Being this information was put together about two years ago, some links may no longer be active.

Pigeons Destroy Bridges and Can Kill People with Over 30 Contagious Diseases: Construction Workers that Re-Paint Bridges, Decontamination Workers, Farmers, and Local Residents

This disease is very dangerous to workers and nearby residents

Dusts containing \( H.\ capsulatum \) spores can be aerosolized during construction, excavation, or demolition. Once airborne, spores can be carried easily by wind currents over long distances. Such contaminated airborne dusts can cause infections not only in persons at a work site, but also in others nearby. Such activities were suggested as the causes of the three largest outbreaks of histoplasmosis ever recorded. All three outbreaks took place in Indianapolis, Indiana.\(^{14,66,68}\) During the first outbreak, in the fall of 1978 and spring of 1979, an estimated 120,000 people were infected, and 15 people died. The second outbreak, in 1980, was similar to the first in the number of people affected. AIDS patients accounted for nearly 50% of culture-proven cases during the third outbreak, in 1988.\(^{14}\)

1. **Pigeon poop destroys bridges.**
   - Pigeons roost under bridges and their poop or droppings are salty and acidic to steel and concrete.

2. **Pigeon poop or droppings contain many deadly diseases easily contracted by workers who clean and remove pigeon droppings.**
   - Construction workers that have to clean pigeon droppings from under the bridges can contract deadly diseases by just breathing “poop air”.
   - Bridge re-painting construction workers need to be protected by bio-hazard suits when working near these deadly diseases.
   - Any laborer who has to clean pigeon poop should be protected from the 30 fungal, viral, and bacterial diseases in pigeon poop.
   - Pigeons are natural bioterrorists with their airborne diseases causing 120,000 cases of Histoplasmosis in Indianapolis in 1978-79 and another 120,000 in 1980 in the same city. 15 people died.

3. **Pigeons consume and contaminate large quantities of food destined for human or livestock consumption.**

4. **Pigeons located around airports can also be a threat to human safety because of potential bird-aircraft collisions, and are considered a medium priority hazard to jet aircraft by the US Air Force.**

5. **Children need to be taught the dangers of pigeon roosts and their deadly diseases.**

Longtime enemy of bridges, pigeons took toll on failed Minnesota bridge
Pounded by heavy trucks, weakened by missing bolts and strained by cracking steel, the failed Minneapolis freeway bridge also faced a more mundane enemy: Birds. The pigeons that made the bridge their home also used it as their toilet. Inspectors began documenting the buildup of pigeon dung on the Interstate 35W bridge two decades ago, a problem that persisted through the years. Experts say the guano they deposited all over steel beams helped rust the bridge faster. Investigators have yet to identify the cause of the bridge's Aug. 1 collapse, which killed at least 13 people and injured about 100. The pigeon problem was just one of many that dogged the steel span in the decades leading up to its failure. "There is a coating of pigeon dung on steel with nest and heavy buildup on the inside hollow box sections," the bridge's watchers wrote in their 1987-1989 report. …

Officials investigating the deadly Minneapolis bridge collapse are looking at an unlikely culprit: pigeons.

Of all the possible causes of the deadly collapse of Minnesota's Interstate 35W bridge earlier this month--uneven traffic patterns, de-icing salts, faulty construction--the latest is the most surprising: Pigeons. Or more precisely, the waste the birds leave behind. "Pigeon dung can be a serious issue--it's acidic and will easily eat away almost any metal," explains engineer William Schutt, president of Matcor, a corrosion-protection firm in Doylestown, Pa. "It can wash into and then rust the bolts and rivets of bridges if they're not cleaned and checked properly."

The build-up of pigeon excrement on the I-35W bridge was substantial enough to be noted in several Minnesota Department of Transportation inspections over the years, pointing to the steel box sections of the bridge as a popular nesting spot. Those sections are crucial to supporting the structure, and in 1999 bridge workers placed plastic screens over openings in the beams in an effort to repel the birds. But the dung continued to pile up. A 2006 inspection of the bridge still reported "severe pigeon debris" on its steel deck truss.

