

This publication provides detailed information about residing, farming, and ranching in bear country and how to minimize human-bear conflict. This article will help you understand and identify common attractants and potential deterrents that people should be aware of when living with bears in Texas.

We will preface this article by reiterating the popular phrase, "A fed bear is a dead bear." A bear may become "food-conditioned" after just a few exposures where the bear is "rewarded" with human food. Food-conditioned bears begin to lose their fear of humans and can become a threat to public safety and may need to be euthanized. Whether you enjoy or disdain bears, please follow the advice in this article to help keep bears, yourself, and your neighbors safe.

Humans must understand and respect bears for both species to coexist. We must establish boundaries between humans and bears and enforce those boundaries when they are tested. Bears must not be allowed to explore or access human structures such as cabins, trash cans, or feeders. It is incumbent upon humans living in bear country to secure potential attractants to prevent enticing bears to explore human structures. This is particularly challenging when humans live in unoccupied bear habitat for years and then, suddenly, bears begin to reoccupy their former range. The reality is that all of Texas was historically occupied by black bears and, as humans, we must learn how to adjust our lifestyles as bears return to their former habitats.

Before going further, it is worth discussing relocation. "Can you come relocate this problem bear?" is the most

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frequent request made of Texas Parks and Wildlife when people begin having issues with a bear. Relocating a bear is generally not a good solution. When living in bear country, removing one bear does not address the source of the conflict and, at best, only buys some time. If the circumstances attracting the bear are not dealt with, it is only a matter of time before another bear comes along and begins causing the same problem. Relocated bears, especially adults, often return to the area despite being relocated a long distance away. Furthermore, capturing a bear is not always easy, and can be dangerous for the bear and the wildlife professionals involved.

ATTRACTANTS

Black bears are food-driven, and they are constantly on the search for easy calories—it's in their biology. Most conflicts with bears center around bears finding an easy meal provided by humans. People and bears share similar diets. We are both omnivores that utilize a wide range of food and enjoy foods containing sugars, fats, and proteins. Due to these similarities, it should not come as a surprise that there are many potential bear "attractants" around human residences. Human dwellings can entice bears with items such as consumable food, garbage, livestock, orchards, and feeders and feed storage, but, with a little knowledge, we can generally deter bears by denying them access to these attractants.

Human Consumables

The most obvious attractants are human-consumable food items found in your pantry, refrigerator, and freezer. Some less obvious food items that could attract bears include food or scented items left in vehicles. Something seemingly harmless like a piece of trash, a



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pack of gum or candy, or even scented lip balm, lotions, or air fresheners can leave a strong enough scent trail for a bear to detect and investigate those items. Backyard grills that are not cleaned or stored away can also contain enough residual food and grease scent to attract bears from long distances.

Pet and Bird Feed

Pet food and bird feeders are often attractants for bears. Many people prefer to feed their cats or dogs outside on the porch. This is a surefire recipe for conflict, as it is simply a matter of time before a bear finds a bowl of pet food on a porch. Similarly, many homeowners enjoy feeding birds and other wildlife at feeders. This is also a recipe for conflict, since bears frequently discover such feeders and tear them down to access the feed. Homeowners should consider where and how they store pet and wildlife feed. Some people prefer to store it in a garbage can or another simple container on the porch or in their garage. However, bears are very strong and smart, and they can easily take advantage of feed stored in unsecured locations and containers.

Garbage

Garbage is another irresistible attractant for bears and is often left unsecured around homes. A trash bag left on the porch overnight is like a gourmet buffet for a hungry bear. Similarly, trash in a normal garbage can or dumpster is easy pickings for a bear. In more rural settings, a bear that finds unsecured communal garbage dumpsters or a trash pit basically hit a jackpot on easy calories.

Livestock

Livestock kept around the home or in the pasture, such as sheep, goats, cattle, horses, pigs, chickens, and bees, can be very attractive to a bear, especially if livestock are penned up in a small area with no escape. Be mindful that bears are adept climbers, and they can easily climb structures, including chain link, wooden, or cinder block fences, to get inside a livestock pen. Similar to fawning seasons for deer and elk, bears will key in on "newborn" season for livestock, which can result in significant losses.

Agricultural Crops

Agricultural crops such as alfalfa, corn, winter wheat, melons, gourds, peanuts, grapes, and fruit and nut orchards can be attractive food sources for a hungry bear, as can backyard gardens. Many crops, such as pecans, which are popular yard and orchard trees throughout Texas, mature in the fall just as bears go into "hyperphagia," a period where they try to consume as many calories as possible before they enter winter.



Figure 1. Common black bear attractants include bird feeders, pet food, and trash stored outside.

Miscellaneous Attractants

Strangely, bears are also known to be attracted to petroleum products, vinyl and other plastics, and citronella. Because of this, bears have been known to chew up hot tub covers, plastic floats in water troughs, and ATV seats. One possible explanation is that plastics and vinyl can give off numerous volatile compounds, including formic acid. Formic acid is naturally present in the venom of ants, and thus its smell is thought to be the reason it attracts bears, as ants can be a regular part of a bear's diet.

