

Rabbits Skill-a-thon Study Guide

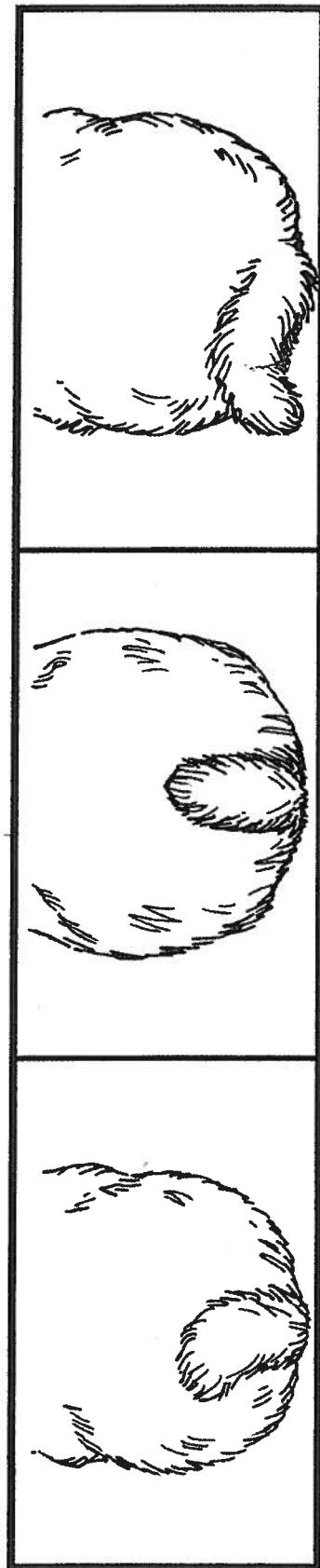
This packet contains study material for the annual skill-a-thon contest. Every member taking a livestock project is encouraged to look over this material. Not every skill-a-thon station is represented in this packet. Members are also encouraged to use other resources to study (ie. Online resources and livestock resource books). These packets are the members' to keep; they do not need returned to the Extension Office.

Feed samples are available upon request. (These will need returned to the Extension Office).

As always, if you have any questions please call the Extension Office at 419-354-9050.

Rabbit Conformation

(Tails/Ears)



Rabbit Skill Station

10/2/2016



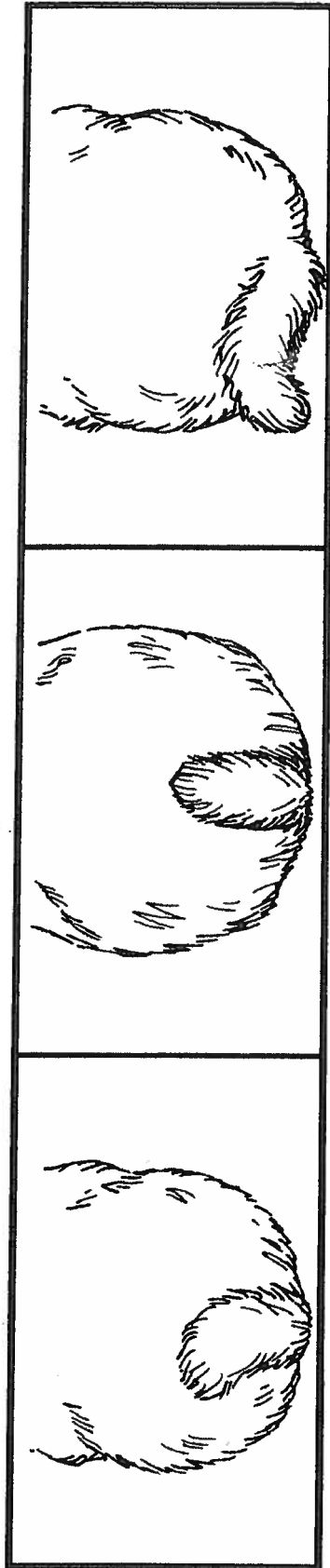
Exploratory Learning: Educational Program

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Rabbit Conformation

(Tails/Ears)



