FREE LIBRARY 17 VIDEOS AND COUNTING

THE RESEARCH LIBRARY

The data behind every Dale vs. Ol' Notch episode and every episode of Sunday Masterclass: Whitetails. What each study found, how big it was, and where it falls short. When it's my own tactic, it says MY READ.

HUNTER SAFETY · DALE VS. OL' NOTCH, EPISODE 15

What Changes for Deer Hunters When the Clocks Fall Back?

The sun doesn't move, your clock does. In PA and NY, deer hunting hours are tied to sunrise and sunset, so after the clocks fall back, quitting time on your watch comes about an hour earlier. And a study of 1,012,465 deer crashes found they jump 16% the week after the clocks fall back.

THE RUT · SUNDAY MASTERCLASS: WHITETAILS, EPISODE 2

Where Bucks Go in the Rut: What 9 GPS Collar Studies Show

In the rut most bucks don't leave the country. They work two or three spots over and over, tied to where the does are, and some take short trips. The peak is a window that changes by state, not one date. Hunt close to the doe bedding, with a stand built for each wind.

MYTHS · DALE VS. OL' NOTCH, EPISODE 14

Do Three Common Deer Myths Hold Up?

Not in the data I found. Pennsylvania's doe data found no relationship between the rut and the moon. About 50 GPS bucks in Mississippi didn't shift when they moved once hunting started, and Mississippi State says a buck may use 10 or more bedding areas in a month.

CALLING AND RATTLING · DALE VS. OL' NOTCH, EPISODE 13

Does Loud Rattling Bring In More Bucks?

In a four-year Texas study, loud rattling pulled in nearly three times as many bucks as quiet rattling, and rattling 1 minute or 3 minutes at a time made no difference. Most bucks came in the first 10 minutes, and 60% were first seen downwind. That's one Texas refuge, so your woods may differ.

THE RUT · DALE VS. OL' NOTCH, EPISODE 12

Should You Hunt Near Does to Find Bucks?

Does live in family groups that hold the same ground. In West Virginia, does in the same group were about as related as first cousins, and in Minnesota one doe family used the same ranges for 20 years. Maryland researchers think most buck trips outside their range had to do with breeding.

DEER MOVEMENT · DALE VS. OL' NOTCH, EPISODE 11

How Big Is a Buck's Home Range?

A Penn State deer researcher says the rule of thumb that a buck's home range is one square mile is most often wrong. In his Pennsylvania data, an average buck used about half a square mile in fragmented Gettysburg and about two in the big woods. One collared buck covered 85 miles in 24 days of the rut.

DEER MOVEMENT · DALE VS. OL' NOTCH, EPISODE 10

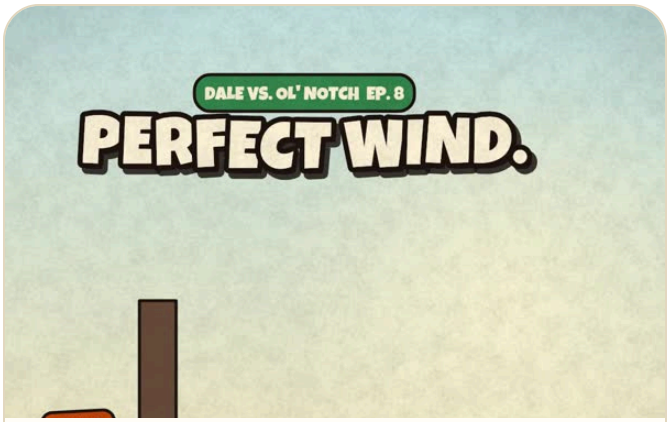
New Buck on Camera: Moving In or Just Visiting?

In the rut, a lot of bucks leave home for a few hours and come back, so a new buck on your camera may be one of them. But in one Mississippi study about a third of bucks kept two separate home ranges and stayed in each for weeks. Some "new" bucks are passing through, and some are seasonal neighbors.

WEATHER · DALE VS. OL' NOTCH, EPISODE 9

Do Cold Fronts Move Bucks?

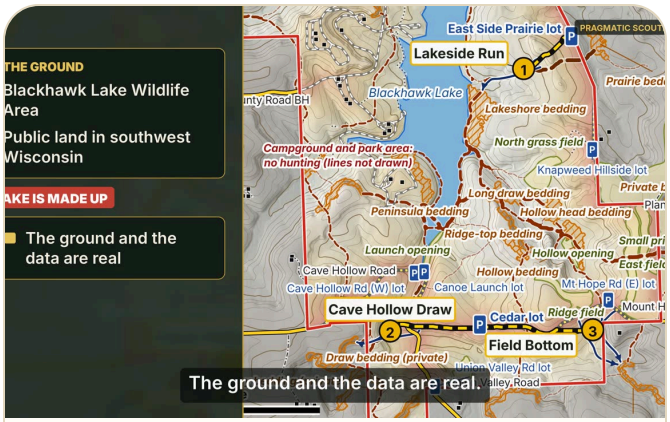
Not much that the data can show. In Oklahoma, weather trends showed up in only 8 of 80 movement models, and in Pennsylvania rut movement had no relationship with daily highs and lows. When Penn State checked one cold front, the researcher said they'd likely need a lot more data to tease out any effect.



WIND AND THERMALS · DALE VS. OL' NOTCH, EPISODE 8

How Do Thermals Work?

Fire weather guides say air starts drifting uphill within a few minutes of the sun hitting a slope, and slides downhill, slow and shallow, once the slope goes into shadow. East-facing slopes switch uphill first, and a strong wind can override all of it. No deer study I found tested how deer use thermals.



SCOUTING · SUNDAY MASTERCLASS: WHITETAILS, EPISODE 1

How I Scout a Deer Property, Start to Finish

Your first sits on a fresh spot are likely your best, so read the whole map before you hang anything. Then check the rules, build a stand for each wind, plan your days around stand rest, and know your wait times after the shot. The example is real public land in southwest Wisconsin with a made-up hunter, built from maps and public data.

THE RUT · DALE VS. OL' NOTCH, EPISODE 7

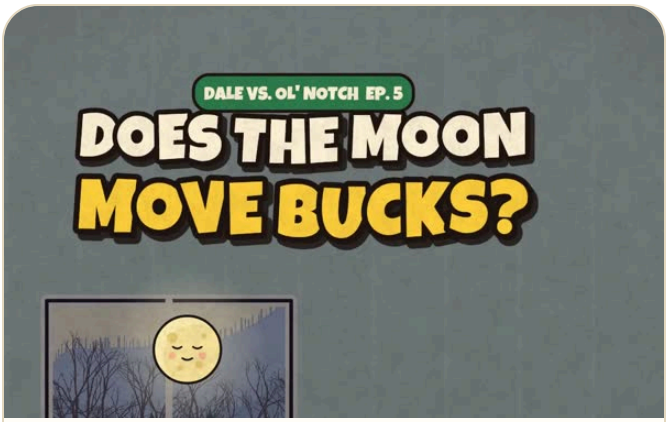
When Does the Rut Start?

In the Wisconsin and Pennsylvania data, it starts around the last week of October. In southwest Wisconsin, peak breeding started between October 23 and 27, and in Pennsylvania only about 20% of does were bred by the last week of October before it took off in November. Rut timing varies by latitude, so your area may run different.

HUNTER SAFETY · DALE VS. OL' NOTCH, EPISODE 6

Can Deer See Blaze Orange?

Deer have two kinds of color cones and are less sensitive to long wavelengths like orange and red. Less sensitive doesn't mean they can't see it, and these studies didn't test blaze orange itself. The number that matters most: in New York from 1989 to 1995, 94% of hunters shot after being mistaken for game weren't wearing orange.



DEER MOVEMENT · DALE VS. OL' NOTCH, EPISODE 5

Does the Moon Move Bucks?

Not much. In Mississippi, 48 GPS-collared bucks were no more or less active on a full moon, a new moon or anything in between. In South Carolina, a solunar chart's day ratings weren't an effective predictor of 38 bucks' activity, and their most active time was around sunset.

SCOUTING · DALE VS. OL' NOTCH, EPISODE 4

Where Should You Hang a Trail Camera?

In Virginia, cameras on game trails detected deer more than cameras at nearby random spots, most on the big worn trails, and fewer where the brush was thick. In field trials, the lowest cameras tested, just under 3 feet and aimed level, caught the most. Bait pulled 40 to 50 times more pictures of antlered bucks in Georgia, but it shows where bucks come to eat, not how they travel.

HUNTING PRESSURE · DALE VS. OL' NOTCH, EPISODE 3

Where Do Hunted Bucks Hide When the Leaves Drop?

When hunters are around, bucks lean on cover. In Oklahoma, bucks facing the most hunters used forest cover about 1.7 times more in daylight, and in a small Florida study hunted deer left open ground for swamps and mature pine, away from roads. Neither study looked at leaf drop, so what counts as cover on your ground is up to you to find.

DEER SIGN · DALE VS. OL' NOTCH, EPISODE 2

Does a Big Rub Mean a Big Buck?

I couldn't find a study showing that a big rub means a big buck. In Maine, 103 rubbed trees averaged less than an inch across, and the closest study I found, 9 big rubs on camera in South Carolina, had one rub worked by at least 13 different bucks. Bucks rub with their forehead too, which leaves scent on the tree.

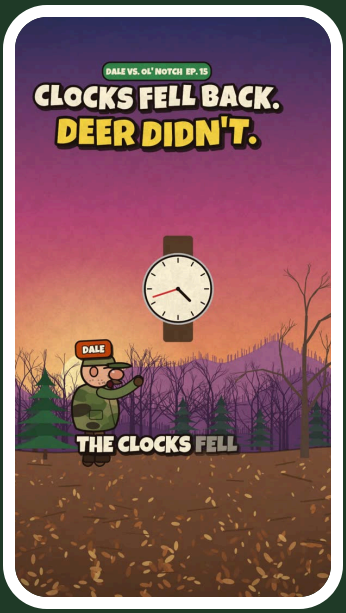
DEER MOVEMENT · DALE VS. OL' NOTCH, EPISODE 1

Is the October Lull Real?

The best data I could find doesn't show a lull. Penn State saw no real drop in buck movement in early October, and 188 GPS bucks in Wisconsin moved more from mid-October to a peak in early November. Neither study settles it everywhere, so read this as "no lull seen," not "no lull exists."

HUNTER SAFETY DALE VS. OL' NOTCH, EPISODE 15

What Changes for Deer Hunters When the Clocks Fall Back?



The sun doesn't move, your clock does. In PA and NY, deer hunting hours are tied to sunrise and sunset, so after the clocks fall back, quitting time on your watch comes about an hour earlier. And a study of 1,012,465 deer crashes found they jump 16% the week after the clocks fall back.

Aired Nov 1, 2026 | 2 research cards, each with its limits | 2 min read

1,012,465

Deer-vehicle collisions studied, 23 states

Cunningham et al. 2022

+16%

Deer crashes the week after the clocks fall back

Cunningham et al. 2022

14X

Crashes 2 hours after sunset, compared with 2 hours before

Cunningham et al. 2022

01 What the research found

THE STUDY

RECEIPT

Hunting hours and the clock change

WHERE Pennsylvania and New York

SAMPLE Not a study. The federal time rules and two states' hunting hours.

WHEN 2026

WHAT THEY DID

Lined up the end of daylight saving time with PA and NY deer hunting hours.

WHAT THEY FOUND

- In 2026, daylight saving time ended November 1 at 2 a.m. local time.
- In both states, deer hunting hours run from a half hour before sunrise to a half hour after sunset.
- Sunrise and sunset shift only a minute or two a day, so quitting time on your watch comes about an hour earlier than the night before.

LIMITS

- PA and NY only. Other states set their own hours.
- "About an hour" is arithmetic from the clock change, not a published number.

Source. NIST, "Daylight Saving Time Rules." NY DEC deer and bear hunting hours. Pennsylvania Game Commission 2026-27 Hunting and Trapping Digest, hunting hours. nist.gov → dec.ny.gov → read.nxtbook.com →

THE STUDY

RECEIPT

Deer crashes after the clocks fall back

WHERE 23 U.S. states

SAMPLE 1,012,465 deer-vehicle collisions and 96 million hourly traffic observations

WHEN 1994-2021

WHAT THEY DID

Compared deer-vehicle collisions with traffic by hour and around the clock changes.