Corrosive pigeon dung also made it hard for bridge inspectors to do their work. Three experts familiar with the I-35W bridge told the Minneapolis Star Tribune that some of the impediments to inspections of the collapsed bridge included piles of pigeon dung, poor lighting, road rage (commuters upset with delays were known to insult inspectors and even occasionally throw objects at them) and spider webs that could resemble metal cracks.

Pigeon droppings cited in bridge collapse

ST. PAUL, Minn.—Pounded and strained by heavy traffic and weakened by missing bolts and cracking steel, the failed interstate bridge over the Mississippi River also faced a less obvious enemy: Birds, specifically pigeons.
Inspectors began documenting the build-up of pigeon dung on the span near downtown Minneapolis two decades ago.

Experts say the corrosive guano deposited all over the bridge's framework helped the steel beams rust faster.

Although investigators have yet to identify the cause of the bridge's Aug. 1 collapse, which killed at least 13 people and injured about 100, the pigeon problem is one of many factors that dogged the structure.

"There is a coating of pigeon dung on steel with nest and heavy build-up on the inside hollow box sections," inspectors wrote in a 1987-1989 report.

In 1996, screens were installed over openings in the bridge's beams to keep pigeons from nesting there, but that didn't prevent the build-up of droppings elsewhere.

Pigeon droppings contain ammonia and acids, said chemist Neal Langerman, of the American Chemical Society. If the dung isn't washed away, it dries out and turns into a concentrated salt. When water gets in and combines with the salt and ammonia, it creates small electrochemical reactions that rust the steel underneath.

"Every time you get a little bit of moisture there, you wind up having a little bit of electrochemistry occurring and you wind up with corrosion," said Langerman. "Over a long term, it might in fact cause structural weaknesses."

Langerman emphasized that he wasn't saying absolutely that pigeon dung factored into the collapse of the bridge, but the problem is familiar to bridge inspectors everywhere.

The Colorado Department of Transportation spent so much time cleaning pigeon manure off bridges that it's researching new ways to keep the birds away from its spans.

http://www.hawkeye.ca/pigeon_damage_bridgeCollapse.shtml

Pigeon Droppings/Excrement: Catastrophic Structural Damage

...This is thought to be one of the contributing factors in the collapse of Bridge 35W in Minneapolis, Minnesota on August 01st, 2007 - killing 13 people.

Bridge inspectors everywhere are aware of this problem:
The Colorado Department of Transportation spent so much time cleaning pigeon droppings off bridges that a two-year research project has been launched, looking for ways to keep pigeons away.

"Pigeon Droppings are damaging to our structures because they are acidic and have other compounds that can dissolve especially things like concrete," said Patricia Martinek, the agency's environmental research manager.

With its large quantities of bacteria and highly corrosive uric acid, pigeon excrement is partly responsible for disasters such as this bridge collapse, as well as the damage of concrete and countless historical stone structures.

According to Venice’s department of fine arts and historic monuments, pigeons cause the most damage "to plaster and stucco used on the exterior of buildings and the mortar used in restoration work".
National Center for Zoonotic, Vector-Borne, and Enteric Diseases

What is Cryptococcus?
Cryptococcus is a type of fungus that is found in the soil, usually in association with bird droppings. The major species of Cryptococcus that causes illness in human is Cryptococcus neoformans, which is found worldwide.

How is Cryptococcus neoformans spread?
C. neoformans spores live in bird droppings – especially pigeon droppings - and in soil contaminated with bird droppings. Humans can get cryptococcal infection by inhalation of airborne fungi which are spread from these sources.

Who gets Cryptococcus neoformans cryptococcosis?
Cryptococcosis is the disease caused by the fungus Cryptococcus. C. neoformans typically infects immunocompromised persons. Most people in the United States who develop this infection are HIV-infected or have other conditions affecting their immune system. However, occasionally persons with no apparent immune system problems develop cryptococcosis.