Side-Carried Tail

Ideal Tail

Screw Tail



Open-Carried Ears

Belled Ears

Ideal Ears



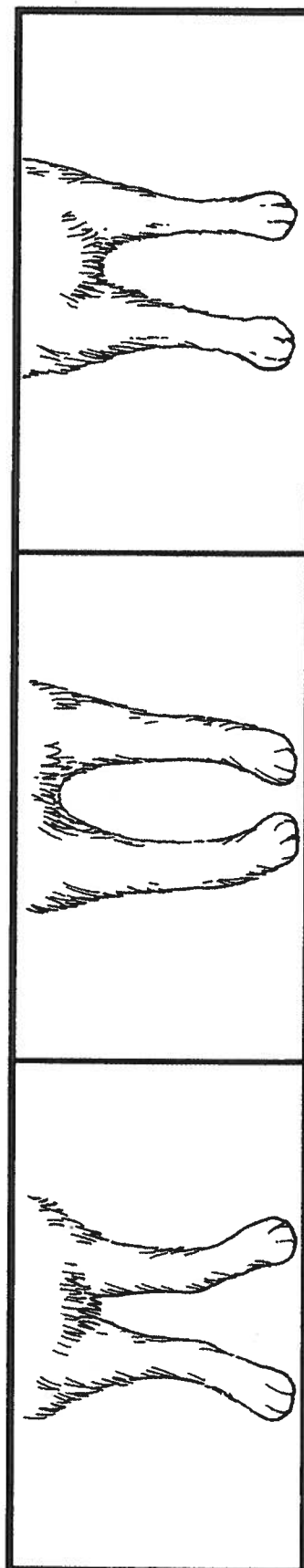
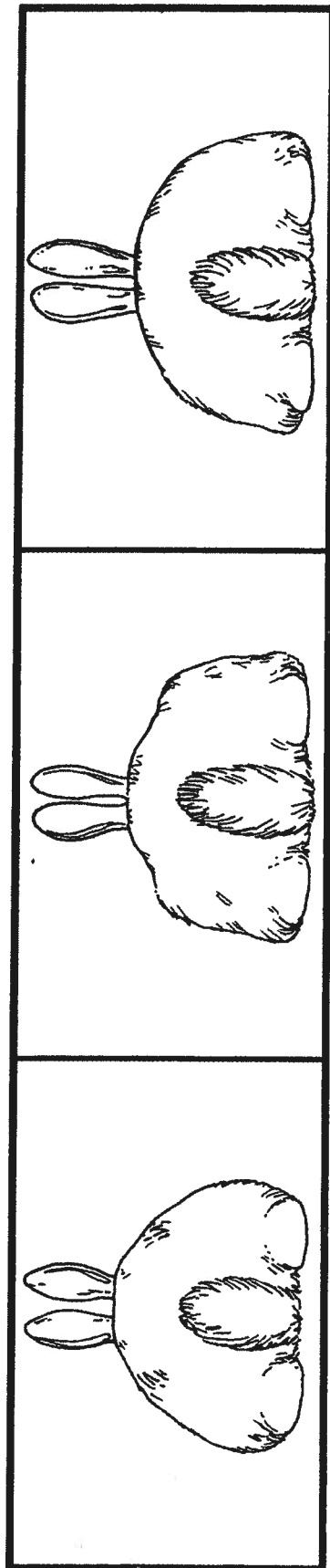
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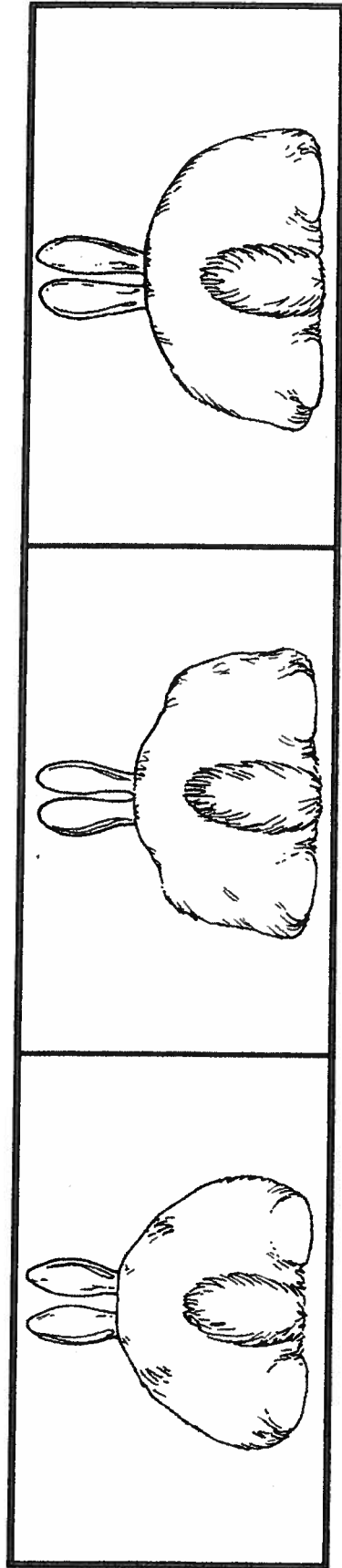
Rabbit Conformation

(Hips/Legs)



Rabbit Conformation

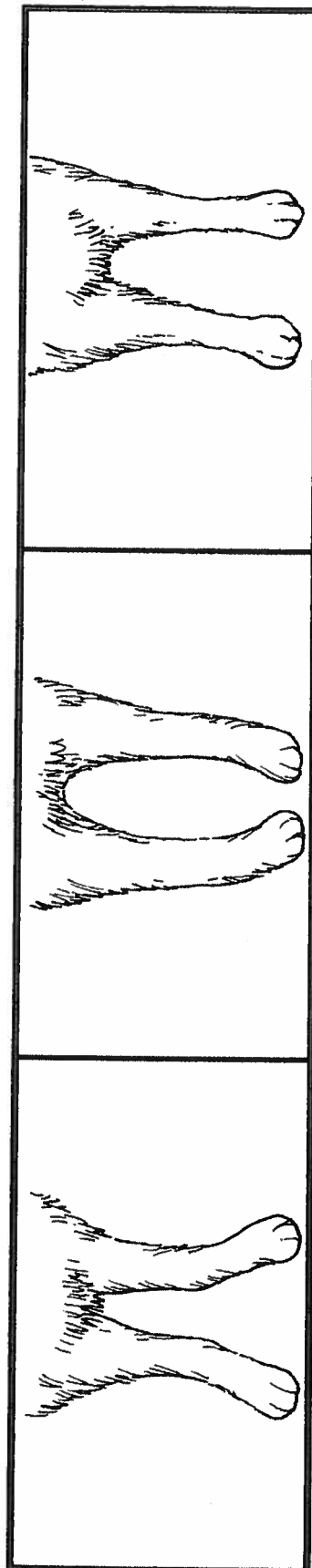
(Hips/Legs)



