



## Deer Sex in the 21<sup>st</sup> Century: Part 1

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WHILE the very mention of Bambi makes wildlife biologists wince in pain, they would have once begrudgingly agreed with the premise that the biggest, strongest, most mature buck (i.e. the Prince of the Forest) would likely be Bambi's father. The paradigm of white-tailed deer breeding ecology is that large dominant bucks do the breeding — period. For decades, observational research supported the idea that bucks maintain a strict dominance hierarchy in which physically mature males dominate immature males. Bucks at the top of this hierarchy possessed all of the breeding rights, and any hunter could recite this “common” knowledge.

Fast forward to the 21<sup>st</sup> century and the development of DNA testing. Trying to observe a specific behavior of wild animals, such as mating, is the proverbial needle in a haystack. And, in the past, when it came to reliably determining paternity, you were more likely to win the lottery. But now, that unique double helix string of nucleic acids can pinpoint exactly who your daddy is. A whole new world has opened regarding mating systems and paternity. Harbor seals, greater horseshoe bats and brushtail possums are just a few of the species on which DNA paternity studies have been conducted. And as more tissue was spun around in test tubes, interesting details surfaced, like multiple paternity. That's right. Individuals in the same litter can be fathered by more than one male. Deer mice, common shrews, black bears and grizzly bears have documented cases of multiple paternity.

What about white-tailed deer? Surely this cannot happen. There is a pecking order. Big mature males get breeding rights. It's common knowledge for cryin' out loud. Think again. In 2002, a study documented multiple paternity in captive white-tailed deer. Two years later, it was documented in a free-ranging population in Michigan. Since then, multiple paternity has been documented in every free-ranging white-tailed deer population that has been tested. A set of twins has a 20 to 25 percent chance of being half siblings. Which means a doe will mate with multiple bucks, casting a new light on her role in the “bedroom” saga. So the biggest, baddest, best looking buck doesn't get all the girls after all. In fact, a quarter of the time he can't even keep his hooves completely on one.

So if the Prince of the Forest isn't doing all the breeding, who is?