

Camelid Dentistry

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Learning objectives

- To describe the normal dentition of camelids
- To explain common corrective dentistry procedures in camelids
- To explain treatments for cheek tooth problems in camelids

Normal Camelid Dentition



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- Alpacas and llamas have 30 to 32 adult teeth, which are all erupted by about six years of age.
 - Incisors
 - six lower incisors are designed to contact the front portion of the roof of the mouth, called the dental pad.
 - Alpaca and vicuna incisors have enamel only on the labial surface
 - llama and guanaco incisors have enamel on both labial and lingual surfaces

Llama Alpaca

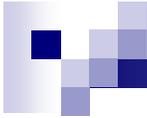
Incisors

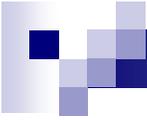


GUANACO & LLAMA

VICUÑA & ALPACA

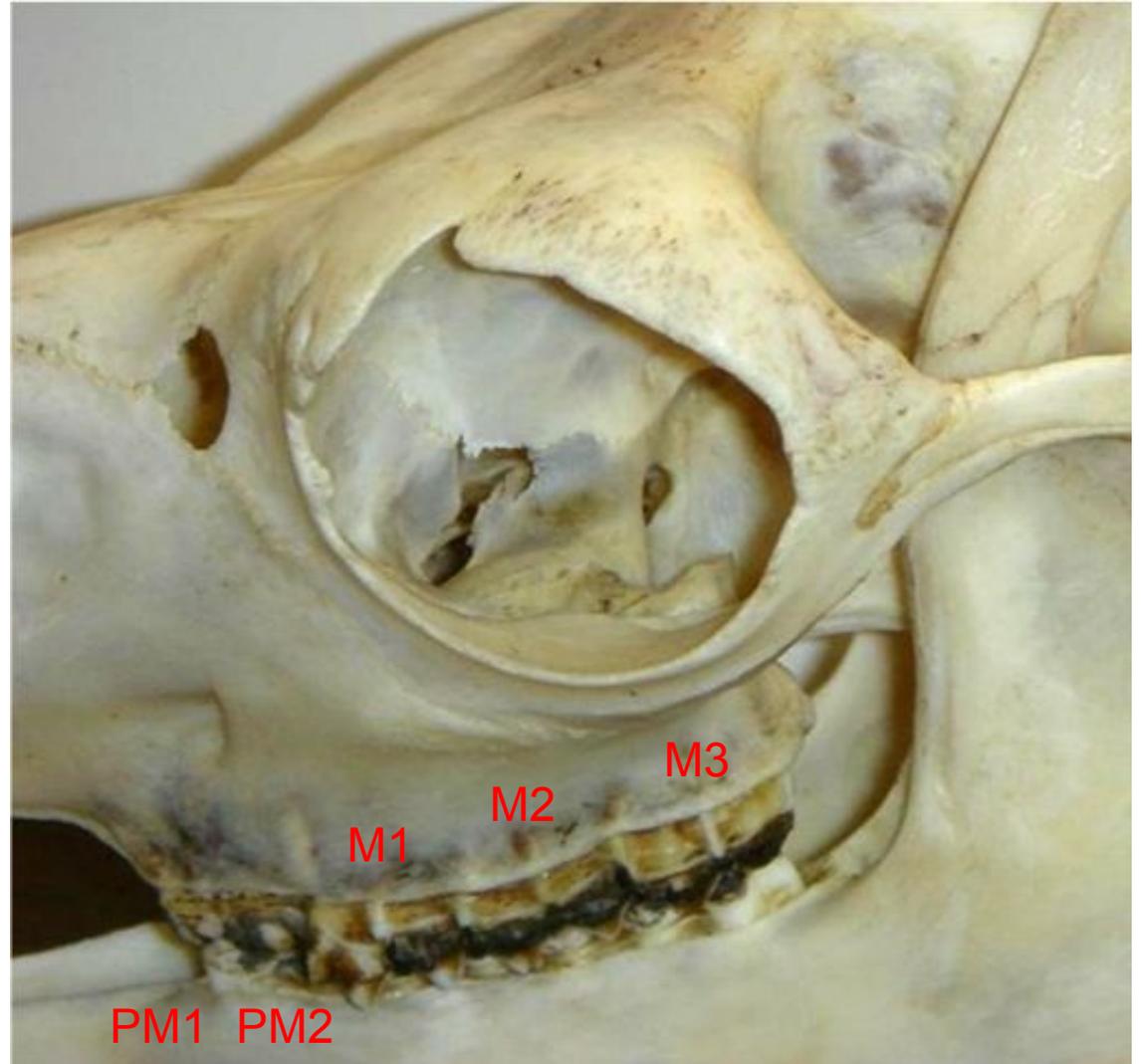
Wheeler

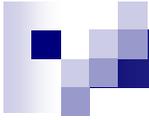




Cheek teeth

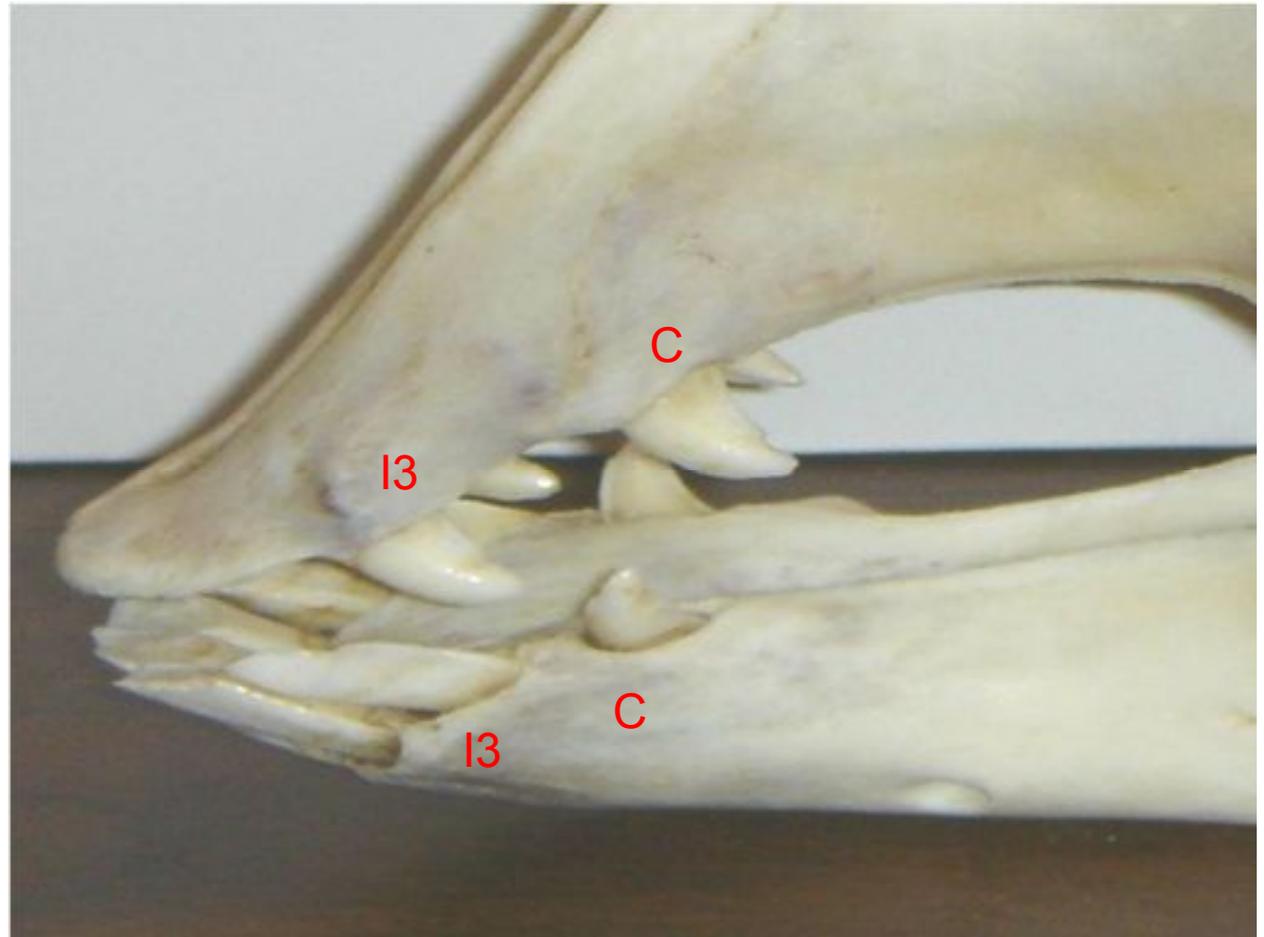
- 5 top and bottom on each side
- 2 Premolars
- 3 Molars





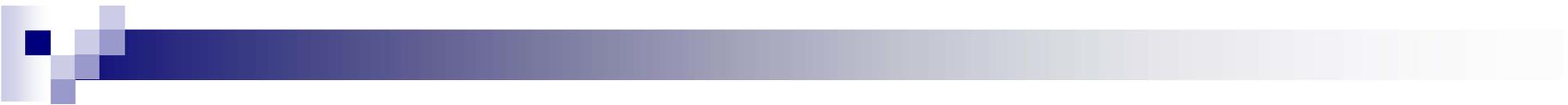
Fighting Teeth

- The upper third incisor and upper and lower canine teeth are called the **fighting teeth**
- Females **CAN** have visible fighting teeth.



