

Tree-Eating Sharks

It's Shark Week in America. All week we can watch horror stories of people getting attacked by sharks:

Rodney Fox was attacked by a great white shark in Australia. He recalled, "I'm looking through the pink of the water, through my own blood, and ... I see the head. Getting bigger."

The shark bit into Rodney, ripping open his body, crushing his ribs and puncturing his lungs. Rodney required 462 stitches to seal his wounds. Ouch!

Bethany Hamilton was surfing one day in Hawaii. Before she knew it, her arm was ripped off by a tiger shark. She said, "It was about a two- to three-second period and when it ... was attacking me all I saw was like a gray blur."

Are you scared yet? Imagine YOURSELF in a swimming pool. A trap door in the pool opens and a shark is released. The shark comes toward YOU... you can hear the water ripple as it swims ... it's rushing toward YOU... and you are helpless!

This is the way a tree feels when a lawn mower comes near. Absolutely helpless!

Every time you start your mower, every tree in your yard shudders in fear. Your mower—a machine designed to bite through plants with a sharpened steel blade—will soon be brushing against the tree's skin.



Mowers terrorize trees by scraping their trunks (left) and shallow roots (right).

The mower is one of the leading killers of trees in North Dakota.

Mowers attack bark, the armor of a tree. Just beneath the bark is the *phloem*, a precious layer where nutrients are carried from the leaves to the roots. If you expose the bark, the phloem is destroyed. If you destroy the phloem, the roots stop receiving nutrients from leaves. The roots starve and die.

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You Can't Buy Friendship

Ladybugs are a gardener's best friend. They serve the role as the "Garden Sheriff," killing all the bad bugs that threaten our plants. They do a great job of keeping law and order in the garden. A ladybug (more properly called a ladybeetle) can eat as many as 5,000 aphids in its lifetime!

Although they are a great friend in the garden, don't buy ladybeetles.

The most commonly sold ladybeetle is the convergent ladybeetle. These beetles eat heartily during autumn in the lowland valleys of the Western USA, develop a fat layer in their bodies, and then fly up nearby mountains to hibernate. These beetles sleep together in huge clusters of up to 40 million. While sleeping, these ladybeetles are gathered, refrigerated and then packaged for sale.

The problem with buying ladybeetles is the insects still think they are in the mountains. They have an inborn desire after hibernating to fly several miles down to the lowland valley before they begin feeding again.

Studies have shown that purchased ladybeetles generally fly 20–30 miles after being released, burning up their fat layer before starting to eat new insects. Within 24 hours, less than 1% of the ladybeetles you release in your garden will remain—maybe these ladybeetles have broken wings. Within 48 hours, you will have difficulty finding any ladybeetles. For goodness sake, gardens in the next county may benefit more than your garden from these ladybeetles!

In general, buying predator insects has its limitations, especially since you



need to have pests in your garden for the predators to eat. Instead of buying ladybeetles, focus on keeping your plants strong so they can withstand minor pest infestations. Short-lived and relatively safe insecticides such as neem, spinosad, BT and soaps are available when needed.

Tree-Eating Sharks (continued)

If that isn't bad enough, the wounds created by mowers are easily invaded by diseases.

How much damage to the bark can a tree withstand?

Trees generally survive if the damage is limited to 25% or less of the bark around the tree. As damage levels increase higher, the tree suffers higher levels of decay and dieback. If the bark is stripped around the entire tree, it will die. This is called *girdling*.

If you love your trees, protect them against your terrorizing lawn mower (and string trimmer).

Place a ring of mulch around each tree. Follow the "3-3-3 rule" (see photo). Place a ring of mulch that is

at least 3 feet in diameter around the tree—even more is better. The mulch should be 3 inches deep. Keep mulch to a minimum for the first 3 inches away from the trunk. Heaping mulch against the trunk can create stem rot and provide nesting habitat for voles.

Use wood-based mulches such as chips or shredded bark. This mulch will conserve moisture, smother weeds and enrich the soil. Wood mulch will insulate tree roots, keeping them cooler in summer and warmer in winter. Most importantly, the mulch will protect the tree from your mower!

Rock mulch is less desirable. It traps heat, accelerating bud break (and potential frost injury) in spring, as

well as creating excessive heat stress in summer. Rock mulch compacts the soil and provides no nutrients.

What are you waiting for? The next shark attack is coming soon!



A properly mulched tree.

Plant Health Care

Vegetables



Early Blight on Tomato

Avoid overhead watering. Remove infected foliage. Protect with chlorothalonil, mancozeb or copper. Stake and prune vines. Sow blight-resistant varieties in the future.



Bacterial Speck, Spot

Dark, corky, sometimes raised spots develop on green and red fruits. Spots develop on vines. Avoid working in the garden and wounding vines when wet. Spray with copper to prevent spread.



Sunscald on Pepper

Pepper and tomato fruits exposed to the direct rays of the sun during hot weather will burn. This occurs on plants with sparse foliage. Fertilize and irrigate to promote healthy plants.



Prevent Potato Scab

Scabs form on expanding tubers after vines begin to bloom. Keep soil moist for the next month. Avoid fresh manure and susceptible cultivars (Red Pontiac, Kennebec, Yukon Gold) in the future.



Potato Cracking

Tubers may crack due to a lack of water, excess heat, chemical injury, or a rapid burst of growth caused by an application of fertilizer or a major rainfall. Maintain uniform soil moisture.