MANAGING HUMAN-BEAR CONFLICTS

So, how do we prevent bears from accessing attractants around human residences? Large black bears can weigh over 300 pounds each, and their raw strength and problem-solving ability can make them challenging to deter. However, keep in mind that there are two parts to the human-bear conflict equation: the bear behavior side and the human behavior side. Under a given set of circumstances, most bears will behave similarly, and there is little we can do to change a bear's innate drive for food. But we can adjust our behavior to prevent a human-bear conflict by keeping attractants



away from bears, either in time or space. Something as simple as feeding pets indoors instead of on the porch can deconflict a situation. Likewise, changing the time when attractants are exposed can minimize the chance of a bear conflict. For example, do not leave trash out overnight. Rather, put it out the morning before pickup. This strategy can also be employed if you have neighborhood dumpsters that are emptied only periodically. Simply learn the pickup schedule and keep trash secured until pickup day. Particularly odoriferous garbage can even be stored in a freezer to reduce odors until pickup.

In cases where attractants cannot be easily moved, it will be necessary to prevent bears from accessing them. We can accomplish this by utilizing deterrents that affect a bear's various senses.

DETERRENTS

Sight

Just like humans, bears can be sensitive to bright lights while they are foraging at night. Motion-activated flood and strobe lights can startle and disrupt a bear if they are used in conjunction with other deterrents like audio alarms or noisemakers as discussed in the next section.

Sound

Motion-activated noisemakers and alarms can be effective at startling and deterring bears when they approach human structures like cabins. They are also effective at alerting the homeowner when a bear, or any unwanted intruder, is on their property. However, over time, bears recognize and ignore noise and light alarms after repeat exposures, so these are relatively temporary deterrents until a homeowner finds more permanent solutions.

Similarly, playing a talk radio show while you are away from your home can trick a bear into thinking that a human is still present. However, it must be a human voice talking, as music does not have the same effect. Likewise, this must be used in conjunction with securing attractants. Playing talk radio while leaving trash on your porch could serve to desensitize a bear to human voices if the bear decides to access the trash.

A good alert dog—even something small like a Jack Russell terrier—that barks loudly when an intruder enters your property can make a bear think twice about further exploring a human residence and can alert you to the presence of an intruder. Obviously, bears are typically larger than dogs, so make sure your dog is secured behind a fence or other sturdy barrier if they may encounter a bear in your yard. In more rural

settings, a livestock guardian dog is a relatively low-cost investment, especially when compared to the potential savings from avoided losses of newborn livestock.

Smell

Black bears have an incredibly powerful sense of smell. Their sniffing ability is thought to be significantly better than the best scent hounds, and they can likely detect potential food sources from a mile or more away. With that said, a bear's sense of smell can also be a powerful deterrent if a pungent, negative smell is properly used.

Bleach, ammonia, and pine-based cleaners have all been used to deter bears from small areas where strong attractive scents may draw bears in. It is advisable to clean trash cans with these pungent cleaners frequently enough, so the smell of the cleaner overpowers the scent of the garbage. Alternatively, a small bucket filled with a gallon or more of the cleaner covered by a lid with holes punched in it can be left next to other attractants. There is some anecdotal evidence that bears can also be deterred by cayenne powder, which can irritate their nasal cavity and cause them to temporarily leave an area. However, this is certainly a short-term deterrent, since the powder disperses quickly with even the slightest breeze.

Bear pepper spray is meant for defensive use in a close encounter with a bear that has escalated into a charge, but it works similarly to cayenne powder by irritating a bear's nasal cavity. Unfortunately, spraying bear spray on things you'd like bears to avoid doesn't work. When the spray dries, the pepper residue left behind mellows out and creates odors that can attract bears.

It is important to note that fruity-smelling cleaners, such as lemon-scented, can actually attract bears. Additionally, never mix bleach with ammonia, as they will react and create toxic fumes that can be deadly.

Touch

Touch is probably the most important sense to use to deter bears. A combination of physical exclosures, hotwire fencing, and "unwelcome mats" can be effective at excluding bears from attractants.

As previously mentioned, bears can be extremely powerful, which makes it challenging to physically exclude them from attractants. However, there are ways to design and construct exclosures using a combination of walls, fences, locks, and window bars that can exclude a bear. For outdoor storage areas, heavy-duty chain-link fence including a bottom rail set no more than 2 inches from the ground, with a chain-link roof and a locking (not latching) gate set into a concrete pad can



exclude average bears from accessing outdoor items such as garbage cans full of trash or pet/wildlife feed, livestock such as chickens or show animals that are kept near your home, or other outdoor items that might attract bears. Alternatively, heavy-duty wire paneling can be used instead of traditional chain-link fencing. For areas with higher bear activity or larger bears that can tear through a well-constructed fence, it may be necessary to store your outdoor items inside a wellsecured garage or in a specially constructed outbuilding with concrete or cinder block walls and a heavy-duty wood or steel door (the bottom of the door needs to be no more than 2 inches from the floor) and roof. Shipping containers make excellent bear-proof storage rooms and may be worth the investment if you live in an area with high bear traffic.