Female fighting teeth





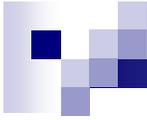
Corrective Dentistry

- Concerned mainly with the incisors and the fighting teeth in males.
- The proper functioning of the incisors and cheek teeth is the first step in the alpaca and llama digestive process.
- These teeth should be kept in optimal condition for maximum efficiency.
- Animals with bad bites should be carefully considered as not suitable for breeding.



Incisor tooth problems

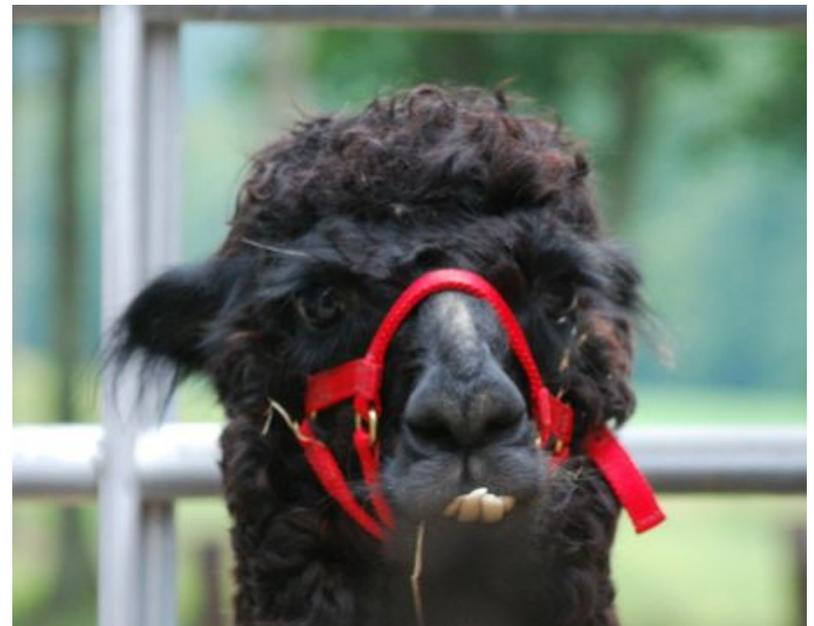
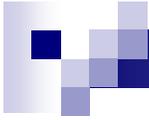
- Camelids eating grass need to have a good incisor-dental pad lineup in order to be able to efficiently bite off the plants for chewing.
- The ideal lineup has the tips of the incisors in contact with the dental pad approximately one eighth of an inch back from the front edge.
 - Very few camelids possess this ideal conformation.
 - Most of these animals are able to survive since they are raised in a noncompetitive environment.
 - Picking up hay is not a problem, even for animals with mild to moderate underbites.

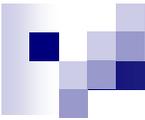


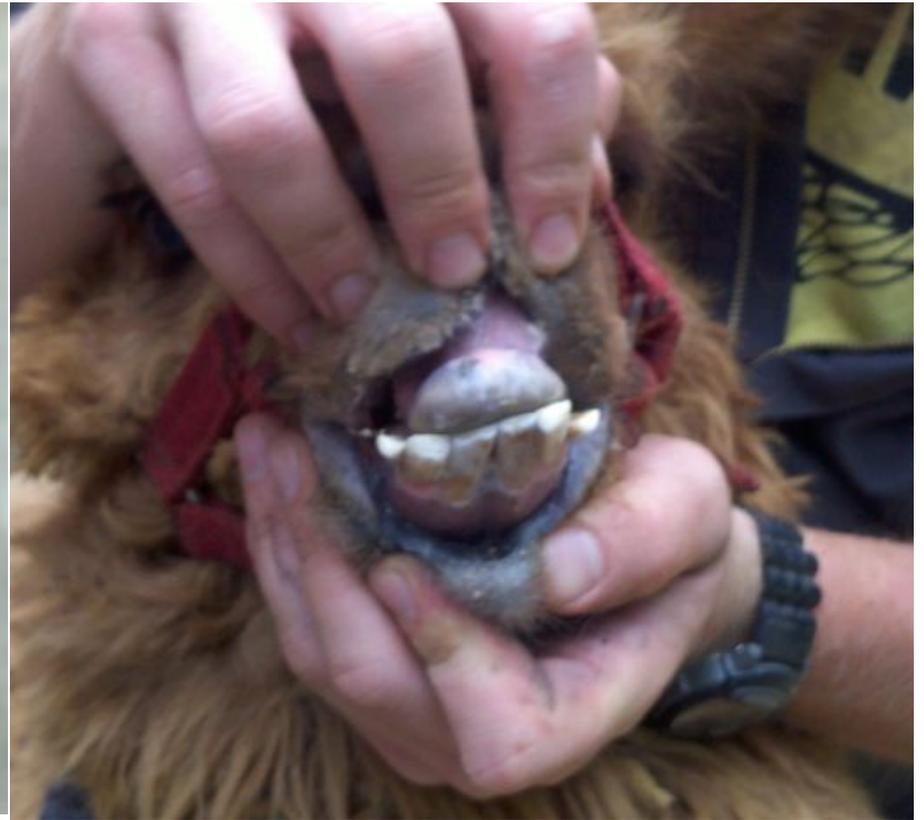
- Long incisors should be trimmed off so that they contact the dental pad at the front edge at least.
- This is most often done for cosmetic reasons
- It can be accomplished with minimal restraint and/or sedation in a particularly fractious animal.

