Aging White-tailed deer by tooth wear and replacement
Aging Characteristics

- Physical Characteristics
  - Antler Size
    - Number of points not correlated with age
  - Body size and shape
    - Neck
    - Waist
    - Back
    - Behavior
- Tooth wear and replacement
- Harvested Deer
Age Classes

- Born in May and June
- Fall harvest
  - 6 months - fawn
  - 1.5 yrs - yearling
  - 2.5 yrs
  - 3.5 yrs
  - 4.5 yrs
  - 5.5 yrs
  - 6.5 yrs
Tooth Wear

- The amount of visible dentine is an important factor in determining the age.
- The tooth wear and replacement method is not 100% accurate however, due to the differences in habitat.
- Tooth wear on a farmland deer may not be as fast as that of a deep woods buck.
Severinghaus (1949) aging method

- Focus on lower jaw bone
- Adult deer
  - 3 premolars and 3 molars
6 Months
4 teeth showing.
3rd premolar has three cusps
1.5 yrs
- 6 teeth
- Third premolar
- Third molar (last tooth) may still be erupting
- Cusps of molars have sharp points.

Inset: Extremely worn third premolar may fool people into thinking deer is older. Actually, this tooth is lost after 1-1/2; years and replaced with a permanent two-cusped premolar.
2.5 yrs

- Teeth are permanent
- On the first molar (4th tooth) the cusps are sharp
- Enamel > dentine
- Third cusp (back cusp) of sixth tooth (third molar) is sharp.
3.5 yrs

- Cusps show some wear
- Dentine now thicker than enamel on cusp of fourth tooth (first molar).
- Dentine of fifth tooth (second molar) usually not as wide as enamel.
- Back cusp is flattened.
4.5 yrs

- Cusp of fourth tooth (first molar) is gone.
- Cusps on fifth and sixth teeth (second and third molar) are blunt.
- Dentine of fourth tooth now twice as wide as enamel.
- Dentine of fifth tooth wider than enamel.
5.5 yrs +

• <2% or deer more than five years of age.
• Accurately aging these deer by tooth wear is usually more of a guessing game than a science.
• In general, deer close to 5-1/2 years of age will show considerable wear on the premolars, and the first cusp of the fourth cheek tooth (first molar) will be dished out or show signs of "cupping."
9-1/2; Years:
By 9-1/2; years, all cheek teeth are cupped and worn nearly to the gum line.
Review

- **1.5**: Tooth 3- milk tooth with three cusps
  Tooth 6- not fully erupted
- **2.5**: Tooth 3- permanent 2 cusp
  Tooth 4- Enamel=Dentine
  Tooth 6- Back cusp is sharp and pointed
- **3.5**: Tooth 4-Dentine>Enamel
  Tooth 6- back cusp worn flat
- **4.5**: Tooth 4-Dentin 2x Enamel
  Tooth 6- Back cusp slopes downward
- **5.5**: Tooth 4-Dentin 2x Enamel
  Tooth 5- Dentin 2x Enamel
  Tooth 6- Dentin > Enamel
- **6.5**: Tooth 4- Dished out
  Tooth 5- Small enamel ridge in center
  Tooth 6- Small enamel ridge in center
- **7.5**: Tooth 4- Worn Smooth
  Tooth 5- Worn Smooth
  Tooth 6- Small enamel ridge in center
- **8.5**: All teeth worn smooth