

Introduction to the Veterinary Profession

VETS30030 / VETS90122



Module 4 - Non-production species

Exotic and unusual pets

Small Mammals

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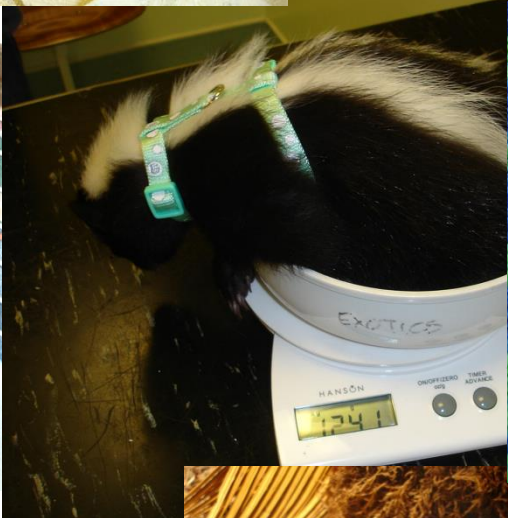
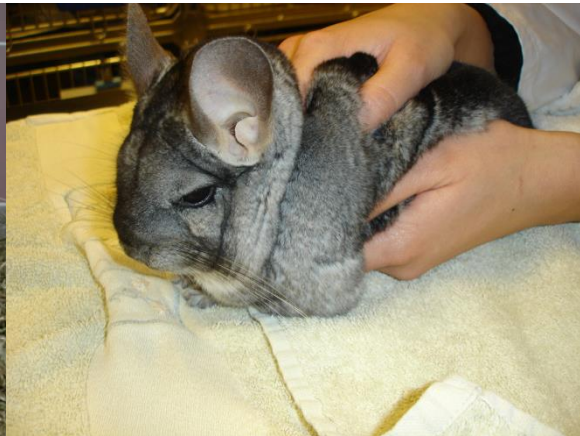
Intended Learning Outcomes