- may prevent efficient grinding of food by the molar teeth, resulting in a malnourished animal.
- Retained deciduous incisors should be removed
 - may trap food resulting in gum disease
 - may prevent the normal growth of the permanent incisors.









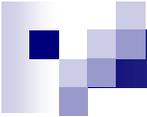
2 year old alpaca

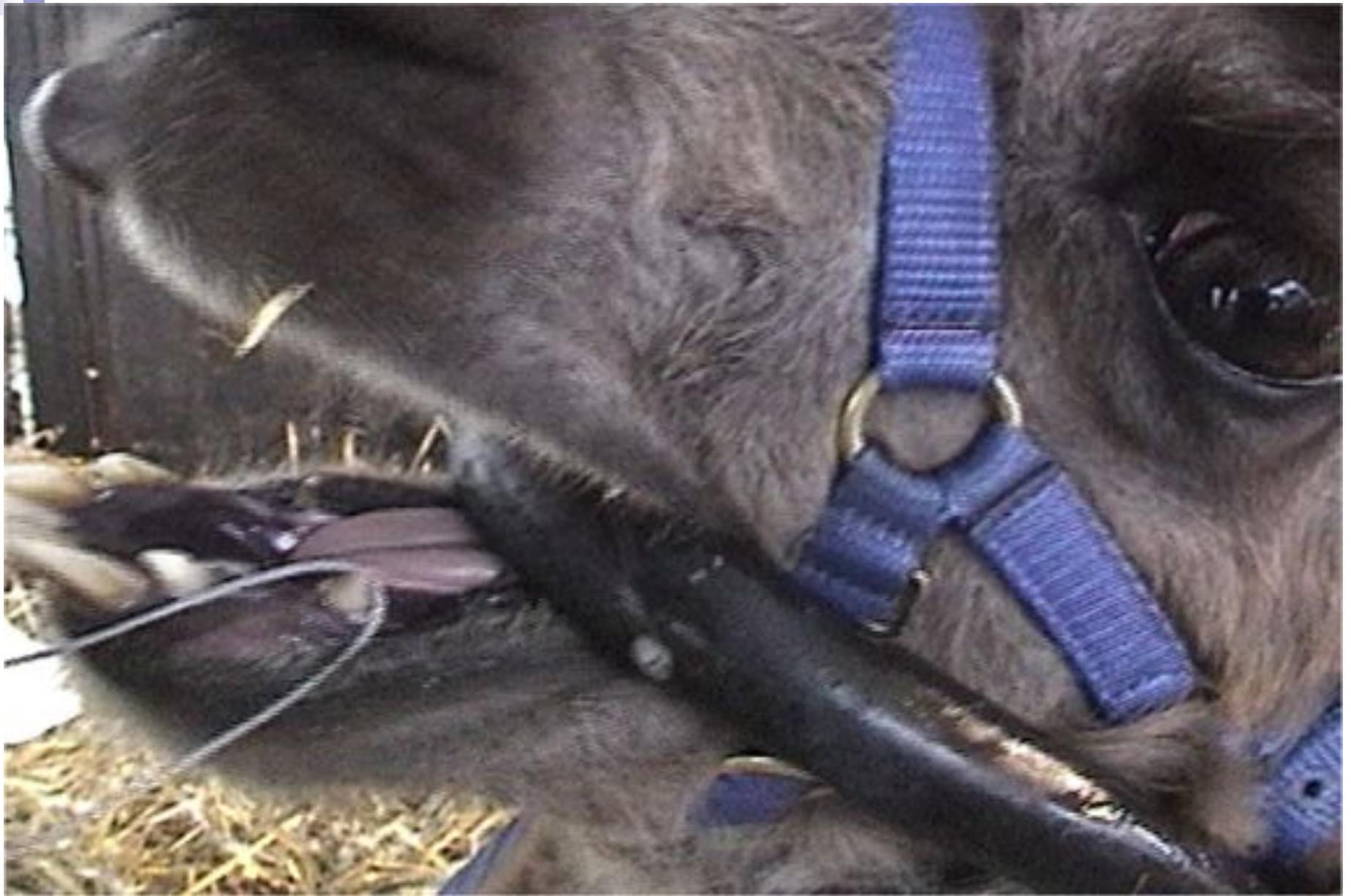




Three common methods are used to trim incisors

- Gigli wire- used to remove the bulk of the tooth, and then a file is used to provide a smooth, even biting surface.
- A one-foot length of rubber hose can be held in the corners of the mouth across the top of the tongue to keep the jaws part way open to facilitate trimming.
- Porcine mouth speculums may also be used to keep the mouth open during trimming

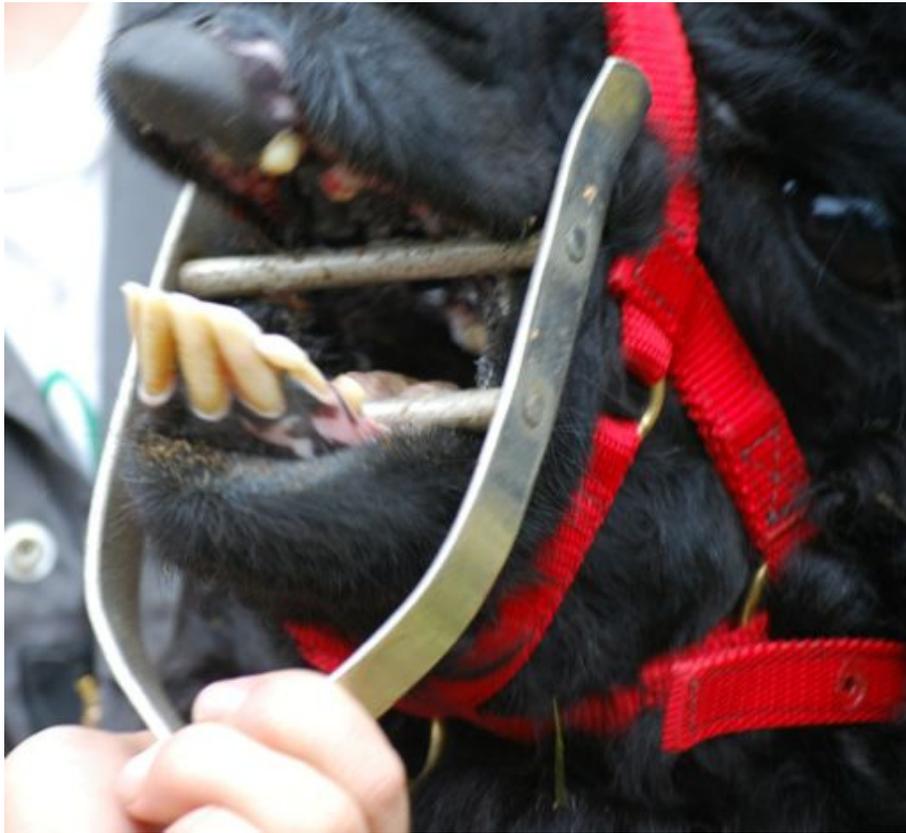
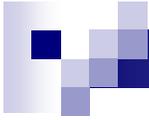