The National Institute for Occupational Safety and Health (NIOSH)

Histoplasmosis: Protecting Workers At Risk
U.S. Department of Health and Human Services
Public Health Service
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health
National Center for Infectious Disease
DHHS (NIOSH) Publication Number 97-146

Histoplasmosis is an infectious disease caused by inhaling the spores of a fungus called Histoplasma capsulatum…Histoplasmosis primarily affects a person's lungs, and its symptoms vary greatly….Histoplasmosis can appear as a mild, flu-like respiratory illness and has a combination of symptoms, including malaise (a general ill feeling), fever, chest pain, dry or nonproductive cough, headache, loss of appetite, shortness of breath, joint and muscle pains, chills, and hoarseness.¹ ¹⁴ A chest X-ray can reveal distinct markings on an infected person's lungs.

Chronic lung disease due to histoplasmosis resembles tuberculosis and can worsen over months or years. Special antifungal medications are needed to arrest the disease.¹ ¹⁴ The most severe and rarest form of this disease is disseminated histoplasmosis, which involves spreading of the fungus to other organs outside the lungs. Disseminated histoplasmosis is fatal if untreated,¹ ¹⁴ but death can also occur in some patients even when medical treatment is received.¹
Where are *H. capsulatum* spores found?

*H. capsulatum* grows in soils throughout the world. In the United States, the fungus is endemic and the proportion of people infected by *H. capsulatum* is higher in central and eastern states, especially along the valleys of the Ohio, Mississippi, and St. Lawrence rivers, and the Rio Grande. The fungus seems to grow best in soils having a high nitrogen content, especially those enriched with bird manure or bat droppings. Therefore, the soil in a stand of trees where blackbirds have roosted for 3 or more years should be suspected of being contaminated by the fungus. Habitats of pigeons and bats, and poultry houses with dirt floors have also been found contaminated by *H. capsulatum*.

Who can get histoplasmosis and what jobs and activities put people at risk for exposure to *H. capsulatum* spores?

Below is a partial list of occupations and hobbies with risks for exposure to *H. capsulatum* spores. Appropriate exposure precautions should be taken by these people and others whenever contaminated soil, bat droppings, or bird manure are disturbed.

- Bridge inspector or painter
- Chimney cleaner
- Construction worker
- Demolition worker
- Farmer
- Gardener
- Heating and air-conditioning system installer or service person
- Microbiology laboratory worker
- Pest control worker
- Restorer of historic or abandoned buildings
- Roofer
- Spelunker (cave explorer)

If someone who engages in these activities develops flu-like symptoms days or even weeks after disturbing material that might be contaminated with *H. capsulatum*, and the illness worsens rather than subsides after a few days, medical care should be sought and the health care provider informed about the exposure.

What can be done to reduce exposures to *H. capsulatum*? Excluding a colony of bats or a flock of birds from a building

Although a primary focus of this booklet is how to protect the health of workers cleaning up accumulated bat or bird manure, the best work practice is to prevent the accumulation of manure in the first place.

**Posting health risk warnings**

If a colony of bats or a flock of birds is allowed to live in a building or a stand of trees, their manure will accumulate and create a health risk for anyone who enters the roosting area and disturbs the material. Once a roosting site has been discovered in a building, exclusion plans should be made, and the extent of contamination should be determined. When an accumulation of bat or bird manure is discovered in a building, removing the material is not always the next step. Simply leaving the material alone if it is in a location where no human activity is likely may be the best course of action.

Areas known or suspected of being contaminated by *H. capsulatum*, such as bird roosts, attics, or even entire buildings that contain accumulations of bat or bird manure, should be posted with signs warning of the health risk. Each sign should provide the name and telephone number of a person to be contacted if there are questions about the area. In some situations, a fence may need
Communicating health risks to workers
Before an activity is started that may disturb any material that might be contaminated by *H. capsulatum*, workers should be informed in writing of the personal risk factors that increase an individual's chances of developing histoplasmosis. Such a written communication should include a warning that individuals with weakened immune systems are at the greatest risk of developing severe and disseminated histoplasmosis if they become infected. These people should seek advice from their health care provider about whether they should avoid exposure to materials that might be contaminated with *H. capsulatum*. The fact sheet in the appendix is one way of conveying information about histoplasmosis; it can be distributed to workers during their hazard communication training.

