([00:03](https://www.rev.com/transcript-editor/shared/nidG67K9oIBxHnU-YQFCYzhMuY-UXwcU4T9ZNm9VJ871E8EPt0JK3teDmDPp42a0n6JTilpPzwuwbACfef26eIiWvBA?loadFrom=DocumentDeeplink&ts=3.78)):

Hello, and welcome to NC State's Audio Abstract. I'm your host, Tracey Peake. Today we're talking turkey, specifically wild turkey, with Chris Mormon, a wildlife biologist here at NC State. Chris's research focuses on forest wildlife management and how challenges such as habitat loss or climate change might affect species survival.

([00:27](https://www.rev.com/transcript-editor/shared/3WNcuuUK4rggSWvUv2WIRKcMuGbvJmkDDtwO6bJY7KTxoTWRZyaL9zLdoqrQ_n5ORA2sQ390iE4g5K4XHGOev0vqLn4?loadFrom=DocumentDeeplink&ts=27.15)):

Welcome, Chris.

Chris Mormon ([00:28](https://www.rev.com/transcript-editor/shared/aFpuccOSkq2VqNbkuu6jgmeR_rH8gHSxAmHdc9CEcDtEYGck78YaV6G0g99wchIiTP9XPLz0MHkoypYua63X2McYrSU?loadFrom=DocumentDeeplink&ts=28.65)):

Glad to be here, Tracey. Happy to be here to talk about turkeys.

Tracey Peake ([00:32](https://www.rev.com/transcript-editor/shared/vjf1ER1JpWXT-4Go5h-834mPMvRXDRxrgj1qQTsBmLSJHDHxWtZtjhZciXLh4e3i343i7Zh2iEfIPbb-jHxvGpdE-Ok?loadFrom=DocumentDeeplink&ts=32.22)):

I'm very excited, and not just because I enjoy turkey from time to time, but we're talking about wild turkeys, which I don't really know much about at all. My entire experience with the turkey is what I buy in the grocery store, but these are not the butterball variety. These are wild turkeys. Can you give us a few basic facts about your average wild turkey?

Chris Mormon ([00:53](https://www.rev.com/transcript-editor/shared/DsUwsFD7cpKvmkC7MIs2q19c0iYO5dAdPNJTGsy4QrxSWOPJv3zoCTFVdWG7NUamr9cTICtRL7E8NvIKXchb6smrclQ?loadFrom=DocumentDeeplink&ts=53.61)):

Sure. Wild turkeys are what we call a popular upland game bird. They're popular for people that like just to watch turkeys, and they're also popular for people that hunt turkeys and then eat turkeys.

([01:05](https://www.rev.com/transcript-editor/shared/TdsoWfh26_CurJwnAFogs3ZAfZkW94vZryrELDaJp_vov96s2ky7JG1yeyMlbeWXuQVXomhMxRSGT3j47okt31KX6Fs?loadFrom=DocumentDeeplink&ts=65.34)):

A little bit of background on their natural history or the language related to turkeys. Females are called hens, but when females are juveniles, those juveniles are called jennies. You may hear people refer to young hens as jennies.

([01:19](https://www.rev.com/transcript-editor/shared/zDl0WxNquzb2glCIBSarodzHgmlEx71vj78t2aZO-UCkDiHvO_gFjA2kWlHa7pQa1p7mLjz7vl82ePUSrxF4fcGcbvM?loadFrom=DocumentDeeplink&ts=79.86)):

And then males are called gobblers or toms. Obviously gobblers because they gobble and there are a couple of hypotheses while they're called toms. And then the juvenile males are called jakes. And then all the young turkeys in the first part of their first year are called poults.

([01:39](https://www.rev.com/transcript-editor/shared/tEJ3tW1kG2BUu5ZiOq5DL_yXrjYO02MWsqikkHAYKIVz5pkVpd-qdVRAH1qdRyk44ZD7PmTatqU0dRGQq8foGqrKJmQ?loadFrom=DocumentDeeplink&ts=99.21)):

Some interesting things, a single male can breed with multiple females, but females will also often breed with multiple males. So a brood of eggs may include the genetics or the sperm from multiple males. In that case, the hen's sort of hedging her bets.

Tracey Peake ([01:56](https://www.rev.com/transcript-editor/shared/BOOYe-a1outNNxQn0HneOxrZcLd4hTrXhUxP9hFlUZtw1rf-Qu5wPRe_xVOqyTCxx6TYzLqvRO5FqXc5y1P2OZGFeok?loadFrom=DocumentDeeplink&ts=116.07)):

Wow, I didn't know that.

Chris Mormon ([01:57](https://www.rev.com/transcript-editor/shared/twMB1xxrShLZpR0M0dnJbGQMlAtSTTZqTvW70yj05Ok5sRkeNfreIO69M-WMXGx9NaT_keEbLl_kqGIAFqW2w5LvGdc?loadFrom=DocumentDeeplink&ts=117.15)):

Yeah, that's pretty interesting. Most people know that the males breed with a lot of females, but the females actually also can breed with multiple males.

Tracey Peake ([02:05](https://www.rev.com/transcript-editor/shared/1f1yv3xgd2sqpf-vQA_ehF3M10keFNTa_8LuNXPcT7S7hJHAHJXslT0rs5vIfld1lNUhI-olOU6lEMCO_eF0OG-Ip6Q?loadFrom=DocumentDeeplink&ts=125.22)):

Okay.

Chris Mormon ([02:05](https://www.rev.com/transcript-editor/shared/0uzoHwkT9FXpQdadL9X9u_U1nk9uOj3pmSiSAyn5J6-STwpdo2iAFDcqZXFzIqDidgImZBRlgjek3_LrgcsYQ_fdVZA?loadFrom=DocumentDeeplink&ts=125.73)):

The female lays an average of 12 eggs in her clutch, and that can range plus or minus several eggs. And then she incubates the nest for an average of about 28 days, so almost a month sitting there on the nest. The male provides no parental care, so the males are not very good parents. The males do the breeding and then they're gone.

([02:26](https://www.rev.com/transcript-editor/shared/GLWdJ3S6KAl6JZ1vIct2tx6HlaTOHy5mGQdxXI9mAZl14cJmZx7icUXc1sU3jIvCUJDUVCXV8eIOb5n1OeVcPrmxub8?loadFrom=DocumentDeeplink&ts=146.61)):

And so the female, while she's sitting on the nest doing the incubation, that's the riskiest time in her life. That's when she's most likely to be killed by a predator, so that's a risky time. These females are investing a lot. Once the reproductive season is over, the sexes form different flocks. The males get together and form small flocks of males, and then the females and the young of the year form big flocks in the fall and winter. And then they break up again the next spring for breeding season and start over.

Tracey Peake ([02:59](https://www.rev.com/transcript-editor/shared/J9lIKR2InsZHKOdqcO4ZSK4Qo5inumMx3s854w6PrYwuQ7jqM6POiWKT8PyrnpDaeNX14qL27zaG5Sy0fdGQqziEYAs?loadFrom=DocumentDeeplink&ts=179.28)):

They only breed once a year, so it's not like what we think of with domesticated chickens where they're laying eggs all the time.

Chris Mormon ([03:06](https://www.rev.com/transcript-editor/shared/erxcmQy2cNlGk5N2htRCI4ohw-ijqylY-wOtx7Ul0PVNWrIoaYpMbjznAfO3Z0trkey3sCQ7bBoxGnsjBNnLi_9757c?loadFrom=DocumentDeeplink&ts=186.09)):

Nope.

Tracey Peake ([03:06](https://www.rev.com/transcript-editor/shared/uJocUZAZMu34iyHXDvZqZMwf0n8bI_UfesvSiaeuwUdD6UI7zTB-40cVXCimQwepEUhMSPhzrnVtJIv4TzoJnEgYY7Q?loadFrom=DocumentDeeplink&ts=186.39)):

These guys have a breeding season.