There are commercially available "bear-resistant" garbage cans and dumpsters that can be purchased from several manufacturers. Even sturdy metal or plastic trash containers with snap-on lids are not bearresistant. Bears use their paws, much like people use their hands, and can often just pop off or unlatch the lid. Bears are also very strong, so if the lid doesn't pop off, it's not much effort for a bear to dent, crack, or split an ordinary can. There are a wide variety of bearresistant containers available, from 35-gallon household containers to dumpsters. The Interagency Grizzly Bear Committee is a nonprofit organization that maintains a list of certified "bear-resistant" containers on its website at www.igbconline.org. If you have curbside pickup, check with your trash collection service to make sure they'll service bear-resistant containers. If they won't, you can do the bears, yourself, and your neighbors a favor by encouraging the company to do the wildlife-friendly and responsible thing, and service containers that don't put bears at risk.

Since bears are very sensitive to electricity, an electric "hotwire" fence is an effective, versatile, and relatively inexpensive way to secure attractants. With an energizer, grounding system, posts, insulators, and wire, nearly every potential bear attractant can be secured. Hotwire fences can be built to be temporary or permanent, on- or off-grid, and large or small to secure everything from bird feeders to entire crop fields. The keys to an effective hotwire fence are to make sure it is well-grounded, clear of vegetation, and periodically tested with a fence tester to make sure at least 5,000 volts are being passed through the entire fence. See AgriLife publication EWF-106, "Deterring Bears with Electrified Fencing: A beginner's guide," for details and specifications for building a hotwire fence to keep attractants and bears separated.

Other nifty tools for deterring bears are "unwelcome mats." Similar to electric fences, they can be custom-built to fit a wide range of situations specific to your

needs. See AgriLife publication EWF-109, "Deterring Bears with Unwelcome Mats: A beginner's guide," for details and specifications for building unwelcome mats to meet your needs.

CONCLUSION

Black bears are legally protected in the state of Texas, meaning a person cannot legally hunt, trap, kill, or otherwise take bears. However, all the recommendations in this article are legal in Texas. If and when conflicts with bears arise, it is important to contact your local Texas Parks and Wildlife biologist (https://tpwd.texas.gov/landwater/land/technical_guidance/biologists/) if you have questions or concerns about how to properly employ these tactics or if your attempts to deter a bear fail. Biologists can help you work through the legal options to handle human-bear conflicts

Wildlife professionals have a limited number of tools. such as hazing and capturing, to deal with habituated bears. Hazing can potentially teach a bear to avoid attractants if it has only encountered them a couple of times, but this tool becomes ineffective when an individual bear is allowed to repeatedly take advantage of attractants. Capturing and relocating bears within their home range or translocation outside of their home range is dangerous for the bear and the wildlife professionals involved, and bears frequently return to the area they were captured from within a few weeks. Moreover, if the attractants remain, it's only a matter of time before another bear finds them. Additionally, translocating bears to a zoo usually isn't an option since most zoos do not have the resources to host additional captive bears. Unfortunately, this means bears often must be euthanized if they become food-conditioned to attractants.

Preventing habituation through exclusion is the best way to keep bears from becoming a safety risk in the first place, but this tool requires the individuals living or visiting bear country to be proactive. Moreover, neighbors must work together. If all residents do not secure their attractants, a bear can become food-conditioned and dangerous to all as a result of the inactions of only a portion of the community.

Black bears are smart, powerful animals that are drawn to a wide range of attractants. As bear populations continue growing and expanding to reoccupy their former range, more and more Texans will find themselves living in "bear country." Wildlife professionals are available to assist homeowners and landowners in learning how to coexist with bears. This is truly a case in which an ounce of prevention is worth a pound of cure. Armed with a little knowledge, humans and bears can coexist with minimal conflict.



IF YOU ENCOUNTER A BEAR...

- ▶ Stay calm! Do not panic—this worries bears.
- Slowly back away. Do not run—this can invoke a chase response.
- Slowly raise your arms over your head and pull a jacket or shirt up high to make yourself look larger.
- Make sure you are not between a mother and her cubs. If you are, back away slowly to leave a clear path between them.
- If you encounter a lone cub, do NOT try to approach or pick it up. The mother is likely nearby, watching for signs of trouble.
- ▶ If a bear begins to clack its jaws toward you, this is a warning and sign of their feeling of danger. Take the hint, and back away slowly and calmly.
- Attacks on humans by black bears are rare, but if attacked, fight back with anything you can, even if it's your bare hands. Do not play dead. Playing dead is advised for grizzly bears, but Texas has only black bears.

OTHER RESOURCES

There are numerous other resources to learn more about living with bears:

- BearWise, https://bearwise.org/
- Get Bear Smart Society, www.bearsmart.com
- Living with Bears, https://livingwithbears.com/
- Colorado Parks and Wildlife, https://cpw.state.co.us/ bears
- ► Texas Black Bear Alliance, https://texasblackbear. weebly.com/
- Interagency Grizzly Bear Committee, http://igbconline. org/