WHAT THEY FOUND

- Deer crashes rose 16% in the week after the autumn clock change.
- Collisions were 14 times more frequent two hours after sunset than two hours before.

LIMITS

- The 16% is for the autumn clock change only.

Source. Cunningham et al. 2022. "Permanent daylight saving time would reduce deer-vehicle collisions." Current Biology. Also University of Washington news release, Nov 2, 2022. cell.com → washington.edu →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

Check tonight's sunset table, and drive slow on the way home.

03 Field notes

1. After the clocks fall back, quitting time on your watch comes about an hour earlier. Go by the sunset table, not habit.
2. Drive slow on the way home. Crashes were 14 times more frequent two hours after sunset than two hours before.
3. Check your own state's season dates and legal hours with your state wildlife agency.

THE RUT

SUNDAY MASTERCLASS: WHITETAILS, EPISODE 2

Where Bucks Go in the Rut: What 9 GPS Collar Studies Show

In the rut most bucks don't leave the country. They work two or three spots over and over, tied to where the does are, and some take short trips. The peak is a window that changes by state, not one date. Hunt close to the doe bedding, with a stand built for each wind.

Aired Nov 1, 2026

10 research cards, each with its limits

7 min read

2-3

Focal areas a South Texas buck worked in the rut

Foley et al. 2015

63%

Maryland GPS bucks that made a trip

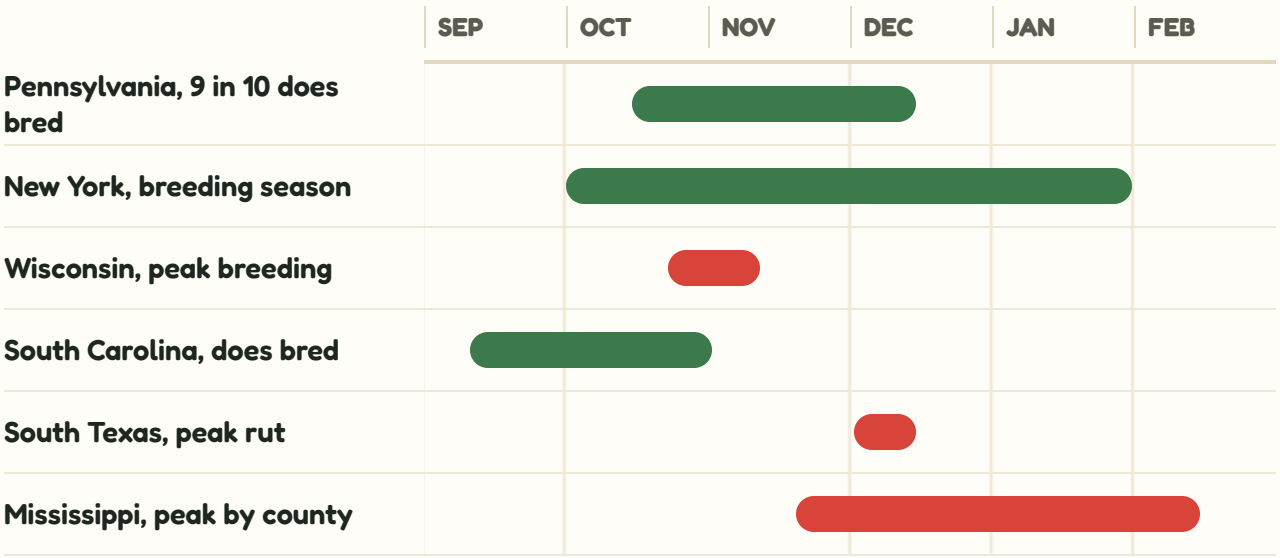
Karns et al. 2011

24-48 HRS

How long a doe is in estrus

Olson, via Thomas 2013

01 When is the rut?



When breeding happens, by study. Bars are approximate where a source says "mid-month" or "late." Red = peak; green = the whole window.

THE STUDY

RECEIPT

Pennsylvania: road-killed does

WHERE Pennsylvania, statewide | SAMPLE More than 6,000 does | WHEN 2000-2007

WHAT THEY FOUND

- About 9 in 10 were bred from mid-October to mid-December, with the peak in mid-November.

LIMITS

- A summary page with no author or date.
- Road-killed does only.

Source. Pennsylvania Game Commission, "When Is the Rut?"

THE STUDY

RECEIPT

New York, Wisconsin and South Carolina

WHERE NY, southwest WI, SC | SAMPLE Agency summary; 188 GPS bucks; 36 GPS does | WHEN 2002; 2017-2020; one property

WHAT THEY FOUND

- New York: breeding from October to January, peaking in mid-November.
- Wisconsin: peak breeding about October 23 to November 12, roughly three weeks.
- South Carolina: does were bred from September 11 to November 2.

LIMITS

- The New York article (2002) gives no data.
- The South Carolina does were on one property.

Source. NY DEC, New York State Conservationist, Oct 2002. Hunsaker et al. 2025, Ecology and Evolution. Sullivan et al. 2017, Ecology and Evolution.

THE STUDY

RECEIPT

Does weather change it?

WHERE Pennsylvania | SAMPLE Almost 98,000 buck locations | WHEN 2013-2023

WHAT THEY FOUND

- When bucks moved more or less than normal, it had no relationship with temperature.

LIMITS

- A blog post, and the number of bucks isn't given.

Source. Diefenbach, "The Heat Is On...," Penn State Deer-Forest Study blog, Jan 6, 2025.

02 Where bucks go

THE STUDY

RECEIPT

Trips outside the home range

WHERE Chesapeake Farms, Maryland | SAMPLE 32 adult bucks, GPS | WHEN 2003-2007

20 OF 32

20 of 32 bucks made at least one trip

WHAT THEY FOUND

- A trip meant 6+ hours and at least half a kilometer (about a third of a mile) past the range.
- The average trip lasted 10.5 hours.
- 22 of the 37 trips fell between October 15 and November 25. Breeding was the likely driver, not hunting pressure or food.

LIMITS

- One farm of about 3,200 acres.
- Not enough collared does to match the trips to does.

Source. Karns et al. 2011, Southeastern Naturalist 10(1).

THE STUDY

RECEIPT

Focal areas

WHERE King Ranch, South Texas

SAMPLE 101 bucks, GPS, hourly

WHAT THEY FOUND

- In the rut, bucks worked 2 to 3 focal areas.
- About 60% went back to them every 24 to 28 hours.
- They used only 20 to 40% of their home range.
- The focal areas lined up with doe core areas.
- The researchers: "if you see a buck in the same area more than once during peak rut, he will probably be back."

LIMITS

- One ranch, where the peak rut is December 2 to 15.
- The link to does rests on 5 collared does.

Source. Foley et al., "Making Sense... of the Madness," Quality Whitetails, Oct/Nov 2015.

THE STUDY

Bedding

RECEIPT

WHERE Mississippi | SAMPLE 60 bucks, GPS

WHAT THEY FOUND

- About 31 bedding areas a season.
- All season, back to a bedding area about every 6 days. In the rut, about every day and a half.

LIMITS

- One region, in thick southern cover.
- "Same area" isn't the same bed.

Source. Resop et al., "You Know Where That Buck Beds, Huh?," National Deer Association, Apr 10, 2024.

THE STUDY

Lockdown

RECEIPT

WHERE Northern Pennsylvania | SAMPLE 15 collared, 3 with full records

WHAT THEY FOUND

- A doe is in estrus about 24 to 48 hours.
- No multi-day "honeymoon" was seen.

LIMITS

- Only 3 bucks.

Source. Thomas, "Is the 'Lockdown Phase' a Myth?," National Deer Association, Oct 30, 2013, on Andy Olson's work.

03 What the does do

THE STUDY

RECEIPT

Doe trips around breeding

WHERE South Carolina; Maryland and Delaware

SAMPLE 36 GPS does; 10 GPS does

WHEN Sullivan 2017; Kolodzinski 2008

WHAT THEY FOUND

- South Carolina: 21 of 36 does were bred and 11 of those made a trip. The chance a doe was off her range peaked the day before breeding, at about 6% on any one day.
- Maryland and Delaware: 9 of 10 does made a trip, about a day on average. Two crossed an arm of the bay 100 to 150 meters wide.

LIMITS

- South Carolina was one property with feeders and food plots, and couldn't tell if the trip came before or after she met a buck.
- Maryland and Delaware was 10 does.

Source. Sullivan et al. 2017, Ecology and Evolution. Kolodzinski 2008, M.S. thesis, University of Georgia.

04 Daylight or dark?

THE STUDY

RECEIPT

The studies don't agree

WHERE MS, PA, WI

SAMPLE 40+ bucks; Penn State locations; 188 bucks

WHAT THEY FOUND

- Mississippi: bucks 2 and older moved about a third of the time in daylight in October and November, over 40% in the rut.
- Pennsylvania: at peak breeding, bucks moved about twice as far at night, with longer nights part of the reason.
- Wisconsin: bucks 3 and older shifted toward night; yearlings toward dawn.
- No study I found explains why they disagree.

LIMITS

- The Mississippi figure is from a news story with no site or years given, and their peak breeding runs late November to mid-February, so their October and November is before the rut.

Source. MSU Extension, Nov 19, 2020. MSU Deer Lab, "Ecology of the Rut." Diefenbach 2025. Hunsaker et al. 2025.

05 How the air moves

THE STUDY

RECEIPT

Slope winds

WHERE Fire weather guides

SAMPLE Not deer studies

WHAT THEY FOUND

- Air flows up a slope in the day and down at night, like water. Cool air collects low.
- It starts up within minutes of the sun hitting the slope: about 3 to 8 mph up, 2 to 5 mph down.
- It goes back down once the slope is in afternoon shade. A strong general wind wins.

LIMITS

- These are fire weather guides, not deer studies. Your hill, shade and cover can change it.

Source. Encyclopedia of Southern Fire Science. National Wildfire Coordinating Group wind guide. NWS Nashville fire weather training.

06 My read

MY READ
MY TACTIC, NOT A STUDY RESULT

In the rut, a lot of bucks run a loop: a few spots, over and over, about once a day, tied to the does.

Map order: food, doe bedding, the connections between doe areas, the downwind side of the bedding, the way in and out, then the tree. Every stand gets a wind, a way in and out, and a time to stay out.

When the woods go dead in mid-November, a lot of bucks are probably with a doe for a day or two. Sit closer to the does. Don't stay home. For daylight, sit long and sit close to the does.

No study I found tested funnels and pinch points, or whether bucks scent-check the downwind edge of bedding.

The example stands (made-up ground)

Stand	Wind	When	In and out	Stay out
1. East edge of the timber cut	W or NW	Evenings. All day mid-rut, only on a steady W or NW	SE parking, up the creek, never across the cut	Any other wind, or milkweed drifting toward the cut
2. The saddle	Steady S	Late morning to mid-afternoon	SW parking, up the west line, north side of the ridge	Calm or light mornings, any wind but S, once the sun leaves the slope
3. Creek crossing	N	Mornings	SE parking, straight up the creek	Any wind but N

Stand	Wind	When	In and out	Stay out
NE, E, SE or SW	No stand	Hunt somewhere else		

Rest rule: bumped deer going in or out, or the wind went wrong? Rest that stand and hunt another. No set number of days.

07 Field checklist

1. At the truck, check the wind. No stand built for it? Hunt somewhere else.
2. Know legal light. In PA and NY it's a half hour before sunrise to a half hour after sunset. Check your own state.
3. Walk the route you planned, never through the bedding.
4. Check milkweed every 20 to 30 minutes. Drifting toward the does? You're done there for the day.
5. Watch for the flip: downhill at first light, uphill once the sun's on your slope, downhill again in the afternoon shade.
6. Same buck, same spot, twice? Stay.
7. Leave the way you came in, away from the does.