A condensed short read of these dangers to workers is found here.  
http://www.cdc.gov/niosh/97146eng.html

HISTOPLASMOSIS: Protecting Workers at Risk  

Dusts containing *H. capsulatum* spores can be aerosolized during construction, excavation, or demolition. Once airborne, spores can be carried easily by wind currents over long distances. Such contaminated airborne dusts can cause infections not only in persons at a work site, but also in others nearby. Such activities were suggested as the causes of the three largest outbreaks of histoplasmosis ever recorded. All three outbreaks took place in Indianapolis, Indiana. During the first outbreak, in the fall of 1978 and spring of 1979, an estimated 120,000 people were infected, and 15 people died. The second outbreak, in 1980, was similar to the first in the number of people affected. AIDS patients accounted for nearly 50% of culture-proven cases during the third outbreak, in 1988.

What other infectious agents are health risks for workers who disturb accumulations of bat droppings or bird manure?
In addition to *H. capsulatum*, inhalation exposure to *Cryptococcus neoformans* may also be a health risk for workers in environments containing accumulations of bat droppings or bird manure. Inhalation exposures to *Chlamydia psittaci* have occurred occasionally in environments containing the manure of certain birds…The USPHS/IDSA Prevention of Opportunistic Infections Working Group recommends that HIV-infected persons should avoid "sites that are likely to be heavily contaminated with *C. neoformans* (e.g., areas heavily contaminated with pigeon droppings).”

*C. neoformans* uses the creatinine in avian feces as a nitrogen source. It gains a competitive advantage over other microorganisms and multiplies exceedingly well in dry bird manure accumulated in places that are not in direct sunlight. This microorganism is commonly associated with old pigeon manure, but it has also been recovered from dried excreta of chickens,
sparrows, starlings, and other birds. As with *H. capsulatum*, *C. neoformans* has not been found in fresh bird droppings, but it has been cultured from the beaks and feet of pigeons.

**Chlamydia psittaci**
While psittacosis is caused by a bacterium (*C. psittaci*) rather than a fungus, it is another infectious disease that people can develop after disturbing and inhaling contaminated bird manure. While *C. psittaci* has been isolated from 129 avian species, most human infections result from inhalation exposures to aerosolized urine, respiratory secretions, or dried manure of infected psittacine birds (e.g., parakeets, parrots, macaws, and cockatiels). The disease is also occasionally associated with exposures to infected pigeons, turkeys, chickens, ducks, and geese, or their manure.

The dangers of pigeon droppings is summarized in the New Jersey Public Employees Occupational Safety and Health Program

Public Employees Occupational Safety and Health Program
Division of Epidemiology, Environmental and Occupational Health
[http://www.state.nj.us/health/eoh/peoshweb/pigeon.pdf](http://www.state.nj.us/health/eoh/peoshweb/pigeon.pdf)

**Hazard Control**
To reduce the health risks associated with the removal of droppings various methods have been developed. When an accumulation of bat or bird manure is discovered in a building, removing the material is not always the next step. Simply leaving the material alone if it is in a location where no human activity is likely may be the best course of action. This is not always possible, of course, and, if the potential for human exposure exists, methods of safely controlling the risks during removal must be undertaken. ...
Communicating Health Risks to Workers
Before an activity is started that may disturb any material that might be contaminated by fungal spores, workers should be informed in writing of the personal risk factors that increase an individual's chances of developing fungal diseases. This written communication should include a warning that individuals with weakened immune systems are at the greatest risk of developing severe and disseminated fungal disease if they become infected. These people should seek advice from their health care provider.

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY
WORKPLACE SAFETY AND HEALTH PROGRAM
www.mass.gov/dos/mwshp

Health & Safety Guidance for Removal of Guano

Guano (bird feces) and other organic matter (feathers, bones, body parts, carcasses, etc.) may pose a health threat to human beings who come in contact with them or inhale the airborne particles from them. Every precaution should be taken to ensure that renovation workers and building occupants are protected from the diseases carried or transported by avian species.

