# Canada geese (Branta canadensis, several races)

There's an added twist to solving nuisance problems caused by Canada geese. Some Canada geese migrate, while others remain as residents in New York year round. Resident geese are not lazy birds that just woke up one day and decided to stop migrating, they're actually a totally different population.

You need to know whether you're dealing with migratory Canada geese (*Branta canadensis*, several races) or resident Canada geese (*Branta canadensis maxima*) before you plan your strategy. For example, summer round-ups will only work if you're dealing with a resident population because the migratory geese will be in Canada all summer long. They look the same, so the best way to tell them apart is to determine if they migrate or if they breed here. In urban areas, the problem is probably caused by a resident flock, but migratory Canada geese may cause problems in rural areas, and they may temporarily join resident flocks.

#### Size:

From 8–15 pounds. Males tend to be larger than females.

## Signs of their presence:

- The bird itself is the most obvious sign. They are often seen flying in V-shaped flocks.
- Sounds: The most familiar call is the honk, but they also make hinking, hissing, and snoring sounds.
- Nest: Their bowl-shaped nest is about 1¹/₂ feet in diameter, made from plants, lined with goose down. Most nests are very close to water, almost always within 150 feet of water. When choosing a nest site, Canada geese seek a good view of the surrounding area. They prefer islands and peninsulas, but may nest in unusual places such as on ledges or rooftops, in the woods or flower gardens.
- Droppings: A single goose produces a pound of droppings each day.
- Remember to ask your customers if the birds are seen all year long. Are they around during the summer? Have they seen nests and young?

#### **Diet:**

Primarily herbivores. They prefer tender young plants. In urban areas, they usually graze on lawn grass but they also eats grains, cattails, pondweed, and clover, and some small aquatic insects, snails, clams, and mussels.

## Typical activity patterns:

Social style: Canada geese form strong social bonds. They're usually seen with a mate, family group, or in a flock—rarely alone. If nesting close together, it's common to see "gang broods": 2–20 adults followed by 20–100 goslings. They'll eventually separate into family groups.

Daily activity: Diurnal.

Hibernator? No.

Migrates? Yes, but it's complicated. Migratory Canada geese migrate in the spring (from the U.S. to their summer breeding grounds in Canada) and the fall (from Canada to their wintering sites in the U.S.). Resident geese usually don't go far. They may migrate within the state in which they were born, or fly to a neighboring state. But some resident geese, usually young birds and those adults that didn't breed successfully, migrate to Canada right before the molting period (early June). They remain there during the summer, returning in September. This "molt migration" (first reported in the late 1990s) can dramatically alter the approach to goose management. Molting: Adult Canada geese molt each summer, usually beginning in mid-June. They congregate in large numbers near ponds and lakes, which provide a safe place to rest and feed, and the open water they need to escape danger. Most adult Canada geese molt in the same place they've chosen for raising their young (although sub-adults, and adults that didn't breed successfully, will often "molt migrate" as mentioned above). The molt lasts for about a month and during that time, geese cannot fly. This is critical! This is when it's easiest to capture Canada geese. Some techniques, such as barrier fencing, may be highly effective during the molt (see "protect vulnerable crops and sites").

#### Where found:

Distribution in NY and the Northeast: Most everywhere. Habitat: In urban areas, they prefer lawns next to a body of water. Canada geese prefer fertilized lawns. They seek open areas, so they have a good view of potential predators. They like mowed lawns, parks, golf courses, industrial parks with ponds, and playing fields. Territory and home range: Both parents are aggressively territorial around their nest until the young hatch. Both parents will defend their young until the goslings can fly, usually at about 10 weeks old.

## **Breeding habits:**

Pair bonding style: Monogamous. They pair for life. Canada geese usually begin breeding at 2–3 years old.

Breeding dates: Canada geese return to their nesting areas in late February or March (as soon as the water opens up.)

Egg laying dates: Peaks in early April-early May.