Chris Mormon ([03:08](https://www.rev.com/transcript-editor/shared/74OuDiPpVK5gaaPNFavGblKRjFZWS-TvLBlj9WL-CTyq8XN7azKfKBe_rrGUuYoW4wKC0cRgZd3nXoFpx4FHQhScbhc?loadFrom=DocumentDeeplink&ts=188.16)):

They have a breeding season, and we can talk later, but the timing of that breeding is determined by the length of the day, so what we call the photoperiod in ecology. The length of the day determines when the birds start to reproduce in the spring. The males start to gobble and get in reproductive condition, and then the females start to break up from their flocks, and then they seek out males and breed with them, and then they go lay their nest. The average start date for incubation for turkeys in North Carolina is April 24th, and that's almost the same across the entire state from the coast to the mountains.

Tracey Peake ([03:46](https://www.rev.com/transcript-editor/shared/HAbSUTmAEaggDE8_Nq6LPJUjTTDqfO4J7sK4wfDZ26JTLLLDWJ1_HXQUZnIJvNvJdLXuxbzYJHCjm0YkSroCGH-8dHE?loadFrom=DocumentDeeplink&ts=226.23)):

If you are a hunter who wants to hunt a turkey, when are you allowed to do that? They don't let you do that in the spring, right, because they're nesting?

Chris Mormon ([03:54](https://www.rev.com/transcript-editor/shared/3alF5WT5PABKD_2_Dgw_8ScJ--FPUO5CNjblxwNxKwXu2xx2NgQFQu6n2VtS2i2v9G3dz2rRNyVwmpKqyqimp2wFItA?loadFrom=DocumentDeeplink&ts=234.54)):

Turkeys are unique in that they're a bird that is hunted during the reproductive period. That's a unique thing. The sort of historical approach to turkey hunting was to hunt them in the fall, and that might make sense, we could shoot a wild turkey for our Thanksgiving dinner table.

([04:13](https://www.rev.com/transcript-editor/shared/_M-aHjbDzcx9R1MghtZr4fmDb10QoAaJoafgFlyjcrjMnrI4bCwVfhRB2pJ0MKhXwntq7ufsDVOC6RVQTSKyPz1bdP4?loadFrom=DocumentDeeplink&ts=253.38)):

Fall hunting is much less common now. It's actually not allowed in North Carolina because during the fall when you're hunting turkeys, it's very difficult to tell the sexes apart, especially the young jennies and jakes because they look fairly similar. In that case, the number of female birds that's killed by hunters is much greater, and that has a stronger effect on reducing the population.

([04:39](https://www.rev.com/transcript-editor/shared/oG3OCZeYVSbf3rNkw9Y1I4quB2sA6JqjznwUYCdV9MD5B9SELoO3sFfkH6vD9yGt8YJxfiDRxuMqvGX6XIPtGfElFMs?loadFrom=DocumentDeeplink&ts=279.78)):

We can talk about restoration of turkeys, but to help restore turkey populations, many states eliminated that fall hunting season and shifted it to the spring where only male birds or primarily only male birds are shot. In most states, you can shoot a female bird that has a beard, and that's the modified feathers on their chest. A small number of female birds has beards. They're rare. We just finished a study in North Carolina where we tracked 700 birds, and we only had one bearded female that was shot by a hunter.

Tracey Peake ([05:09](https://www.rev.com/transcript-editor/shared/QOGXRlik8grtc4kE1rACoLK3FpRmCSc_41bkfQ3l0VRlQYO-xo4o4ZxsV7LfTdAjIVM03kldTtAKjiG1ivb4D4NP3ZQ?loadFrom=DocumentDeeplink&ts=309.75)):

Okay. That's interesting to know because I just always figured, oh, it's fall and it's when you want to eat the turkey, and so you would go out and hunt the turkey. But that does make sense if you're trying to preserve the species.

Chris Mormon ([05:20](https://www.rev.com/transcript-editor/shared/mVoHUKXSsZb_ebYiVxKHo3ZJhAQBKous3DmAPSCgbxA4ocYTbCnVsgTuJ9mN-xo0vIgfbiBg5RyPmMVYhYGsEXIdkfI?loadFrom=DocumentDeeplink&ts=320.67)):

Also in the spring, the males are gobbling, so hunters like to interact with those gobbling males and try to attract those gobbling males to them to shoot them.

([05:31](https://www.rev.com/transcript-editor/shared/Ne_P5Ou-1lIBBj1Y-A8OBr2x2EVopLa5QtdeAcEtEWkSKY64COze4Sd__iGrFh2qXbulKwDOsAAX2Xc7WxmA6zbQXC8?loadFrom=DocumentDeeplink&ts=331.05)):

But you make a good point. Because we're hunting them while they're reproducing, we have to be very careful about the timing. That's what a lot of research right now on wild turkeys is focused on is learning when turkeys nest so that we can structure our hunting seasons that most hunting happens after the females are on the nest. So we're not disrupting that breeding activity.

Tracey Peake ([05:51](https://www.rev.com/transcript-editor/shared/K8C9-a-oykRz4wITZF4ynKZVBQ_X0nWYC92jjTtdIWTIbEP4cOrYWImDhpPOMfyomcK-WZfQxj7MTtGQosywDMgFu4U?loadFrom=DocumentDeeplink&ts=351.18)):

Okay, so they're kind of [inaudible 00:05:52] of it.

Chris Mormon ([05:51](https://www.rev.com/transcript-editor/shared/VnrJD61nV-wyDirqkypqVduZ7V33gtf25oanzUb8ikD7qBCUNVz05JYtNKPcM22jy02zsS2riUPNHlLDPlnceMuwJR4?loadFrom=DocumentDeeplink&ts=351.66)):

When the males are done, they do their thing, they don't do any other parental care, then hunters can actually shoot.

Tracey Peake ([05:57](https://www.rev.com/transcript-editor/shared/lAqTfTESVh44Xg-kOme2AjJnCf_haGC9Q24EOK98nZ1Yepd5Mwnhi0hWNZs16e5mH1DjzZRAzsHMBHpqcoUn7wj2iCg?loadFrom=DocumentDeeplink&ts=357.6)):

Then we can just eat them because whatever.

Chris Mormon ([05:57](https://www.rev.com/transcript-editor/shared/eDSJmErk30Q-wQZALmpFl0SDOaYxTzAWTo25v0pNaYSajV3fxStdsg0N-IfyUVS6_9paSxIJeMxI1s_zsAGbjLP_9i4?loadFrom=DocumentDeeplink&ts=357.69)):

Yeah, and then you can shoot them and eat them, right.

Tracey Peake ([05:59](https://www.rev.com/transcript-editor/shared/YdaMiL0tP8a-iidsty8S7SjnSx-LEHuhsI6gDoA3sKhUy0LELyRmT3y3o5OYRC17LFo2iLxodK8QkCpNtRNmUVDFKLw?loadFrom=DocumentDeeplink&ts=359.16)):

Because they're not worth anything. Just go on, man. You're not going to help raise the children. We're just going to eat you. So yeah, that kind of brings me to, and just to get this out of the way, these birds nest on the ground.

Chris Mormon ([06:12](https://www.rev.com/transcript-editor/shared/jpyXCio3kliGDhs8c-XDMy0LX12FhjZeTVDhfQEMHrJeAtcu9tkyuxzNwr2uAT1dvXLnmwKrg9_WeYnMqjUGUknEtEc?loadFrom=DocumentDeeplink&ts=372.75)):

Correct.

Tracey Peake ([06:13](https://www.rev.com/transcript-editor/shared/yFCQz2wVtAjHXLSYIQWtqWEZg5qxXCfvPf7yV-ZsxhI8sy3zEJKlvTqruUuCctMXvH2zC9UbEHtfOOD_v2fC-MiaYOQ?loadFrom=DocumentDeeplink&ts=373.23)):

They cannot fly.

Chris Mormon ([06:27](https://www.rev.com/transcript-editor/shared/LhVJ2bgHvkPDueTmbAjF3fViGuCzQgeolyEBB3dMoDtlGARyDDuAZs-9cQJYkIz8vlp16e91SxzAv3IdO7WNPbfwOng?loadFrom=DocumentDeeplink&ts=387.45)):

They can fly.