1. Describe specifically what work will be done on the structure to prevent future infestation of pigeons, PRIOR to the removal of the guano.


Guano (bird feces) and other organic matter (feathers, bones, body parts, carcasses, etc.) may pose a health threat to human beings who come in contact with them or inhale the airborne particles from them. Every precaution should be taken to ensure that renovation workers and building occupants are protected from the diseases carried or transported by avian species.

Exposure to bird droppings and nesting materials under ideal conditions can result in a number of diseases, including histoplasmosis, Newcastle disease, cryptococcosis, pseudotuberculosis and other avian transmitted diseases. Another major condition of concern would be hypersensitivity pneumonitis. This disease is generally contracted by inhaling a specific type of bacteria (thermophilic actinomycetes). The ubiquitous organisms, whose primary purpose is the decomposition or organic matter, have been isolated from manure, bird droppings, grain compost, hay, etc. Thermophilic actinomycetes are generally not a concern in the indoor environment. The presence of nesting birds in any portion of the building HVAC system and the potential introduction of the associated diseases that they cause become a real concern.
New Zealand Dept of Labor

Hazard Alert — Bird Droppings No. 14, August 2002

Some of the diseases that can be caused by the organisms in bird droppings are:

**Bacterial:** e-coli; salmonella; listeriosis; campylobacter; psittacosis.
**Fungal:** histoplasmosis; cryptococcosis; candidiasis.
**Viral:** meningitis; Newcastle disease.
**Parasitic/Protozoal:** toxoplasmosis; trichomoniasis.

**Case Histories**

1. A 37-year-old mother of five contracted ‘pigeon lung’ from feral pigeons nesting outside her apartment. The family doctor said: “The fire escape at the back would get pigeon debris on it and was cleaned regularly by the mother and one child at a time. That, we think, is why the mother had the most severe symptoms and died. The father, who did no cleaning, was unaffected.” The children are being treated for the illness.
2. The potential for infections (in this case histoplasmosis) to spread downwind is clearly illustrated by an outbreak that occurred when dry soil under a starling roost was bulldozed. People up to one mile away contracted histoplasmosis and the bulldozer operator died after a 7-week illness.
3. Failure to diagnose rare diseases (in this case cryptococcosis) can result in fatalities. A 46-year-old man developed a chronic neurologic syndrome after dismantling a steeple. He was treated for tuberculous meningitis and the symptoms went into remission. One year later he was hospitalised with chronic inflammation of the brain and diagnosed as having cryptococcal meningitis. By that late stage, treatment was unsuccessful and the man died.

Wildlife Damage Management, Internet Center for Bird Control Seminars Proceedings

University of Nebraska - Lincoln Year 1979

**PIGEON ASSOCIATED PEOPLE DISEASES**

Walter Weber

Indianapolis, Indiana

http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1020&context=icwdmbirdcontrol&sei-redir=1#search="PIGEON+ASSOCIATED+PEOPLE+DISEASES+Walter+Weber+Indianapolis,+Indiana"
Feral pigeons (*Columbia livia*) are not harmless birds. Many potential infections of humans silently exist in pigeons which are not apparent. They have the potential for transmission of over 30 diseases to humans plus another ten to domestic animals. Environmental pollution from pigeon droppings is quite evident. Air pollution involves more than noxious gases from automobile exhausts and belching smokestacks. One serious air pollutant is air-borne fungi, which are agents for infectious diseases. There is much information written about the problem, but it remains primarily in the professional journals and technical references, neatly stacked away on library shelves. The objective of this paper is to provide a brief account of the major diseases and to assess their importance. Feral pigeons have been identified with mycotic, bacterial, protozoal, chlamydial, rickettsial, and parasitic diseases as well as dermatosis (Weber 1979).

**MYCOTIC** diseases are not transmitted from humans to humans. Perhaps this is why they do not make the headlines. The fungi causing the diseases are acquired by inhaling the fruiting bodies or spores along with particles of dust. The fungi live saprophytically in feces and soil.