Clutch size: 1 brood of 1–10 eggs, average 5. They don't begin incubating until all of the eggs are laid. Incubation takes 26–28 days. If the nest fails before the young hatch, they may renest.

Hatching: The eggs generally hatch within a period of 8–36 hours. Within one day of hatching, the adults may move their brood up to 2 miles away, seeking a grassy feeding area next to water, for safety.

Fledging dates: at about 10 weeks old.

Amount of time young remain with parents beyond fledging date: They'll migrate with their parents in the fall.

#### **Common nuisance situations:**

Time of year: Any time of year. Severe problems are often associated with their molt, when large numbers of geese may gather on lawns that are next to water. Some birds will travel hundreds of miles to a favored molting ground.

What are they doing?

- Large flocks may gather or nest in parks, playing fields, yards, or near ponds or other water sources. Some people find the resulting piles of droppings and the feathers disgusting, and avoid these public areas. The birds can be quite noisy, too.
- Their droppings contain nitrogen, which can pollute ponds and lakes. Their droppings may contain bacteria and viruses, but it's unclear whether they transmit any diseases to people. However, when there's a lot of bacteria in the water the health department may close beaches and swimming areas.
- Canada geese aggressively protect their nest sites and young, and may attack pets, children, and adults.
- They may overgraze grass, causing large dead spots on lawns.
- They trample turf. In medium-heavy soils, this can cause the surface to harden, which may stop other plants from growing and lead to erosion. Overgrazing and trampling can change the habitat, which may harm other species that rely on grassy fields.
- They eat farm crops, mostly grains. Heavy grazing can damage newly planted alfalfa and grain fields. They may pull up or eat seedling corn.
- They may collide with airplanes, or be sucked into their engines, causing crashes.
- Disease risks: they can infect other birds with coccidoisis, avian influenza, schistosomes,

chlamydiosis, salmonella, and avian cholera. When Canada geese concentrate in very large numbers, this risk increases dramatically. Canada geese may also transfer salmonella to cattle. It's not known if they transfer diseases or parasites to people.

## Legal status in New York:

Federally protected migratory bird (under the Migratory Bird Treaty Act). In New York, Canada geese are also a game species with a set season. Management responsibility of Canada geese in New York is shared by the DEC, the U.S. Fish and Wildlife Service, and USDA-APHIS Wildlife Services staff.

Federal and state permits are required if you are going to capture, handle, or kill geese, or disturb their eggs or nests (if there are eggs or young in the nest). The permits are issued to the landowner, not to a NWCO. A landowner may chase or disperse geese at any time without a permit, as long as the geese are not physically harmed.

Control techniques marked by the  $\mathcal{O}$  symbol require a federal and state permit. Obtain the federal permit first. The US Fish and Wildlife Service automatically sends copies of the permits they issue to the DEC's Special Licenses Unit, so you don't have to do this. In most cases, once the DEC has received the federal permit, it can approve the activities through the existing general Canada goose permit.

Control measures that affect wetlands may require other permits. Those techniques are marked by the  $\Omega$  symbol. Contact the DEC Bureau of Wetlands for information.

To apply for the federal permit, contact:
U.S. Fish and Wildlife Service
Region 5 Federal Permit Office
U.S. Dep't. of the Interior
PO Box 799, Hadley, MA 01035-0779
(413) 253-8643 • FW5\_birdpermits@fws.gov

Allow 2 months for processing of the request. There is an application fee. To read the regulations and apply online, see: www.permits.fws.gov/mbpermits/birdbasics.html. Questions about controlling nuisance Canada geese should be directed to your regional DEC wildlife staff or to Rich Chipman, State Director, USDA-APHIS-Wildlife Services, 1930 Route 9, Castleton, NY 12033-9653. Call (518) 477-4837. Email: Richard.B.Chipman@usda.gov

## **Best practices**

Canada geese have a strong homing instinct. They will usually return to the area in which they fledged, and use the same nesting and feeding grounds year after year. That means that without any control, the local population will almost certainly increase, and the problem is only likely to grow worse over time.

