

ODDS & SODS

1. Vulva patch
2. Function of bell - reference Bubenik movie.
3. Reference Yukon study re: bears and impact on moose - how bears hunt.
4. Glands - between hooves - eyes - greenish stained hair - pheromones.
5. Urination on glands.
6. Antlers - Shed by older bulls 1st, young later.
 - An average start growing about May 1 although again, older ones start 1st - in early April, I've seen them with foot long antlers.
 - As growth occurs, there is a very rich blood supply in velvet covering antlers - it takes a tremendous amount of nutrition to result in this somewhat spectacular piece of head gear which attains full size in about 3 months.
 - About end of August velvet starts to shed, blood supply is cut off and pretty soon all velvet is shed and there he is with his 'crowning glory for all the world to see'. Well, not quite, as it does require some polishing on the local shrubbery and this also lets the girls know who's in town.
 - Following this or during this time, he begins to do all those 'bull like things' - like a bull in a china shop to tell the girls he's around and to challenge other bulls in the area. Some areas look like he's been on a habitat rejuvenation project.
 - Antlers and their size will determine who is king of the hill and only serious jousting will occur between animals of same social status - in other words you generally will not see a prime bull with a spread of 60+ inches jousting with a teenager whose antler spread is about 30".

7. Testosterone - We've talked about antler development, rut, etc. and the fool that a big bull can make out of himself ~~showing~~ ^{charming} all those girls around, urinating on himself, rolling in his urine, beating trees, etc. What triggers it all?
- Interconnected to all this is the hormone testosterone. During most of the year it's barely detectable in the bloodstream but beginning with the shortening of the summer days in August, testosterone begins to increase and one of the first things to occur is shedding of velvet.
 - Once testosterone peaks in mid-September, it falls off very rapidly to one half its ^{former level} in late September and this is when most of breeding occurs.
 - This whole sequence is governed largely by the Solar Clock in moose and occurs at the same time year in and year out.
 - Following this, the bulls settle down to not so foolish ways and even form aggregations - I've seen as many as a dozen bulls all together following the rut.
 - What the bull moose goes through annually is akin to what humans go through during adolescence with all of the manifestations. Most humans only go through it once whereas the poor moose and also deer, elk and caribou, go through it once a year for life. That doesn't imply that humans only go into rut once - not so. I'm sure that there are some around who are in rut almost constantly.
8. Castration - explain antlers.
9. Females - What about her when all this crazy bull stuff is going on. She does some pretty strange things also, things as I mentioned like rolling in his urine and smelling his urine.
- She has her own hormonal cycle that determines when she gets bred.

- If not bred in first cycle which occurs in very early September and perhaps even late August, she will again come in heat about 28 days later. *gestation about 240 days*
- Most of breeding occurs in late September although there are some years when it appears to take place later - reference GHA 26.

10. Domestication - Can be very tame although when they come into rut one has to be careful.

- Picture of moose riding, hitched to sleigh.
- Reference females in period must stay away from captive bulls that are in rut.

11. Radio Telemetry - Use *receiver* and a collar to illustrate how we do telemetry studies.

*add 46.67
to cervix*

12. Weights & Size - *Ad. ♂*

<i>wt</i>	<i>ant. live</i>	<i>dead</i>	<i>length</i>	<i>girth</i>	<i>shoulder</i>	<i>wt. lbs</i>
	447	646	9.2	6.2	6.1	21
	529	581	8.7	6.0	5.9	29
	390	260	6.9	4.7	4.8	36

13. Reproductive Differences - Hecla - Duck Mountains

- Makes quite a difference in number of animals on landscape when you have such marked differences in productivity.
- So, if you shoot cow moose, we'd like you to bring us in the jaw along with the reproductive tract.
- Reference NFAA - if we want to manage moose and learn more about what makes them tick up here, we must have your help because with cut backs we are taking, it is financially impossible for us to do any work ~~up here~~.

14. So what are we asking you for:

- Report all kills you make to your local NRO so that he can record them.
- Bring us in a jaw.
- Bring in reproductive tract of females including foetuses.

- drag mark - tip is long ~~drag~~ ^{drag} ~~direction~~ ^{drag} ~~spring~~

15. Which way is it going - urine in snow. - difficult to see

16. ~~Hormones~~ ^{Hoooves} - how they wear on bulls in rut.

17. The good Lord - a little prayer helps. - one of the ~~for~~ the good lord's chosen people carries rosary.

18. annual change in pop'n size is the net result of 4 primary factors

$$N = R + I - M - E$$

↓ ↓ ↓ ↓
 natality immigration mortality emigration

or $N = R - M$ if $I = E$

19 fatty livers - photo

20 kidney fat - condition

21 stones

22 Pedic glands

23 strange foetus

24 revenue -

25 WSI

26 Rectopneumic pavers -

28 bald licks