

Wisconsin's White Deer: Separating Science and Myth

by MaLenna Smith (Leland, WI)

- Question #35 on the April 14 ballot of the Wisconsin Conservation Congress Spring Hearing, which uses public input to advise the DNR Board on hunting, fishing, and trapping issues, asks: **Would you favor legalizing the harvest of white and albino deer statewide?**

White and albino deer have been protected in Wisconsin since 1940, with an exception in CWD zones being made only in 2008, so removing all protection is a **radical proposal**. Considering the Natural Resources Board just voted in January to reinstate protection of white and albino deer in CWD zones, it is also an unexpected proposal.

Question #35 is preceded on the WCC ballot by two paragraphs of sometimes misleading information about white deer. There is much myth and little science floating around about white deer, so **Wisconsin citizens need accurate information to make a well-informed decision**.

- Despite recent newspaper stories that have put white deer in the public eye, white and albino deer are **extremely rare**--estimated by most sources to occur at **1 in 20,000**. Based on a total statewide population of between 1.5 and 1.8 million deer, that's about 75-90 white deer in the entire state, or **slightly over one per county**.

Granted, white deer tend to occur in pockets, and there are probably a few more in Wisconsin, but Question #35 neglects to mention how truly uncommon these deer are.

- What's the difference between white and albino deer? **The term "white deer" (and sometimes "leucistic") is generally used to refer to deer with just white coats, while "albino" refers to deer with additional pink eyes and noses**--the result of a total lack of pigmentation which allows blood vessels to show through the eye covering and skin.

The terms "white deer" and "albino deer," however, are used very loosely and are often mixed up. To further complicate the picture, **there is a lot of variation between the two types**. Even true albinos can have blue or greenish eyes.

Coat color is actually determined by many genes (over 100 just in mice!).

Different genes control various pigments, enzymes, and hormones that affect color, and can even "leak," producing dark spots on a white coat. The genetics of color is far from simple.

- To further complicate the picture, there are **"piebald deer," which are partially white** and legal to hunt in Wisconsin, and whose definition has caused more than a few headaches for hunters, non-hunters, and wardens alike. The problem: **At what point is an animal no longer "white"?**

The term "piebald," as used for most animals, refers to a "pinto-like" color. In Wisconsin game regulations, however, piebald is defined as **"...a deer that has some brown hair, even if only a small patch, on any part of the body that is not part of the head, hooves, or tarsal glands..."** (DNR Bureau of Law Enforcement)

To make things even more confusing, **white bucks often have brown-stained foreheads** from secretions of glands near the base of the antlers and from rubbing against saplings to mark territory. Both bucks and does also have dark glands on the hind legs--which is why Wisconsin has the "head, hooves, and tarsal glands" exclusion.

- The paragraph introducing Question #35 starts: "White, albino, and piebald deer have a recessive genetic mutation..." The term "recessive" is often misunderstood. **Recessive genes are not usually expressed and are not (as often implied) harmful or defective.** A 2010 outdoorlife.com reader ("bigshed") makes the point:

"I like all the discussion about the recessive genes being inferior. I have been telling people for years we need to eliminate left-handed people to help improve our species. This also goes for baldness and color blindness. Recessive and dominant genes generally have nothing to do with inferiority as far as survivor ability and hardiness. The terms recessive and dominant only mean whether or not the gene shows itself on the animal's appearance to the naked eye (Dominant) or if the gene is present but not expressed (Recessive.)" Bigshed ends: *"Now let's get to hunting left-handed people."*

- The term "mutation" is also misleading, since white deer are not freaks of nature, but the result of genes that prevent them from producing the pigment melanin. They are typically normal in every other way. In fact, **the word "mutation" in genetics can refer to any change from a normal type**, as this scholarly excerpt explains:

"Red hair is a recessive genetic trait caused by a series of **mutations** in the melanocortin 1 receptor (MC1R), a gene located on chromosome 16." (from eupedia.com/genetics/)

Many other animals have "genetically impaired" color, yet are not viewed as defective: white rabbits, white guinea pigs, white mice and white rats--all of which are pure albinos with pink eyes. Darwinian evolution, the whole foundation of modern science, is based on the theory of mutation and change over thousands of years.

- Question #35 continues: "these animals (white and albino deer) often have other recessive traits and physical maladies such as poor eyesight in albinos."

