

Rodents Are Everywhere

Diseases being spread by rodents are not just a concern among the chief port cities in the United States. Landlocked cities and towns must also deal with the health consequences of rats in their food factories, restaurants, fields, hospitals, and schools. PMPs help keep the nation's food supply and vulnerable populations protected from diseases through several different techniques including trapping and baiting. Without their keen eye and quick-thinking, a loose rat could cause a major health issue in one of these buildings. PMPs are a major cog in the infrastructure of public health.

Implementing Technology

Larger rat-infested cities have since leveraged advancements in technology to control the rat population. One such tool in Washington, D.C. lets residents report rodent burrows or rodent sightings conveniently and quickly. This information is then placed on a digital map so the city can move quickly to bait or trap growing infestations. Additionally, residents can access information on how to spot a rodent infestation or rat-proof their home. Chicago, which consistently places amongst the country's rattiest cities, offers residents free rat-proof trash cans. These comprehen-

sive programs, along with the knowledge and expertise of PMPs have helped mitigate the spread of rodent borne illnesses throughout the United States over the last 120+ years.

Because of their work, it's important to keep investing in ratproof materials and rodent management programs. As Dr. Blue previously showed, ridding a city of rodents is more than just stopping rats. It's an investment in public health. ■



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The War on Rodents

During the beginning of the 20th century, port cities in the United States made concerted efforts to reduce the number of rats that came ashore. City officials were concerned with the recent spread of the bubonic plague throughout China and India. To combat this highly infectious disease, cities quickly sprang into action to protect its citizens. In the process of creating these new rodent management programs, they created many of the same principles that comprise what we now know as Integrated Pest Management. Since then, Pest Management Professionals (PMPs) have continued to serve as the front line of defense in protecting the population from rat-spread diseases such as hantavirus, bubonic plague, and rat-bite fever.

Bubonic Plague

The first outbreak of bubonic plague in the United States happened in San Francisco circa 1900. San Francisco, and its newly hired City Director, Dr. Rupert Blue, took an aggressive approach in ridding the city of rats. Dr. Blue and his team were methodical in their approach. This included filling in gaps of basements, demolishing empty homes, and using rat catchers. According to reports, Dr. Blue and his team of catchers trapped and

killed around 2 million rats over the next several years. Dr. Blue was also instrumental in identifying and implementing sanitation measures to prevent the spread of disease from rats. This led to the creation of the Public Health Commission in California. For his work in getting San Francisco plague free, Dr. Blue would later be appointed as the United States Surgeon General and would later head the American Medical Association.

The plague eventually popped up in Philadelphia and New Orleans, too. Officials from both cities were wary of having a major public health crisis on their hands, so they began using different techniques to keep their citizens safe. Philadelphia used

Above: Rat eats out of a trash can / Source: iStock Photo

ship inspectors and traps at the ports to try and stop rodents from entering the city. The city paid between 2 and 5 cents for each rat caught.

New Orleans exterminated nearly half a million rats between 1914 and 1915. This extermination was the result of a citywide effort to trap, burn, and poison rats. They also tried to rat-proof homes and fumigate arriving ships with carbon monoxide. New Orleans was so successful that other cities copied their techniques. As a result of their quick and coordinated effort, New Orleans and Philadelphia were able to stop the spread of the bubonic plague in their city.

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DID YOU KNOW?

A rat's bite force has been measured at 6000 PSI (pounds per square inch) while a human's bite force is just over 160 PSI.

PROTECTING GARDENS FROM RODENTS



In the summertime, gardens are the focal point of a client's home or business. Unfortunately, gardens lend themselves to destructive infestations from rodents like mice, rats, voles, squirrels, and prairie dogs that can turn gardens into an eyesore. The plethora of food, shelter, and water make it the ideal place for rodents to burrow and reproduce. Removing or limiting the accessibility of these vital resources can deter rodents from setting up a home. Staying ahead of infestations in these areas is imperative, as rodent populations can grow quickly amidst abundant vegetation.

Keeping rodents out of the garden helps reduce the spread of harmful diseases to plants, humans, and pets. If left to their own devices, rodents can severely damage homes, sheds, fences, and landscapes. During inspections of homes, business, or municipal areas with gardens, eliminate food and water sources and harborage areas.

