

Hunter Levitan
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Professor Quigley
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The Rodent That People Love to Hate

A few hours after dusk on a Sunday in early December, about 100 yards from the Seaport District is a cobblestoned backstreet. In the alley, a sole lamppost casts an eerie light on industrial trash bins overflowing with garbage. Graffiti covers the walls and a rancid smell spreads from all angles. A faint rustle and scamper break the silence. A rat freezes eight feet above ground on a chain link fence that surrounds a backdoor. It contorts itself so much that its body and tail are above its head, as if it paused mid-spasm. Suspended, its filthy little feet grip the chain tightly.

With adjusted eyes and alert ears, more and more rats appear visibly and audibly, as they scurry around, darting from one trash heap to the next. Big rats, small rats, rats with long tails, rats with short tails; all kinds of rats. Edens Alley and Ryders Alley is dominated by rats.

Edens Alley and Ryders Alley are two adjoining streets that date back to 1740. Named after the prosperous New Yorker Medcef Eden who lived there in the late 1700s, the streets were filled with expensive houses. Hundreds of years later, take one step into Edens Alley and Ryders Alley and it is clear that someone, or something, still lives here.

If New York City is the concrete jungle, then the rat is the king of the jungle. They live in the shadows of the city, feeding on mounds of waste littered on sidewalks. They scurry across alleys and parks, darting from one trash bag to the next. Only the brave emerges in daylight; the rest wait until nighttime to run wild. When the sun sets on the city, the *Rattus norvegicus* rules the streets after dark.

Since the 17th century, rats and the issue of rat control have afflicted New York City. They are an ongoing problem that persists year after year, despite government efforts. The most recent discovery regarding rats is the emergence of a new breed of super rats that cannot be exterminated by normal methods.

Rats are disgusting and repellent, yet there is something intriguing about how these little rodents co-exist with humans in one of the biggest cities in the world. Rats not only repulse people, but also have inspired a book, a pure-bred dog sport, and even a graduate study.

What is it about rats in New York?

Richard Sullivan believes rats embody all that is dirty, dark, and mysterious in the city, and inspired him to write *Rats: Observations on the History & Habitat of the City's Most Unwanted Inhabitants*. No one knows exactly when rats came to New York City. Like the earliest settlers in

America, rats most likely landed in large port cities like New York City. He dubs the rat “a newcomer to America, an immigrant, a settler,” says Sullivan.

Since the 17th century, rats and the issue of rat control have afflicted New York City. They are an ongoing problem that persists year after year, despite government efforts. In July 2017, Mayor Bill de Blasio announced a \$32 million, multi-agency neighborhood rat reduction plan. However, the statistical data of the number of rats in New York City is limited, given that most live and exist underground.

“Nobody knows how many rats there are,” says Sullivan. “It’s just a wild guess.” The number ranges from 250,000 rats to eight million, one for every New Yorker, a statistic that simultaneously disgusts yet fascinates people.

A Book of Rats

On a warm spring night in 2001, Sullivan set out into the darkness of lower Manhattan to conduct research for his book. He ventured into the Seaport District, the oldest part of the city, the place where Manhattan began. Sullivan walked down the late-night, deserted streets with a backpack and night-vision monocular around his neck.

Sullivan turned off into Edens Alley. Exterminator George Ladd from Bonzsi de Bug had advised Sullivan to check out the alleys off of Gold Street and Fulton Street, which is a historically rat-infested area. The fluorescent glow of streetlights illuminated mounds of discarded trash and the smell of urine wafted through the air; a rat’s paradise. He didn’t see any at first but heard the rustling of movement. He raised the monocular to his eyes and saw little bright eyes, shining in the infrared gaze.

“There were rats in Edens Alley, all right, and there were lots of them, all scurrying around in the dark,” writes Sullivan. “They were all running around, carrying food, burrowing in a pile of sand, disappearing and returning again in a way that made my skin crawl. The rats were busy, alive. They were rat-happy rats.”

He decided Edens Alley was the perfect rat-watching place.

Sullivan spent over a year watching and waiting from midnight to 5 a.m., sitting in New York’s most rat-infested alleys, observing urban rodents. He refers to this period in the alleys watching rats as his “active duty.” His days on active duty happened almost 19 years ago, yet when he went back to Edens Alley two weeks ago, “It was still full of rats,” said Sullivan. “Despite fancy hotels and fancy clubs.”

In the late 1700s and early 1800s, rat fights were an attraction in the Seaport District, an event where immigrants gathered in big rooms at bars, known as rat pits, and watched—and even bet—as dogs fight rats. The dog that killed the most rats was deemed the champion. Sullivan considers rat fighting the big urban sport before baseball. “You could show up, bet some money, eat peanuts, drink beer, and watch the action,” said Sullivan, “Which is essentially what happens at a baseball game.”

In *Rats*, Sullivan shows a statement from 1870, where Kit Burns, the owner of the most renowned rat pit in the seaport area, Sportsman's Hall, advertised "Three hundred rats will be given away, free of charge, for gentlemen to try their dogs with." The rat pits and rat fights were shut down at the dawn of the American Society for the Prevention to Animals in the 1860s, Sullivan explains.

A Study of Rats

Matthew Combs, a graduate student from Fordham University's biology department, has researched the ecology and evolution of New York City rats since 2014. Fascinated by the impact humans have on wildlife and the environment, Combs explored the close relationship between rats and humans and how rats are successful in part because of the complex urban ecosystem humans created.