- Aspergillosis is caused by *Aspergillus fumagatus*. The fungus produces toxins which poison the victim’s blood. Pigeons assist the spread of the spores in airborne dust. Blastomycosis is caused by *Blastomyces dermatitidis*. It primarily affects the lungs; the main route of infection is by inhalation of spores. The organism has been isolated from pigeon manure.
- Candidiasis is caused by *Candida* spp., chiefly *C. albicans*. Nearly one-fourth of all mycotic deaths are caused by this yeast. It often affects the mouth, respiratory system, intestines, and urogenital tract, especially the vagina. Incidence of candidiasis (yeast infection) in women is an increasing problem. The discomfort of the itching, pain, and discharge caused by the growth of this fungus is significant enough to warrant the elimination of pigeons which are one of the three wild birds most frequently infected with Candida.
- Cryptococcosis is caused by a systemic pathogenic yeast called *Cryptococcus neoformans*. No organ or tissue of the body is exempt. It very frequently involves the brain covering as cryptococcal meningitis. One Indianapolis victim spent 91 days in the hospital with cryptococcosis. The yeast is carried in the intestinal tract of pigeons and deposited in their feces (Newberry 1967). One Kansas City survey showed that 93% of the pigeon coops were infected.
- Histoplasmosis is caused by *Histoplasma capsulatum*. It is interesting to note that the disease was suggested at one time as a biological warfare agent because of its airborne route (Furcolow, personal communication, 1960). It is probably the second most significant fungus disease. The “summer flu” that midwesterners used to get is now thought to have been histoplasmosis (Personal communication, American Lung Association, 1974). It is basically a pulmonary disease but may extend to the liver, lymph nodes, and spleen. The organism may disseminate to the blood and bone marrow and be fatal. It may lodge in the eye to cause ocular histoplasmosis. Twenty-two cases were reported to the Indiana Board of Health in 1976. Pigeon feces fertilize the soil in such a way as to give the fungus competitive advantage over other soil microorganisms. The largest outbreak ever recorded occurred in Indianapolis during the winter of 1978-79 with over 450 confirmed cases. There were 18 deaths.
- **BACTERIAL DISEASES** identified with pigeons are listed. Erysipeloid generally starts in a break in the skin and is accompanied with a sensation of burning, throbbing pain, and intense itching. It is caused by *Erysipelothrus insidiosis*. Pigeons are involved in its transmission.
- Listeriosis is caused by *Listeria monocytogenes*. It causes changes in the cells of the nervous system. It may cause conjunctivitis, endocarditis, and skin infections. It can also cause meningitis in newborns, abortions, premature delivery, stillbirths, and death. The organism has been isolated from pigeons.
- Parteurellosis is caused by a highly contagious bacteria, *Pasteurella multicida*. The disease may be divided in four groups of syndromes: 1) infection of the upper respiratory tract as nasal discharge or conjunctivitis, 2) infection of the lower respiratory tract as bronchitis or pneumonia, 3) infection of internal organs as appendicitis or inflammation of the urinary tract, 4) abscessed wound infections. Pigeons can spread the bacteria through their droppings or nasal discharge. The organism can live as long as a month in pigeon manure or three months in a dead pigeon.
- Salmonellosis is more than food poisoning. Gastroenteritis is the most common
manifestation. Enteric fever or septicemia may follow several weeks later as a relapse. Septicemias often terminate fatally. Persistent infections are less common but very important. There may be an abscess or local infection as arthritis, bronchopneumonia, endocarditis, meningitis, osteomyelitis, or pyelonephritis. Pigeons are important in the spread of salmonellae, since the bacteria are left wherever the pigeons defecate (Müller 1965). They trample back and forth through their copious excretion on window ledges and air intake vents. Dusts to contaminate food or homes enter through air conditioners and ventilators. The most common salmonella Isolated from pigeons is Salmonella typhimurum var. Copenhagen, which is found in about 2% of pigeon feces (Müller 1965).