GENERAL TIPS

- Reduce brush or other harborage, Educate customers about the importance of keeping gardens neat and tidy by reducing brush and other harborage zones. This includes keeping the lawn mowed, hedges trimmed, and sheds and outbuildings cleaned. Decks and patios also need to be kept tidy since rodents may use them for shelter.
- Rodents are also constantly in search of accessible and abundant resources like food and water. Bird houses and bird baths are popular targets for rodents since they contain easily accessi-

ble resources such as bird seed and water. As a result, bird seed should be cleared from the ground and properly sealed in a rodent-proof container when it is being stored. Encourage clients to lessen or eliminate bird seed entirely from their garden, if possible.

- Customers should be advised to dump bird baths as soon as they fill up with rainwater. Clients should also be wary of letting their pet drink from a bird bath too since rodents can contaminate the bath's water.
- Be on the lookout for bite marks or loosened vegetables. Rodents usually frequent the same places until resources are removed or shielded so just seeing a few vegetables on the ground is not enough to cause concern, but a recent pile-up is worth further investigation.
- Additionally, since gardens require water, it can be tempting to keep a constant stream of water going from sprinklers and hoses to the garden and landscaped areas. This is inviting to rodents and clients should be aware of the problems posed by their garden hose. A small water source may be just enough to make wandering rodents want to stay.

Community Gardens

Community gardens are becoming increasingly common in urban areas. They, like a home garden, add a bit of natural beauty to a neighborhood. And just like a home garden, it is vital to keep community gardens tidy and neat since community gardens may border multiple homes or businesses.



Above: Rat and mouse search for food in gardens
Source: iStock Photo

Signs of a rodent infestation in a garden include:

- Burrows
- Runway lines in grass, mulch, or dirt-covered areas
- Droppings
- Gnaw marks on sheds, fences, and plants
- Shredded paper
- Odor

Rodents can access nearby homes while also accessing the plentiful resources provided by the nearby garden. As rodents expand their litter, they may seek out other places to burrow, making nearby homes or businesses a target.

Burrow Builders

Burrowing rodents like voles can quickly turn a garden from a beautiful landscape into a blemish.

Voles can quickly damage a landscape or garden with their runways. Their burrows zig and zag across the yard creating persistent pathways. Voles will also damage and injure plants by chewing on their roots. ■



NEW

Bell is pleased to announce the upgraded Trapper® Tunnel which is now comprised of a durable and protective polypropylene plastic cover for improved reusability. The cover helps prevent dust, debris, and non-target animals from contacting the Trapper® Rat Glue Tray.

Arched entryways and double-sided walls help filter rats onto the glue tray while also preventing escape. Pest Management

Professionals can easily place and remove the tunnel from the tray to quickly access and dispose of any captured rats. The rounded design also makes it simple for each glue tray to fit securely against any wall.

Contact a Bell Representative to learn more about the benefits of glue tray protection. ■

TRAPPER® TUNNEL



WHAT MAKES PACK RATS UNIQUE

Pack rats, otherwise known as trade rats or wood rats, share similar physical features with other commensal rodents such as a superior climbing ability and adaptability. However, they have distinct behavioral traits that make them unique. Most notably, pack rats are incessant nest builders that love collecting things to store. Pack rats are always in search of shiny objects. Biologists have found that pack rats are known to abandon their current pile

of nesting materials if they spot a shinier object. This obsessive hoarding behavior is behind the "pack rat" nickname.

Another unique pack rat feature has to do with their urine. Their urine, along with the desert heat, forms a hard crystallized exterior that protects and preserves materials for thousands of years. The exterior is so durable and tough that scientists must use a chisel and hammer to break through.

Environmental scientists have found plants and other materials thought to be extinct inside their nests, which have been used to extrapolate data about a region's former climate. In abandoned homes memorable figures, historians have discovered former pack rat nests filled with various trinkets like buttons that have not been used nor sold in centuries.



Above: A nest constructed by a pack rat in Joshua Tree National Park / Source: iStock Photo

Pack rats live primarily in the western United States and Mexico and occupy a variety of habitats including deserts, mountains and grasslands. Like other commensal rats, pack rats are incredibly destructive and harbor disease-ridden insects. They have been known to destroy car engines, mattresses, walls, insulation, and jewelry in search of nesting material.

To keep pack rats away from and out of homes, remove enticing nesting materials like brush and other yard debris. Additionally, make sure any food is tightly sealed. ■

Below: White-throated wood rat in Arizona / Source: iStock Photo