Ideal Hips

Rough Hips

Not Enough Rise



Outward-Bowed Legs

Inward-Bowed Legs

Ideal Legs

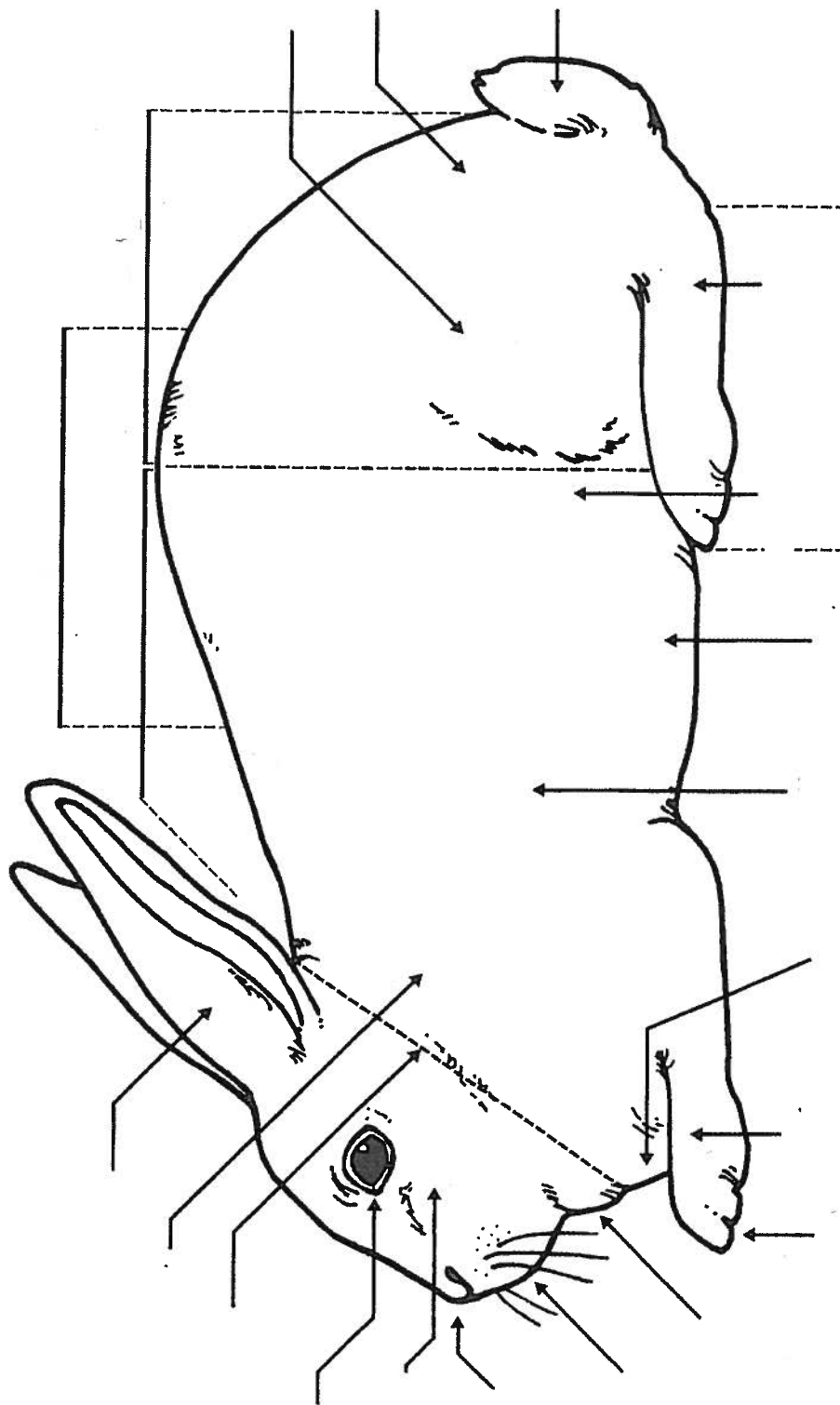


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Parts of a Rabbit



Rabbit Skillathon

Parts

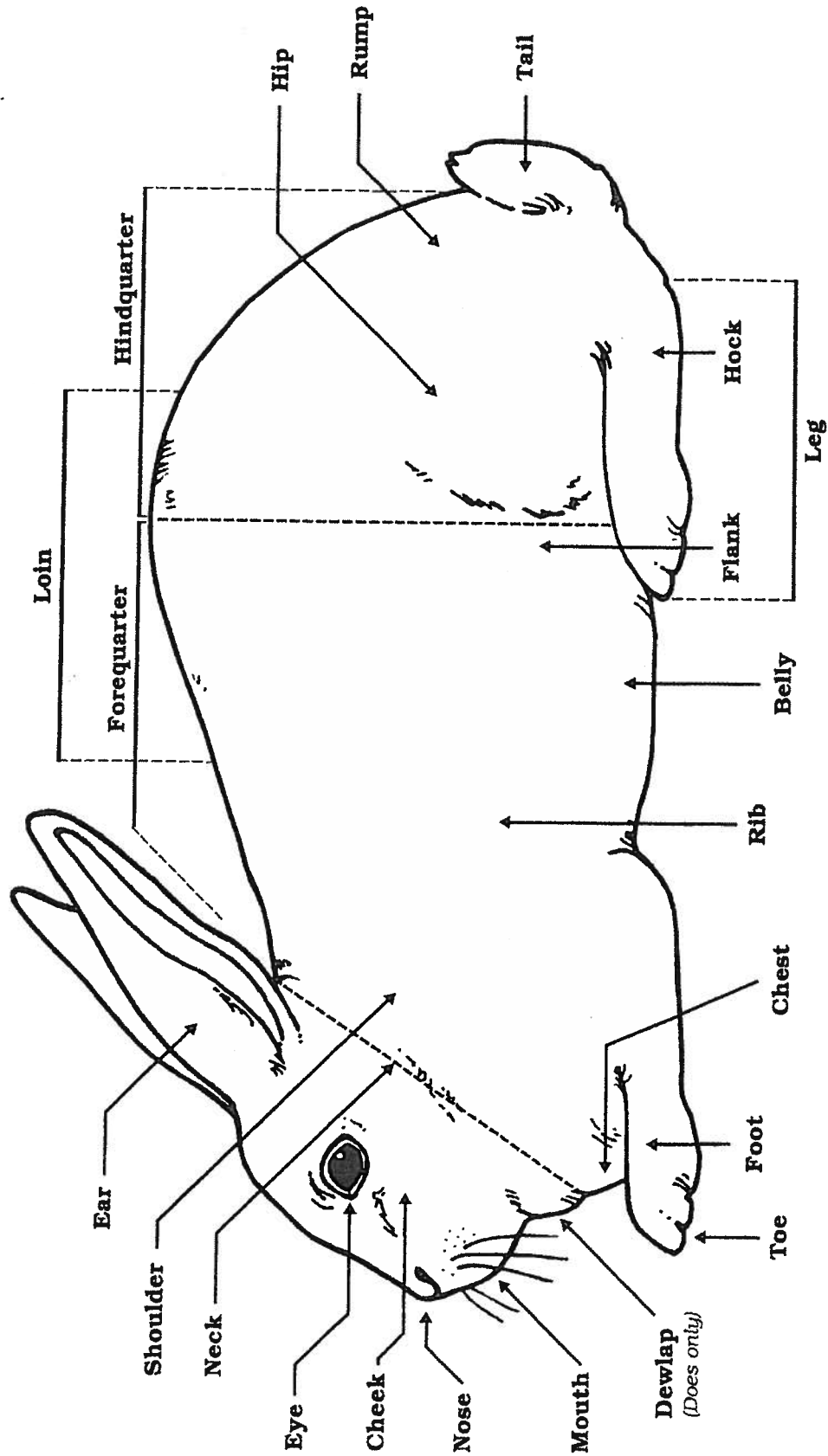


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Parts of a Rabbit



Exploratory Learning: Educational Program

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Rabbit Breeding and Reproduction Questions

Always take the ____ to the ____ cage when breeding.

The process of determining if a doe is pregnant by feeling for developing babies in the uterus is called ____.

The average gestation period for rabbits is about ____ days.

The birth process for rabbits is called ____.

Removing young rabbits from the mother is called ____.

Newborn rabbits are called ____.

Mating unrelated rabbits from different lines is ____.

Mating rabbits that are closely related is called ____.

Mating rabbits of different breeds is called ____.

Mating rabbits that are descendants of the same rabbit several generations back is ____.

Rabbit Breeding and Reproduction Questions

Always take the doe to the buck's cage when breeding.

The process of determining if a doe is pregnant by feeling for developing babies in the uterus is called palpation.

The average gestation period for rabbits is about 31 days.

The birth process for rabbits is called kindling.

Removing young rabbits from the mother is called weaning.

Newborn rabbits are called kits.

Mating unrelated rabbits from different lines is outcrossing.

Mating rabbits that are closely related is called inbreeding.

Mating rabbits of different breeds is called crossbreeding.

Mating rabbits that are descendants of the same rabbit several generations back is linebreeding.

Senior Rabbit Skillathon

Genetics and Breeding

Each cell in the rabbit has ____ chromosomes.