Tracey Peake ([06:28](https://www.rev.com/transcript-editor/shared/D_rLsVeHAH6jwTN28F1k7ZG_S3s0mCivnif3HbYUxMcg2VcjuNeO06EdK_jHpaK8erLGpQ9g2AQfiq893HSBPkUIPdg?loadFrom=DocumentDeeplink&ts=388.44)):

They can?

Chris Mormon ([06:29](https://www.rev.com/transcript-editor/shared/IgJ6FwDlXhCUTZpt0xNV_WYTiQ5D5qdzpKj-YZToiKv9EIguBYiAz3uulsdgl0EpufoIak0uE8zxZ03e-7pwYGmazfI?loadFrom=DocumentDeeplink&ts=389.49)):

They spend most of their time on the ground running around on the ground. They're well evolved. They have strong long legs that allow them to run around, but they can fly, and they actually roost in trees at night. So it's critically important that adult turkeys can fly up into a tree to roost to escape the risk of predators on the ground.

([06:51](https://www.rev.com/transcript-editor/shared/DSotsEjnRNKm65Mi-9KecVpRqtFnSGoEAmZkU8744Z3h3fjzrbmkbj-SMCclI2GnrQEbQKe6qYHm6QbwDYG4MR2sliA?loadFrom=DocumentDeeplink&ts=411.12)):

But they do spend most of their time on the ground and they do nest on the ground. That's their sort of evolved behavior is to nest on the ground. And they often construct those nests in areas that have concealing vegetation so they're hidden from predators, not too dense, not too open.

([07:06](https://www.rev.com/transcript-editor/shared/7AhFjE_zfBWtosE2sfPDbn4WZsQp3J3qJI8OxJ04_V1tdBse8DBHhRGcYuo7xzxUDTYOgfpm32DiH7xnA8a5AWSJW2M?loadFrom=DocumentDeeplink&ts=426.3)):

The young poults, so when the turkeys hatch out of the eggs for the first two weeks, they cannot fly. In that case, they roost on the ground often with a female, and they're very vulnerable to predation then. As quickly as they can grow enough bone and feathers and muscles to be able to fly up to a tree, even a low tree limb, that's critical. It usually takes about two to three weeks for them to be able to do that.

Tracey Peake ([07:31](https://www.rev.com/transcript-editor/shared/ZVGMHDr-GDC9bs_-dy9mamqEF-jVuE5BC9_TMJuRX-29eXqSEIyv0Toz4oU2oJ5dMlqw-_jcgNLwUU1u8xVZDL-0LF0?loadFrom=DocumentDeeplink&ts=451.26)):

Okay. All right. That's a rough life for a little turkey.

Chris Mormon ([07:33](https://www.rev.com/transcript-editor/shared/qsdGwJY75immW3WBFrTA5atWoAdZ2c2R79FH9CnCIiZ8QwEI02N-Vok2l2LnAvNtEClDk1qClFqWNFDxmJ2l3GKjQ-c?loadFrom=DocumentDeeplink&ts=453.84)):

Everything eats turkeys.

Tracey Peake ([07:35](https://www.rev.com/transcript-editor/shared/DrIA0KEIQtHqFnJHCrGgKc61POqRuO16AqlJlGCd7x1jm3Bwd00viN5PairWAMANeh0v4Omekp81AhfxREqe9h_b2WE?loadFrom=DocumentDeeplink&ts=455.91)):

Yes.

Chris Mormon ([07:38](https://www.rev.com/transcript-editor/shared/_ECmRkhSztILNdQKlPRyOTHF6QB9mLM3Z3pM-IaDPGeOlSJWHIaY-_tpSfP9EqrTSsRkSPCqAkUPmjUGwf-TuRM4fmo?loadFrom=DocumentDeeplink&ts=458.7)):

We can talk about some data in a little bit, but everything eats turkeys.

Tracey Peake ([07:41](https://www.rev.com/transcript-editor/shared/KWUOBNRX4uPzOAwTg04k6bk2ZGX92Pd0U2E7P3Zx0-YHU5bX23KahcBkjmp39Rdr0Ko9U4Oyooo5pY6042tvUpvWeqc?loadFrom=DocumentDeeplink&ts=461.7)):

Now, when you talk about where they're nesting, are wild turkeys found across the state? I mean, I'm talking specifically North Carolina, obviously.

Chris Mormon ([07:53](https://www.rev.com/transcript-editor/shared/HXehFVr8jlFmAJaST2JqSdcoZgVG1Ckgj6JT08S-QfqHn4ZXNimjmvqrm55IVqat2X_EH_yLypx2zYW57nIjfHtV1JA?loadFrom=DocumentDeeplink&ts=473.73)):

Yes.

Tracey Peake ([07:53](https://www.rev.com/transcript-editor/shared/CMma95SAleiiBV-yps-T0gzap0iZEjqpD1ecWmKhQL7oyMBuSeO3MqKE8_ys88LOoPsGcV_rE0R99xxJuEI6wzqyf_o?loadFrom=DocumentDeeplink&ts=473.85)):

Just across the state in all the habitats?

Chris Mormon ([07:56](https://www.rev.com/transcript-editor/shared/fhH9Av01zxlLCNJ5t6yaJwj_3QcjnsGrPmf85N2-vYX4rYGEWiN7W_xXxKZKgZ2ElVivIayBBRLR6fgEzCsKundHvbE?loadFrom=DocumentDeeplink&ts=476.04)):

They're in all 100 counties of the state. The abundance of turkeys varies across the counties, but I was just speaking to one of our state biologists and their data suggests that even though there's some variation across the state, the harvest per area is fairly similar in all regions of the state. Our coastal counties tend to have the most robust turkey populations on average, but they're all over the state now.

Tracey Peake ([08:24](https://www.rev.com/transcript-editor/shared/TbhnWgN5-a5Mq1lS7IraM0dZf--7ydSpoCrLEuKptkNdV9SKrI6akjugmLKQohBx_52VuqznrSOYbM3QVeMgtpcX_BA?loadFrom=DocumentDeeplink&ts=504.06)):

Wow. I would not have pictured them as being in the coastal areas, but okay. You said everything eats turkeys and it's hard out here for a little wild turkey and grownup wild turkey, apparently, all the wild turkeys. What are some of the challenges? You mentioned that we're trying to stabilize the populations. What's been sort of the history with that?

Chris Mormon ([08:49](https://www.rev.com/transcript-editor/shared/1LUHqVQoS6yLbDLBvCvDVO_u47_eBZmiubJynuo6sJQLkIicjY8dl7NOIYHEKkiDNw2TpeT6197D1-AjowxQUy03KOE?loadFrom=DocumentDeeplink&ts=529.05)):

Like many of our wildlife, by the early 1900s, populations had been extirpated from areas where there were still individuals of certain animal populations. They were not very common. And turkeys fit that bill.

([09:05](https://www.rev.com/transcript-editor/shared/S2vHoTAIK3G9Wwu69KOt--d28IJLmu6ORf_wSHh_Hky__TNVGUc7udLYSpd_Ix0OqaP3mXue_MY5psWpu3li_w-yjjY?loadFrom=DocumentDeeplink&ts=545.37)):

1800s, early 1900s, habitat loss and over hunting, shooting turkeys at a roost at night where they're very vulnerable, using lights and shine them in the trees at night, shooting them in the fall, and shooting lots of females. Females are the important engine that drives populations typically because they reproduce, so if we increase mortality on those females, then we can reduce the population.

([09:33](https://www.rev.com/transcript-editor/shared/WQCJNBa4ZTrId7MY14Wgr02N-OWbbd6-8HIG2EyViapif9LOZdTZnoQflNoBIcciB_ac5yl2vm0ValfgfJ3YNFKOsx4?loadFrom=DocumentDeeplink&ts=573.84)):

States went through these restoration programs, and North Carolina's restoration program really picked up in the 1970s. Some big steps there were to change the hunting regulations to move away from that fall hunting and to reintroduce wild birds. There was a lot of efforts to take pen raised birds that were tame and release them to restore populations, and they just didn't live.