It's best to address problems when goose populations are low. Some techniques that work for smaller populations fail with larger flocks; and most techniques work better when populations are of low to moderate size. The best time to begin your control activities is in the late winter—soon after the geese have shown up, but before they start nesting. Plan ahead! You'll need about two months to secure any needed federal and state permits.

Nuisance problems associated with Canada geese usually affect an entire community, not just the residents of one property. The community may be willing to work with DEC and USDA-APHIS-WS staff to craft a solution. NWCOs will sometimes be hired to assist with aspects of the management plan.

Most long-term solutions to goose conflicts involve the use of several techniques in combination, such as hazing, habitat modification, summer roundups, shooting, egg addling, and persuading people to change their habits (most often, you must convince them to stop feeding the geese). Don't rule out any technique that may be feasible because every little bit may help. Persistence is critical in goose management. Most of these techniques only work well with repeated applications. The use of one technique by itself is less likely to work. Also, it may convince the geese to move to another site where they may cause similar problems.

With a community-wide problem, long-term solutions usually involve lethal techniques to stabilize or reduce the goose numbers, at least initially. (Nonlethal techniques used by themselves may reduce the problem at an individual site, but this approach rarely solves large scale problems.) The most effective way to reduce the size of a flock is to remove adult geese. Canada geese can live for more than 20 years. A female goose may have more than 50 young during her lifetime.

Lethal measures can be controversial. As with any community-wide nuisance wildlife problem, a public

information campaign to explain management goals and methods is usually critical to success.

How molt migrations may influence your strategy
One other major point to consider is the possible effect
of molt migrations on your goose management strategy.
This behavior isn't consistent; in some areas it's a big
problem, but not in all.

If some birds in the flock you're trying to manage "molt migrate" in early June, then they may be off-site when certain control techniques, such as harassment and round-ups, have traditionally been most successful. In these situations, it may take more than one year of round-ups to solve the problem. However, at some sites, a molt migration might help solve the problem! How's that? Perhaps geese only cause problems during the summer. If some of the birds leave, that helps reduce the nuisance.

Here are options for goose management. Remember, start when the populations are low, be persistent, and combine methods for a better chance of long-term success.

Reduce their food sources (especially young shoots of grass):

- If anyone is feeding the geese, persuade them to stop.
   Consider installing signs at popular feeding sites such as public parks, that explain the problems associated with these handouts.
- Make lawns smaller by leaving areas unmowed.
- Let grass grow to a height of 6" (right around the water's edge, it's better to let plants grow as tall as they will). This makes it harder for the geese to find the young grass shoots they like to eat.
- Reduce fertilizer use and stop watering lawns, to make the grass grow more slowly.
- Switch to grass and plant species the geese don't like to eat as much. They tend to avoid tall fescue, periwinkle, myrtle, pachysandra, English ivy, hosta or plantain lily, *Eunymous*, and ground junipers.

## Lure them to another site:

If migrant geese are feeding on crops, or resident geese are damaging a certain site, such as a park, you may be able to divert them to a different spot during the time of year when they'd cause trouble at the vulnerable site. Frighten them away from the vulnerable site, then lure them to an alternative area. Obviously, you need a nearby site where the geese will be tolerated, and that site must be attractive. This method won't work

if people are feeding the geese at the vulnerable site. It may even attract more geese. At your sacrificial site, keep the grass well-mowed to make the field particularly attractive to the geese. If there are many geese, they may trample the grass, which might cause them to leave. If that's a problem, plant some clover, which is more resistant to trampling.

