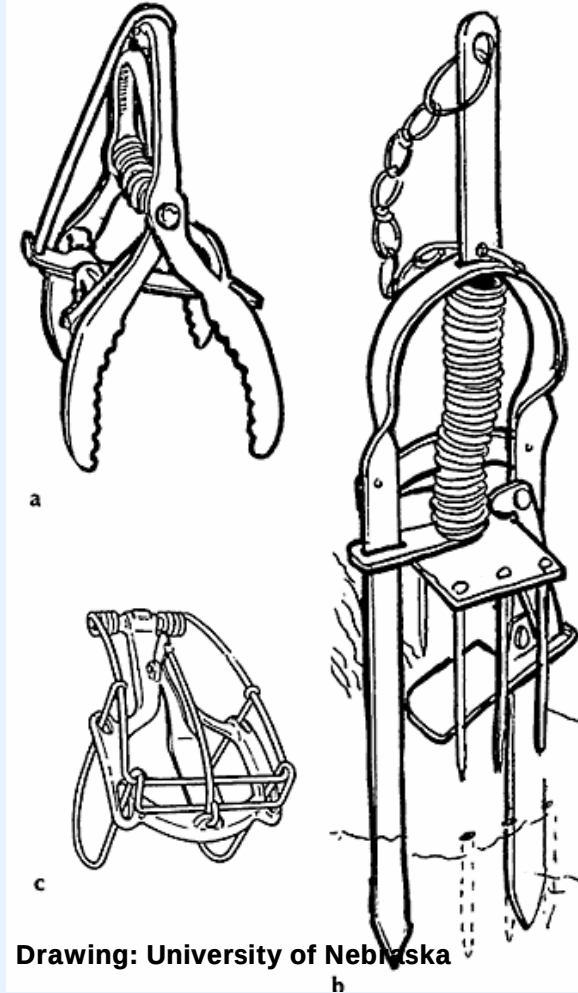
❖ Traps

- Many types of lethal mole traps
- Use on surface runs that are active and reappear
- Walk over all runs
- Place traps on runs the mole has reopened
- "Test fire" harpoon traps in non-sandy soils
- Trapping can be very labor intensive
- Extreme care must be taken when using traps



Mole Control: Lethal

- ❖ Trapping: All the traps work
 - Trapping is extremely effective
 - Pesticide free



Drawing: University of Nebraska



Mole Control Trapping Principles



Photo: University of Nebraska

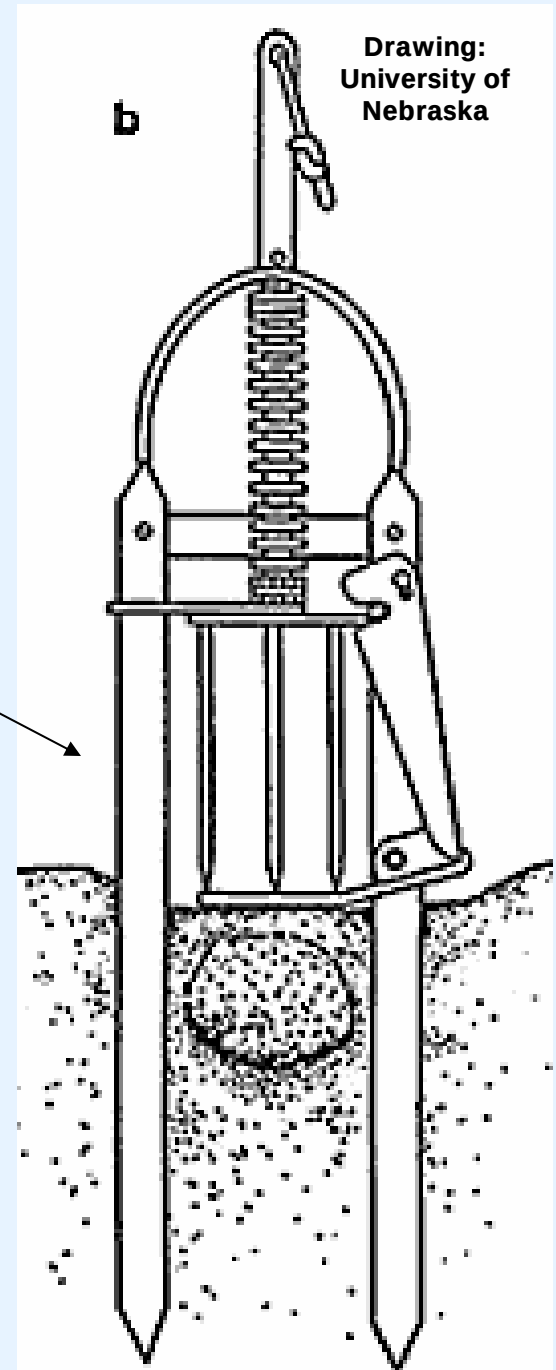
- ❖ Use more than one trap
- ❖ Surface tunnels
 - Set the long straight tunnels
 - Set the new tunnels
- ❖ Boils
 - Dig to the tunnel
 - Set the new boils