([09:56](https://www.rev.com/transcript-editor/shared/LngEZnGfZPxcddQy19LubP3Cz-Ftj6OCFFJIH1IpLlKglJonCxX3Sv7su3cJuLaTcKYRhQXi4TJA0covshLYL-svuo4?loadFrom=DocumentDeeplink&ts=596.7)):

What they learned is you have to catch wild birds where they are and then move them. And if there's habitat there, turkeys are very adaptable and those populations exploded. Since the late 1970s, our turkey population, at least the harvest, I think our biologist told me that the harvest has increased like 17,000% or some incredible-

Tracey Peake ([10:18](https://www.rev.com/transcript-editor/shared/rNFssX0rQvDbwdOhjLF1gGHkGRdQAeIc4yaH5MQxYka-kMjy-XD2yLrBeiYzR-onpHq5KlntBWQe9XnFB0ADR5CH5yQ?loadFrom=DocumentDeeplink&ts=618.9)):

Good grief.

Chris Mormon ([10:19](https://www.rev.com/transcript-editor/shared/hgcHqo0xQoGobmmdlV36XkHdj78lYhEi8Eg5JhaOu_fQj6VB77EiIyohnxuqKEVwTZJ4IqIUsdM_4Dn6G-LZC6Bd-50?loadFrom=DocumentDeeplink&ts=619.71)):

... percentage. Just this past spring was the record turkey harvest in North Carolina. 24,000 birds were harvested in the state, whereas it was 140 birds in the late 1970s.

Tracey Peake ([10:31](https://www.rev.com/transcript-editor/shared/LxHvIYQf2jEL0Tpq9IF_7zSErBQiAlaNxarQGmRvfSChxI1A6oiE7Jb8qLD3uJjvpD9Bu0-tyTntY3_ToLVs3mU5sW0?loadFrom=DocumentDeeplink&ts=631.2)):

Good grief. When we do a harvest, do we have a ballpark of what kind of percentage of the turkey population that is so that we're kind of keeping tabs on whether we're going up or down?

Chris Mormon ([10:45](https://www.rev.com/transcript-editor/shared/sRsES9h0kID2yWxfmsbGt_MXF-S9bhe-HejM3NmpWdYWZ54NM54ec5nRqWTR-SH_Nptj5NRI2e3PVrSZh-62H7tK0zk?loadFrom=DocumentDeeplink&ts=645.42)):

In North Carolina, all turkeys that are harvested are required to be reported. That reporting is an important way to track trends in harvest. And then in many cases, we use trends in harvest as an estimate of the changes in population. I mean, there are some issues with that if you have an increasing number of hunters that can artificially inflate harvest when the population may be declining. But assuming hunter effort stays the same, an increase in harvest or a stable harvest would indicate a stable population. North Carolina has had an increasing harvest for a long time.

Tracey Peake ([11:17](https://www.rev.com/transcript-editor/shared/GlxlYinOlsoJP4o6AljgMJGj2y3Q_Gpwk5Y3Fg4KM69gBEW8MhsoDin2OZn2c9ATSawKh3RDP75zA6acJWoTFXYIRjY?loadFrom=DocumentDeeplink&ts=677.28)):

Okay.

Chris Mormon ([11:17](https://www.rev.com/transcript-editor/shared/YfA3pkaDKXf8feCmcs7qk8fQq64n2h0r1fj6MAAusp3k2ymNq1zuJwgoyxZFSwL2LTkuDtcJNak1w_5LOECMq0RkCRY?loadFrom=DocumentDeeplink&ts=677.58)):

Now, there are other places in the southeastern US that have seen declines in turkey populations as indicated by harvest and some other metrics like the amount of reproduction that's going on. In some cases it's been a dramatic decline and it's even been termed the southeastern wild turkey decline.

([11:36](https://www.rev.com/transcript-editor/shared/rnVMWCgse67B0BFcXIB1zS3f6vlhEU03Ba3romjnoaGBS2uEMwj169JzffLH49Qe44EvHvjPxDbhz1elWgFl45zsJOU?loadFrom=DocumentDeeplink&ts=696.81)):

There's research ongoing across the South and really across the eastern US to try to figure out the causes of that decline. I think nobody has a silver bullet to figure that out right now. It's probably a combination of factors. It certainly has something to do with habitat loss in some areas.

([11:55](https://www.rev.com/transcript-editor/shared/ggV6PbZCaAgj3WvCpHAg3A1rIQjdwXrZh7UI6OrEgovIPP0wGaIRRS8Jj95SbsFi_cX_D2CGfo59waYTp4XLGzlMYj8?loadFrom=DocumentDeeplink&ts=715.2)):

It could be changes in predator populations. There are many predators that thrive in the presence of humans. So with more people, a lot of human waste, trash, whatever, those populations of predators go up. There could be new diseases that are emerging. There could be diseases that move from domestic to wild turkey populations or vice versa.

([12:16](https://www.rev.com/transcript-editor/shared/VNk3TGZGdMOLlOShAT29SmgNCpQp9dhLMVyMuSYHHtQGaf9an4w26ziMIlI4dr_lnsH7-gvIhd3Tz_NJ2zACKHjm9So?loadFrom=DocumentDeeplink&ts=736.77)):

And then it could be that the way we're hunting in the spring, if we're hunting a little too early and shooting too many male birds, that could lead to a reduction in sort of the reproductive output. There's probably other things I didn't even think of there.

Tracey Peake ([13:06](https://www.rev.com/transcript-editor/shared/Y3p7K86NvDVs1csrPYIeSsESLXtzOouEGitVre4eV9F7aSjAXsKJTXUG7dfFWqCkqxz0bAkKtMbpRJgozytY8zmKIsw?loadFrom=DocumentDeeplink&ts=786.6)):

That kind of leads into the next question, and you've answered some of it. What are the challenges besides the obvious things like over hunting or predators that wild turkey populations might be facing right now?

Chris Mormon ([13:21](https://www.rev.com/transcript-editor/shared/PKPqfNw358PrngrXoJwfIGuxWznyue1mQg_fGjn1X5dzujpp1kB1yTTun5Ys_mSO-VHVJJRU51IzfSsH4XkCUbEHMKg?loadFrom=DocumentDeeplink&ts=801.12)):

Right. Habitat loss, probably the limiting component of habitat for turkeys is the vegetation that supports nesting and then brood rearing. When the eggs hatch, you have these tiny little poults that are barely above the ground. They're little chicken nuggets walking across the ground.

([13:42](https://www.rev.com/transcript-editor/shared/rIbt6vO-SYjharu9cMtJFM50ZU54SawYpRB5MbPGmbqwavy5TK0wWEbSdE-jbCc2XHfoquM2pK4LdVlQmlhYIsUBvOU?loadFrom=DocumentDeeplink&ts=822.75)):

They need to be able to move through the landscape easily. They don't have strong legs, so they need sort of bare ground, but they need what we call umbrella cover, so vegetation that's over the top of them so they're hidden from predators. And they need to be able to eat insects and other invertebrates because that's where they get the protein they need for bone and tissue growth.

([14:05](https://www.rev.com/transcript-editor/shared/8to7ib2qIvc8S0XanLZglYk312B5zDNyvSsheU_VoMGkpNhE3wG7MdYCIv8-GhU6m7pfLAsVbmSt7034QvqZWPmffPo?loadFrom=DocumentDeeplink&ts=845.73)):

That sort of condition, that herbaceous, maybe woody herbaceous open forest condition is much less common. It's less common in forest, it's less common on agricultural edges. That's one big challenge is to try to restore that habitat.

([14:22](https://www.rev.com/transcript-editor/shared/8jyyom7VFFXrr-0HzUcYnc9tM_LYx6HfzMd-jxQaVPdrWsw-1hEjKcRbyEqAcV-4VSX0pt7blfayAG_LfqA0P-h1bPY?loadFrom=DocumentDeeplink&ts=862.29)):

Prescribed burning, the presence of fire is a real beneficial process for turkeys because it maintains that vegetation near the ground, and we've seen a decline in that occurrence over the past 100 years, although I think managers really recognize the value now, so we do more of that.