Protect vulnerable crops and sites:

- Offer an alternative gathering site, as described above.
- Install a grid of wires over the crop (described in the section, "Block access to open water").
- Install fences. For small, high-use areas, such as a picnic site or play area, this may be a terrific solution. Fences work best before the geese nest, and during the early summer, when they're molting and can't fly. The fence must be long enough so the geese can't walk around it. It can be made from many materials including welded wire, chicken wire, snow fencing, silt fencing, corn cribbing, chain link, netting, mylar tape, picket, or monofilament lines, or an electric fence. These materials differ in their costs and durability.
  - The mesh should be 3" or smaller, and the fence must be at least 30" high. If dealing with really aggressive birds, switch to a fence that's 48–60" high.
  - Fences may be even more effective when combined with a barrier of plants or rocks.
  - Monofilament lines (at least 20-lb. test): set on poles that are 6 feet apart. Can use two lines, spaced at 7 and 12" above the ground, or five lines, set at 4, 8, 12, 18, and 24" above the ground (the lower wires deter goslings, too).
  - Mylar tape: strands need support every 20 feet, secured with duct tape or electrician's tape.
     Twist the tape at least once within that span.
  - Electric fences: Usually, two strands of polytape or 10-gauge high-tensile wire are attached to fiberglass or plastic posts at 8 and 16" above the ground.

## Frighten the birds away:

- If the geese aren't nesting, you may harass them without a federal or state permit as long as the geese are not touched.
- Visual scare devices: the most effective ones include the Avian Dissuader® (a laser); laser pointers; mylar tape or streamers strung along the water's edge (leave

- some slack in the line and twist the tape, to make it noisier and more reflective); and flagging or balloons on poles that are 6 ft. high or taller, installed around the vulnerable area (make sure the materials don't become tangled in tree branches or power lines.)
- Frightening noises: gunshots, sirens, air horns, and various pyrotechnic devices (bangers, screamers, whistle bombs, shell-crackers, propane cannons).
- Hazing with dogs (especially border collies) or radiocontrolled boats, aircraft, or cars. Geese will not overcome their fear of being chased by dogs, so this technique will not lose its effectiveness over time. However, it is labor intensive and can be expensive. At first, the dogs must chase the geese several times a day. Eventually, you can reduce the number of patrols. In general, don't use dogs when the geese are nesting, molting, or have goslings. Dogs may not be able to chase geese away from large areas of water, or properties subdivided with fences. Roads can cause a problem, too. Don't let the dogs herd geese into traffic.
- As always, use an unpredictable combination of frightening techniques.
- $\Omega$  NWCOs with a commercial pesticide applicator license: There are chemical repellents registered for use against Canada geese, but results have been mixed. Methyl anthranilate (a nontoxic, biodegradable food ingredient) may make grass taste bad to geese. The product is costly and needs frequent application, so its use is best limited to small lawns. In New York, if this product is applied within 100 ft. of a regulated wetland, you'd need a permit from the DEC. Also, this repellent is intended to stop geese from eating grass, not from using a site. If they're just loafing, it would be useless. A second repellent, anthraquinone (Flight Control™), gained registration in New York in 2003 for use on turf at airports, commercial sites, landfills, dumps, and on golf courses. This product includes a chemical that makes the geese sick. It also coats the grass with an ultraviolet stain, which the birds can see, but people can't. The idea is that the geese learn to associate UV-colored grass with a tummy ache, and avoid the area.

Block access to open water and the paths between the water and grassy areas (both flight paths and walking paths):

 Geese like to rest on open water, or on the nearby shore, where they feel safe from predators. If they're feeding on a lawn next to water, they tend to take off and land on the water. Deny them access to that water, and they may move away.