08 Common mistakes

MISTAKE	INSTEAD
Sitting the August stand in November.	Move to the does and the connections between them.
Planning around the moon or a cold front.	Put your days where your state's breeding data puts the peak.
Going home when the woods go dead.	Keep hunting the doe bedding.
Walking through the bedding to your stand.	Plan the way in and out first, even if it's the long way.
Trusting the forecast at first light.	It's still night air sliding downhill till the sun's on the slope. Check your milkweed.
Chasing does that vanish for a day.	Stay near the bedding. That's where it all comes back to.

09 Summary

1. The rut is a window, not a date. In PA and NY, it's mid-November.

2	A lot of bucks work a few spots over and over, tied to the does. Find the loop.
3	Does leave sometimes, right around breeding, but it's short. Keep hunting the bedding.
4	Daylight? The studies don't agree. Sit long, and sit close to the does.
5	Map order: food, doe bedding, connections, the downwind side, the way in and out, then the tree.
6	Every stand gets a wind, a way in and out, and a time to stay out.

MYTHS DALE VS. OL' NOTCH, EPISODE 14

Do Three Common Deer Myths Hold Up?

Not in the data I found. Pennsylvania's doe data found no relationship between the rut and the moon. About 50 GPS bucks in Mississippi didn't shift when they moved once hunting started, and Mississippi State says a buck may use 10 or more bedding areas in a month.

Aired Oct 31, 2026 | 3 research cards, each with its limits | 2 min read

3,507

Road-killed Pennsylvania does with fetuses

Diefenbach 2014

~50

Mississippi GPS bucks, no time shift found in hunting season

Beeson, MSU

10+

Bedding areas a buck may use in a single month

MSU Extension 2020

01 What the research found

THE STUDY

RECEIPT

Myth 1: the rutting moon

WHERE Pennsylvania | SAMPLE 3,507 road-killed does with fetuses | WHEN 1999-2006

WHAT THEY DID

The Pennsylvania Game Commission checked road-killed does with fetuses, which give the date each doe was bred, and compared those dates with the moon.

WHAT THEY FOUND

- The researcher's words: "There is no relationship between the rut and the moon."

LIMITS

- This tests when the rut happens, not daily deer movement.
- A research blog post, not a paper.

Source. Diefenbach, D. "How to Predict the Rut." Penn State Deer-Forest Study blog, Nov 14, 2014. deer.psu.edu →

THE STUDY

RECEIPT

Myth 2: bucks go nocturnal when hunting starts

WHERE Madison and Yazoo counties, Mississippi

SAMPLE About 50 bucks, GPS, a location every 15 minutes

WHAT THEY DID

Tracked bucks during hunting season to see if they moved at different times of day.

WHAT THEY FOUND

- The researchers: "We did not detect a temporal shift in buck movement during hunting season."
- The bucks still moved most around sunrise and sunset.
- They did tend to avoid areas hunters visited a lot.

LIMITS

- A university news article, undated, with no paper named.
- Other studies under heavy hunting pressure may differ. This is one study.

Source. Beeson, V. "Where Have All the Bucks Gone?" Mississippi State University College of Forest Resources news. cfr.msstate.edu →

THE STUDY

RECEIPT

Myth 3: a buck has one bed

WHERE Mississippi | SAMPLE More than 40 bucks aged 2 and older, GPS

WHAT THEY DID

Put GPS collars on bucks and followed where they bedded.

WHAT THEY FOUND

- Mississippi State: "A buck may use 10 or more bedding areas in a single month."

LIMITS

- An Extension news story, not the paper itself.

Source. Mississippi State University Extension. "Research sheds light on best times to hunt bucks." Nov 19, 2020, updated Aug 8, 2025. accessibility.extension.msstate.edu →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

The scariest thing in the woods is a plan built on myths.

03 Field notes

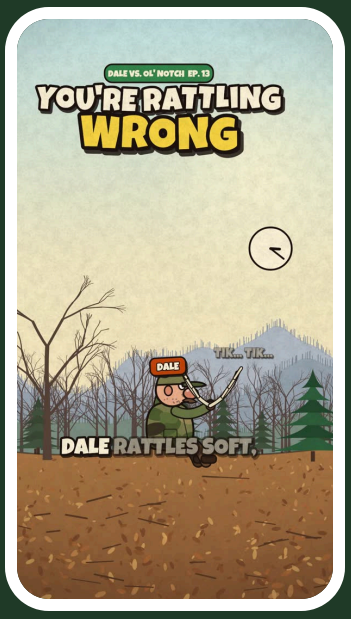
1. Don't plan your rut days around the moon. Pennsylvania's doe data found no relationship.
2. Don't write off daylight once hunting starts. The Mississippi bucks still moved most around sunrise and sunset.

3	Don't count on one bed. A buck may use 10 or more bedding areas in a month.
4	Check your own state's season dates and legal hours with your state wildlife agency.

CALLING AND RATTLING DALE VS. OL' NOTCH, EPISODE 13

Does Loud Rattling Bring In More Bucks?

In a four-year Texas study, loud rattling pulled in nearly three times as many bucks as quiet rattling, and rattling 1 minute or 3 minutes at a time made no difference. Most bucks came in the first 10 minutes, and 60% were first seen downwind. That's one Texas refuge, so your woods may differ.



Aired Oct 30, 2026

1 research card, each with its limits

1 min read

~3X

Bucks drawn by loud rattling, compared with quiet

Hellickson et al. 2009

60%

Bucks first seen downwind of the observer

Hellickson et al. 2009

43%

Bucks the rattler on the ground spotted

Hellickson et al. 2009

01 What the research found

THE STUDY

RECEIPT

Texas: rattling watched from towers

WHERE Welder Wildlife Refuge, San Patricio County, Texas

SAMPLE 171 rattling sessions, 111 buck responses

WHEN 1992-1995

WHAT THEY DID

One person rattled from brush on the ground near one of 17 observation towers, 10 meters tall, while an observer watched from the tower. Each 30-minute session started with either 1 or 3 minutes of rattling, loud or quiet.

WHAT THEY FOUND

- Loud rattling pulled in nearly three times as many bucks as quiet rattling.
- Rattling 1 minute or 3 minutes at a time made no difference.
- Most bucks came during the first 10-minute segment.
- 67 of 111 bucks (60%) were first seen downwind of the observer.
- The rattler on the ground spotted only 48 of them (43%).

LIMITS

- One Texas refuge with a high-density, balanced herd.
- Only 1-minute and 3-minute bursts inside 30-minute sessions were tested. Nothing longer.
- The bucks weren't individually marked, so one buck could be counted twice.

Source. Hellickson, Miller, Marchinton, DeYoung and Hall. 2009. "Behavioral Responses of Male White-tailed Deer to Antler Rattling." Proceedings of the Southeastern Association of Fish and Wildlife Agencies 63: 7-10. seafwa.org →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

That's Texas, so your woods may differ. Rattle loud, keep it short, and watch downwind.

That's how I hunt it, not something the study tested outside Texas.

03 Field notes

1. Rattle loud. In Texas, loud pulled in nearly three times as many bucks as quiet.
2. Be ready right away. Most bucks came in the first 10 minutes.
3. Watch downwind. 60% of bucks were first seen there, and the rattler on the ground spotted only 43%.
4. Check your own state's season dates and legal hours with your state wildlife agency.

THE RUT DALE VS. OL' NOTCH, EPISODE 12

Should You Hunt Near Does to Find Bucks?

Does live in family groups that hold the same ground. In West Virginia, does in the same group were about as related as first cousins, and in Minnesota one doe family used the same ranges for 20 years. Maryland researchers think most buck trips outside their range had to do with breeding.

Aired Oct 29, 2026

4 research cards, each with its limits

2 min read

229

Does checked by DNA in West Virginia

Miller et al. 2010

4

Generations of one Minnesota doe family on the same ranges

Nelson & Mech 1999

20 YRS

How long that family held the same summer and winter ranges

Nelson & Mech 1999

01 What the research found

THE STUDY

RECEIPT

West Virginia: doe groups are family

WHERE Central Appalachians, West Virginia

SAMPLE 229 adult does (DNA), 102 of them in 28 social groups

WHAT THEY DID

Collected genetic data on adult does and measured how related the does in each social group were.

WHAT THEY FOUND

- Does in the same group were about as related as first cousins. The authors: within-group relatedness "approached the expected value for 1st cousins" (R = 0.103).
- The authors: "philopatric females form social groups composed of related individuals."

LIMITS

- A high-density Appalachian herd.
- A South Carolina herd showed little of this structure, so it varies.

Source. Miller, DeYoung, Campbell, Laseter, Ford and Miller. 2010. "Fine-Scale Genetic and Social Structuring in a Central Appalachian White-Tailed Deer Herd." Journal of Mammalogy 91(3): 681-689. digitalcommons.unl.edu →

THE STUDY

RECEIPT

Petals on a rose

SAMPLE A concept paper

WHAT THEY DID

Described how doe social groups spread across the land.

WHAT THEY FOUND

- The authors: "female offspring remain near their dams for life."
- A population expands slowly as overlapping home ranges, "analogous to the petals on a rose."

LIMITS

- A model and concept paper. The abstract names no study site.

Source. Porter, Mathews, Underwood, Sage and Behrend. 1991. "Social organization in deer: Implications for localized management." Environmental Management 15(6): 809-814. pubs.usgs.gov →

THE STUDY

RECEIPT

Minnesota: one doe family over 20 years

WHERE Northeastern Minnesota

SAMPLE 6 does from 4 generations of one family

WHEN 20 years

WHAT THEY DID

Followed one doe family, from the matriarch to her great-granddaughter.

WHAT THEY FOUND

- All of them "migrated to the same summer and winter ranges."

LIMITS

- One family.
- Migratory northern deer.

Source. Nelson and Mech. 1999. "Twenty-year home-range dynamics of a white-tailed deer matriline." Canadian Journal of Zoology 77(7): 1128-1135. pubs.usgs.gov →

THE STUDY

RECEIPT

Maryland: why bucks leave home

WHERE Chesapeake Farms, Maryland | SAMPLE 32 adult bucks, GPS | WHEN 2003-2007

WHAT THEY DID

Looked at when GPS-collared bucks made trips outside their home range.

WHAT THEY FOUND

- The researchers think most of the bucks' trips outside their home range had to do with breeding.
- Their words: "breeding-season-related motives were likely the driving force behind the majority of adult male" trips.

LIMITS

- This is the authors' read from the timing of the trips, not observed mating.
- None of the 37 trips followed the same path at the same time as a collared doe.

Source. Karns, Lancia, DePerno and Conner. 2011. "Investigation of Adult Male White-tailed Deer Excursions Outside Their Home Range." Southeastern Naturalist 10(1): 39-52. eaglehill.us →

02 My read

MY READ
MY TACTIC, NOT A STUDY RESULT

In November, the does are the map. Find where the families bed, and hunt the travel between them.

That's how I hunt it, not something these studies tested.

Field notes

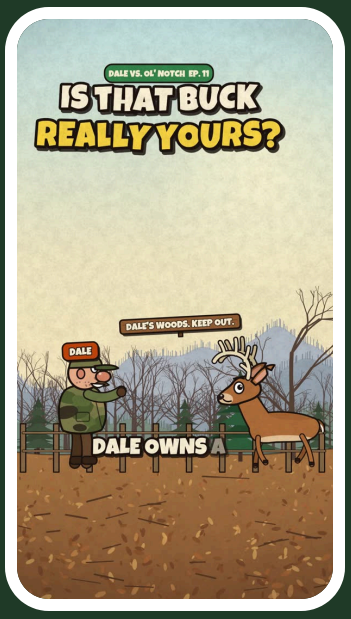
03

1. Doe families can hold the same ground for years. Learn where they bed.
2. In November, hunt the travel between doe family bedding areas.
3. Check your own state's season dates and legal hours with your state wildlife agency.

DEER MOVEMENT DALE VS. OL' NOTCH, EPISODE 11

How Big Is a Buck's Home Range?

A Penn State deer researcher says the rule of thumb that a buck's home range is one square mile is most often wrong. In his Pennsylvania data, an average buck used about half a square mile in fragmented Gettysburg and about two in the big woods. One collared buck covered 85 miles in 24 days of the rut.