([14:38](https://www.rev.com/transcript-editor/shared/eu_tKDtMO-AginCqYrvoUWuHcmChFpJ_YKQCfc6OaVuU_rW_6PulTdcShgB7yEjo84-qlQJImkEWF6USax23KoM9JBE?loadFrom=DocumentDeeplink&ts=878.34)):

In our study in North Carolina, we have some new data. Just to give you a feel for the challenge for turkeys reproducing, about one in four nests hatches. Three quarters of all nests that are laid are eaten. Then once those eggs hatch, you have a brood of poults, and there's only about a 30% chance that that brood will actually produce at least one poult that makes it to a month old where it can fly up and roost in a tree. That's about 5% of nests that are laid produce one poult to 28 days.

Tracey Peake ([15:16](https://www.rev.com/transcript-editor/shared/vV5a9i0Pp4r2WZZgruzG0OLxBG-LMLEDuuwNp4YV1nHHppspVUCYmPDD1TzeExnaQjk7trSWE4ksEsjg8f7Yr5Whlt8?loadFrom=DocumentDeeplink&ts=916.02)):

That's amazing. How are there any turkeys?

Chris Mormon ([15:19](https://www.rev.com/transcript-editor/shared/m6Bz-748q-6qhWPefW1ctURC3AGFI_0F2UjVbKo9XmSNIMg3XFe023GpqoXz6SKHrSqmHmgIbBIj49GfwuQEEDE0RrM?loadFrom=DocumentDeeplink&ts=919.53)):

Right. Well, that's a good point.

Tracey Peake ([15:19](https://www.rev.com/transcript-editor/shared/PCm31r9Bk8YfXJYBA3cEDLkzW6Q-EASevrpbPR8keBg9Tg5PURBJrT05XGuEZFjzEvd7aNyFAOjod3IOR3qJg3NEgEs?loadFrom=DocumentDeeplink&ts=919.53)):

How are there any turkeys?

Chris Mormon ([15:20](https://www.rev.com/transcript-editor/shared/fQ0w_2i_LJ-t6C2c0ypne_m50ST8iANhmfLw9pLh0Z-ArXPoMUIW-ZnYMj4NKAe5eAHiqUtl8dVVBqdaq3s1-sVOv1U?loadFrom=DocumentDeeplink&ts=920.73)):

Well, a lot of times it's like boom or bust. Some years reproduction is incredibly successful and then other years it's not good at all. The first year of our study, we found about 100 turkey nests. Nest survival was low. Brood survival to 28 days was zero.

Tracey Peake ([15:38](https://www.rev.com/transcript-editor/shared/s-0pNyXwbvFKCKnBL24HabTjnXikOoaNeboj0sftWwde-mlpdSj1GeYgQJE8R67Qqhq2CUf7zX7mAm8eJuhYiRLLkd0?loadFrom=DocumentDeeplink&ts=938.49)):

Oh gosh.

Chris Mormon ([15:38](https://www.rev.com/transcript-editor/shared/my-R6BTXmYHycfJqcDgLyU5htGIEd_mP1m3zoLw6b8mirWfHjinARvhKJdfm2S-ZoQyxgZ7cwVfBK9cJoaJz2P6QXLU?loadFrom=DocumentDeeplink&ts=938.94)):

Out of those 100 nests, we had zero poults produced to 28 days. That's zero reproduction for our sample. Now, there were some turkeys that were reproduced, but that was scary. We thought maybe we were doing something wrong as part of our study, it was the first year, but University of Tennessee was doing a similar study and they had very similar results over there. It was something going on in a large scale. These declines were happening at a big scale.

Tracey Peake ([16:05](https://www.rev.com/transcript-editor/shared/y6fSTPPe3ZkL4hwEVY_GrETJfpcs2s7r4F7b2q8Cq_OkQoS1A2Rr_5MmTsii-7Aarlvzw60EamJa2hBm3s2ENsSgmXE?loadFrom=DocumentDeeplink&ts=965.85)):

Wow. That's amazing. This kind of leads me to the next question, one of your most recent studies. You say that they have to nest at a certain time and it's when the days start getting longer. And so you were looking at climate and nesting time. What were you trying to tease out there?

Chris Mormon ([16:27](https://www.rev.com/transcript-editor/shared/3CDlL7IhMWsYI7fKZa6OzKkH7GMNeqvuwf9s5SW90M5t2hgZmesNuVGrJwNcpq0BU20gP-ENPKiYCoxpkmK42Y2l9Gg?loadFrom=DocumentDeeplink&ts=987.75)):

We know that climate change is happening, so it's important that we understand how animals relate to current weather and climate, and then we can use the projections that climate scientists create to sort of get estimates of what may change in the future.

([16:46](https://www.rev.com/transcript-editor/shared/hEzLvdNtHYSbnDQ1VAKONl9erMSHvr_ujyxcQQgPdpCNoBAPw_BygGXAftchhwDCuTLDFFgy9U0XjTu9U8lEQBX-_B4?loadFrom=DocumentDeeplink&ts=1006.14)):

What we've been working on in a separate turkey study, and this is across the southeastern US in five states, we've been looking at the relationships between weather and reproduction. The first thing we did, we looked at the timing of nesting to see if weather before and during nesting affected the timing. We also looked at the timing of green-up. When things leaf out in the spring, changes from one year to the next based on weather.

([17:09](https://www.rev.com/transcript-editor/shared/8o61SJrPN13g5Qiea94gOsD-zKsle6HlF2yQ1f13xNWqCuwC5xokBVGZvNM1BKjNM54Bi1auBgoy0VN096FsnpMzi7M?loadFrom=DocumentDeeplink&ts=1029.87)):

Turkeys did not respond to either. They generally did not respond to weather or to green-up. They're sort of inflexible to those annual changes we see. They're responding to the length of the day. It's sort of an evolved behavior that would historically have matched the resources that would be available at the time they nest.

([17:36](https://www.rev.com/transcript-editor/shared/lhhYk3-tSh_5CVQjEiBjhf_v_EmMiqGDQz3x6s96dT6MlLK0Xp7zGZVBU3Jn6v0g1T8Vi-cPksA_X7_aII88GLFT-Zk?loadFrom=DocumentDeeplink&ts=1056.42)):

If you project it to the future, you might have concerns that if turkey nest timing is inflexible, that with a changing climate, those resources may become available earlier and earlier in the spring, whereas turkey nesting stays the same. So there could be a mismatch between the availability of resources and the timing of nesting.

([17:55](https://www.rev.com/transcript-editor/shared/lfxOxbgLjzZJEpVOYHQA1ns50mA-LygwZga9o2ANkbOxJ75GbVGGBfn7Ap8deBm7P8QrJqxRR8xaLf5hqFs9mL6c2Lo?loadFrom=DocumentDeeplink&ts=1075.83)):

We don't know that for sure. We didn't document that because we can't document the future, but it's something to be aware of. Turkeys are very adaptable, so I have some confidence that they would figure it out, but we don't know.

([18:09](https://www.rev.com/transcript-editor/shared/KaQ5Kc7qGIm8P-vb7OJw8sMQtMIvgbdqj8Vo8i5uJihiredUT_nZM1KU7oOKifj6XZEsvpI513NFEe2SOEpCwMmTmDA?loadFrom=DocumentDeeplink&ts=1089.12)):

We also looked at nest success. I thought this was more likely to show some relationships. We looked at the effects of weather before and during nesting on nest success. It's long been thought that lots of rain, especially cold rain, would reduce a turkey's nest success, but it didn't. We saw no relationship between weather during nesting, really, not strong relationships, certainly not between rain. Precipitation did not affect nest success. So there you go.

