

# Snakes can manipulate that come-slither smell



**Faye Flam**  
*Carnal Knowledge*

**T**he creators of the movie *Snakes on a Plane* did at least a little science homework. For those who haven't seen it, the bad guys in the film manipulate the behavior of a bunch of snakes using scent signals known as pheromones.

They put the pheromones on leis given to the passengers, and that makes the snakes want to suck out peoples' eyeballs.

Reptiles really do rely on pheromones more than any other verte-

brate class, and scientists really have used pheromones to alter their behavior. The one subtle difference: In the movie, the snakes were induced to attack people; in the real world, scientists made otherwise heterosexual male snakes jump on other males.

The only snake pheromone ever isolated helps female snakes to attract males. The scientist responsible for finding it, Bob Mason of Ore-

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**Samuel L. Jackson** stars in "Snakes on a Plane," which is partly based on scientific fact.



# So, those are sex-crazed snakes on that plane

**PHEROMONES** from E1

gon State University, says one technique for hunting female pheromones is to try out different compounds on the back of a male. You know you're on the right track if other males jump on him.

"They're not gay," Mason insists. They're just fooled, like the guy in *The Crying Game*, or any straight guy who unknowingly drools over a transvestite.

It's a little-appreciated fact that *Snakes on a Plane* is based on a true story. In the real version, brown tree snakes normally native to Australia or New Guinea stowed away on planes during World War II, invaded Guam, and ate all the songbirds. Today the invasive snake still terrorizes people on Guam and has spread to Hawaii, where it threatens the bird population.

This is just one reason we need scientists to study snakes and their pheromone-driven sex lives.

Of course, the screenwriter had to change the story a bit.

And if you were to nitpick, true pheromones communicate within a single species, Mason says. In the movie, cobras and

rattlesnakes and pythons all reacted to "the pheromone," which was, herpetologically speaking, ridiculous.

David Crews, a biologist from the University of Texas, did much of the groundwork in understanding how pheromones drive snake behavior.

He looked at garter snakes living in Manitoba — the farthest north any reptile has dared to venture. In the fall, the snakes find a few deep caves where they hibernate together in a big pile. In spring, the males come out first, Crews says, then the females emerge one by one or in small groups, where they're mobbed by dozens of males, leading to what's called a "mating ball."

Once a female is inseminated, the male leaves her with a "don't cheat on me" pheromone that renders her repulsive to his rivals.

Scientists also noticed some attempted male-male sex in garter snakes. It turns out, says Crews, some males are natural transvestites — and convincing ones, at that. They pose as females by secreting female pheromones through their skin. "We called them 'shemales,'" he says.

The "shemales" really just want to mate

with the females, and their cross-smelling may help by throwing off the rival males. "It confuses them," Crews says.

Mason, who trained under Crews, discovered in later studies that this transvestite thing wasn't so rare after all. Most male garter snakes did it, but only right after they emerged from hibernation.

At that point, they're pretty sluggish, with body temperatures below 40 degrees Fahrenheit, making them easy pickings for birds of prey. But they can warm up faster by exuding some female pheromone, thereby luring other males who already have warmed up a bit to jump on them.

Most male snakes quickly go back to smelling like males, but about 1 in 100 remain "shemales" through mating season.

So perhaps the screenwriter could include some of those new scientific details in a sequel. Here in the United States, at least, where people tend to be more horrified by sex than violence, *Transgender Snakes on a Plane* just might fly.

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