Tooth-O-Matic ®

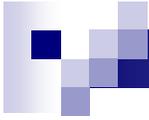


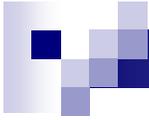


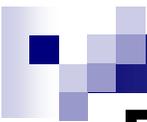


Dremel ® Tool



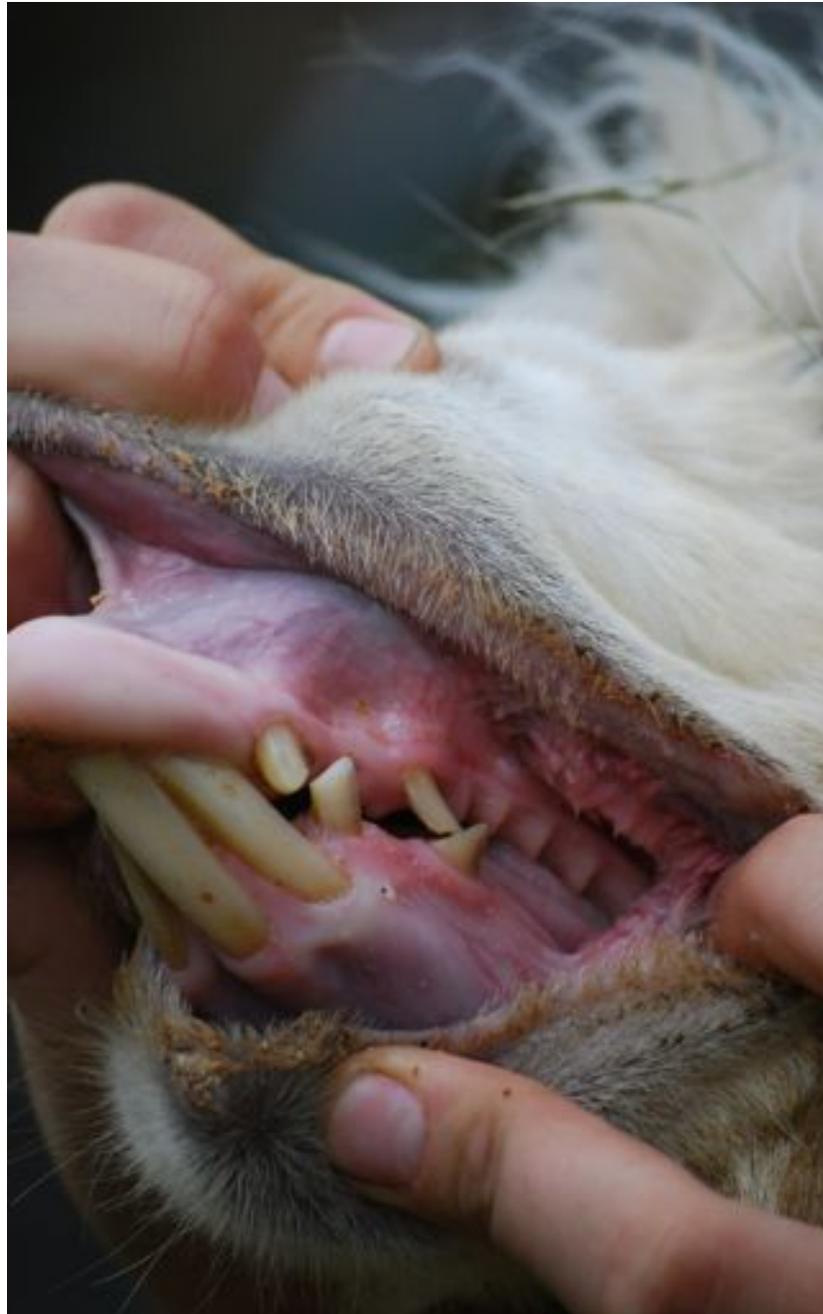
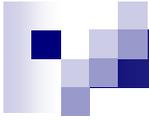


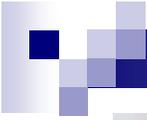


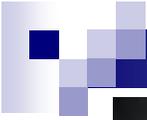


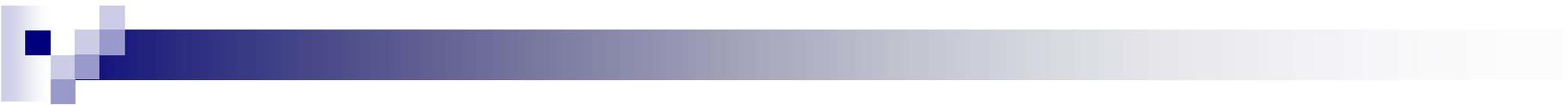
Fighting Teeth

- All alpacas and llamas do ***not*** need to have their fighting teeth trimmed.
- If males are not aggressive fighters when housed with other males, or are just not housed with other males, the teeth can be left alone.
- Aggressive fighters often attack other males around the face or ears or in the testicles, so these animals should have their fighting teeth trimmed.
- Gigli wire or a Dremel tool are used to trim these sharp teeth down to the level of the gums









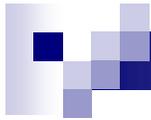
Cheek tooth problems

- Not common
- An animal that takes a long time to chew grass or hay, or who spills grain while eating may be having trouble with sharp edges.
- Poor body condition can also be a sign of dental problems.
- If the animal strongly resists when pressure is put on cheeks over these teeth, they may have a problem with excessively sharp cheek teeth.