Aired Oct 28, 2026 | 3 research cards, each with its limits | 2 min read

~0.5 SQ MI

Average buck range in fragmented Gettysburg

Diefenbach 2015

~2 SQ MI

Average buck range in Pennsylvania's big woods

Diefenbach 2015

85 MILES

One collared buck in 24 days of the rut

Diefenbach 2015

01 What the research found

THE STUDY

RECEIPT

Pennsylvania: farm country against the big woods

WHERE Gettysburg and Susquehannock State Forest, Pennsylvania

SAMPLE GPS-collared deer, number not given

WHAT THEY DID

Compared average buck home ranges in fragmented Gettysburg with the big woods of Susquehannock State Forest.

WHAT THEY FOUND

- The researcher's words: "the rule of thumb that a buck's home range is one square mile is most often wrong."
- In Gettysburg, an average buck home range was about half a square mile.
- In Susquehannock State Forest, an average buck home range was about two square miles.
- In both places, an average buck range took in about 2 doe home ranges.

LIMITS

- A research blog post, not a paper.
- The post doesn't give the number of deer or the season for these averages.

Source. Diefenbach, D. "One Square Mile - The Sequel." Penn State Deer-Forest Study blog, Jan 6, 2015. deer.psu.edu →

THE STUDY

RECEIPT

Big woods bucks in November

WHERE Large tracts of contiguous forest, Pennsylvania

SAMPLE GPS-collared deer, number not given

WHAT THEY DID

Tracked buck home ranges through the fall in big, unbroken forest.

WHAT THEY FOUND

- In November, buck ranges grew to nearly three times larger and averaged almost 3 square miles.

LIMITS

- A research blog post, and the sample isn't stated.
- Big woods deer only. The author says other parts of the state differ.

Source. Diefenbach, D. "One Square Mile." Penn State Deer-Forest Study blog, Dec 19, 2014. deer.psu.edu →

THE STUDY

RECEIPT

Buck 8917: one buck in the rut

WHERE Bald Eagle State Forest, Pennsylvania

SAMPLE 1 GPS-collared buck

WHAT THEY DID

Followed one buck, captured March 29, 2013, through the rut.

WHAT THEY FOUND

- The researcher's words: "between the 4th and 27th of November (24 days) he traveled 85 miles."

LIMITS

- One buck.
- The post doesn't say how the 85 miles was measured.

Source. Diefenbach, D. "The Life and Times of Buck 8917." Penn State Deer-Forest Study blog, Oct 8, 2015. deer.psu.edu →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

On a small property, you're not hunting his whole range. You're hunting the spot where he crosses yours.

That's how I hunt it, not something these studies tested.

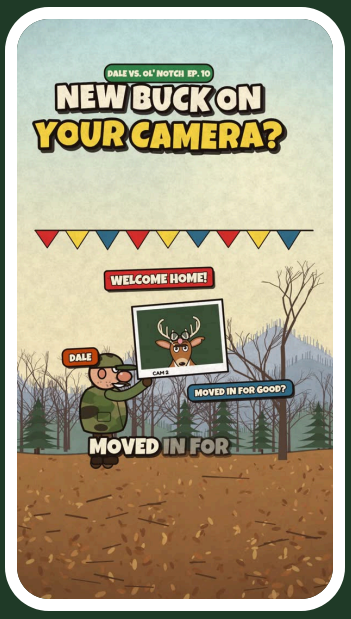
03 Field notes

1. Don't plan around the one-square-mile rule. In this Pennsylvania data, an average buck used about half a square mile to about two.
2. On a small property, find the spot where his range crosses yours and hunt that.
3. Check your own state's season dates and legal hours with your state wildlife agency.

DEER MOVEMENT DALE VS. OL' NOTCH, EPISODE 10

New Buck on Camera: Moving In or Just Visiting?

In the rut, a lot of bucks leave home for a few hours and come back, so a new buck on your camera may be one of them. But in one Mississippi study about a third of bucks kept two separate home ranges and stayed in each for weeks. Some "new" bucks are passing through, and some are seasonal neighbors.



Aired Oct 27, 2026

2 research cards, each with its limits

2 min read

63%

Maryland GPS bucks that left home at least once

Karns et al. 2011

10.5 HRS

Average length of a trip

Karns et al. 2011

1 in 3

Mississippi bucks with two separate home ranges

Resop et al. 2024

01 What the research found

THE STUDY

RECEIPT

Maryland: 32 GPS bucks and their trips

WHERE Chesapeake Farms, Maryland | SAMPLE 32 adult bucks, GPS | WHEN 2003-2007

WHAT THEY DID

Followed GPS-collared bucks and counted "excursions": at least 6 hours and at least half a kilometer outside the buck's home range.

20 OF 32

20 of 32 bucks made at least one trip

WHAT THEY FOUND

- 20 of 32 bucks (63%) made at least one trip, immediately before or during breeding season.
- The average trip lasted 10.5 hours (range 6 to 40).
- The average minimum distance was 778 meters, about half a mile, past the home range.
- 22 of the 37 trips (59%) were at least partly in daylight.

LIMITS

- One site, about 3,200 acres, with low hunting pressure.

Source. Karns, Lancia, DePerno and Conner. 2011. "Investigation of Adult Male White-tailed Deer Excursions Outside Their Home Range." Southeastern Naturalist 10(1): 39-52. eaglehill.us →

THE STUDY

RECEIPT

Mississippi: bucks with two homes

WHERE Mississippi | SAMPLE 30 adult bucks, GPS | WHEN 2017-2021

WHAT THEY DID

Followed GPS-collared adult bucks across the year.

WHAT THEY FOUND

- About a third were "mobile," with two seasonal home ranges.
- Mississippi State Extension puts the average gap between the two at 4.4 miles.
- Mobile bucks stayed in one range about 79 days before moving to the other.

LIMITS

- One region of Mississippi.
- The paper gives the gap in kilometers (7.1 km); the 4.4 miles and 79 days come from the Extension summary.

Source. Resop, Demarais, Strickland, McKinley and Street. 2024. "Rutting and rambling." Ecology and Evolution 14(2). Also Mississippi State University Extension, P3927, "Understanding Buck Movement." doaj.org → extension.msstate.edu →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

A new buck in the rut is often just visiting. I hang stands where travelers cross, not where he showed up once.

The Mississippi result partly cuts the other way, which is why I say "often," not "always."

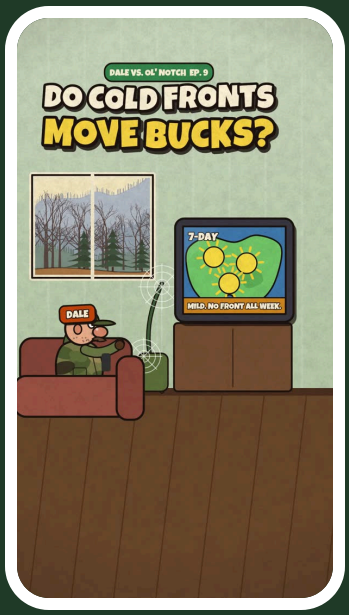
03 Field notes

1. One picture of a new buck isn't a pattern. Get him again in the same spot before you move a stand for him.
2. Check your own state's season dates and legal hours with your state wildlife agency.

WEATHER DALE VS. OL' NOTCH, EPISODE 9

Do Cold Fronts Move Bucks?

Not much that the data can show. In Oklahoma, weather trends showed up in only 8 of 80 movement models, and in Pennsylvania rut movement had no relationship with daily highs and lows. When Penn State checked one cold front, the researcher said they'd likely need a lot more data to tease out any effect.



Aired Oct 26, 2026

3 research cards, each with its limits

2 min read

8 OF 80

Oklahoma models where weather showed a trend

Webb et al. 2010

32

GPS-collared deer in the Oklahoma study

Webb et al. 2010

NO RELATIONSHIP

PA rut movement vs. daily highs and lows

Diefenbach 2025

01 What the research found

THE STUDY

RECEIPT

Oklahoma: 32 GPS deer and the weather

WHERE Noble Foundation property, southern Oklahoma

SAMPLE 17 does and 15 bucks, GPS

WHEN 7 years, 3 seasons

WHAT THEY DID

Ran GPS collar data (130,098 locations) against air temperature, wind speed, barometric pressure, relative humidity and rain.

5 OF 8

Temperature was the factor in 5 of the 8 models with a trend

WHAT THEY FOUND

- Movement trends tied to weather showed up in only 8 of 80 models (10%).
- Temperature was the factor in 5 of those 8. Rain, humidity and wind speed were each the factor in 1.
- The authors: daily weather has "minimal impact on movements of white-tailed deer in southern latitudes."
- They said deer from northern latitudes, with more extreme weather, may be more affected.

LIMITS

- Southern deer on one property. North may differ.
- Wind direction wasn't tested.

Source. Webb, Gee, Strickland, Demarais and DeYoung. 2010. "Measuring Fine-Scale White-Tailed Deer Movements and Environmental Influences Using GPS Collars." International Journal of Ecology 2010: 459610. dlc.dlib.indiana.edu → doaj.org →

THE STUDY

RECEIPT

Pennsylvania: rut movement and temperature

WHERE Pennsylvania | SAMPLE 97,979 buck locations | WHEN 2013-2023

WHAT THEY DID

Compared how much more or less than average bucks moved in the rut with the daily high temperature, and at night with the daily low.

WHAT THEY FOUND

- "Statistically there is no relationship" between movement and the daily high.
- At night, "once again, no relationship."

LIMITS

- A research blog analysis, not a formal paper.
- The number of bucks isn't given.
- It tested temperature only, not fronts or air pressure.

Source. Diefenbach, D. "The Heat Is On..." Penn State Deer-Forest Study blog, Jan 6, 2025. deer.psu.edu →

THE STUDY

RECEIPT

Pennsylvania: one cold front

WHERE Pennsylvania | SAMPLE Collared bucks | WHEN Front of Oct 7, 2023

WHAT THEY DID

Looked at buck movement around one fall cold front.

WHAT THEY FOUND

- "From one deer to the next there is huge variability in their movements."
- The researcher: "Deer may respond to cold fronts but we likely would need a lot more data to tease out any effect."

LIMITS

- One front.
- A research blog post, not a paper.

Source. Diefenbach, D. "Cold Wet Winds of Change-The Verdict." Penn State Deer-Forest Study blog, Oct 25, 2023. deer.psu.edu →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

In November I don't wait on fronts. I hunt the calendar.

That's how I hunt it, not something these studies tested.

03 Field notes

1. Don't stay home waiting on a cold front. The data above doesn't show weather driving much movement.
2. In November, hunt the calendar.
3. Check your own state's season dates and legal hours with your state wildlife agency.

WIND AND THERMALS DALE VS. OL' NOTCH, EPISODE 8

How Do Thermals Work?

Fire weather guides say air starts drifting uphill within a few minutes of the sun hitting a slope, and slides downhill, slow and shallow, once the slope goes into shadow. East-facing slopes switch uphill first, and a strong wind can override all of it. No deer study I found tested how deer use thermals.

Aired Oct 25, 2026 | 4 research cards, each with its limits | 3 min read

A few minutes

For upslope air to start once the sun hits a slope

NWCG PMS 437

2-5 mph

Typical downslope wind, slower than upslope

NWCG PMS 437

0

Deer studies I found that tested thermals

My search, Oct 17, 2026

01 What the research found

THE STUDY

RECEIPT

Slope winds: up by day, down in shadow

WHERE Fire weather guide

SAMPLE Not a deer study

WHAT THEY DID

Explains how local slope winds behave, for firefighters estimating fire behavior.

WHAT THEY FOUND

- "Slope Winds are driven by heat exchange at the slope surface."
- They react quickly to sun on the slope, "with upslope breezes starting within a few minutes." Upslope winds generally run 3 to 8 mph.
- The switch to downslope "begins soon after the first slopes go into afternoon shadow."
- "Downslope winds are very shallow and of a slower speed than upslope winds, generally 2-5mph."
- "Critical winds," like frontal and thunderstorm winds, "easily override local wind influences."
- But valley inversions can keep general winds from reaching the midslopes and valley floor.