Yersiniosis is a plague-like disease by Yersinia pseudotuberculosis and Y. enterocolitica. The disease is clinically indistinguishable from appendicitis. Both diseases cause fever, nausea, headache, hard and painful stomachs. Because of the similarity, there were 32 school children hospitalized in Oneida County, New York in September 1976. Fourteen were reported to have had unnecessary appendectomies. Y. enterocolitica serotype 8 was isolated from the ill children. It was first isolated from pigeons in 1916. Transmission may be through the feces, eggs, or ticks of pigeons (Hubert 1972).

PROTOZOAN diseases include American trypansomiasis, toxoplasmosis, and trichomoniasis. American trypanosomiasis is caused by Trypanosoma cruzi. There is no vaccine, effective treatment, or cure for the disease. It is transmitted through the feces of infected triatmid bugs, as the pigeon kissing bug (Triatoma rubrofasciata). The bugs tend to feed at night while the victim is asleep the bug defecates during or soon after engorgement, and most human infections occur when the bug feces are rubbed into eyes or mucous membranes following a bite.

Toxoplasmosis may be one of the most widespread zoonotic diseases in the United States. It is caused by Toxoplasma gondii. It has been shown to cause abortions in women (W.J. Schneider, personal communication, 1977). The organism seems to have an affinity for brain tissue; it may cause mental retardation and death. Pigeons frequently transmit toxoplasmosis through fecal contamination, respiratory droplets, eye secretions, contact with infected tissue, or through ectoparasites.

Trichomoniasis is caused by Trichomonas gallinae. It may affect the genital tract. Pigeons are considered the primary host, with about 80-90% of the adults infected.

VIRAL diseases include encephalitis, meningitis, and Newcastle. Eastern equine encephalomyelitis (EEE) is the most deadly of the North American arbovirus diseases. It has been known to cause mental retardation, convulsions, and paralysis. The mortality rate may be around 60%. Pigeons are considered an amplifying host for the virus (Fothergill et. al. 1938).

St. Louis encephalitis (SLE) affects the nervous system, ranging from complete recovery to disorganization, paralysis, coma, and death. The mortality rate is usually 5-10%, in some cases up to 33%. Pigeons, English sparrows, and house finches are the three birds labeled as main reservoirs of SLE.

West Nile encephalitis ranges from mild to fatal infections. The virus has been isolated from pigeons.

Western equine encephalomyelitis is much more present and dangerous than most people think. The fatality rate has been between 5 and 15%. Children under one year of age may never recover from an infection of the virus, often becoming total vegetables. Pigeons are one of the amplifying hosts (W.F. Rathel, personal communication, 1977). Meningitis causes as inflammation of the brain and its covering. Pigeons are subject to meningo-encephalitis. Newcastle disease often involves conjunctivitis, lacrimation, and a mild influenza-like infection. Pigeons are the third largest common carrier; the virus has been detected in their feces.

CHLAMYDIAL and RICKETTSIAL diseases. Chlamydiosis, caused by Chlamydia psittaci, is a generalized infectious disease that causes a flu-like respiratory infection with high fever, severe headache, and generalized aches and pains. Mortality is usually restricted to the old, the weak, or those with concurrent disease. Pigeons are the most common and consistent source of all known hosts (Terskiph 1961). Over half of the pigeon population is or has been infected.

Q fever is caused by Coxiella burnetti. It is characterized by a sudden onset of pneumonitis, sometimes causing death. Pigeons are involved as carriers (Syruek et al. 1956). Investigators have isolated C. burnetti from the Kidneys of a large number of pigeons. The disease can be transmitted by infected ticks, ingestion, or by inhalation of
dust contaminated with the organism.

PARASITIC WORMS include cestodes and trematodes. Taeniasis by large tapeworm is caused by *Taenia saginata*, with specimens up to 50 feet having been recovered. Pigeons have been incriminated as potential vectors. Schistosomiasis, one of the most prevalent diseases throughout the world, is caused by a water-borne trematode. Pigeons are associated with flukes in the watery areas where they exist. Other pigeon-associated trematodes include *Echinoparyphium paraulum*, *Echinoparyphium recurvatum*, *Echinostoma revolutum*, *Haplorchis pulio*, and *Hypoderaeum conoideum*.