([18:43](https://www.rev.com/transcript-editor/shared/RvGHe4lIKM0Y1yDPruxqXzvtpXNqm5r9gnN_WWm31iKNETdekMRMBK8fMZ_gMtAU7c1rIIiDdtEp2yoPwPI_eSacyGc?loadFrom=DocumentDeeplink&ts=1123.56)):

But there were some other things that we did project, that we did document, and then we were projected that to the future, the different things we saw currently canceled each other out in the future. Our projection suggested that the future weather with climate change is not going to be so problematic for nest success for wild turkeys.

Tracey Peake ([19:03](https://www.rev.com/transcript-editor/shared/t2-IInh9ejAfxxVlAqfi2uXULVBMRg4j_2pO5Tw-3AXWWFlzoA-e3mCsLMVYVbcYXpKSSCslYekTlENWaF2xBdwMv5E?loadFrom=DocumentDeeplink&ts=1143.24)):

Well, that's good.

Chris Mormon ([19:04](https://www.rev.com/transcript-editor/shared/OLhLibEHRJRY0jDHYHt-kG_iHw9P8T-Y-I448ymFv17nPtr61iXotWRZoc06OEcbpWX6WfmUCmZvKAp39eAdswVlCXA?loadFrom=DocumentDeeplink&ts=1144.74)):

That's a good thing, yeah.

Chris Mormon ([19:09](https://www.rev.com/transcript-editor/shared/RpVox2dpjo4AT2gY4j0G_n_fl6GGELONuA1MAPalbcRUBWW3xuccpnUi6PsIVO0jKYduKf3JKW_RZPNb-0SdgXQH2_U?loadFrom=DocumentDeeplink&ts=1149)):

These are projections, so there's a lot of uncertainty in them, but it's a good start.

Tracey Peake ([19:13](https://www.rev.com/transcript-editor/shared/AZdFKGE-Rbm2OXc3pdJNO119I8HJsUQhlwDKKFznGeo3EVyyxhuWYrYjDsKEO3EwyR9eiIzajGO00eqcbr8SlQITVxA?loadFrom=DocumentDeeplink&ts=1153.17)):

That is a good start. Literally every carnivore in the forest eats turkeys, is that kind of it?

Chris Mormon ([19:23](https://www.rev.com/transcript-editor/shared/gQsfPTzkqTOkjU2MnEPPpJOvwPR0NybuW_TZAdGlDFlOo2U3-DhUptf8ejhH8pmbKFlDzk-9Qz1UAUQmV6XL9OMbOus?loadFrom=DocumentDeeplink&ts=1163.94)):

Especially the-

Tracey Peake ([19:24](https://www.rev.com/transcript-editor/shared/MCJSEBLzfpGHAd73iStGaC1ar8kqkxyY03b9r_nIoIvhoki_NJxh3aQh7bba0Edbq0UG_MM10pX1XOmYQdjI9A4l6KA?loadFrom=DocumentDeeplink&ts=1164.48)):

So if you're talking foxes, raccoons, all of them?

Chris Mormon ([19:28](https://www.rev.com/transcript-editor/shared/QRg4F0Qa7o1Sxv30b_lZc6cVlrfzfj93YnP_t4RD9-BISc5VO-q7hKWT0FVvltoAkuQ_8o79Nf6pkEpl9-RplprrDpE?loadFrom=DocumentDeeplink&ts=1168.77)):

Everything. Snakes.

Tracey Peake ([19:29](https://www.rev.com/transcript-editor/shared/nCLoTWX9ZZmFtMVnXaRexv7ebO4rsAtwtkmUq4FcoEmxXQRKST3msn1HP1UqURRqYhejgqPrYzKjKCVy_sfRYBavY3M?loadFrom=DocumentDeeplink&ts=1169.61)):

Then you got snakes.

Chris Mormon ([19:30](https://www.rev.com/transcript-editor/shared/if3uXnE_9mvtprjCnt0vyv197L_-v_tqrT4e6R1_qtcVqLmcW29mjZi-4Ik0Wj-rDhNdvpLiyNuzbi5gQPdyzGvzoH8?loadFrom=DocumentDeeplink&ts=1170.36)):

Owls.

Tracey Peake ([19:30](https://www.rev.com/transcript-editor/shared/5Bk2Z8PQ2jVgMx4HY0yUc-Z1_4Z2jJq7lzbtbB3-Nxq_o1nqjEFDruL144F-0RdWS7taSh16IusO5zSFF-L-OYO2uMc?loadFrom=DocumentDeeplink&ts=1170.75)):

Owls.

Chris Mormon ([19:32](https://www.rev.com/transcript-editor/shared/Bbr4-muLEm0JmopsUZsXRGJcsMYPb_EuCxj2RMhG27cSwkj5wL93aZq0BQ2CxFhE54Qwone7mf0NUO9zVRyIGMzp7v4?loadFrom=DocumentDeeplink&ts=1172.04)):

Great horned owls have been known to depredate adult turkeys at night. They'll attack them while they're on the roost and pull their heads off and-

Tracey Peake ([19:39](https://www.rev.com/transcript-editor/shared/TBlkphBmzQWH57pHLWSIdsc4xJ24HNrFCajOfm7XfDxNBD_6Lbfb4spbh3BfJUhVsjJwKF5eBfQ4Vt0o-jlchjNAPw8?loadFrom=DocumentDeeplink&ts=1179.42)):

Oh, wow.

Chris Mormon ([19:40](https://www.rev.com/transcript-editor/shared/W0AjgdK8-hoxWUqxZDozcVkDwVFzvDt_1odTuWLgDEn9D63_Md6H1JlvSvx4Lvqd1BgQvH9XQ0Grc00OmdRyTWiNRQI?loadFrom=DocumentDeeplink&ts=1180.05)):

... eat them.

Tracey Peake ([19:40](https://www.rev.com/transcript-editor/shared/1k7nRImUMA3_E1xFBd55nzKtGVp9HkgLXNF0bXlKYQ-s77rTpMzfri7QzARJHT0ki_CQIluXS_33sN4AtQPBnsi5IdE?loadFrom=DocumentDeeplink&ts=1180.53)):

Owls are mean I discovered in being here long enough. I used to, oh, pretty owls, and they're just out there. They are mean.

Chris Mormon ([19:49](https://www.rev.com/transcript-editor/shared/NzCVIf3fRZgJGroEw39vnrgHy8AM-HBRpZUVf_z0tzAhqcoaz9tPmcfuusIeeI_ptTL3NdQ2Fv9iFwnYvfsl_dTuELA?loadFrom=DocumentDeeplink&ts=1189.62)):

Well, they have to make a living, right?

Tracey Peake ([19:50](https://www.rev.com/transcript-editor/shared/mxW_TwLuOZhU1DihVRp1LbrbUh9-3HTnhd59YAxrr5LVkENGM2LmxryqTeTZAlqwW9otEzylW6qLkYt93xCsa49Vmbc?loadFrom=DocumentDeeplink&ts=1190.73)):

Yeah, they do. They do.

Chris Mormon ([19:51](https://www.rev.com/transcript-editor/shared/x4W1R0qsELznwI2cMxI8dhMCVKKzka1qqxmyDru6P-5MR3y0Ut-DD4jeiD-yfgZUow9UFf2H0U3CSH6NjCVOqjhfyZk?loadFrom=DocumentDeeplink&ts=1191.45)):

They have to eat to stay alive.

Tracey Peake ([19:52](https://www.rev.com/transcript-editor/shared/ZaX3zalzC26S2OapH1DEUEJKfyqP9O_w4hpCSyEjpku0mByvtGwgVXBFbllisvWE1lAs53pCKQYTDTdL-wKCRPU3rho?loadFrom=DocumentDeeplink&ts=1192.8)):

But wow, they pull their heads off? Because I was like, "Those turkeys could take that owl." Apparently not without a head.

Chris Mormon ([19:58](https://www.rev.com/transcript-editor/shared/sGoZIRAYRz0J06DCLpVOv_Y2S2CWsLFK-d6DzxA8eYf3JEwujjQD8GyJcMpLWh6iOR8ujK-UUmYyPpcmj1X1wEkQKvI?loadFrom=DocumentDeeplink&ts=1198.92)):

Great horned owls are pretty ruthless predators, you're right. There are things that eat turkey eggs. There are lots and lots of things that eat turkey poults. And then there are certain animals that eat adult turkeys. Bobcats and coyotes can kill adult turkeys as well.