LIMITS

- A fire weather guide, not a deer study. Your hill, shade and cover can change it.
- The guide says "slope winds." "Thermals" is hunter shorthand for the same thing.
- Slopes that lose the sun early, like east-facing ones, can switch downhill in the afternoon.

Source. National Wildfire Coordinating Group. PMS 437, Fire Behavior Field Reference Guide, "Weather: Estimating Winds for Fire Behavior." www-nwcg.fs2c.usda.gov →

THE STUDY

RECEIPT

Which slope switches first

WHERE Fire weather training

SAMPLE Not a deer study

WHAT THEY DID

Explains how slope direction changes the timing of slope winds.

WHAT THEY FOUND

- "Upslope winds develop on east-facing aspects first because they receive direct sunlight earlier."
- West-facing slopes start upslope and peak later in the day than east and south slopes.
- On south-facing slopes, downslope winds begin after the slope loses direct sun, "usually after sunset."

LIMITS

- Fire weather training, not a deer study.

Source. COMET Program (UCAR, sponsored by NWS and NOAA). "Introduction to Fire Behavior." meted.ucar.edu →

THE STUDY

RECEIPT

A light-wind, clear-sky pattern

WHERE Meteorology glossary

SAMPLE Not a deer study

WHAT THEY DID

Defines mountain-valley wind systems.

WHAT THEY FOUND

- Slope and valley winds are a daily cycle "during clear or mostly clear periods of weak synoptic flow." That means light general winds.
- At sunrise, the east-facing slope gets sun earlier than the rest of the valley.

LIMITS

- A glossary entry, not a deer study.
- It doesn't use the word "override." The NWCG guide does.

Source. American Meteorological Society, Glossary of Meteorology, "Mountain-valley wind systems." glossary.ametsoc.org →

THE STUDY

Looking for a deer study

RECEIPT

WHERE Searches run Oct 17, 2026

SAMPLE Deer papers and hunting sites

WHAT THEY DID

Searched for deer studies that test travel, bedding or detection against thermals or slope winds. A second checker ran its own search.

WHAT THEY FOUND

- Neither search found one.
- A winter bed study in Maryland (Lang and Gates 1985) looked at cover at 140 night beds. Wind, aspect and air drainage weren't measured.
- A winter bed study in Ontario (Armstrong, Euler and Racey 1983) looked at cover, slope and aspect for heat loss. No airflow or scent test.
- A mule deer bed study (Germaine et al. 2004) recorded wind at beds but never analyzed it.
- The closest hit, Lingle and Wilson 2001 in Ethology, tested whether deer were upwind or downwind of a person. Wind direction had no significant effect on how far away the deer became alert. It didn't test slope winds.
- Hunting sites explain thermals but cite no deer study that tests them.

LIMITS

- Both searches were reasonable but not exhaustive. This means "none I found," not "none exist."

Source. My open check and an independent check, Oct 17, 2026.

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

Check which way your slope faces, and time your sit to the sun.

No deer study I found tested this. That's how I hunt it, not a study result.

03 Field notes

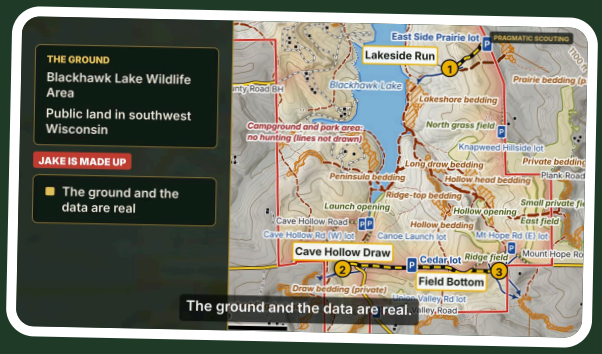
1. Once the sun hits your slope, expect the air to start drifting uphill within minutes. East-facing slopes go first.
2. Once your slope goes into shadow, expect a slow, shallow slide downhill.
3. On a strong-wind day, the general wind can override the thermals.
4. Check your own state's season dates and legal hours with your state wildlife agency.

SCOUTING

SUNDAY MASTERCLASS:
WHITETAILS, EPISODE 1

How I Scout a Deer Property, Start to Finish

Your first sits on a fresh spot are likely your best, so read the whole map before you hang anything. Then check the rules, build a stand for each wind, plan your days around stand rest, and know your wait times after the shot. The example is real public land in southwest Wisconsin with a made-up hunter, built from maps and public data.



Aired Oct 25, 2026

13 research cards, each with its limits

11 min read

87%

Deer hunters within half a kilometer of a road

Diefenbach et al. 2005

24%

Drop in the chance a deer was active in daylight, Sunday vs Friday

Wiskirchen et al. 2022

NOV 5-11

Week of peak buck movement in southwest Wisconsin

Hunsaker et al. 2025

01 The ground and the hunter

The ground is Blackhawk Lake Wildlife Area, real public land in southwest Wisconsin. The hunter, Jake, is made up. He's a bowhunter after a mature buck, he shoots out to 30 yards, and he carries a stand in and out every day. The plan is my sample plan, built from maps and public data. Nobody hunted it for this video.

THE STUDY

RECEIPT

Why your first sits matter

WHERE One property in Oklahoma, 1,861 hectares

SAMPLE 37 adult bucks (2 and older), GPS

WHEN 2008 and 2009 rifle seasons

WHAT THEY DID

Set up low and high hunter density and counted how often hunters saw collared bucks on the first, second and third weekends.

WHAT THEY FOUND

- Hunters saw collared bucks the most on the first weekend, in both the low and high density setups.
- Sightings dropped each weekend after that.
- In the high density setup, bucks that were seen had been moving more just before they were seen.

LIMITS

- One property, two seasons.
- Rifle season, not bow season.

Source. Little, Demarais, Gee, Webb, Riffell, Gaskamp and Belant. 2014. "Does human predation risk affect harvest susceptibility of white-tailed deer during hunting season?" Wildlife Society Bulletin 38(4): 797-805. digitalcommons.unl.edu →

02 Step 1: Read the map

THE STUDY

RECEIPT

Blackhawk Lake Wildlife Area

WHERE West-central Iowa County, Wisconsin

SAMPLE One property, 2,037 acres

WHAT THEY DID

The Wisconsin DNR's page for the property.

WHAT THEY FOUND

- The property is 2,037 acres.
- The DNR manages 1,500 acres as a wildlife area.
- Iowa County leases 330 acres as a recreation area.
- Camping and bathrooms are only in the county-leased recreation area.

LIMITS

- An agency page, not a deer study.

Source. Wisconsin DNR, Blackhawk Lake Wildlife Area. dnr.wisconsin.gov →

THE STUDY

RECEIPT

The lidar layer

WHERE Iowa County, Wisconsin

SAMPLE USGS lidar, quality level 2

WHEN April 10-11, 2022

WHAT THEY DID

A laser scan flown from a plane that shows the ground under the trees.

WHAT THEY FOUND

- The Iowa County block was collected April 10 to 11, 2022.
- The record says it was flown in spring 2022 with no snow on the ground.

LIMITS

- Not a deer study. It shows the shape of the ground, not where deer are.
- The record I opened doesn't say "leaf-off."

Source. NOAA InPort, "2022 USGS QL2 Lidar: Green, Iowa, Polk, Winnebago Counties, WI." fisheries.noaa.gov →

THE STUDY

RECEIPT

Where hunters go on public land

WHERE North-central Pennsylvania, public land

SAMPLE About 45,907 hectares, aerial counts of hunters

WHAT THEY DID

Counted hunters from the air during the bear and deer rifle seasons and modeled where deer hunters were.

WHAT THEY FOUND

- An estimated 87% of deer hunters hunted within 0.5 km of a road, about a third of a mile.
- Distance from the nearest road and slope predicted where deer hunters went.

LIMITS

- One study, one region.
- Rifle season, counted from the air.

Source. Diefenbach, Finley, Luloff, Stedman, Swope, Zinn and San Julian. 2005. "Bear and deer hunter density and distribution on public land in Pennsylvania." Human Dimensions of Wildlife 10(3): 201-212. pure.psu.edu →

No study I found tested whether deer bed where a bedding model like mine says. Confirm bedding with tracks and cameras.

03 Step 2: Legal and safe

Season dates, shooting hours and land rules change every year and every state. Check your state's current regulations and the property's own rules before you go. Use your state's shooting hours, not a sunrise app.

THE STUDY

RECEIPT

Where you can't hunt at Blackhawk

WHERE Blackhawk Lake Recreation Area

SAMPLE One property

WHAT THEY DID

The county recreation area's own hunting page.

WHAT THEY FOUND

- The page says hunting and trapping in the campground and park area is "absolutely prohibited."
- It tells hunters to follow all Wisconsin DNR rules.

LIMITS

- The park's page, not a DNR rule. Rules can change.

Source. Blackhawk Lake Recreation Area, hunting page. blackhawklake.com →

THE STUDY

RECEIPT

Stand rules on DNR land

WHERE Wisconsin, DNR-managed lands

SAMPLE Agency rules

WHAT THEY DID

The DNR's page of rules for DNR-managed lands.

WHAT THEY FOUND

- South of State Highway 64, a stand or blind can stay up only from one hour before to one hour after shooting hours each day.
- Cutting shooting lanes and using screw-in tree stands count as damage to trees.
- An unoccupied stand needs your DNR customer ID number, or your name and address, where it can be read.

LIMITS

- Wisconsin only. Check the current rules each year.

Source. Wisconsin DNR, "DNR-Managed Lands." dnr.wisconsin.gov →

THE STUDY

RECEIPT

Shooting near roads

WHERE Wisconsin, all public roads

SAMPLE Agency rules

WHAT THEY DID

The DNR's hunting regulations page on roads.

WHAT THEY FOUND

- You can't shoot an arrow from a bow or crossbow from or across a highway.
- You can't shoot one within 50 feet of the roadway's center.

LIMITS

- Wisconsin only. Check the current rules each year.

Source. Wisconsin DNR, "Hunting Near Roadways." dnr.wisconsin.gov →

04 Step 3: Wind and scent

THE STUDY

RECEIPT

How air moves on a slope

WHERE Weather glossary

SAMPLE Not a deer study

WHAT THEY DID

The National Weather Service glossary entries for slope winds.

WHAT THEY FOUND

- An along-slope wind system is a closed, thermally driven daily circulation. Its lower branch blows up or down the slope.
- Downslope flow is thermally driven and usually happens at night.

LIMITS

- A weather glossary, not a deer study. Your hill, shade and cover can change it.

Source. National Weather Service glossary, "Along-slope Wind System" and "Downslope Flow." forecast.weather.gov →

No study I found tested how far a deer can smell you, or which way GPS-collared bucks travel compared to the wind.

05 Step 4: Picking the stands

THE STUDY

RECEIPT

How long bucks avoid a hunted stand

WHERE Brosnan Forest, Dorchester County, South Carolina

SAMPLE About 40 bucks, GPS

WHEN A 3-year study

WHAT THEY DID

Auburn University research by Clint McCoy, described in a SC DNR news release.

WHAT THEY FOUND

- Bucks avoided a stand's area for about 3 days after it was hunted.
- Even after 5 days, they were less likely to visit than before the stand was ever hunted.

LIMITS

- One property.
- A news release, not a journal paper. I couldn't find it in a journal.
- It supports spacing your sits. It doesn't test my rest rule numbers.

Source. SC DNR, "New research sheds light on buck movements related to hunting," November 6, 2014. dnr.sc.gov →

The sample stands (Blackhawk, made-up hunter)

Stand	Where	Wind	Walk in
1. Lakeside Run	South-facing sidehill east of the lake	Steady SE or S. SW is the second choice	East Side Prairie lot, about 450 yards, in from the northeast, never across the trail

Stand	Where	Wind	Walk in
2. Cave Hollow Draw	Bottom of a draw	Steady W or NW	Cedar lot, about 700 yards along Mount Hope Road, then down into the draw
3. Field Bottom	Wooded bottom south of Mount Hope Road	NE, E, and calm mornings	Cedar lot, about 875 yards. A closer lot's walk crosses the trail, so skip it
N, WSW or NNW	No stand	Scout or rest a stand	

06 Step 5: The day by day plan

THE STUDY

RECEIPT

When southwest Wisconsin bucks move

WHERE Parts of Dane, Iowa and Grant counties, Wisconsin

SAMPLE 188 bucks, GPS

WHEN 2017-2020, mid-October to early December

WHAT THEY DID

Tracked GPS-collared bucks through the breeding season and compared movement by age.