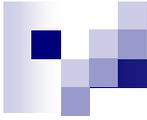
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- This may be a difficult call in a high strung animal
 - Cheek teeth should be filed if the other problematic signs are observed.
 - The outside edges of the upper cheek teeth and the inside edges of the lower cheek teeth are easily blunted with miniature horse dental floats or other thin files.
 - Most animals do not object to this procedure.
 - An immediate improvement in chewing is observed in most instances.
 - I have done this 2 times in 18 years!

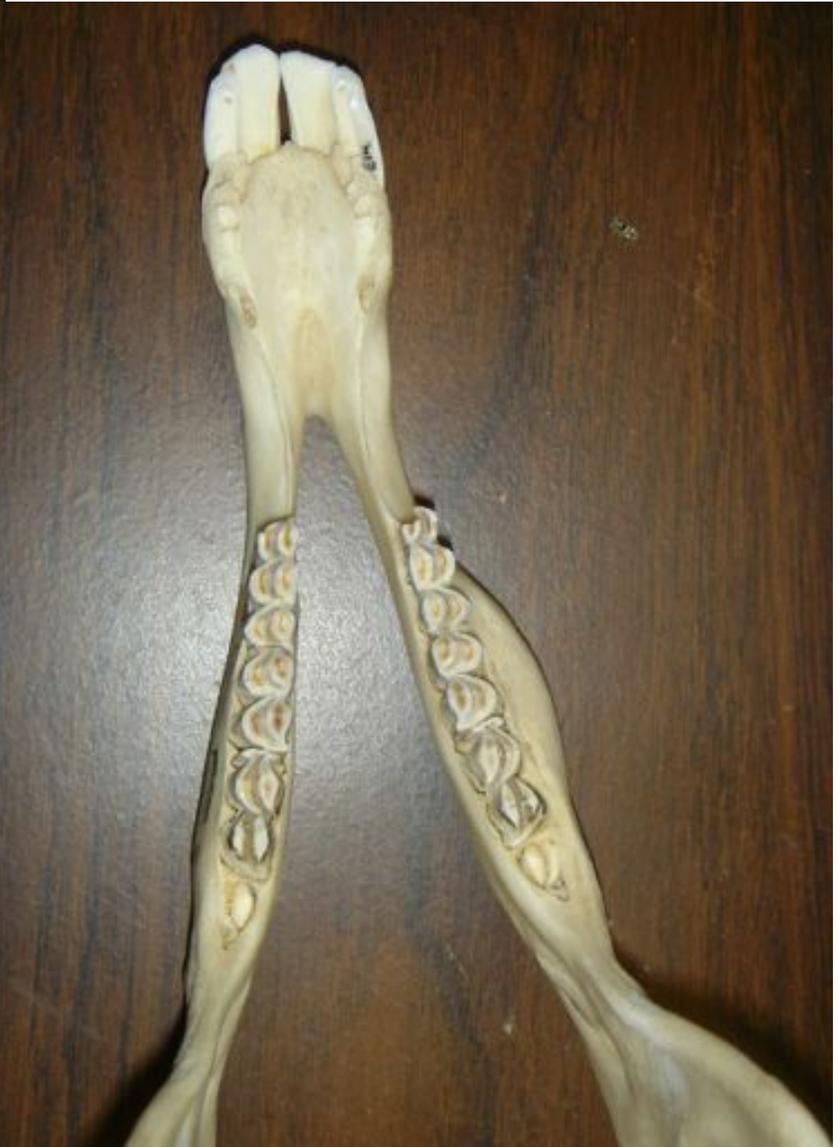
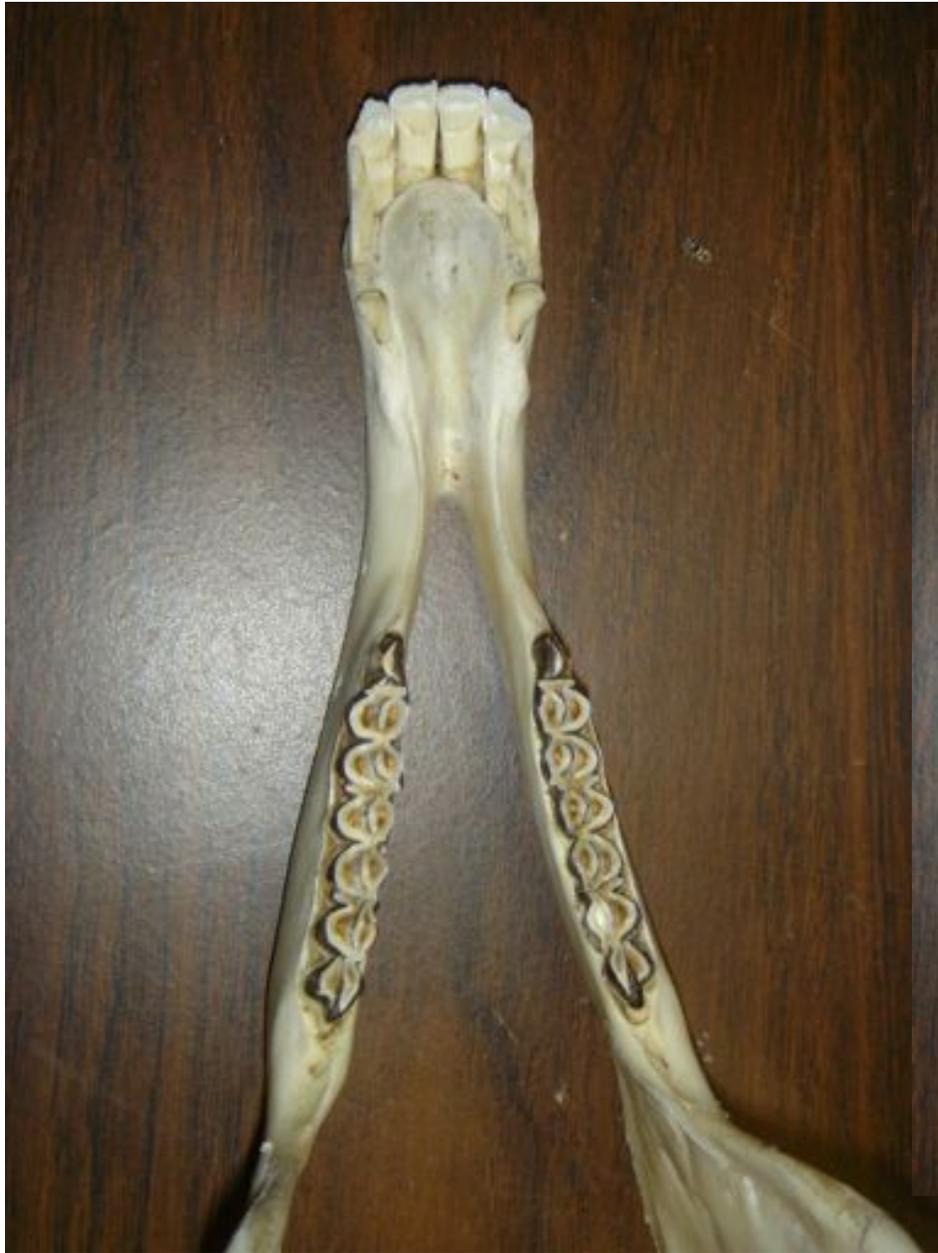
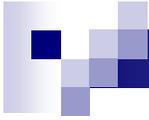
Camelid Jaw Abscesses