Mole Trapping: Surface Runs

❖ Harpoon

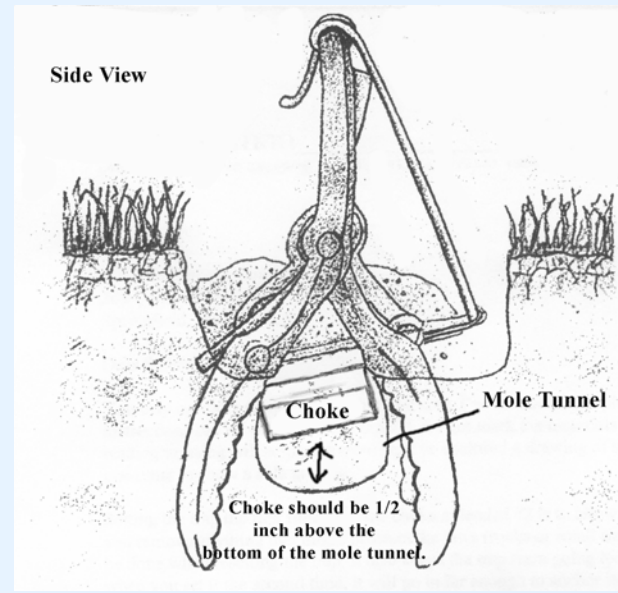
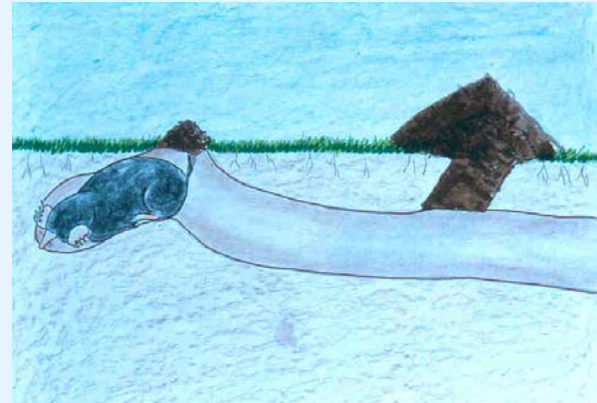
- Find the run
- Make sure trap legs don't invade the tunnel
- Depress only enough tunnel for the trigger
- Pre-form the time holes
- Set trap so tines are NOT above the soil
- Cover with 5 gal. bucket



Mole Control Trapping Boils

❖ Scissor trap

- Dig to the travel tunnel
- Place jaws to straddle the tunnel
- Create barrier or install woody
- "Test fire" trap
- Reset and back fill trap



Drawings: Tom Schmidt

Mole Control: Toxicants



- ❖ Follow Label Instructions
- ❖ THE LABEL IS THE LAW!



Mole Control: Toxicants



Photo: University of Nebraska

❖ Toxicants: Fumigants

➤ Two types:

- ✓ Smoke or sulphur "bombs"
- ✓ Lethal gases

➤ Smoke "bombs" usually do not work as mole's tunnel system is very extensive and moles need very little oxygen



Mole Control: Toxicants

❖ Toxicants: Fumigants

➤ Two types:

- ✓ Smoke or sulphur "bombs"

- ✓ Lethal gases

➤ Lethal gases are extremely dangerous and explosive! They are only to be used by specially certified applicators

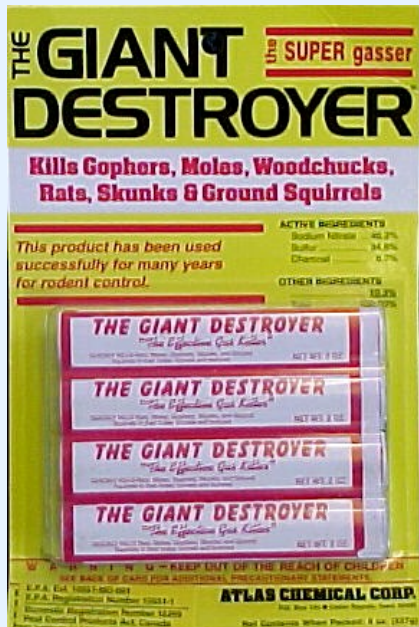


Photo: Do It Yourself Pest Control, Inc



Mole Control: Toxicants

❖ Toxicants: Baits

- Remember, moles feed on **LIVE** earthworms, so grain based baits will **NOT** work!
- The bait must smell and feel like an earthworm to the mole



Photos: Do It Yourself Pest Control, Inc



Mole Control: Toxicants

❖ Toxicants: Baits

- The bait must have a poison that effects the moles' different blood composition
- Most common rodent poisons will not be as lethal to moles



Photos: Do It Yourself Pest Control, Inc



Mole Control: Toxicants

❖ Toxicants: Baits

- Baits must be placed in the active surface burrows
- The burrows must be closed after the bait is introduced
- Always read and follow all label directions



Photos: Bell Laboratories, Inc.



Mole Management "Wannabes"

- ❖ Many products have been tested by Universities and found to be non-effective in controlling moles; better to use proven methods
- ❖ Miscellaneous home remedies
 - Pinwheels/windmills
 - Animal scat
 - Birth control pills
 - Chewing gum
 - Used cat litter
 - Kerosene
 - Ultrasonics



Resources/Information

- ❖ Internet Center for Wildlife Damage Management

- <http://icwdm.org>

- ❖ Prevention and Control of Wildlife Damage

- <http://icwdm.org/handbook/index.htm#om>

- ❖ Local Cooperative Extension/Pesticide Education Office

- Learn more about becoming a Licensed Pesticide Applicator. Only necessary for Restricted Use Pesticides (Wildlife Damage Control Category 14)



Credits

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❖ Content Editor

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