WHAT THEY FOUND

- Movement peaked in Week 4, November 5 to 11, by the mean movement rate of all ages.
- Bucks 3 and older shifted toward night, especially in the peak rut. Yearlings were more active at dawn.
- The DNR's write-up puts the peak at about November 1 to 7.

LIMITS

- The study area is mostly private land.
- Peak movement is a good window, not a sure thing.

Source. Hunsaker, Gilbertson, Storm and Turner. 2025. "The Breeding Season and Movement Ecology of Male White-Tailed Deer in Southwest Wisconsin." Ecology and Evolution 15(7). Also Wisconsin DNR Field Notes, December 2023. pmc.ncbi.nlm.nih.gov → dnr.wisconsin.gov →

THE STUDY

RECEIPT

Deer and the day of the week

WHERE Four areas in Alabama, 2 private, 2 public

SAMPLE 32 adult deer, 16 bucks and 16 does, GPS

WHEN 2014-2015 and 2015-2016 seasons

WHAT THEY DID

Compared deer behavior by day of the week against the pattern of hunting pressure.

WHAT THEY FOUND

- In daylight on Sundays, compared with Fridays, the chance a deer was active dropped 24%.
- Movement rate dropped 17% and net displacement dropped 31%.
- The daytime shift lasted until Wednesdays.
- No change by day was found at night.

LIMITS

- Weekends as a block (Friday to Sunday) looked about the same as weekdays. The effect only showed up day by day.
- Alabama, with a long season.

Source. Wiskirchen, Jacobsen, Ditchkoff, Demarais and Gitzen. 2022. "Behaviour of a large ungulate reflects temporal patterns of predation risk." Wildlife Research 49(6): 500-512. doi.org →

07 Step 6: After the shot

THE STUDY

RECEIPT

How long to wait before tracking

WHERE National Deer Association articles

SAMPLE Not a study

WHAT THEY DID

Two NDA articles on recovering a hit deer.

WHAT THEY FOUND

- Heart or lung hit with a bow: wait 15 to 30 minutes.
- Liver: 8 to 10 hours. Guts: 10 to 12 hours.
- A second NDA article says 8 to 12 hours for a gut shot, and to wait until the next morning after a late evening gut shot.

LIMITS

- Advice articles, not research.

Source. NDA Staff, "You Just Shot a Deer. Here's How to Find It," Oct 25, 2023. Cole Gander, "5 Steps to Recovering a Gut-Shot Deer," Oct 8, 2025. deerassociation.com → deerassociation.com →

THE STUDY

RECEIPT

Registering your deer

WHERE Wisconsin SAMPLE Agency rule

WHAT THEY DID

The DNR's deer registration page.

WHAT THEY FOUND

- Register your deer through GameReg by 5 p.m. the day after recovery.

LIMITS

- Wisconsin only. Check the current rules each year.

Source. Wisconsin DNR, deer registration. dnr.wisconsin.gov →

08 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

Your first few sits on a fresh spot are your best ones. Don't spend them on a guess.

Map order: lidar and cover for likely bedding (thick cover, steep ground, away from people), then food, then travel between the two, then people. I map pressure off every lot and road. My bedding, travel and pressure layers are a model. Confirm them with tracks and cameras.

Mark every building on the map and never put a shot toward one. Wear an orange cap on every daylight walk, in or out, scouting included.

One wind table: each wind gets a Best stand, an OK stand, or no stand. On a no-stand wind, scout or rest a stand. Under 7 mph with a clear sky, I only use a stand where the downhill air carries my scent away from the deer. Plan as if a buck comes in from downwind. In my count of 10 years of NOAA hourly records from the Iowa County Airport on Jake's dates, some stand fit 122 of 152 mornings and 101 of 152 evenings. The rest, nothing fits. Plan for it.

Check the hourly forecast the night before, and trust your puffer at the truck. A forecast 6 to 9 days out will change.

Score every spot on the same rules: travel, bedding, pressure, the walk in, and wind. Three stands that cover different winds beat three great stands that all want the same one. A great tree with a bad walk in is a bad stand. If a doe gives Jake a chance, he takes it at stand 2 or 3 and saves stand 1 for a buck.

Leave times: 35 yards a minute, a little extra for the uphill, and 30 minutes to hang the stand and climb, so you're settled 20 minutes before legal light. Don't get to the tree before the stand is allowed up.

Rest rule: sit a stand up to 3 times, then rest it at least 4 days. An all-day sit counts as 2, and every climb counts. No study I found tested this.

Weekdays beat weekends for a sit. No study I found tested this. Don't burn your only stand for a wind on day after day of that wind. Scout those days at midday instead, orange cap on, out of the bedding, and save its last sits for your best days. When a long stretch ends, rest every stand before you start fresh.

Wind turns wrong on stand: climb down when no deer are in sight and go where the table says, or scout. Bump deer walking in: finish the sit, then rest that stand 4 days. A truck at your lot: go to another stand that fits, or scout.

After a bow hit to the heart or lungs, I wait 30 minutes to an hour, and only if I'm sure. If I'm not sure, I treat it as a gut hit. If a liver or gut wait ends after dark, go back the next morning. After an evening shot on DNR land, take your stand down before you track.

Keep a sit log. No study I found tested whether one helps you kill more deer. I keep one because the rest rule only works if you count, and what deer actually do on that ground beats any model, mine included.

09 Field checklist

- [ ] 1 Read the whole map before you pick a tree: ground, cover, bedding, food, travel, then people.
- [ ] 2 Mark where hunting is closed, every road, and every building. Nothing goes near them.
- [ ] 3 Check this year's season dates, shooting hours and property rules with your state agency.

4	Put the stand where every trail passes inside your range. Jake's is 30 yards, so 15 to 25 yards out.
5	Build one wind table. Every wind gets a Best stand, an OK stand, or no stand.
6	At the truck, check the wind with a puffer. No stand fits? Scout or rest.
7	Plan the walk in so it never crosses the trail, even if it's longer.
8	Count every sit on every stand, and rest a stand once it hits its limit.
9	After the shot, mark where the deer stood and where you last saw it. Sneak out and wait.
10	Register the deer on time. In Wisconsin it's GameReg by 5 p.m. the day after recovery.
11	Keep a sit log: date, stand, time in and out, wind and sky, every deer seen with time and direction, and anything you bumped.

10 Common mistakes

MISTAKE	INSTEAD
Hanging a stand at the first good scrape and hunting it every weekend.	Read the whole map first. Your first sits there are your best.
Using a sunrise app for legal light.	Use your state's shooting hours for your zone.

MISTAKE	INSTEAD
Parking at the closest lot when the walk crosses the trail.	Take the longer walk that stays off the trail.
Sitting your only stand for a wind three days in a row.	Watch its sit count and save it for your best days.
Tracking a hit you aren't sure of right away.	Treat it as a gut hit and wait.

THE RUT DALE VS. OL' NOTCH, EPISODE 7

When Does the Rut Start?

In the Wisconsin and Pennsylvania data, it starts around the last week of October. In southwest Wisconsin, peak breeding started between October 23 and 27, and in Pennsylvania only about 20% of does were bred by the last week of October before it took off in November. Rut timing varies by latitude, so your area may run different.

Aired Oct 24, 2026

3 research cards, each with its limits

2 min read

188

GPS-collared bucks in southwest Wisconsin

Hunsaker et al. 2025

OCT 23-27

When peak breeding started in Wisconsin

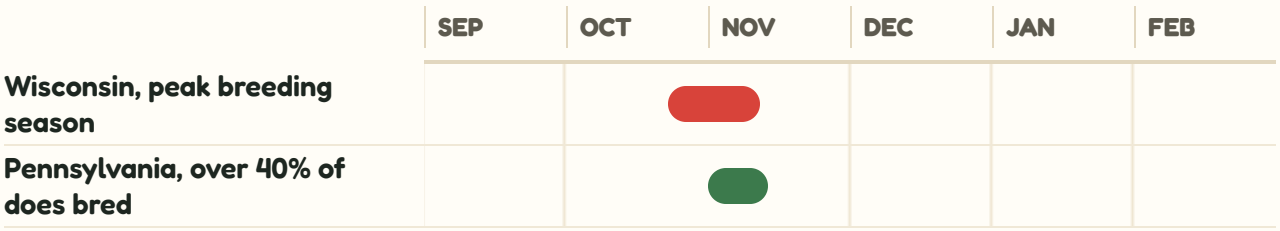
Hunsaker et al. 2025

ABOUT 1 IN 5

PA does bred by the last week of October

Penn State blog 2014

01 What the research found



When breeding happened in two studies. The Pennsylvania bar is approximate: the source says "the first two weeks of November." Red = peak; green = the whole window.

THE STUDY

RECEIPT

Wisconsin: 188 GPS bucks

WHERE Dane, Iowa and Grant counties, southwest Wisconsin

SAMPLE 188 bucks, GPS

WHEN 2017-2020

WHAT THEY DID

Collected GPS locations from collared bucks from October 15 to December 1 and looked for the point where daily movement changed.

WHAT THEY FOUND

- The peak breeding season ran from October 23 to November 12.
- It started between October 23 and 27, depending on the analysis.
- The timing was "generally supported by estimated fawn neonate conception dates."

LIMITS

- One region, not a national date. The authors: "The rut varies latitudinally."

Source. Hunsaker, Gilbertson, Storm and Turner. 2025. "The Breeding Season and Movement Ecology of Male White-Tailed Deer in Southwest Wisconsin." Ecology and Evolution 15(7): e71589. pmc.ncbi.nlm.nih.gov →

THE STUDY

RECEIPT

Pennsylvania: when does are bred

WHERE Pennsylvania

WHAT THEY DID

Showed a weekly graph of when does were bred.

WHAT THEY FOUND

- By the last week of October, only about 20% of does had been bred. More than 10% were bred in that last week alone.
- "What we see is a rapid onset of breeding in late October."
- In the first two weeks of November, over 40% were bred.

LIMITS

- A research blog post, not a paper.
- The page doesn't say what data the graph uses or whose data it is.
- The graph likely pools doe fawns with adults.

Source. "Why 2 Weeks Later?" Penn State Deer-Forest Study blog, Nov 17, 2014. deer.psu.edu →

THE STUDY

RECEIPT

Penn State: bucks in early October

WHERE Pennsylvania | SAMPLE All the deer tracked since 2013, GPS | WHEN Since 2013

WHAT THEY DID

Graphed the average miles walked per day for October through November.

WHAT THEY FOUND

- The researcher: "It looks like males rest up, compared to females, during early October."
- "By the 3rd week they are on track for an exponential increase in activity."

LIMITS

- A research blog post with a graph, not a peer-reviewed paper.
- No deer count is given.
- "On track for" is a projection, not an increase he had measured yet.

Source. Diefenbach, D. "Miles and Miles to Go." Penn State Deer-Forest Study blog, Oct 16, 2024. deer.psu.edu →

02 My read

MY READ
MY TACTIC, NOT A STUDY RESULT

The last week of October is when I want you in a tree, not on the couch.

That's how I hunt it, not something these studies tested. It's built on Wisconsin and Pennsylvania data, and rut timing varies by latitude.

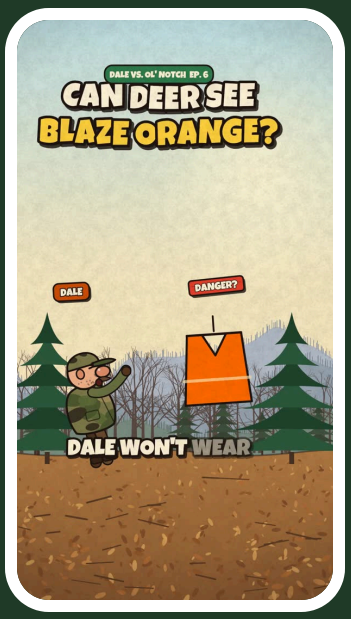
03 Field notes

1. In Wisconsin and Pennsylvania, breeding is starting in the last week of October. Be in a tree, not on the couch.
2. Rut timing varies by latitude, so these dates may not fit your area.
3. Check your own state's season dates and legal hours with your state wildlife agency.