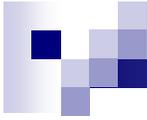




- Common problems in mature animals
- No sex predilection
- May start when hay or other plant material or wood is lodged between the tooth and the socket
- Have been called tooth root abscesses







- May be asymptomatic until a draining tract is discovered
- Palpable enlargement of soft tissue and mandible in area of the cheek teeth
- weight loss and problems chewing in advanced cases of long standing



Treating Jaw Abscesses

- Medical treatment is best in my opinion.
- Long term antibiotics
 - **Isoniazid®** at 6 mg/lb PO SID for 4 to 6 weeks
- Very successful even in long term cases with extensive bone remodeling
- Soft tissue and bone distortion often disappears
- Improvement usually seen within 1 week



Medical Treatment

■ Injectables

- Procaine Pen G at 1 ml per 15 lbs BW SQ SID for 30 days
- Nuflor® at 6 ml/lb BW SQ every 3 days for 5 treatments
- Long acting oxytetracycline at 9mg/lb SQ every 3 days for 5 treatments

- Flush any draining tracts daily with water/iodine or chlorhexidine solution/hydrogen peroxide and infuse with antiseptics such as Biozide® or Nolvasan Suspension®



Surgical treatments

- Open soft tissue over the draining/swollen area
- scrape the bone
- flush until healed
- Very painful
- Avoid if possible

- 
- Radiograph cheek teeth and **remove** those with evidence of tooth root damage
 - Avoid if possible
 - ***Mandible sometimes fractures*** during surgery as the lateral jaw plate must be cut and the tooth repelled out
 - ?? Long term consequences of missing teeth with respect to adjacent teeth and opposing teeth??