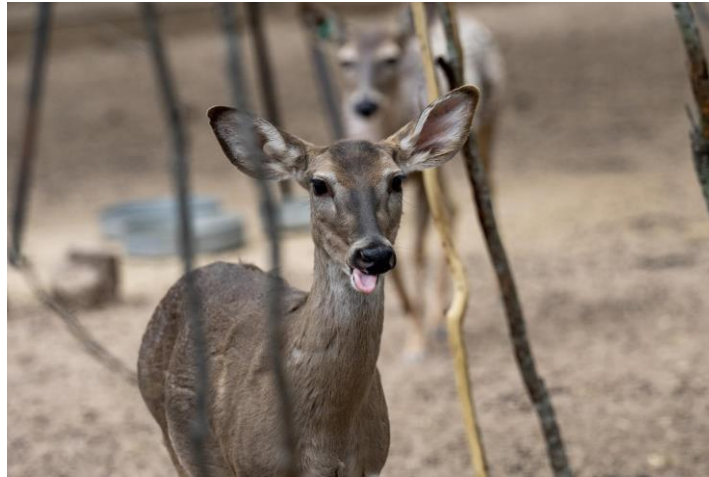


Ooh That Smell, Can't You Smell that Smell



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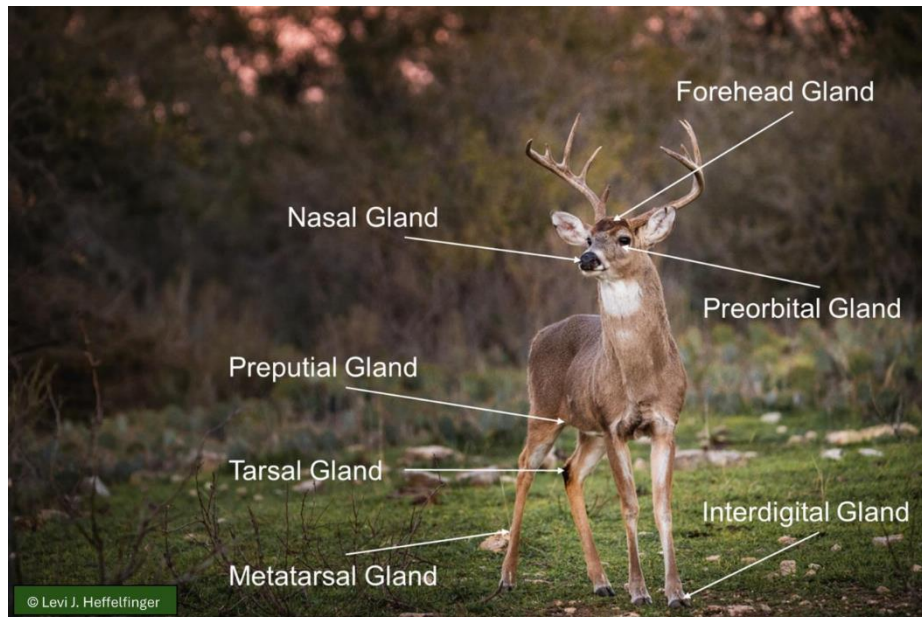
No, Lynyrd Skynyrd's famous song 'That Smell' wasn't talking about deer glands, but we are. In fact, today, we'll be doing a head-to-toe inventory of whitetail glands and discussing their role in scent communication.

Whitetails have seven glands: the interdigital, metatarsal, tarsal, preputial, nasal, preorbital, and forehead. Each gland is responsible for communication by depositing scent or facilitating scent exchange. Starting from the ground up, we have the interdigital gland between the hooves. This gland is one of the more "gland-looking" and is easy to spot when you pull the hooves apart. The scent from this gland is deposited in tracks while deer are on the move, and as you can imagine, it is likely important for a herding species trying to keep tabs on each other. Moving up to the "ankles," we have the metatarsal gland, which isn't well understood. It is documented that some deer, depending on where they are located on the globe, have larger or smaller metatarsal glands and that they may play a role in thermoregulation. On the rear legs near the "knee," you will find the most well-known of the glands – the tarsal gland. The tarsal gland secretes oils to hold urine deposited when deer urinate on their hind legs and rub them together, often called rub-urinating. It's common to see this behavior when bucks visit scrapes. Bucks urinate on these glands during the rut to increase scent communication, causing the tarsal gland to become darker and have a pungent smell.

Now, leaving the legs and getting to the main body, we have the preputial gland inside the penile sheath, which is thought to assist with lubrication and may have antimicrobial properties. The nasal gland is inside the nostril; high-five to whomever gave it such a straightforward name. The nasal gland is believed to moisturize the nasal passage to facilitate smell rather than deposit scent. The preorbital gland is in the corner of the eye and can deposit scent on tree branches, such as a licking limb commonly found over buck scrapes. The forehead gland is, you guessed it, located on the forehead beneath the hair. You may have noticed bucks often get a darker forehead during the rut, and this is due to the gland actively secreting an oily substance that can be deposited onto licking limbs and rubbing trees.

Of course, I can't talk about scent communication without mentioning the Jacobson's organ, commonly called (and less cool) the vomeronasal organ. This organ is located in the soft tissue inside a deer's nose and is essential for interpreting pheromones, which influence social responses. Have you ever seen a buck raise its head and weirdly curl its lip? If so, you have witnessed pheromones being directed to the vomeronasal organ for communication in what is called the flehmen response.

We've all heard it: communication is key, but communication doesn't have to be verbal. Spend any time observing a group of whitetails, and you will notice that they are constantly communicating with each other even though you haven't heard a thing.



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