- Install a grid of wires above the water's surface to keep the geese from landing on the pond (or on land). Can use #14 wire, 80–100-lb. monofilament line, Kevlar®, twine, cotton rope, or mylar tape. Secure the wires  $1-1^{-1}$ /, feet above the water, in parallel lines that are 10-15 feet apart. Attach brightly colored rope, flagging, or some other marker to the wires to keep the geese from flying into them. Install the grid before the geese arrive. For more certain success, add a perimeter fence to keep the geese from walking down to the water underneath the grid. Wire grid systems work best on golf course ponds, reflecting pools, wastewater ponds, and newly seeded lawns with limited public access. This isn't a practical method for ponds that are used for swimming, fishing, or other recreation.
- Ropes can be strung between trees to block their flight paths and prevent landing. Ropes should be loose enough to move in the wind, and highly visible. Polypropylene rope and mylar tape have been used.
- With small ponds, tall trees in the flight path between the water and grazing area may prevent geese from landing.
- Create a visual barrier along the shoreline, with plants or rocks that will keep the geese from walking onto the land.
- Locate playing fields at least 450 feet away from water to reduce their use by geese during the molting period. When the birds are unable to fly, they're reluctant to leave the sites that have it all: open water with great views (for safety) near grassy areas (for feeding, resting). When the geese can fly, they'll use fields that are a mile away from water so this won't give year-round protection to the fields.
- Install a fence around the pond, to keep geese from walking down to the water. (See details under "protect vulnerable crops and sites.)

Reduce the number of favored nesting sites (islands and peninsulas with quiet, straight shorelines):

- It's very hard to eliminate goose nesting sites, because they adapt to nesting in some weird places. Certainly, you can make sure that you don't accidentally create prime nesting sites for them while building or land-scaping around ponds. You may be able to prevent them from nesting at a site by harassing them in the early spring. Try to block their path to the water or their line of sight, which makes them nervous.
- $\Omega$  In addition to the expected permits, you may also need permits from the DEC Bureau of Habitat and

- the Army Corps of Engineers to modify some protected waterways.
- Remove any artificial nest sites, such as platforms, tubs, and up-ended hay bales.
- Plant (or protect) wetlands plants that grow along the shoreline, such as cattails and bulrushes, which create a visual barrier that may prevent geese from walking onto the land.
- Stop mowing grass along the shoreline.
- $\Omega$  Eliminate islands and peninsulas that provide nesting sites by flooding the pond or reducing the water level. This is usually the most effective way to reduce the number of nesting sites, but it's expensive.
- Ω Add boulders or shrubs every 10–20 yards along the shoreline to block the pathway and their line of sight. The boulders should be at least 2 feet wide. Plants must be dense and tall enough (30 in.) to prevent the geese from seeing through or over them. Shrubs, wildflowers, or prairie grasses may provide an effective barrier. Wide plantings tend to work better than narrow ones. A combination of a rock barrier with a hedge of thick plants may be more effective. This method works best with smaller populations.
- Nest materials can also be removed to discourage nesting (works best in small areas where the nests are easily found, and when labor is cheap or free). This is a very labor intensive technique, requiring daily trips to the nest sites, which can be hard to find, and hard to reach. Another problem is that individuals within a flock may begin nesting during a period that lasts for several weeks. It takes the birds about a week to build their nest, but once it's done, they lay their eggs quickly—and once there are eggs, you'd need a federal permit.

Reduce the amount of good winter habitat for the geese:

• Turn off fountains to encourage earlier freeze-up of ponds.

Control their reproduction by disturbing their eggs so they don't hatch:

• These techniques are most effective at keeping a small population small. For example, if there are one or two pairs of geese on a pond and that's tolerable, you may be able to maintain the status quo using these techniques. With larger populations, these techniques are probably impractical because they're labor-intensive and time-consuming. Also, you'd need to tamper with nearly every egg to ensure success, and that grows more challenging with larger flocks.