DERMATOSIS. Acariasis is caused by infection of mites. Bird mites were responsible for a case of pruritis in a North Carolina hospital. The mites originated in a pigeon nest in the ventilator.

**PIGEONS (Rock Doves)**

[Image of pigeons]


**Habitat**
Pigeons are highly dependent on humans to provide them with food and sites for roosting, loafing, and nesting. They are commonly found around farm yards, grain elevators, feed mills, parks, city buildings, bridges, and other structures.

**Food Habits**
Pigeons are primarily grain and seed eaters and will subsist on spilled or improperly stored grain. They also will feed on garbage, livestock manure, insects, or other food materials provided for them intentionally or unintentionally by people. In fact, in some urban areas the feeding of pigeons is considered a form of recreation. They require about 1 ounce (30 ml) of water daily. They rely mostly on free-standing water but they can also use snow to obtain water.

**Damage**
Pigeon droppings deface and accelerate the deterioration of buildings and increase the cost of maintenance. Large amounts of droppings may kill vegetation and produce an objectionable odor. Pigeon manure deposited on park benches, statues, cars, and unwary pedestrians is aesthetically displeasing. Around grain handling facilities, pigeons consume and contaminate large quantities of food destined for human or livestock consumption. Pigeons may carry and spread diseases to people and livestock through their droppings. They are known to carry or transmit pigeon ornithosis, encephalitis, Newcastle disease, cryptococcosis, toxoplasmosis, salmonella food poisoning, and several other diseases. Additionally, under the right conditions pigeon manure may harbor airborne
spores of the causal agent of histoplasmosis, a systemic fungus disease that can infect humans.

The ectoparasites of pigeons include various species of fleas, lice, mites, ticks, and other biting insects, some of which readily bite people. Some insects that inhabit the nests of pigeons are also fabric pests and/or pantry pests. The northern fowl mite found on pigeons is an important poultry pest.

Pigeons located around airports can also be a threat to human safety because of potential bird-aircraft collisions, and are considered a medium priority hazard to jet aircraft by the US Air Force.

Legal Status
Feral pigeons are not protected by federal law and most states do not afford them protection. State and local laws should be consulted, however, before any control measures are taken. Some cities are considered bird sanctuaries that provide protection to all species of birds.

Damage Prevention and Control Methods
Habitat Modification
Elimination of feeding, watering, roosting, and nesting sites is important in long-term pigeon control. Discourage people from feeding pigeons in public areas and clean up spilled grain around elevators, feed mills, and railcar clean-out areas. Eliminate pools of standing water that pigeons use for watering. Modify structures, buildings, and architectural designs to make them less attractive to pigeons.

http://www.aaanimalcontrol.com/blog/pigeondisease.html

03.16.2007 - Ever since I was a small lad, I was taught not to pick up bird feathers, as I was told they were dirty. Many birds are in fact dirty, especially the "flying rat" or "gutter bird", also known as the pigeon. These birds often live in cities or buildings, and they make quite a mess with their feathers, nesting material, and most of all, waste. The waste can accumulate in heavy amounts inside buildings, such as in the ceiling of the office building pictured above. Here are some of the more serious diseases associated with bird infestation in public areas and buildings: Histoplasmosis, Cryptococcosis, Psittacosis and toxoplasmosis, Parasites.

To protect yourself:

- Avoid inhaling air that may be contaminated with fungal spores, and don't disturb or contact piles of pigeon waste.
- Avoid contact with food or water that may have been contaminated with pigeon waste.
- Avoid direct contact with any pigeon excrement or nesting material.
- Have any contaminated areas professionally cleaned.
• Prevention - Eliminate any pigeon roosts or infestations in buildings, and have those buildings sealed shut to keep birds out, or have deterrents such as pigeon spikes installed to keep pigeons from roosting.

Bottom line is never let pigeon roosts get started or grow – control the pigeon population to protect food and feedstock, farmers, workers, our bridges, and our jets!