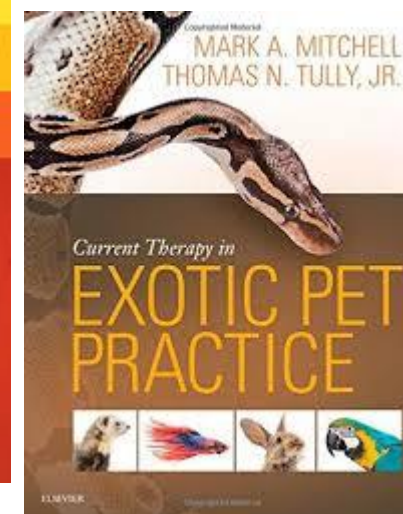
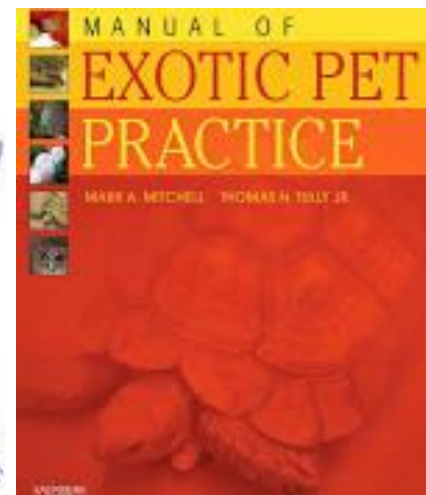
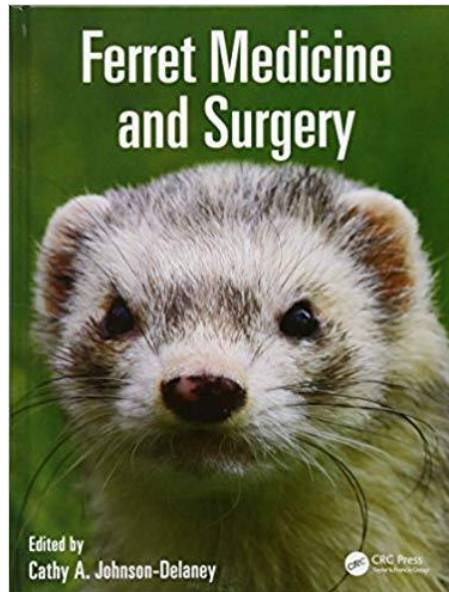
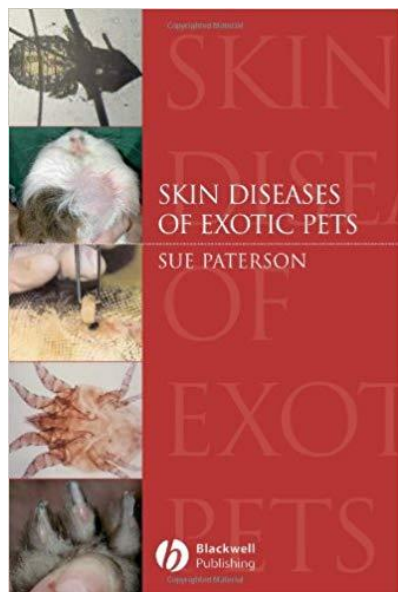
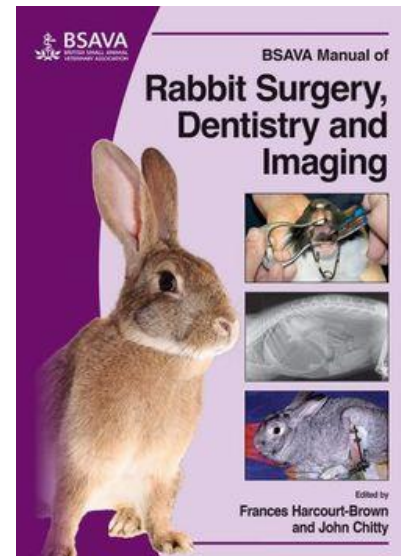
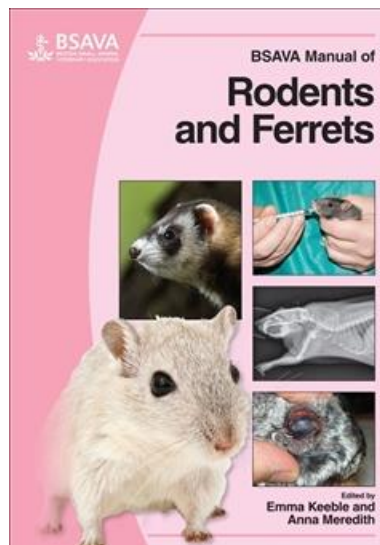
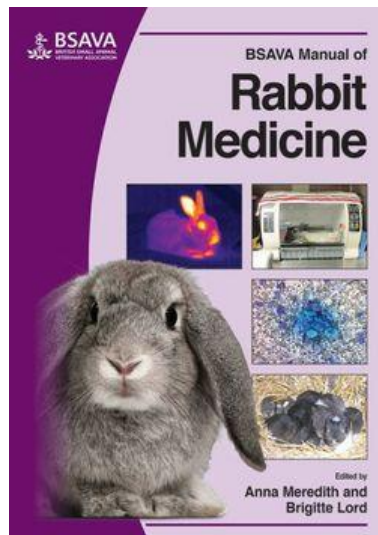
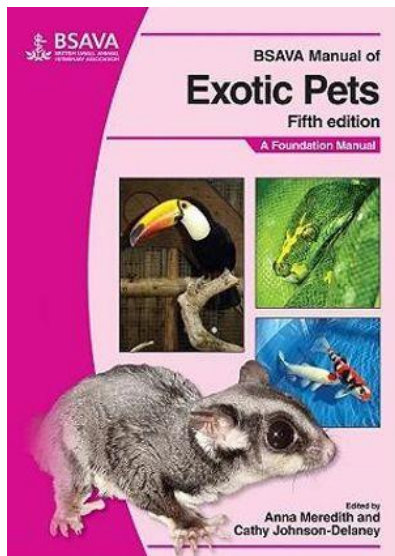
- Describe breeding, management, nutrition, animal welfare and common causes of disease of small mammal pets
- Describe the role of veterinarians within the exotic and unusual pet industries



Exotic pet practice

- 'Exotic' = non-native; but term used generically to encompass non-cat/dog pets, including small mammals, birds, reptiles, fish, invertebrates etc.
- Popular, rapidly expanding area of practice
- Special interest groups e.g. UPAV of the AVA
- Specialist qualifications
- Dedicated journals, text-books, formularies
- Limited evidence-based medicine
- Some licensed vet drugs, mostly off-label use





Exotic pet practice

- The majority of disease and welfare problems can be attributed to **poor husbandry**
- Rarely deliberate neglect
- Lack of information
 - Owners not seeking advice
 - Inadequate, misguided or incorrect information from breeders, pet shops, literature and the internet.