_____ are the basic units of heredity.

_____ refers to a rabbit's actual appearance.

_____ refers to the genetic make up of the rabbit.

_____ genes are symbolized by a capital letter and refer to characteristics that always show up in a F1 offspring.

_____ genes are hidden and are written with lower case letters.

The term agouti refers to the _____ of color on the hair shaft.

_____ is the mating of rabbits that are closely related.

_____ is the mating of unrelated rabbits from different lines within the same breed.

_____ is the mating of rabbits that are descendents of the same rabbit, but are related several generations back.

Senior Rabbit Skillathon Genetics and Breeding

Each cell in the rabbit has 44 chromosomes.

Genes are the basic units of heredity.

Phenotype refers to a rabbit's actual appearance.

Genotype refers to the genetic make up of the rabbit.

Dominant genes are symbolized by a capital letter and refer to characteristics that always show up in a F1 offspring.

Recessive genes are hidden and are written with lower case letters.

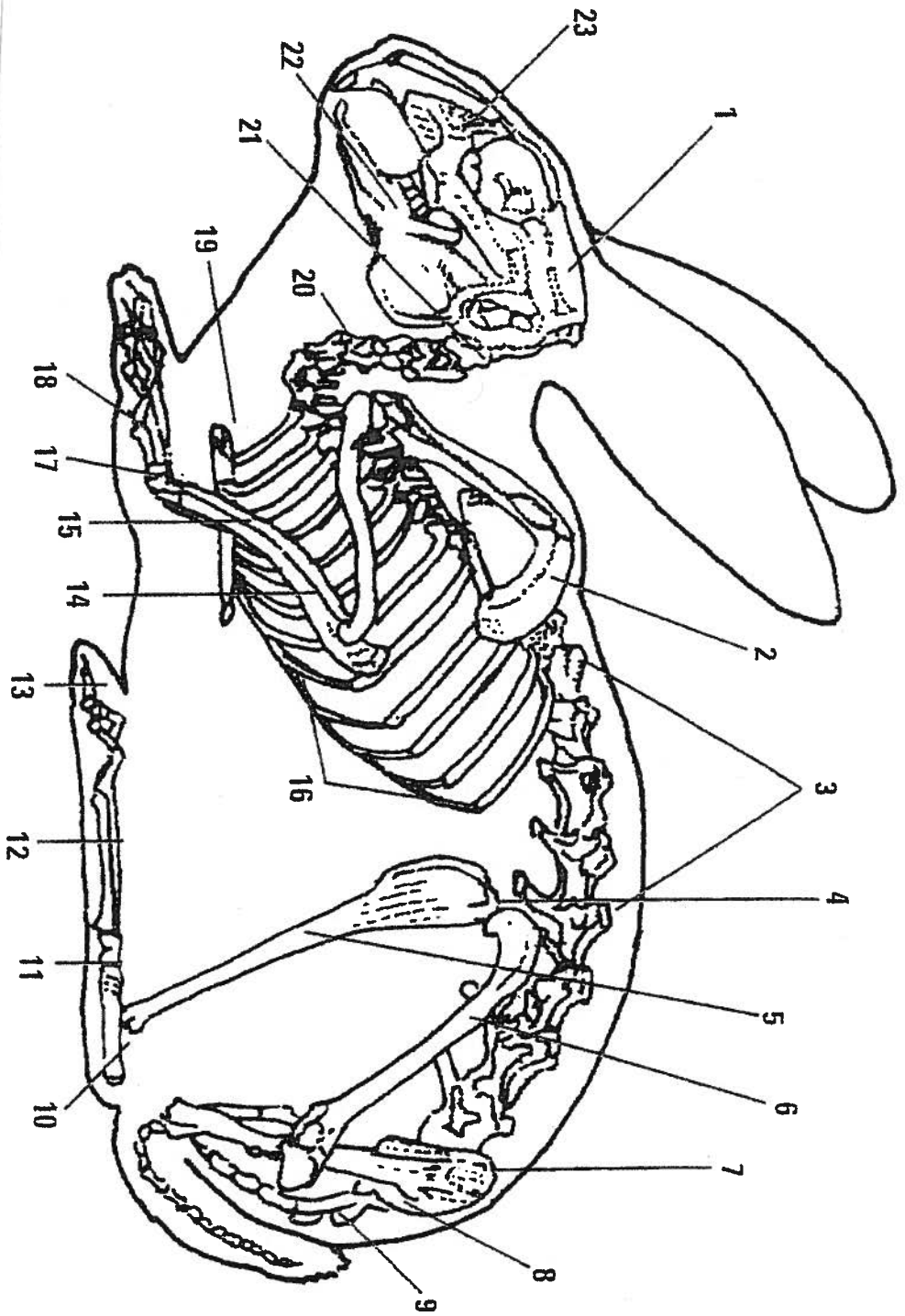
The term agouti refers to the rings or bands of color on the hair shaft.

Inbreeding is the mating of rabbits that are closely related.

Outcrossing is the mating of unrelated rabbits from different lines within the same breed.

Linebreeding is the mating of rabbits that are descendents of the same rabbit, but are related several generations back.