- One disadvantage of these techniques is that if they take a long time to work (10–15 years)—if they work at all. New birds might join the flock, increasing the numbers you're trying to reduce. Birds that fail to hatch eggs successfully might move to a new breeding area and cause a nuisance there, so this approach might not be neighborly. Other lethal techniques, such as hunting, will almost certainly work faster and more effectively.
- The techniques of oiling, addling, and puncturing eggs should be done as early in the incubation as possible. They may require two trips to the nest to treat any eggs laid after the first visit (so you'll have to mark the nests). The second visit should be 7–10 days after the first trip. The male goose will probably defend the nest more aggressively on the second visit, so you may need a partner to fend off the gander. With all three methods, after the eggs are treated, they are put back into the nest so the female will continue incubating them. If the eggs are removed or destroyed, especially early in the incubation, the geese may lay another clutch.
- Ø Oiling eggs: Coating eggs with corn oil prevents gases from passing through the shell, so the embryo suffocates. The eggs are either sprayed with oil or dipped into a container of oil.
- Ø Puncturing eggs: Use a barbeque skewer, turkey lacer, or sharpened nail to pierce the embryo. The best place to make the hole is slightly off center, on the bottom of the egg (opposite the point). The tool must be strong enough to puncture the egg and long enough to reach the embryo. Don't crack the egg, because that might cause the birds to lay more. One problem is that the smell of the punctured eggs might attract predators, such as raccoons, skunks, coyotes, foxes, and crows. Even if your actions are unnoticed, if the geese realize that predators raided the nest, they may renest and lay more eggs.
- Ø Addling eggs: Addling, or vigorously shaking, the eggs, kills the embryo. Many people choose oiling or puncturing eggs over addling because it's easier to tell immediately whether the technique worked.
- Ø If you intend to addle or puncture eggs, wait until the female's been incubating for 1–2 weeks (mid-to late March in New York). By then, she's well-established. She's less likely to re-nest and may be less biologically able to lay eggs.
- ØRemoval of eggs or replacement with dummy eggs: If it's at least 18 days into the incubation, the eggs can probably be removed without causing the birds to lay more eggs. Or the eggs can be replaced with

- dummy eggs (wood or plastic eggs, or real eggs that are unfertilized or hard-boiled). This is simpler than oiling, addling, or puncturing eggs. It only requires two visits to the nest: once after all the eggs have been laid (sometime after the first week of incubation) to place the dummy eggs, and then later to retrieve them. You may need a partner to defend from the gander. The geese tend to continue incubating the dummy eggs.
- Once the geese are off the nest, try to move them. If there are no goslings, you can harrass them with such techniques as hazing. If there are immobile young or goslings, you cannot harass them without federal and state permits.

Allow hunting (during the legal Canada goose season):

- Hunting is one of the most cost-effective ways to reduce goose populations. In addition to directly removing some adult birds, it may scare off others. Hunting also increases the effectiveness of noisemakers, because the birds learn that some loud noises really mean trouble.
- Hunters must have a state small game hunting license, the federal Migratory Bird Hunting Stamp, and be registered in the Harvest Information Program. They must have the landowner's permission, be in an area that permits hunting, and hunt only during the legal season for Canada geese.
- Even in areas where hunting is prohibited, a controlled hunt may still be possible. This has been done successfully on golf courses, for example. Such controlled hunts may require variances to local laws.
- Hunting is also an effective way to target the specific birds that are causing the problems. How's that? Most goose problems are associated with resident geese, not migratory ones. Although you probably can't tell the two apart by looking at them, you don't need to because the migrants leave. In September, hunting is allowed in most areas in New York. Chances are superb that geese removed in that hunt are resident birds, because very few migratory geese would still be around. (In some areas, hunting is also allowed later in the fall and winter, with stronger restrictions.)

Remove the birds using direct capture methods (the birds are usually killed afterwards):

Ø If you're only dealing with a few birds, you may be able to catch them with a dip net or use a super-sized duck funnel trap with grain, corn, or oat bait.