Role of the vet

- General practitioners should have a basic understanding of biology, specific husbandry needs, behaviour and common diseases
- Veterinary practice should be a well- recognised and trusted source of information and first port of call
 - Rarely happens; vets are only consulted when animals become sick.
- Will help to prevent a large array of common but easily avoided diseases
 - welfare and economic benefits
- Individual pets, breeders, suppliers, pet shops
- Laboratory animal practice

Small mammals

- Range of domesticated and non-domesticated species - rodents, rabbits, ferrets, hedgehogs, marsupials, small primates etc
- Traditionally children's pets – no longer the case
- Key areas of advice are:
 - Basic biology – sexing
 - Nutrition
 - Housing and environmental requirements
 - Behavioural management
- This lecture on rodents, rabbits and ferrets



Behaviour

- Rodents and rabbits are prey species
- Easily stressed by sight, sound, smell of predators, unfamiliar surroundings, large bright open spaces
- Adverse effects on gut health/motility and immune function
- Hide overt signs of disease until advanced
- Important to minimize stress at all times



Rodents

- Two main taxonomic groups, based on anatomy and biology
- Important differences in **dentition, diet and gastrointestinal function, and reproductive strategies** that influence their predisposition to disease and their veterinary care.
- **MOUSE, RAT, HAMSTER, GERBIL** are Myomorphs – the ‘mouse-like’ rodents:
- **GUINEA PIG (CAVY), CHINCHILLA, DEGU** are Hystricomorphs – the ‘porcupine-like’ rodents:
- A third group sometimes kept as pets are the Sciuromorphs – the ‘squirrel-like’ rodents, such as chipmunks and prairie dogs

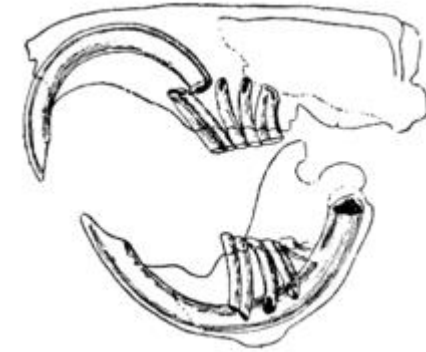
MYOMORPHS:
MICE, RATS, GERBILS, HAMSTERS



HYSTRICOMORPHS:
GUINEA PIGS(CAVY,) CHINCHILLAS,
DEGUS

Rodents - General Points

- 'Rodere' = to gnaw (latin)
 - Sharp, chisel-shaped curved incisor teeth – grow continuously
 - Large diastema
 - Mandible wider than maxilla
 - Gnawing - lower jaw forward, incisors oppose
 - Chewing - lower incisors behind upper, cheek teeth oppose



Guinea pig



Rodents - General Points

- Dental formula: Incisors, Canines, Premolars, Molars on one side of mouth: upper/lower
- 1/1 0/0 0/0 3/3 (myomorphs)
- 1/1 0/0 1/1 3/3 (hystricomorphs)
- Sharp chisel shaped incisors, constant growth
- Cheek teeth (pre-molars and molars) constant growth in hystricomorphs



Guinea pig



Chinchilla – overgrown cheek teeth

Rodents - General Points

- Simple stomach, sacculated caecum.
- Coprophagic - Vitamins B and K.
- Separate vaginal and urethral openings
- Vaginal plug post mating



- Hamsters - cheek pouches.
- Flank sebaceous glands in male Golden/Syrian hamsters
- Gerbils and Russian hamsters - ventral scent gland.



Rats and Mice

- Social animals; Desexing important for population control and disease prevention → Usually males
- *Housing*: Open sided cages for ventilation, shredded paper, recycled-paper cat litter
Enrichment: cardboard rolls, wooden blocks for chewing, coloured paper, food reward puzzles
- *Diet*: Omnivorous; commercial pellets, fresh produce, sunflower seeds as treats only

Common diseases:

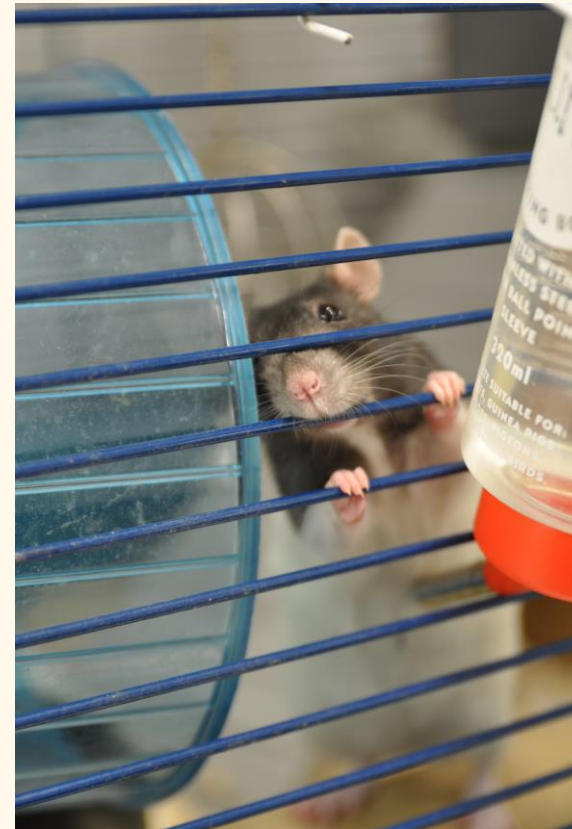
- Rats- Respiratory disease, benign mammary adenocarcinoma, pituitary adenomas
- Mice- Malignant mammary neoplasia



Enrichment, Enrichment, Enrichment



Enrichment, Enrichment, Enrichment



Hamsters

- Golden/ Syrian Hamsters : Solitary, hibernate $<5^{\circ}\text{C}$
- Russian Hamsters: Social, do not hibernate
- *Housing*: Cages - wire, plastic, glass, tunnel systems
 - Cage furniture - exercise wheel, wood
 - Bedding - deep shavings, nest box
 - Do not use cotton wool
- *Diet*: Commercial rodent pellet, vegetables, nuts, occasional insects, animal protein in wild; Hoard food
- *Common diseases*: Demodectic mange, skin tumours



Enrichment, Enrichment, Enrichment



Typical hamster 'starter' packs available in pet stores pose real welfare concerns, failing to provide the rodent with adequate space

FACT

In the wild can travel up to 10km per day



Gerbils

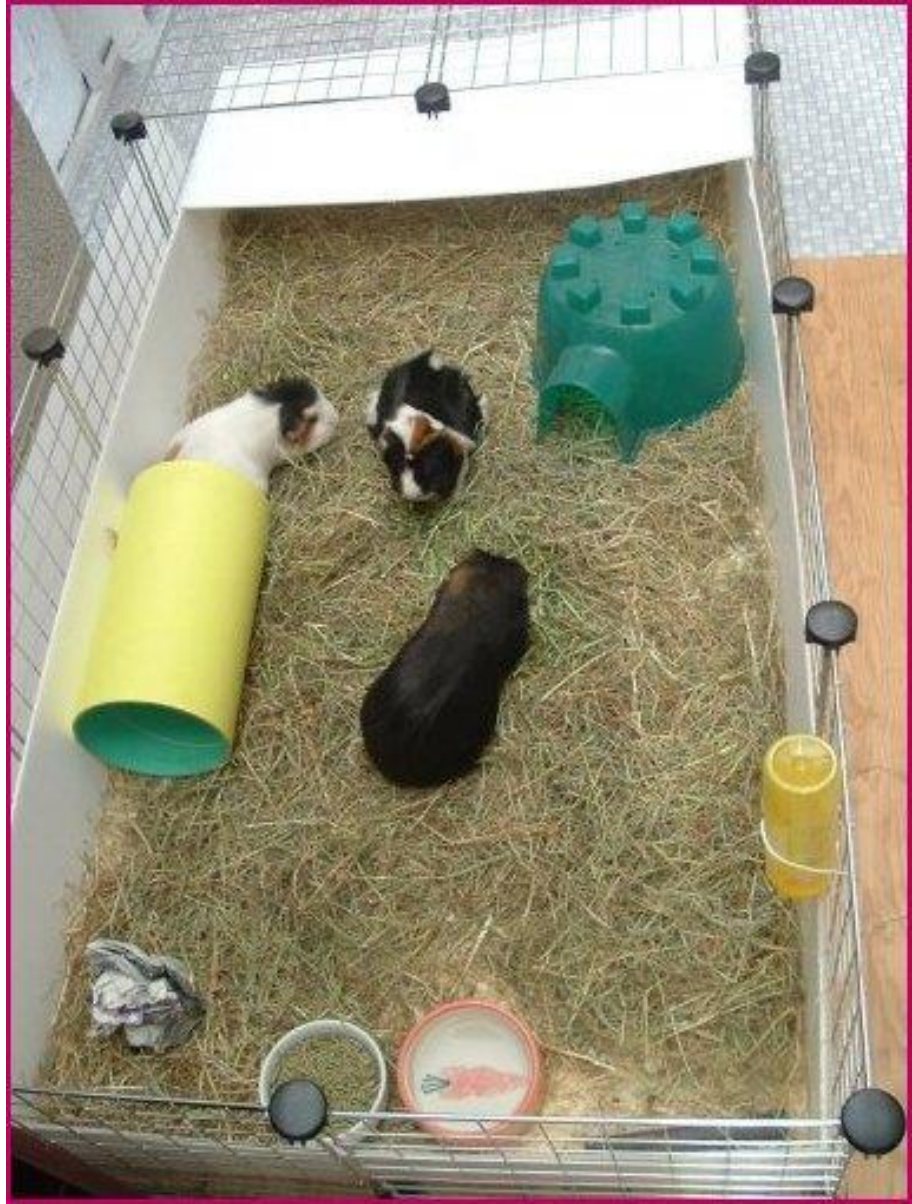
- Desert animal from Mongolia
- Social - single sex groups, breeding pair
- *Housing*: 'Gerbilarium' - plastic, glass tank, mesh lid, Bedding - deep shavings, peat, sawdust, avoid sand. Cardboard rolls, boxes
- Dustbath
- *Diet*: Commercial rodent mix, vegetables, fruit, occasional insects in wild, 'Seed Junkies' - beware obesity
- *Breeding*: Form monogamous pairs, male assists in rearing
- *Common diseases*: nasal dermatitis, scent gland tumours, epilepsy