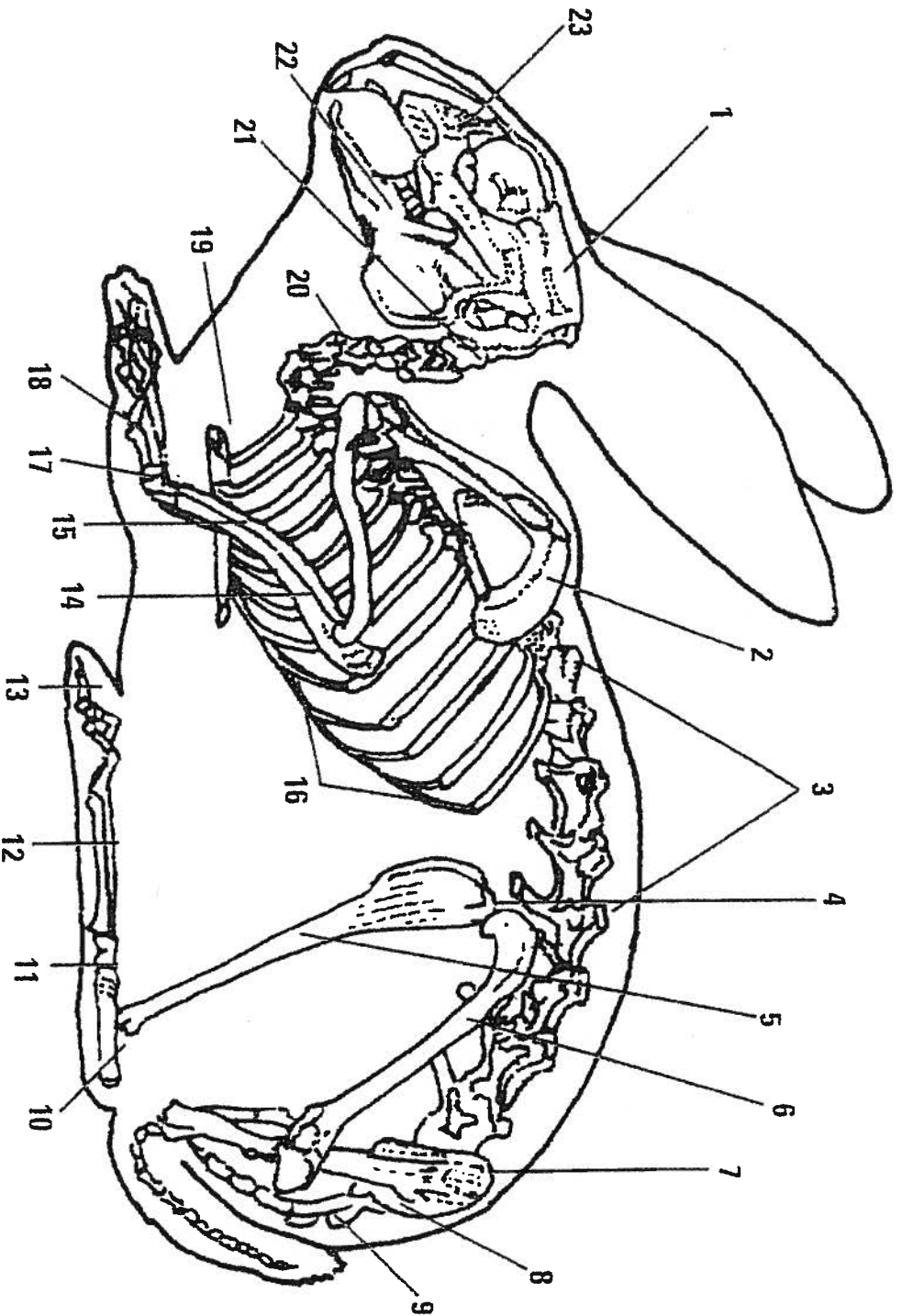
Major Parts of a Rabbit Skeletal System



Rabbit Skillathon

Skeletal

Major Parts of a Rabbit Skeletal System



Rabbit Skillathon

Skeletal

1. Cranium (Skull)
2. Scapula
3. Spine
4. Fibula
5. Tibia

6. Femur
7. Ilium
8. Sacrum
9. Caudal Vertebrae
10. Calcaneus

11. Tarsus
12. Metatarsus
13. Phalanges
14. Ulna
15. Radius

16. Ribs
17. Carpus
18. Metacarpus
19. Sternum
20. Cervical Vertebrae

21. Atlas
22. Mandible
23. Maxilla



Selection and Evaluation

Faults and Disqualifications

| <i>Disqualification</i> | <i>Fault</i> |
|---|---|
| | |
| <p>Unmatched Toenails</p> <p>Colored toenail on a white breed - or - White toenail on a dark-colored breed</p> | <p>Stained Coat</p> <p>Urine and/or manure stains on fur</p> |
| | |
| <p>Wry Tail</p> <p>Abnormal tail - bent, carried, or twisted permanently to one side Corkscrew tail with one or more turns</p> | <p>Low in Shoulders</p> <p>Shoulder depth is lacking and fails to balance with the hindquarters</p> |
| | |
| <p>Ear Canker</p> <p>Inflamed, scabby condition deep inside the ear - caused by an infection of the ear canal by ear mites</p> | <p>Narrow in Shoulders</p> <p>Shoulder width is "pinched" and fails to balance with the hindquarters</p> |
| | |
| <p>Malocclusion</p> <p>Teeth with lower incisors extending in front of the upper incisors or meeting with no overlap</p> | <p>Stray Hairs</p> <p>White hairs in colored fur</p> |
| | |
| <p>Wry Neck</p> <p>Carriage of the head to one side at an angular plane, instead of a normal carriage in a vertical plane</p> | <p>Cow-Hocked</p> <p>Hind legs that turn inward at the hocks, causing the toes to turn outward from the body</p> |
| | |
| <p>Foreign Color Patch</p> <p>White spot in colored area of the fur coat - or - Colored spot in white area of the fur coat</p> | <p>Molt</p> <p>Act of shedding or changing fur</p> |

Ailments and Disorders



Sore Hocks (Ulcerative Pododermatitis)

Cause: Damage initially to the pad of the foot, usually followed by a bacterial infection

- Prevention:**
- House rabbits in clean cages on soft, clean, dry bedding
 - Eliminate environmentally stressful conditions
 - Use nesting bowls
 - Cull affected animals and do not use for breeding

Common treatment:

- Preparation H**
- Clean sores/lesions, trim toenails, and apply topical antibiotic or protective covering
 - Healing is often prolonged/complicated by secondary bacterial infections



Ear Canker (Acanthosis)

Cause: Ear mites -- *Otodectes cynotis* and/or *Chorioptes cynotis*; transmitted from infected animals or environment to noninfected rabbits

- Prevention:**
- Carefully examine the ears of all stock every 14 days