HUNTER SAFETY DALE VS. OL' NOTCH, EPISODE 6

Can Deer See Blaze Orange?

Deer have two kinds of color cones and are less sensitive to long wavelengths like orange and red. Less sensitive doesn't mean they can't see it, and these studies didn't test blaze orange itself. The number that matters most: in New York from 1989 to 1995, 94% of hunters shot after being mistaken for game weren't wearing orange.



Aired Oct 23, 2026 | 3 research cards, each with its limits | 2 min read

2

Kinds of color cones in a deer's eye. We have 3.

Cohen 2011; Cleveland Clinic

94%

NY hunters mistaken for game who wore no orange, 1989-1995

CDC MMWR 1996

125

Mistaken-for-game incidents in that New York data

CDC MMWR 1996

01 What the research found

THE STUDY

RECEIPT

Georgia: what colors deer pick up

WHERE Captive deer, University of Georgia

SAMPLE 7 captive adult does

WHAT THEY DID

Trained deer in forced-choice tests with lights at different wavelengths, including 590 nm and 650 nm, the orange and red end.

WHAT THEY FOUND

- Deer are dichromats. In the thesis's words, "their eyes contain two types of cones."
- Deer have "a greater perceptual sensitivity to shorter wavelengths and lower sensitivity to longer wavelengths."
- For comparison, people have three types of cones.

LIMITS

- A small study: 7 semi-tame, penned does, ages 2.5 to 5.5.
- Blaze-orange fabric was not tested.
- "Less sensitive" means it takes more light for them to detect it. It doesn't mean they can't see it.
- The human cone count comes from a health page, not the deer papers.

Source. Cohen, Osborn, Gallagher, Warren and Miller. 2014. "Behavioral measure of the light-adapted visual sensitivity of white-tailed deer." Wildlife Society Bulletin 38(3): 480-485. Also Cohen 2011, MS thesis, University of Georgia. Human cones: Cleveland Clinic, "Color Blindness." doaj.org → getd.libs.uga.edu → my.clevelandclinic.org →

THE STUDY

RECEIPT

Inside a deer's eye

WHERE University of Georgia study

SAMPLE Eyes from 6 wild does (3 fawns, 3 adults)

WHEN 2007

WHAT THEY DID

Looked at how the cone cells are laid out across the back of the eye.

WHAT THEY FOUND

- The cones are "concentrated in a horizontal visual streak."
- The author's words: "The visual streak provides deer with enhanced surveillance of a broad area."

LIMITS

- Eye anatomy, not a behavior test.
- 6 deer.

Source. D'Angelo, G.J. 2007. "Development and Evaluation of Devices Designed to Minimize Deer-Vehicle Collisions." PhD dissertation, University of Georgia, Chapter 3. getd.libs.uga.edu →

THE STUDY

RECEIPT

New York: hunters mistaken for game

WHERE New York | SAMPLE Hunting-associated firearm injuries | WHEN 1989-1995

WHAT THEY DID

Looked at hunting-associated firearm injuries in New York and whether the injured hunter wore hunter orange.

WHAT THEY FOUND

- Of the 125 incidents where the injured hunter was mistaken for game, 117 (94%) weren't wearing hunter orange.
- Six (5%) were wearing hunter orange.
- Of 78 turkey-hunting injuries, 61 (78%) came from one hunter mistaking another for game.

LIMITS

- Older data.
- It covers all hunting, turkey hunters included, not just deer season.
- At the time, New York hunters weren't required to wear high-visibility clothing.
- Orange helps against being mistaken for game. It doesn't protect anyone who is in the line of fire.
- A safety report, not a deer study.

Source. CDC. 1996. "Hunting-Associated Injuries and Wearing 'Hunter' Orange Clothing, New York, 1989-1995." MMWR 45(41): 884. cdc.gov →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

Deer may still pick up orange, but moving is what busts you. Wear it and sit still.

That's my read, not something these studies tested.

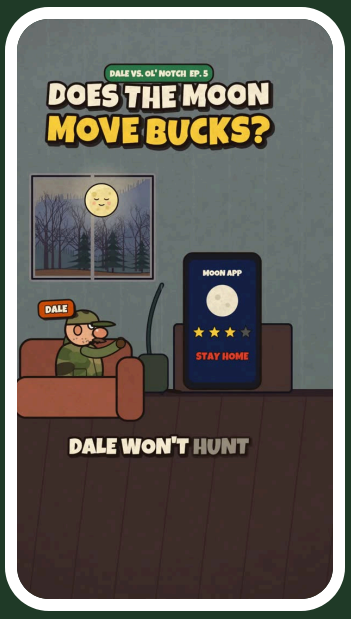
03 Field notes

1. Wear the orange. Less sensitive isn't the same as blind, and the New York numbers are why it matters.
2. Sit still. Deer eyes are built for watching a broad area.
3. Check your own state's season dates and legal hours with your state wildlife agency.

DEER MOVEMENT DALE VS. OL' NOTCH, EPISODE 5

Does the Moon Move Bucks?

Not much. In Mississippi, 48 GPS-collared bucks were no more or less active on a full moon, a new moon or anything in between. In South Carolina, a solunar chart's day ratings weren't an effective predictor of 38 bucks' activity, and their most active time was around sunset.



Aired Oct 22, 2026 | 2 research cards, each with its limits | 2 min read

48

GPS-collared bucks in central Mississippi

Neary et al. 2025

7 min

How much later bucks may bed when the moon rises or sets

Neary et al. 2025

38

GPS-collared bucks in South Carolina

Sullivan et al. 2016

01 What the research found

THE STUDY

RECEIPT

Mississippi: 48 bucks through the moon phases

WHERE Central Mississippi

SAMPLE 48 bucks, GPS, every 15 minutes

WHEN Two years, September through February

WHAT THEY DID

Tracked GPS-collared bucks and compared their activity across the moon's phases.

WHAT THEY FOUND

- "The moon being full, new, or anything in between does not cause our bucks to become more or less active."
- When the moon was rising or setting, bucks may have bedded about 7 minutes later than usual.
- At night, no meaningful change in movement on full moon or new moon nights.
- "The rut affects buck activity much more than the moon."

LIMITS

- An extension report, not a peer-reviewed paper.
- One region.
- The main analyses focus on daylight hours.

Source. Neary, Strickland, Resop, Demarais and McKinley. 2025. "Lunar Legends: Does the Moon Influence Buck Activity?" Mississippi State University Extension Publication 4068. extension.msstate.edu → mdwfp.com →

THE STUDY

RECEIPT

South Carolina: solunar charts against GPS bucks

WHERE Brosnan Forest, Dorchester County, South Carolina

SAMPLE 38 adult bucks, ages 1 to 4+, GPS, every 30 minutes

WHEN 2010-2012

WHAT THEY DID

Compared buck activity with one popular online solunar chart, which rates each day 1 to 4 stars.

WHAT THEY FOUND

- The chart's day ratings were "not an effective predictor of deer activity."
- Deer were most likely to be active in the hours around sunset.
- Moon events did have some link to activity. On days nearer a new or full moon, activity at moonrise and moonset was higher.
- The researchers said the charts may be misleading about how the moon relates to activity.

LIMITS

- Bucks only, one site.
- One chart's day ratings.

Source. Sullivan, Ditchkoff, Collier, Ruth and Raglin. 2016. "Movement with the Moon: White-tailed Deer Activity and Solunar Events." Journal of the Southeastern Association of Fish and Wildlife Agencies 3: 225-232. seafwa.org →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

The moon doesn't pick my sits. The rut calendar and the wind do.

That's how I hunt it. Mississippi State found the rut affects buck activity much more than the moon, but neither study tested the wind.

03 Field notes

1. Don't skip a sit because the moon chart gives it fewer stars.
2. Plan around the rut and the wind.
3. Check your own state's season dates and legal hours with your state wildlife agency.

SCOUTING DALE VS. OL' NOTCH, EPISODE 4

Where Should You Hang a Trail Camera?

In Virginia, cameras on game trails detected deer more than cameras at nearby random spots, most on the big worn trails, and fewer where the brush was thick. In field trials, the lowest cameras tested, just under 3 feet and aimed level, caught the most. Bait pulled 40 to 50 times more pictures of antlered bucks in Georgia, but it shows where bucks come to eat, not how they travel.

Aired Oct 21, 2026 | 3 research cards, each with its limits | 3 min read

24

Trail and random-spot camera pairs in Virginia

Kolowski & Forrester 2017

under 90 cm

Lowest camera height tested, about 3 feet, aimed level

DeWitt & Cocksedge 2023

40-50x

More antlered-buck pictures on bait in Georgia

Johnson et al. 2021

01 What the research found

THE STUDY

RECEIPT

Virginia: game trails against random spots

WHERE Smithsonian Conservation Biology Institute, Front Royal, Virginia

SAMPLE 24 trail camera pairs

WHEN 2013 and 2014

WHAT THEY DID

Paired a camera on a game trail with a camera at a nearby random spot, out of sight of the trail. Pairs were on average 23.5 m (about 77 feet) apart.

WHAT THEY FOUND

- Deer were detected more on game trails than at the random spots.
- Deer were "more easily detected on larger, more well-worn game trails."
- Detections were lower where the understory was thicker: more woody stems over 1.5 m tall and under 7.5 cm thick.

LIMITS

- One site, two seasons.
- It measures how often a camera records deer, not how many deer live there.
- The paper reports the brush pattern, not the reason. It doesn't say the brush blocked the camera's view.

Source. Kolowski, J.M. and T.D. Forrester. 2017. "Camera Trap Placement and the Potential for Bias Due to Trails and Other Features." PLoS ONE 12(10): e0186679. journals.plos.org →

THE STUDY

RECEIPT

Ontario: how high to hang it

WHERE A flat, grassy field in Ontario, Canada

SAMPLE 3,780 trials

WHAT THEY DID

Mounted three cameras on one pole, with lenses at 86, 116 and 146 cm. People stood in for animals: crawling, walking hunched over, or two people walking side by side.

WHAT THEY FOUND

- Cameras under 90 cm (about 3 feet) and aimed level got the most detections.

LIMITS

- People stood in for animals, in an open field, not deer in the woods.
- 86 cm was the lowest lens height they tried, so this is "lowest tested," not "lower is always better."
- The authors couldn't separate the effect of camera angle from lens height.

Source. DeWitt, P.D. and A.G. Cocksedge. 2023. "A Simple Framework for Maximizing Camera Trap Detections Using Experimental Trials." Environmental Monitoring and Assessment 195(11): 1381. link.springer.com →

THE STUDY

RECEIPT

Georgia: cameras on bait

WHERE Four sites on three private properties, Worth and Baker counties, southwest Georgia

SAMPLE 470 unique bucks in summer, 423 in winter

WHEN Aug-Sept 2015 and Jan-Feb 2016

WHAT THEY DID

Compared cameras with shelled corn about 5 m away against cameras with no bait.

WHAT THEY FOUND

- Baited cameras got 40 times more pictures of antlered bucks in summer and 50 times more in winter.
- Bait made deer "concentrate space use near bait sites within home ranges."
- Short-term bait, under three weeks, did not strongly change where deer were found across the land.

LIMITS

- Short-term baiting, under three weeks.
- Bucks only, one region.
- Cameras only, no collars, so it didn't track movement.
- Baiting is illegal or restricted in some states and seasons.

Source. Johnson, Chandler, Conner, Cherry, Killmaster, Johannsen and Miller. 2021. "Effects of Bait on Male White-Tailed Deer Resource Selection." Animals 11(8): 2334. mdpi.com →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

Low, level and aimed down a worn trail. I want to see how bucks travel, not who shows up for free food.

That's how I set them. None of these studies tested it.

03 Field notes

1. Put the camera on a big, worn trail, not a random spot nearby.
2. Set it low and level. Just under 3 feet was the lowest height tested, and it caught the most.
3. If you use bait, know it shows where bucks come to eat, and check your state's bait rules first.
4. Check your own state's season dates and legal hours with your state wildlife agency.