Guinea Pigs

- Highly social animals; best in pairs or harems. Neuter if not breeding
- Do not keep with rabbits
- *Diet*: 70-80% grass hay (Oaten)
- + 20-30% fresh, leafy greens +
- 0-5% pellets and treats (Oxbow)
- *Housing*: Secure, well ventilated. Hides essential.
- *Substrate*: Newspaper, grass hay (indoors) or grass (outside, rotate position)
- *Enrichment*: Hides, seagrass mats/tunnels, cardboard rolls





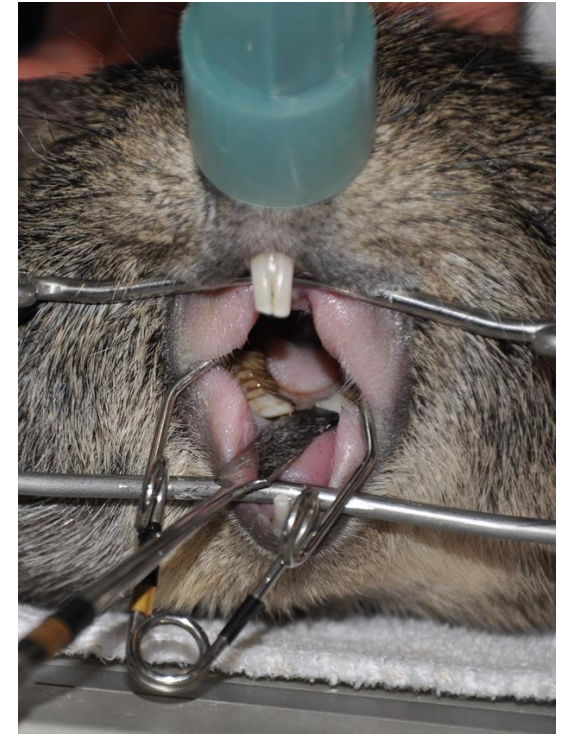
Guinea Pigs

Preventative medicine:

- Desexing (females= ovarian cysts)
- Vitamin C supplementation
- Parasites- Selamectin, ivermectin

Common diseases:

- Dental disease (acquired)
- Mange mites
- Gut stasis
- Cardiomyopathy
- Lymphoma



Chinchillas

- Nocturnal
- Dense fur, easily damaged
- *Housing*: Singly or breeding pair; Indoors, large wire cages (gnaw), nest boxes, wood, branches
- Dust bath
- *Diet*: Hay, chinchilla pellets, occasional veg
- *Breeding*: Pair or harem; precocial young
- *Common diseases*: Dental disease, gut stasis



Degus

- Diurnal, do not hibernate
- Highly social, live in colonies and dig burrows
- *Housing*: wire caging, provide tunnelling, nestbox, sufficient bedding to dig, exercise wheel
- Will stockpile food
- *Diet*: hay, chinchilla pellets, small amounts leafy greens
- Females communally rear young
- *Common diseases*: dental disease