- Contact your regional wildlife staff for information about using the duck trap.
- Ø In the early summer when the geese are molting and can't fly, the adults can be easily herded into a holding pen. This is called a "roundup." The pen (a moveable fence made of netting) is set on dry, flat land, usually about 20 yards from the water. It should be 4 feet tall, made of snow fence or plastic or cotton net, supported every 5–10 feet with poles. The side facing the water should have V-shaped "wings" that funnel the birds into the pen. People in canoes or boats herd swimming geese toward the capture area. Then others walk slowly behind the geese with outstretched arms, herding the birds into the pen. Once the geese are in the pen, the open side is closed. The birds can then be handled. Young should be removed first, because if there are many birds in the pen, they might be trampled. In most cases, birds that are rounded up are then killed. Remember, if some of the birds migrated just before the molt period, you may need to return the next year to conduct another round-up.
- Cannon nets can capture many geese at once. Generally, a large, open area is baited with grain. Once enough geese are feeding, the net is fired over the flock. The birds are then hand-captured. (The nets are propelled by explosives, so you may need to check local noise ordinances).
- Ø USDA-APHIS-WS staff can capture geese using an immobilizing agent, alpha-chloralose (a highly restricted drug). The drug is usually put in a bread bait, which the birds eat. It may take 1 <sup>1</sup>/<sub>2</sub> hours to sedate the birds. This product can't be used during, or one month before, goose hunting season. Local, state, and federal permits are required.

## Ø Preferred killing methods:

- Follow the conditions of your federal permit.
- Gunshot (using a a shotgun with nontoxic shot)
- Carbon dioxide chamber
- Stunning and decapitation
- Commercial poultry processor

# $\emptyset$ Acceptable killing methods:

• Cervical dislocation

# Control strategies that don't work particularly well, or aren't legal in New York:

- Ultrasonics don't work. Birds can't hear them.
- Installing a fountain or aerator in the pond won't work well, and it may actually attract geese to the area. (Ouch!)
- Dead goose decoys or swan decoys haven't worked well, especially with resident geese.
- Scarecrows don't scare them, either.
- $\Omega$  Joggers on paths along the shoreline are supposed to scare geese away, so some sources suggest that you add a jogging path to an area. Think about this for a minute. Are these geese afraid of people? Probably not. This is an expensive technique and it hasn't worked well in many areas.
- Birds of prey are used to chase other birds, but we don't know if this works to scare away Canada geese.
   Right now, it's also impractical because there just aren't enough trained falconers around.
- Another technique that works well for other birds is the use of distress calls, but we don't know if this works with geese, either.
- Ø Releasing swans to keep Canada geese out of ponds is a bad idea. Swans are aggressive and territorial, and have even driven geese off their nests, but the swans may cause worse problems than the geese. Swans and geese like the same habitats, so the presence of swans might even attract geese.
- ∅ In the past, geese were captured and moved to new locations, sometimes even in different states. No more. We're full up. There are no known areas in New York that would welcome problem geese, and other states can't take them, either. Although relocating young geese without their parents did work in some cases, moving adult geese usually doesn't work because they tend to return to their nesting areas.
- ØSome communities might want or be willing to tolerate a certain number of geese, but not a breeding population. One suggestion was to create a single-sex flock for that area. Unfortunately, creating and maintaining a single-sex flock is difficult and costly. The birds must be captured and examined carefully to tell their gender. Then, all members of one gender must be killed or moved. But adult geese tend to return to their birth sites, and other geese might join the single-sex flock. This is a highmaintenance approach that has not worked well.

- Ø Vasectomy (surgical sterilization) of male Canada geese is expensive. It's possible that the treatment changes the behavior of the goose. If other, fertile male geese mate more successfully than the neutered males, the technique would only work well if many geese received vasectomies.
- **Ø** The USDA National Wildlife Research Center is studying the use of birth control drugs for birds.
- In a variation of the "sacrificial site" technique, bait (loose grain) is provided to lure the geese to the sacrifical site. Some sources suggest that a lure crop, such as Kentucky bluegrass or grain, actually be planted at that site. These preferred foods may draw the geese away from the vulnerable site, but you could end up attracting other geese, too. Also, how would you persuade people to stop feeding the geese at other sites, if they know you're feeding them? This is not recommended.
- Ø There are no poisons registered in New York for use against Canada geese.