For over two and a half years, Combs and a research team hunted and trapped rats. "We scoured Manhattan from top to bottom looking for signs of rats or the rats themselves," says Combs. "We looked for indicative signs of rats including evidence of their burrows, trails in grass from constant use, sebum trails (oil marks) on concrete, or human food waste they might use for resources."

Combs and his research team set and checked traps during the day, but the rats were mostly active at night. They searched in parks, green spaces, alleys, construction sites, and trash storage areas. "If we were having trouble locating rats, sometimes I would do night walks in those areas so I could look for evidence of active rats that were otherwise cryptic," says Combs.

After trapping the rats, Combs studied their DNA and genes and discovered that rats are creatures of habit. He learned that rats rarely venture more than a hundred meters from their colonies. In his article, "Spatial population genomics of the brown rat in New York City," that was published by Wiley Molecular Ecology, Combs writes that there is "a clear split between major Uptown and Downtown genetic clusters" of rats.

It turns out rats are just as divided as their fellow Manhattanites: they are either an Uptown rat or a Downtown rat. Midtown rats, like always, are irrelevant.

Despite rats embodying all that is filthy and repulsive, people in NYC "can't help but be impressed at this animal that persists despite all efforts to eradicate them," says Combs. "Rats find ways to survive and have built a reputation, which New Yorkers respect."

Like the humans they co-exist with, New York City rats are bold, tough and courageous: "I watched a rat run up someone's pant leg once," says Combs.

A Sport of Rats and Dogs

Although rat pits are a thing of the past, a vestige of rat fighting exists today. Named with both a nod to rat history and to construct a clever acronym, Ryders Alley Trencherfed Society is

fighting the rats of New York City with one dog at a time. The group, known as R.A.T.S., includes dog owners and their pets who hunt rats in New York City and surrounding areas.

R.A.T.S. started in 1995 when Richard Reynold was contacted by the Liberty State Park superintendent. The park was overrun with rats and traditional methods of traps and poison failed to control the rampant vermin. Reynold works as a dog show judge for the American Kennel Club, and the superintendent asked him if he could recommend any dogs that could help manage and exterminate rats. As luck would have it, Reynold was working a dog show in Jersey City and reached out to a number of dog owners.

At first, he used only a few dogs that hunted on the New Jersey side of New York Harbor at Liberty State Park and Ellis Island. They travelled to the Statue of Liberty to eliminate any rats clustered around Lady Liberty. After 9/11, the city used Liberty State Park as a morgue for the bodies and Reynolds moved the hunts to Manhattan. In all the disarray caused by 9/11, the rats were plentiful and begging to be hunted.

R.A.T.S. is about as elusive as the rodents they try to hunt, with only an email on a Facebook page; no website or a phone number. That's deliberate.

"There is no anything," says Reynold. "R.A.T.S. is simply a common interest of a whole lot of dog owners who are also interested in managing rats."

Before a hunt, Reynold emails about 85 people. He limits the number of dogs that can participate to eight dogs per hunt. The first eight people to respond are in; after that there is a waiting list.

The location is revealed only to the eight participants who each bring one dog. "One thing we don't do is advertise exactly where we hunt," says Reynold. "We don't want any difficulty with the bunny-hugging animal rights people."

The hunts average once a week. Sometimes a group informally meets up and goes out. The "we" Reynold refers to are the "three of us that are the mainstays, the stalwarts that go every single week, every single time." Alongside Reynold, the "core group," right now is Bill Reyna and Jimmy, not James, Hoffman. Reyna is the official photographer as well as an organizer and tactician. Hoffman, who Reynold describes as "a totally crazy kid from Queens," is the point man. He instructs people on how to position their dogs and actually runs the hunting. "If this were a fox hunt," says Reynold, "He'd be the huntsman."

R.A.T.S. is "all about the dogs," says Reynold. Terriers and terrier mixes are the most common breed R.A.T.S. use during their hunts. Reynold is passionate about allowing pure-bred dogs to do what they were bred to do which is "to seek and destroy vermin," according to the group's Facebook page. While "any old dog will kill a rat," says Reynolds, terriers do it especially well and "quickly, with a minimum of training," said Reynold. "They actually thrive on the pursuit of vermin removal."

The American Kennel Club and the American Working Terrier Association run training classes, called den trials, to teach dogs that a rat is quarry. Properly trained dogs will shake the rat one

time, break its neck and then drop the rat and moves onto the next one, Reynold explains. “Anything less than that detracts from its [the dogs] performance,” says Reynold. “If you have a dog that wants to chew or bite the rat, it’s not going to perform up to his capability because you want them to shake the rat and get onto the next one.”

The process is quick and instantaneous. “Under normal circumstances it’s not bloody, it’s not gory, it’s not dramatic,” says Reynold. “It’s simply a quick shake, gone, and move on.”

For the past three or four years, the group has been hunting rats on the Lower East Side. As for how they measure their impact: “You can’t,” Reynold said laughing. “It’s just a gut feeling.”

A City of Rats

The combination of very high human densities, very poor trash management policies, and lots of vulnerable infrastructure (old sewers, old buildings) make New York City a perfect habitat for rats to flourish.

Rats are the only animal that has not only survived, but also thrived within the concrete streets of New York. Not many people can say the same.

“New Yorkers are often secretly proud of their rats being the biggest and baddest,” says Combs.

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