Tracey Peake ([20:12](https://www.rev.com/transcript-editor/shared/8KJFFhB67481pG6B6x9KM_H94U1i38OufxNp9k6Aqcyx73V-PPz3KenxM_4C7p7lvL06-_tBstSXpSXCcQ7cCeH2RSU?loadFrom=DocumentDeeplink&ts=1212.18)):

Okay. Yeah. I'm just picturing little chicken nuggets with legs [inaudible 00:20:15].

([20:17](https://www.rev.com/transcript-editor/shared/1QzE_KTpMh7V7h2i8XXAunGXGKCqqag__tr3NW9JqFtEoLueRoILBgcb5IOrIpX272y-Ih_DKfC5B_2yj1msZ8MjRfU?loadFrom=DocumentDeeplink&ts=1217.61)):

Well, I'm coming to my final question, which is my favorite question that I ask everyone, which is, what is the coolest or most interesting or just weirdest off the wall fact that you came across while doing this work?

Chris Mormon ([20:31](https://www.rev.com/transcript-editor/shared/wU6sprDVML92ZygUykVtVff7TopjwSlKaRGIJGyoswce_l-WsXuEcIT3SKTyT_U9ANCvzWb8n9wQ9PEnqiWV0QCFZ-s?loadFrom=DocumentDeeplink&ts=1231.98)):

It may not seem off the wall or weird, but the research we did, I mean, this was a large scale project where we did catch hundreds, we caught over 700 turkeys and put tags on them. Many people are like, "How do you catch a turkey?" Well, you catch a turkey by putting out some bait, and we used corn. They get used to that. We use cameras to track when they're there. And so we know that.

([20:53](https://www.rev.com/transcript-editor/shared/AsORM8bwiS28OoHdZIqUuQ3WxLJKjpPsv_HJURjcl6LzbdMCIZsoeIrFqZXNQ58nXldE-K9yLOxWEs6615qA9HnytEE?loadFrom=DocumentDeeplink&ts=1253.79)):

And then we can set up ahead of time in tents, and we have rocket nets that are these nets that are in boxes that are propelled with charges that you set off and they explode over the birds and they're caught under the net, and then you can catch them and work them up.

([21:08](https://www.rev.com/transcript-editor/shared/Z27kytwS8T2n10VtkPXpkmbNUz2DJfP5D1NLfSmpqWAX_qwOuqmLLWbBAowgppY9KYVTDPGnqekROu_0BI0c4CJV3_8?loadFrom=DocumentDeeplink&ts=1268.58)):

We caught all these birds, and the goal of the study was to understand the timing of turkey nesting and if it varies across the state, because the state needs to know if they should have different season timings or if everything's the same. I was under the impression that turkeys would nest later in the mountains. We had some turkeys that were up to four or 5,000 feet in elevation. It's still winter when it's greened up in the coastal plains, so I was sure that nesting would start in the coastal plain and then it would move to the Piedmont and then it would move to the mountains because of elevation.

([21:46](https://www.rev.com/transcript-editor/shared/kuKNck0lETHO1BpItRff7CuQKYNxUcQDVax4P0847Q2Tp4S4evrEUns5XKLpqC0DOm0MSYabZCa5vdrpKItFWKR7aQQ?loadFrom=DocumentDeeplink&ts=1306.35)):

What we found is that generally in every year, the coastal plain turkeys were the last to start nesting, and then the mountain turkeys sometimes nested first. They were laying eggs and incubating when it oftentimes was still very cold, and maybe there was still a risk of a snowstorm or a flurry or something like that.

([22:07](https://www.rev.com/transcript-editor/shared/h-AoxXmeO1rDdkv9Xm2Uo_zpptddbBeyr7YnlOqFyAMSrM6RrAy9PNiGs-k1CS_dQMHIQV-zqK-Oov6BAggekGg6vZ4?loadFrom=DocumentDeeplink&ts=1327.26)):

It sort of makes sense in hindsight because all those study areas were in similar latitudes. We're moving east-west instead of north-south, so on that east west axis, and you can go all the way into Tennessee and their nest timing is identical to ours. Turkeys nest in Tennessee and North Carolina, the average date for both states is around April 24th when they start incubating.

([22:30](https://www.rev.com/transcript-editor/shared/5z0WBeX4RvgeYrE3z_9YZDjOyef0eg7jGIIyk2s_a5RUZUOJEytFO_xHuiMC01lQvRx7WTAiVDkNExu1i0LYt2nLc9A?loadFrom=DocumentDeeplink&ts=1350.66)):

That was shocking to me. I really was surprised. I wasn't so surprised at the really low reproductive rates. We actually tracked adult survival rates and harvest rates. We tracked where they nest. Those are all things that we would've predicted. But the timing was surprising to me. I think it's probably going to be surprising to a lot of constituents that would've thought everything starts earlier in the coastal plain, but not for turkeys.

Tracey Peake ([22:54](https://www.rev.com/transcript-editor/shared/Ov-UxjhRoZXPywxWx0fUX9ZkpfJKcwCAoFIW4FNlkpZE1NQdhocj1b25Y-kJjFlzCy6PA3tGI8pWD9MP7UKmBwnEzyE?loadFrom=DocumentDeeplink&ts=1374.21)):

But not for turkeys. The people on the coast just taking their time. They're just taking their time.

Chris Mormon ([22:57](https://www.rev.com/transcript-editor/shared/ExebVvaDojpinAzNcb7AadDf1QDtNZZQFYWEX49qMtM6_AQAhHiT5vrjINussMJCc6RPMe-bu1clsUwT3fONiVZADgY?loadFrom=DocumentDeeplink&ts=1377.36)):

They're taking their time.

Tracey Peake ([22:57](https://www.rev.com/transcript-editor/shared/Z3_u1CrDU7WxjbglSqfRPfaSJMjd2BiUBm8Aj_QiJitB1j7dIBLfV1FvQgeBK33g7FMRGJ5fYm8jR1N3JKnrYLl-lN8?loadFrom=DocumentDeeplink&ts=1377.96)):

Getting started. My favorite thing about that was the idea of all of you crouching down in tents and rocket shooting nests over these birds. That's a great mental image.

Chris Mormon ([23:07](https://www.rev.com/transcript-editor/shared/AvyECYBzbtYMyiRiq1MAeMX5g9j64X3NmL9hwalh4__u0W4y0_DG6me5oJuFR8GuRp_Ag_WBhLo_a8uG24UQ3xu8MmI?loadFrom=DocumentDeeplink&ts=1387.56)):

Oh, it's so much fun. Two people in a tent is short of the max, but the rest of us are off in a distance, in a safe direction because these rockets can be dangerous, in trucks waiting to hear that kaboom. It's so loud.

([23:22](https://www.rev.com/transcript-editor/shared/4x2asevV5LoGkl0cwfxmy9prHuoFk7vWEieAxalfkK7IBXpK1T3t2EaJn7UgCso1FjIWvnfbDmp-b_Gf-X-cF6UhRTk?loadFrom=DocumentDeeplink&ts=1402.89)):

And then we drive up real fast, and then we get out and run and we have to extract the turkeys from the net. We have boxes, cardboard boxes we store them in. The turkeys are very well taken care of and do quite well in that situation. And then we put a transmitter on their back so we can track them.

Tracey Peake ([23:40](https://www.rev.com/transcript-editor/shared/nzGK4dH_HNAq-JJWrHWKvNDONyYht1C58qMbKPwb7jUzW7UrlfYNtGseHvUWhBsgwEvz2uND9LkI95MMX7ZiH2Ne_68?loadFrom=DocumentDeeplink&ts=1420.08)):

Track them?