 - Quarantine all new arrivals and treat twice before placing in clean herd/colony

Common treatment:

- Mineral- or Vegetable Oil
- Treat (soothe) with oil based insecticide preparation
- Clean off crusting and massage 1 to 2 ml of fluid into each ear canal with a cotton swab
- Repeat treatment in 7 days to eliminate newly hatched mites
- or Treat with injectable Ivermectin

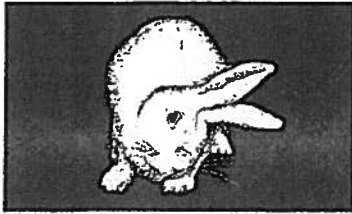
Wry Neck (Torticollis)

Cause: Bacterial infection -- An otitis interna caused by *Pasteurella multocida* frequently no specific inner ear lesions are detected, with the cause remaining unknown

- Prevention:**
- Cull affected individuals immediately
 - Quarantine new arrivals prior to herd/colony entry
 - Do not allow affected animals to reproduce

Common treatment:

- Treatment is NOT effective**
- There is NO satisfactory treatment for this condition



Weepy Eye (Staphylococcosis)

Cause: Bacterial infection -- *Staphylococcus aureus* and/or *Pasteurella multocida* spread by humans and contaminated food, feces, cages, and/or bedding

- Prevention:**
- Apply rigid sanitation methods
 - Eliminate sharp or abrasive surfaces
 - Use clean feed and bedding
 - Reduce animal stress
 - Monitor animals

Common treatment:

- Trimethylolpropane**
- Clean, drain, and cauterize lesion
 - Detected early, treat with ophthalmic antibiotic ointment
 - Advanced cases have been treated with antibiotics via injection or drinking water

Snuffles (Infectious Respiratory Disease)

Cause: Bacterial infection *Pasteurella multocida* transmitted by direct contact between cagemates, doe and litter, and/or breeding pair untreated may result in pneumonia

- Prevention:**
- Adhere to strict sanitation and husbandry standards
 - Ensure good ventilation
 - Follow strict culling procedures

Common treatment:

- Terramycin, Isoniazid mycin, or Baytril**
- Treat at first symptoms of illness
 - Treat with antibiotics via drinking water or syringe



Mange (Sarcopic Mange or Acariasis)

Cause: Mites -- Common fur mites *Cheyletiella parasitiformis* and/or *Laelophorus gibbus* or burrowing mites *Sarcoptes scabiei* and/or *Notoedres cati* spread by direct contact with infected host

- Prevention:**
- Introduce only clean stock into clean premises
 - Separate, quarantine, and treat infected animals until free of infestation

Common treatment:

- Sebacol or Sebacol**
- Minor infestations, dip all animals with insecticide
 - Major infestations, dip all animals in the colony in a malathion dip
 - Caution: perform dipping where animals may dry in a warm and noninfected environment

Vent Disease

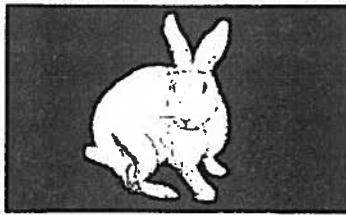
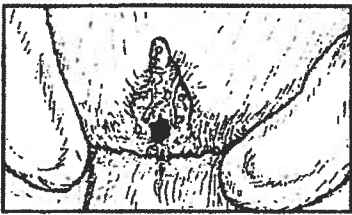
(Venereal Spirochetosis or Treponematosis)