The "poor eyesight" of pure albinos with pink eyes is true because of the involvement of pigments in the retina or back of the eye, but **doesn't apply to most of the Wisconsin white deer population--almost all of which have normal brown, or blue or greenish eyes.**

To make another point: How many people wear glasses? Do we consider people who wear glasses "defective?"

- As far as "physical maladies," Jeff Richter, photographer and co-author of *White Deer: Ghosts of the Forest*, has seen 40-50 different albino deer and watched them over 15 years, with thousands of hours of viewing time. He claims he has **"never noticed any (of the white deer) to be impaired in any way."**

Mike and Marshia Crowley, photographers and long-time white deer watchers from Boulder Junction, state: **"We have had the privilege of observing a line of albino deer for the past 20 years and can tell anyone that they live long and healthy"**

lives, and the does we have observed have had healthy fawns at 8 and 9 years of age..."

A "New York Antler Outdoors" writer comments: **"The albino deer, other than their color difference, are in every other way the same as regular colored deer... their health is not compromised by the recessive gene."**

(<http://www.nyantler-outdoors.com/albino-deer.html>)

- The truth is, **there have been no studies done on white deer.** An article on white deer in *Our Wisconsin* magazine (February/March 2013 issue) quotes Wisconsin DNR deer researcher Keith McCaffery, **"...the DNR's emphasis has been to manage harvestable deer in the greater herd, so that's why no time has gone into studying them."**

Even the statement that white deer are "just as apt to get CWD as any other deer" is an assumption and not a fact.

- Are white and albino deer "social outcasts" because of their color? Long-time observers of white deer all make the same comment: **The white deer are in no way recognized as different or ostracized by their brown herdmates.**

White and brown deer not only live together just fine, the white deer often dominate in social altercations and competition for food--a far cry from the oft-touted image of white deer as inferior members of the herd.

- The idea that white deer are somehow harming the herd and need to be culled is perhaps the biggest myth of all. **Hunter fears of a herd take-over by white deer are not grounded.** It hasn't happened--anywhere! Even if white genes were undesirable, their ability to "contaminate" a herd is greatly exaggerated.

Hunter/biologist Bob Humphrey ("Ask the Biologist," buckmasters.com) explains: **"...protecting white deer probably won't cause any real harm to your deer herd. It's a very rare trait and the genetic drift in even a small, isolated population is so great that such traits seldom become prolific without selective aggressive breeding."**

As far as removing the albino genes from the deer herd, it wouldn't be possible, since many brown deer carry the genes, just as **an estimated 1 in 200 humans carry the gene for albinism** (University of Minnesota International Albinism Center). Most humans also carry genes for various physical defects that are never expressed because the genes are recessive or hidden.

- The biggest and most important question is: **Can these deer survive predators, deep snow, brutal temperatures, scarce food, fights with other deer, any number of diseases, and still survive?** In other words, are they fit? And the answer is an unequivocal "yes"!

John Bates; co-author of *White Deer: Ghosts of the Forest*, columnist, and naturalist, says: **"For me, the final proof of their fitness is simply this: They have survived, and thrived, over time. If they were significantly unfit, they would have been culled out a long time ago."**

- Question #35's introductory paragraphs end: "From a strictly biological perspective, there is no reason to protect white deer..." "Perhaps not," says John Bates in his March 7, 2014 column, *A Northwoods Almanac*, in the Lakeland Times, **"It's equally true, however, that there is no reason to hunt white deer either."**

John continues: **"So, the argument for hunting them comes down to this: do rarity and beauty enhance the value, and therefore justify the protection, of white/albino deer, or not? For me, rarity and beauty, not to mention the economic benefit to the area, are the trump cards, and thus I would vote no to the hunt."**

Additional sources:

- WPT "In Wisconsin" episode on Wisconsin's white deer: <http://video.wpt.org/video/1510278527/>
- Mike and Marshia Crowley's photo website: <http://www.lifeinthenorthwoods.com/>
- Advocacy website for protecting white deer: protectthewhitedeer.com
- Boulder Junction Chamber of Commerce promotional page: <http://boulderjct.org/recreation-trails/birding-wildlife/white-deer-the-albino-deer-of-boulder-junction-wisconsin/>
- *White Deer: Ghosts of the Forest* by Jeff Richter and John Bates <http://www.manitowish.com/manitowishriverpress.html>