Chris Mormon ([23:40](https://www.rev.com/transcript-editor/shared/UOoHViB8jKExV8siz6bhMtOr0PhTu0-Mv0BM1zn8vA8OpyD22yQParJQjDZ2yqd7JAqrUoxriIzA8MJKvW5GFS-i0uw?loadFrom=DocumentDeeplink&ts=1420.2)):

Mm-hmm.

Tracey Peake ([23:40](https://www.rev.com/transcript-editor/shared/Qmm2aSihNTTNJWdTqsgjnh6h8ieEwAG7JQAP5hfGRaJZJGYClC6iI7OXYLWul3rDwZoqoU_ETnqHEeSMOZBhjoM022I?loadFrom=DocumentDeeplink&ts=1420.29)):

Okay. I just imagine sitting there being a turkey and all of a sudden you hear an explosion and you're under a net.

Chris Mormon ([23:45](https://www.rev.com/transcript-editor/shared/zCmYJFf-zVeNwJJuSbf_Vc6ef0naOFfH0EbbCqttdizLYkJAv_J55jEz9xPjtSdcWxl3cMHB6yW-D1-98Ka38RIok5c?loadFrom=DocumentDeeplink&ts=1425.15)):

Yeah. Researchers can be a harassment to wild animals sometimes.

Tracey Peake ([23:50](https://www.rev.com/transcript-editor/shared/XbK5uadOliVzYARZz2UXujOD0Y7O7yrYK9ywCDld5rs2vvdUXdmfot1_laPem1vWt7pIH0Mn7RUlb64upJcp6fS4SyE?loadFrom=DocumentDeeplink&ts=1430.91)):

Well, it's got to be easier than just running around trying to grab a turkey.

Chris Mormon ([23:55](https://www.rev.com/transcript-editor/shared/cKZoM08P161eaK7uCAfR9fODmgQ-Uec-2JzBzzReNHcjbBS7KTRjrNGZoCfy3Nbmglv0h8rOMhlnrLUzIbX_JOURJxI?loadFrom=DocumentDeeplink&ts=1435.83)):

Oh, that would be nearly impossible. Turkeys, again, are very adaptable, so there are some tame populations of turkeys, maybe increasingly so in many of our cities.

Tracey Peake ([24:04](https://www.rev.com/transcript-editor/shared/QuYpoBPl_o4zl0ro1nDFVPsYiGqxgCe_BcS_lrORfelc4C4ogRyGQN-DRelcdEq5nwU6AOqpRxxtdNoX9_W-ZisAEio?loadFrom=DocumentDeeplink&ts=1444.68)):

Okay, so they are close enough to cities sometimes that you can-

Chris Mormon ([24:08](https://www.rev.com/transcript-editor/shared/PVvAiwjte5urVBQ1qAaHVq-twSq5jFbbGiYMYZmE9dIL2EDTwS8vCd_VRwin1ZnQpk_22QwpzHcba2qQbtCz6FdFtMs?loadFrom=DocumentDeeplink&ts=1448.55)):

See them.

Tracey Peake ([24:08](https://www.rev.com/transcript-editor/shared/iLtmPj97l8Qkz-UmQ0I8UmNQFV2m908GyLFwx4WWKlScBtURxavyZMZ3AEpAa7HZDjgaJ573HxvgMVdmB3QwNfw0WaI?loadFrom=DocumentDeeplink&ts=1448.79)):

... see some turkeys.

Chris Mormon ([24:09](https://www.rev.com/transcript-editor/shared/kPatbiENm6VHOJ2E6KDsr0dnnxZfrGzWurRzegH8GmHMrOigjMta4dN8bnewkgla_QGXU9BDDnSlGHv5bXjzWQgXUfQ?loadFrom=DocumentDeeplink&ts=1449.24)):

Asheville has turkeys in the suburbs, so if you want to go see some suburban turkeys, you can go to Asheville. Boston has-

Tracey Peake ([24:14](https://www.rev.com/transcript-editor/shared/FxfZOwdlUJAZiCryr5_U8CL-i2r18A8PODWMC6FJL_zM9lsxGBikUHFjMAfe1nh6wuj0N86G3r-91j9ihmbqx3g7i34?loadFrom=DocumentDeeplink&ts=1454.37)):

You can find bears there too.

Chris Mormon ([24:14](https://www.rev.com/transcript-editor/shared/ESMXsLZuEY5Fe2p6xvK0hE9fRtMGgKwuf5FRZ5_M0JB6xL6uT41Eyx3dc8MyW-fHn3J6a_gw15_GPEH7GWiVYnMgWJA?loadFrom=DocumentDeeplink&ts=1454.88)):

Bears are the same.

Tracey Peake ([24:16](https://www.rev.com/transcript-editor/shared/4cQKJdka3YQnek62o9cqS361iJ0lQX8t8xiyyZWlKDs28bQ3vMXHrAspXKcCNB0I05g-JqbUwxmZAgr7YswSz7uyBoA?loadFrom=DocumentDeeplink&ts=1456.02)):

That's like a one-stop shop.

Chris Mormon ([24:16](https://www.rev.com/transcript-editor/shared/nQ0HCF6U8_tKc6PfNVp4GS5hS5_354tt08XRwR9HtdFzWUdV3fnk2aLN-idG5jvVB6ZBbrTwzBSC6ZnWIcqsKYlmvSg?loadFrom=DocumentDeeplink&ts=1456.65)):

Yeah. It's because the sort of natural world is closely integrated into the boundaries of that city, so bears and turkeys and deer are pretty adaptable to the city there.

Tracey Peake ([24:25](https://www.rev.com/transcript-editor/shared/t-VpOMg2wGQ4luKnsrJUf6PSNYVjOvToqtMjm0tC7BeWR7KylKacVYyN5jUDhi5_974gYrD-eBP_Mj04_dXgB54yaQA?loadFrom=DocumentDeeplink&ts=1465.02)):

Okay. Well, this has been very informative. I have learned a lot about wild turkeys. All I knew about wild turkeys was that they were kind of hard to hunt, that they were wily.

Chris Mormon ([24:34](https://www.rev.com/transcript-editor/shared/bM-mopDjNkd9A0gZjQB0fXd2RcPWgny4g2oQZgrTQN9bjsZiOA4d9aID6W8Z7ySeQapKyWCaB6t8iTjXw9O7S2vPnMg?loadFrom=DocumentDeeplink&ts=1474.23)):

We didn't go there. They're very difficult to hunt.

Tracey Peake ([24:36](https://www.rev.com/transcript-editor/shared/_ASk1xwZggUQaHG9qGPYai-TPgrb4udByb40E5hxCfAI3aTCTZfA1bT265cf6ju-IGAhhDZGHNpdqt_3u-YhfZ86N6Q?loadFrom=DocumentDeeplink&ts=1476.18)):

That was all I knew. Now I know more. That's very fascinating. Well, thank you so much for being here today, Chris.

Chris Mormon ([24:42](https://www.rev.com/transcript-editor/shared/TcOL1PKAH-xmyUX2_1m6X_H0DF1TycSqKL_Y_JubOHtiJZEU9YmUtbeSGda-9BkbFOCrqcPaFBPpDvflg3_wJYk4Wcs?loadFrom=DocumentDeeplink&ts=1482.3)):

Thanks. Thanks to be here. Happy to be here.

Tracey Peake ([24:45](https://www.rev.com/transcript-editor/shared/pYLHfMDylMU9PYd3oYnXbVUd__uKmtiIBscMO80ZIHmuJG3qofHCi-waJjPA78S5sS5L3O7vhm_6qY25cu6UAUwwDzU?loadFrom=DocumentDeeplink&ts=1485.48)):

I've been speaking today with Chris Mormon, a wildlife biologist here at NC State. This has been Audio Abstract. I'm your host, Tracey Peake. Thank you so much for listening.

([24:57](https://www.rev.com/transcript-editor/shared/tiy9kR_A4YwugcPQi3K0D8px0cdnremXU6Xf_DeIlasueVxRzjrnz97LR1Tm0KFWvQ2sRuPgx51GApHvck1ISYOH4jE?loadFrom=DocumentDeeplink&ts=1497.18)):