Cause: Bacterial infection *Treponema cuniculi* transmitted by direct contact, especially during mating

- Prevention:**
- Examine breeding bucks and does routinely for lesions
 - Treat affected individuals at once
 - Cull carriers
 - Maintain a closed breeding herd
 - Treat and quarantine new stock

Common treatment:

- Penicillin G**
- Treat with injectable antibiotic
 - Increased possibility of enterotoxemia from penicillin exposure must be considered



Wound (Lacerations and/or Abrasions)

Cause: Injuries, bites, and scratches -- Bites and scratches from other animals, and/or injuries from poor housing and environmental conditions

- Prevention:**
- Maintain rabbitry equipment and facilities
 - Adhere to strict sanitation and husbandry standards to prevent risk of infection

Common treatment:

- Blood-Stop**
- Minor injury use styptic powder to stop bleeding
 - Major injury clean, disinfect, dress, and apply pressure to laceration or abrasion to help stop bleeding

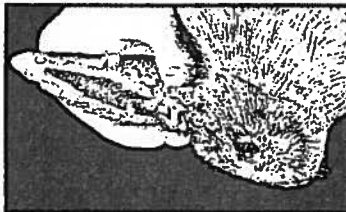
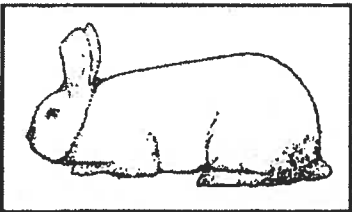
Enterotoxemia (Clostridial Enterotoxemia)

Cause: Bacterial infection -- *Clostridium sporforme* and/or *C. perfringens* transmission is primarily fecal oral route

- Prevention:**
- Implement rigid sanitation and husbandry standards
 - Use copper sulfate or *Lactobacillus* preparations
 - Change diet slowly
 - Feed sufficient fiber

Common treatment:

- Blood**
- Change the diet: increase fiber and decrease protein
 - Maintain hydration
 - Maintain body temperature
 - Neomycin treatments have uncertain benefits



Myxomatosis

Cause: Virus -- *Myxoma virus* a DNA virus of the pox virus family transmitted by mosquitoes, flies, fleas, birds (strapping), and/or plant materials

- Prevention:**
- Control vector populations, flies, and fleas by spraying and screening
 - Keep wild rabbits away from facilities
 - Adhere to strict husbandry standards

Common treatment:

- NO treatment exists**
- There is NO treatment for this ailment/disorder
 - Eliminate all biting insects from rabbitry
 - Immediate removal of affected animals is crucial

Ringworm (Dermatophytosis)

Cause: Fungal infection -- *Trichophyton mentagrophytes* and/or *Microsporum canis* transmitted easily by direct contact with spores on hair coat, in bedding, and/or soil

- Prevention:**
- Maintain high standards of animal husbandry
 - Examine animals routinely
 - Cull carriers
 - Sterilize contaminated facilities and equipment

Common treatment:

- Iodine**
- Individual outbreaks apply medication to skin
 - Ordinary iodine or an ointment containing hexachrome
 - Hard outbreaks use griseofulvin as a feed additive or in water-soluble form



VHD (Viral Hemorrhagic Disease)

Cause: Virus -- *Pennicillium infection of Oryctolagus cuniculus* transmitted by direct contact with secretions or excretions of infected rabbits, or indirectly via aerosol exposure to contaminated rabbit products

- Prevention:**
- Select VHD-free stock
 - Adhere to strict husbandry practices
 - Quarantine new arrivals prior to herd/colony entry
 - Conduct serologic screening

Common treatment:

- NO satisfactory treatment exists**
- Short-term protection is provided from a vaccine that lasts only 6 to 8 months
 - Bi-yearly vaccination is recommended in epidemic areas

Coccidiosis (Intestinal Coccidiosis)

Cause: Protozoa -- *Eimeria* spp. transmitted by ingestion of sporulated oocysts passed in feces and found viable in soil, feed, on personnel, cages, and utensils for several months

- Prevention:**
- Employ strict sanitation and husbandry standards
 - Cull infected animals
 - Prevent contact with infected feces or contaminated food and water containers

Common treatment:

- Sulfis Q**
- Best prevented and/or controlled through rigid sanitation practices
 - Treat infected animals with medication containing sulfamonomethoxime or monensin as a feed additive or in water-soluble form



Malocclusion (Mandibular Prognathism)

Cause: Inherited abnormality -- Inherited condition in which the incisors fail to meet and thus, grow to extreme lengths, may also result from dietary, traumatic (abuse), or traumatic reasons

Prevention:

- Do not allow animals affected with this ailment/disorder to reproduce

Treatment:

- Treatment of tooth overgrowth involves repeated filing or sawing with a sharp clipper or dental burr
- Removal of affected teeth

WARNING: Before any condition is treated, medications not approved (labeled) for use in rabbits or caviae must be prescribed by a licensed veterinarian familiar with the care and treatment of rabbits and caviae.

Rabbit Skillion

Ailments and Disorders