HUNTING PRESSURE DALE VS. OL' NOTCH, EPISODE 3

Where Do Hunted Bucks Hide When the Leaves Drop?

When hunters are around, bucks lean on cover. In Oklahoma, bucks facing the most hunters used forest cover about 1.7 times more in daylight, and in a small Florida study hunted deer left open ground for swamps and mature pine, away from roads. Neither study looked at leaf drop, so what counts as cover on your ground is up to you to find.

Aired Oct 20, 2026 | 2 research cards, each with its limits | 2 min read

1.7x

More forest cover use by bucks facing the most hunters, daytime

Little 2011

14

Radio-collared deer in the Florida study

Kilgo et al. 1998

>70%

Closed canopy that counted as forest in Oklahoma

Little 2011

01 What the research found

THE STUDY

RECEIPT

Oklahoma: hunter numbers set on purpose

WHERE Noble Foundation Oswalt Ranch, Love County, south-central Oklahoma

SAMPLE Adult bucks (2.5 and older), GPS: 19 collars in 2008 and 18 in 2009, 7 bucks tracked both years

WHEN 2008 and 2009 rifle seasons

WHAT THEY DID

Set three hunter levels on a 1,861-ha ranch (no hunters, few, many) and tracked GPS-collared bucks, with a location every 8 minutes.

WHAT THEY FOUND

- In daylight (6 a.m. to 6 p.m.) on days 4 to 13 of the season, bucks facing the most hunters increased their use of forest cover 1.7 times more than bucks facing few or no hunters.
- Forest meant more than 70% closed canopy, compared with grassland.
- Bucks used forest more in daylight as the season went on, at every hunter level.
- The thesis: "Deer recognized human predation risk by increasing diel path complexity and use of security cover with greater hunter density."

LIMITS

- One ranch, and a master's thesis.
- The 1.7x is a daytime figure from days 4 to 13 of the season, not all hours or the whole season.
- "Cover" here was forest compared with grassland, not thickets.
- It tested hunter numbers in rifle season, not leaf drop.

Source. Little, A.R. 2011. "Human Predation Risk Effects on Adult, Male White-Tailed Deer Antipredator Behavior." M.S. thesis, Mississippi State University. scholarsjunction.msstate.edu →

THE STUDY

RECEIPT

Florida: hunted deer moved to cover, away from roads

WHERE Osceola National Forest, Florida

SAMPLE 14 radio-collared deer

WHEN June 1990 to July 1991

WHAT THEY DID

Followed radio-collared deer and compared the hunting season with the rest of the year.

WHAT THEY FOUND

- During the hunting season, deer avoided clearcuts, young pine plantations (4 to 10 years old) and other open ground.
- They preferred swamp and mature pine forest, both of which gave cover.
- Deer were farther from roads in the hunting season, and more active at night.

LIMITS

- A small study, 14 deer.
- Checked against the abstract only. The full paper was blocked.
- In Florida pine flatwoods, young pine counts as open ground. What counts as cover changes from place to place.
- It didn't look at leaf drop.

Source. Kilgo, J.C., R.F. Labisky and D.E. Fritzen. 1998. "Influences of Hunting on the Behavior of White-Tailed Deer: Implications for Conservation of the Florida Panther." Conservation Biology 12(6): 1359-1364. research.fs.usda.gov →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

When the leaves drop, I pull up leaf-off imagery and look for what still hides a deer on your ground, away from the road. What counts as cover changes from place to place.

That's how I hunt it. Neither study tested it.

03 Field notes

1. Once the leaves are down, check leaf-off imagery for the cover that's still thick.
2. Look for that cover away from roads. Hunted deer in Florida moved away from them.
3. Check your own state's season dates and legal hours with your state wildlife agency.

DEER SIGN DALE VS. OL' NOTCH, EPISODE 2

Does a Big Rub Mean a Big Buck?

I couldn't find a study showing that a big rub means a big buck. In Maine, 103 rubbed trees averaged less than an inch across, and the closest study I found, 9 big rubs on camera in South Carolina, had one rub worked by at least 13 different bucks. Bucks rub with their forehead too, which leaves scent on the tree.

Aired Oct 19, 2026

4 research cards, each with its limits

3 min read

1.7 cm

Average width of 103 rubbed trees in Maine, under an inch

Benner & Bowyer 1988

109

Rubs measured under UV light in a Georgia forest

DeRose-Broeckert et al. 2025

13+

Different bucks on camera at one big traditional rub

Woods 1994

01 What the research found

THE STUDY

RECEIPT

Maine: how thick are rubbed trees?

WHERE Hayfield edges near Unity, Waldo County, Maine

SAMPLE 103 rubbed trees and shrubs

WHEN March and April 1986

WHAT THEY DID

Measured the trees and shrubs deer had rubbed, and compared them with the trees nearby.

WHAT THEY FOUND

- Rubbed trees averaged 1.7 cm across at chest height, about 0.67 inch. The range was under 0.1 cm to 8.5 cm.
- Measured at the rub itself, the average was 2.3 cm, about 0.91 inch. Still under an inch.
- The trees nearby that deer could have rubbed averaged 6.8 cm.

LIMITS

- One site and one season, surveyed after the rut.
- The study can't tell which buck, or what age of buck, made a rub.
- The 103 includes shrubs.

Source. Benner, J.M. and R.T. Bowyer. 1988. "Selection of Trees for Rubs by White-Tailed Deer in Maine." Journal of Mammalogy 69(3): 624-627. originalwisdom.com →

THE STUDY

RECEIPT

Georgia: the forehead is a scent organ

WHERE University of Georgia

SAMPLE 19 deer: 4 adult males and 4 adult females from a captive herd, plus 11 wild deer

WHAT THEY DID

Studied the forehead glands of captive and wild deer.

WHAT THEY FOUND

- "Most of the rubbing motions are made with the basal medial portions of the antler beams and with the forehead itself."
- The authors concluded the forehead is a scent organ used to mark antler rubs during the rut.

LIMITS

- A tiny sample, mostly captive deer.
- The paper doesn't say where the herd or the wild deer were.
- Marking the rub is the authors' conclusion. The scent wasn't chemically identified on rubs.

Source. Atkeson, T.D. and R.L. Marchinton. 1982. "Forehead Glands in White-Tailed Deer." Journal of Mammalogy 63(4): 613-617. originalwisdom.com →

THE STUDY

RECEIPT

Georgia: rubs glow under UV light

WHERE Whitehall Forest, Athens-Clarke County, Georgia

SAMPLE 146 signposts: 109 rubs and 37 scrapes

WHEN Fall 2024

WHAT THEY DID

Shined UV lights (365 and 395 nm) on rubs and scrapes and measured the glow with a spectrometer.

WHAT THEY FOUND

- Rubs and scrapes stood out clearly against the background around them.
- The researchers say the glow "would be visible to deer based on previously described deer visual capabilities."

LIMITS

- The study didn't test whether deer actually use the glow.
- What causes the glow is unknown.
- One site, one season.

Source. DeRose-Broeckert, Hammond, Castleberry and D'Angelo. 2025. "White-tailed Deer Signpost Photoluminescence." Ecology and Evolution 15(12): e72618. researchgate.net →

THE STUDY

RECEIPT

Big rub, big buck? The closest study I found

WHERE South Carolina | SAMPLE 9 traditional rubs, 9 trail cameras | WHEN Two years, reported in a 1994 dissertation

WHAT THEY DID

Watched traditional rubs with cameras. A traditional rub was a tree rubbed three years in a row and at least three inches across.

WHAT THEY FOUND

- Mature bucks were more likely to work a traditional rub than yearling bucks.
- One traditional rub had at least 13 different bucks on camera.
- Some deer biologists, including Karl Miller and John Ozoga, say mature bucks tend to rub bigger trees. Miller adds, "that's not always the case." They cite no data.
- I couldn't find a study that measures rub size against buck size.

LIMITS

- Secondhand. I couldn't open the dissertation itself, only magazine reports on it.
- Nine rubs on one study area.
- It shows which bucks used big rubs, not that a big rub means a big buck.

Source. Woods, G. 1994. "Studies on Traditional Rubs and the Human Dimensions Associated with Quality Deer Management." PhD dissertation, Clemson University. As reported by C.J. Winand in Bowhunter (Dec 7, 2020) and Buckmasters (Winter 2008), and by John Ozoga in Deer & Deer Hunting (Nov 29, 2017). Karl Miller quoted by Bowhunters United, Oct 22, 2019. John Ozoga, "The Science of Buck Rubs," Deer & Deer Hunting. open.clemson.edu → bowhunter.com → buckmasters.com → bowhuntersunited.com → deeranddeerhunting.com →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

One rub doesn't tell me much. A cluster of fresh rubs between bedding and food is where I start looking for a stand.

That's how I hunt it. None of these studies tested it.

03 Field notes

1. Don't judge a buck by the size of one rub. No study I found ties rub size to buck size.
2. Look for a cluster of fresh rubs between bedding and food, not a single rub.
3. Check your own state's season dates and legal hours with your state wildlife agency.

DEER MOVEMENT DALE VS. OL' NOTCH, EPISODE 1

Is the October Lull Real?

The best data I could find doesn't show a lull. Penn State saw no real drop in buck movement in early October, and 188 GPS bucks in Wisconsin moved more from mid-October to a peak in early November. Neither study settles it everywhere, so read this as "no lull seen," not "no lull exists."

Aired Oct 18, 2026

2 research cards, each with its limits

1 min read

NO DROP

Penn State bucks, early Oct vs late Sept

Diefenbach 2018

188

GPS-collared bucks in southwest Wisconsin

Hunsaker et al. 2025

NOV 5-11

Peak movement week in the Wisconsin study

Hunsaker et al. 2025

01 What the research found

THE STUDY

RECEIPT

Penn State: early October against late September

WHERE Pennsylvania | SAMPLE About 5 bucks | WHEN Fall 2017

WHAT THEY DID

Compared the average hourly speed of tracked bucks for October 2 to 22 with the two weeks before.

WHAT THEY FOUND

- The researcher's words: "If there is any difference, I don't see it."
- None of the weekly differences were statistically significant.
- His aside: if there is an October lull, maybe the deer see a lull in hunters.

LIMITS

- About 5 bucks, one fall, one area.
- A blog post, not a paper, and it gives no speed numbers.

Source. Diefenbach, D. "October Lull." Penn State Deer-Forest Study blog, Oct 17, 2018. deer.psu.edu →

THE STUDY

RECEIPT

Wisconsin: 188 GPS bucks through the rut

WHERE Southwest Wisconsin | SAMPLE 188 bucks, GPS, hourly | WHEN 2017-2020

WHAT THEY DID

Tracked GPS-collared bucks with a location every hour through the rut.

WHAT THEY FOUND

- Movement tended to rise from mid-October to a peak the week of November 5 to 11.

LIMITS

- The data start October 15, so it can't compare October with September.
- The peak is averaged across all ages and all four years, not each year.

Source. Hunsaker, Gilbertson, Storm and Turner. 2025. "The Breeding Season and Movement Ecology of Male White-Tailed Deer in Southwest Wisconsin." Ecology and Evolution 15(7): e71589. pmc.ncbi.nlm.nih.gov →

02 My read

MY READ

MY TACTIC, NOT A STUDY RESULT

Deer don't quit moving in October. The food changes. When the acorns are dropping I look for them near thick cover and hang the stand there.

Neither study tested acorns or stand placement.

03 Field notes

1. Don't skip early October because of "the lull." The data above doesn't support it.
2. Follow the food. When acorns start dropping, find the ones near thick cover.
3. Check your own state's season dates and legal hours with your state wildlife agency.

Want this worked out on your own ground?

DM me PLAN on Instagram @pragmaticscouting, or use the link to book your own plan.

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The research behind every video, with its limits.

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How to read this library. Research sections name each study, its size and its limits. Anything marked MY READ is my tactic, not something a study tested.

Season dates, legal hours and rules change by state and by year. Check your state wildlife agency before you hunt. This is general education, not a guarantee of results.