

# Secret lives of the furred and feathered

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Call her the tabloid journalist of the animal world. Julie Feinstein, a PhD student at The City College of New York, has the dirt on all creatures great and small – specifically – the wild animals that live among us. She lays it bare in a new tell-all book, "Field Guide to Urban Wildlife: Common Animals of Cities and Suburbs, How They Adapt and Thrive" (Stackpole Books, 2011).

Ms. Feinstein's book taps the untold stories of the birds, mammals and invertebrates she encounters daily in the New York metropolitan area. Her survey extends to animals found alongside humans in cities and suburbs across North America. This menagerie includes far more than the rats and pigeons we take for granted.

"I think of these animals as having their own internal lives – life and death struggles that we don't know about," says Ms. Feinstein, who is also a collections manager for the American Museum of Natural History. "What I look for are their secrets."

Her guide reveals the cast of characters we see, but often ignore, dismiss or revile. They share the sidewalks, lawns and buildings that we think of as our own. Our communities include a diversity of wildlife, and wild lives they certainly lead, according to this collection of 135 essays that explores the hidden activities of turkeys, raccoons, bats, possums and house centipedes, among others.

What might seem a drab existence eked out by these animals in our shadows can rival the exploits of a celebrity-stalking reality show, says

Feinstein. "There's a lot of sex in this book." The male house mouse romances mates by crooning ultrasonically, which is why we can't hear his high falsetto through the walls. The charming male grey squirrel enforces fidelity with an internal chastity belt, or "copulatory plug," that clever females often promptly remove. Some male fireflies flash "transvestite" signals to confuse their rivals, while house centipede pairs perform intricate mating dances and can cast off wiggling legs to elude predators.

But some of the "Sex in the City" going on among our animal neighbors would alarm even Samantha, Carrie, Miranda and Charlotte. A placid group of drakes dabbling on a pond will turn into a violent scrum, submerging a single female in the coerced copulations common among mallard ducks. And, that recent scourge of city life, the bedbug, is even more unpleasant to meet if you happen to be another bed bug.

Males, equipped with a penis variously described as "needlelike", "scythelike" and "hypodermic," writes Feinstein, practice what is called traumatic insemination. They look for no particular target on a female, but puncture her body anywhere during mating, allowing sperm to simply diffuse throughout.

Feinstein also reveals tamer tidbits. For example, individual pigeons land either left-footed or right-footed, and feel so at home in our concrete canyons because they are descendants of wild cliff dwellers. Raccoons, normally solitary, build up large populations in cities and suburbs and form food-begging gangs. And flocks of chimney swifts return to particular industrial smokestacks on the same day each year, just like the legendary swallows of San Juan Capistrano.

## **Country Mouse, City Mouse**

What makes one species suited to city life while another abhors it?

Apparently, animal urbanites share many characteristics with the humans that surround them: City residents tolerate crowding, have broad palates, adapt to unusual living arrangements and tend to be scrappier than their country cousins, says Ms. Feinstein.

Ring-billed (or "trash") gulls, for example, hold their own against aggressive starlings in fights over scraps in city garbage dumps. Cockroaches can learn to overcome their aversion to mint if sugar is involved (so hide your Mentos). Crows squeeze ketchup from leftover plastic packets and Central Park squirrels dine on pizza, donuts and souvlaki. In spring, house sparrows wage epic battles over the narrow apartments offered by old-fashioned streetlamp crossbars, reminiscent of pre-recession real estate scrambles.

Ms. Feinstein grew up in Camden, NJ, an industrial city where "every dark bird was just called a blackbird" and the few trees that once grew are now almost all gone. As a young adult, she escaped to the Pacific Northwest. For a while, she lived in a tent in the Idaho wilderness, befriending hummingbirds and immersing herself in nature. A return to the east, a life-changing biology course, three master's degrees, and a career in molecular biology followed.

As a CCNY graduate student, she ventures far beyond the city's boundaries as a member of Associate Professor Amy Berkov's lab. She has collected insects in Arizona and hunted caterpillars in French Guiana that make their homes in fallen flowers. For her PhD dissertation, she is unspooling the changing demography of Costa Rican butterflies, hoping to reconstruct the history of climate change as reflected in their DNA.

Ms. Feinstein spends her workdays surrounded by a menagerie in an altogether less-animated state from that of her book. As manager of the Ambrose Monell Cryo Collection at the American Museum of Natural History, she oversees a frozen ark. In a glassed-in room next to her

bright office are seven stainless steel canisters housing 70,000 tissue samples – snippets of muscle, liver and fur, and drops of blood containing DNA from animals around the world. The tiny plastic vials sit above a bath of liquid nitrogen at -190 degrees Celsius, awaiting further study.

Ms. Feinstein's blog, <http://www.urbanwildlifeguide.net>, extends the experience of her book with weekly vignettes and what she calls 'wow' moments of the wildlife she watches during her regular walks around the city. A recent post described a lone muskrat that has recently taken up residence in the new Brooklyn Bridge Park pond.

Calling on the lessons of graduate school, her life outdoors, and, perhaps even her Camden childhood, Ms. Feinstein reveals there are animals doing interesting things almost everywhere. People can discover the worlds of animals all around them every day, she says. "Even though you think you might not care about wildlife, they change the city."

Provided by City College of New York

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