Fruitless Flowers

Most flowers on cucumber and squash vines are male (left photo) and do not set fruit. They provide pollen to fertilize female flowers (right photo; note the fruit attached). Use insecticides judiciously to promote bee activity.

Fruits



Fire Blight on Pear

Branch tips wilt and darken. Prune tips going 8 or more inches into symptomless wood, leaving a stub of at least 4 inches. Sterilize pruners between cuts. Paint “ugly stubs” and prune in winter.



Leaf Spot on Cherry

Leaves develop spots and drop. Rake leaves to remove fungus. Prevent infection next year using a spray of fungicide at 90% petal fall, followed by two sprays at 10–14 day intervals.



Rust on Juneberry

Berries develop “spikes” that emit spores. This rust comes from junipers. Avoid planting near junipers. Prune to reduce shade and humidity in canopy. Use fungicides when shrubs set fruits.

Plant Health Care

Trees and Shrubs



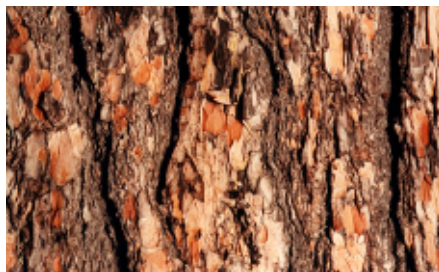
Lightning Damage

Some or the entire tree suddenly turns brown and dies. A strip of bark may be burned or missing along the entire tree, top to bottom. Remove loosened bark. Irrigate during dry spells. Remove severely damaged trees.



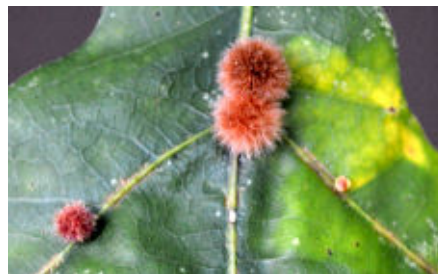
Ash Flower Gall

“Tumors” develop after mites bite into male flowers in spring. These galls may turn brown and persist through winter. These galls are harmless; no treatments are needed.



Bark Shedding

This is natural. The bark of a tree darkens, hardens and dies over time. New growth and new layers of bark are created beneath the old bark. As the girth of a tree expands over time, the new layers push out the hardened old bark, which cracks or peels off.



Woolly Oak Gall

Fuzzy balls appear, especially on leaf midribs. Inside is a developing wasp. The gall will drop off and an adult wasp will emerge. These galls are virtually harmless and no treatments are needed.



Lecanium Scale

Insects under shells suck sap, causing thin and dying branches. Crawlers are hatching now. Spray with carbaryl, pyrethroids or summer oils. Suffocate with dormant oil in early spring.

Flowers



Measles on Peony

Red spots and blotches appear. Avoid overhead sprinkling. Remove leaves and stems this fall. Fungicides may be sprayed when plants are 4–6 inches tall next spring.



Mildew on Sunflower

Plants are stunted with yellowing along leaf veins. Fungus is inside the plant and no sprays are useful. Pull out plants. Remove wild sunflowers in vicinity. Use resistant varieties.

Lawns



Dull Mower Blade

Dull mower blades will shred, not cut grass leaves. Damaged plants will be more susceptible to injuries and grow slower. Sharpen blades or replace every year; more often if necessary.

Weather Almanac for July 16–July 22, 2018

Site	TEMPERATURE ¹				RAINFALL ^{1,4}				GROWING DEGREE DAYS ^{1,5}			
	July 16–22				July 16–22		2018		July 16–22		2018	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	66	68	85	45	0.30	0.55	8.13	9.23	102	113	1294	1071
Bowman	69	70	89	52	0.07	0.49	9.51	8.39	108	126	1202	1054
Carrington	67	70	83	50	0.08	0.75	8.46	10.28	107	126	1409	1166
Crosby	68	67	88	50	0.13	0.62	7.49	8.15	114	106	1262	973
Dickinson	70	70	90	50	0.69	0.56	9.41	9.24	117	120	1327	1058
Fargo	70	71	83	50	0.88	0.59	9.65	10.20	121	132	1598	1262
Grafton	67	68	86	45	1.42	0.55	9.96	9.53	106	110	1374	1093
Grand Forks	67	69	85	47	0.93	0.67	10.55	9.53	107	117	1465	1125
Hazen	69	71	87	44	0.57	0.52	6.49	9.32	119	126	1337	1196
Hillsboro	68	71	84	47	1.37	0.75	8.83	10.21	111	125	1466	1180
Jamestown	68	71	82	52	2.03	0.73	11.68	9.81	108	126	1368	1155
Langdon	65	66	86	47	1.17	0.71	7.35	10.02	100	98	1234	917
Mandan	70	71	87	51	0.52	0.72	9.32	9.51	125	126	1415	1134
Minot	69	69	87	50	0.41	0.53	5.94	9.27	120	114	1358	1042
Mott	69	71	90	50	0.15	0.43	7.65	8.82	108	126	1311	1113
Rugby	68	68	86	50	0.13	0.78	7.91	10.13	112	108	1320	1078
Wahpeton	69	72	85	49	2.30	0.68	10.40	10.64	113	132	1553	1316
Watford City	71	70	89	54	0.91	0.55	7.21	8.10	127	121	1329	1078
Williston	72	72	87	60	0.45	0.51	9.06	7.70	133	132	1340	1230
Wishek	68	69	84	52	0.38	0.54	10.14	8.71	107	114	1323	1034

DAYLENGTH (July 23, McClusky, center of ND)² LONG-TERM OUTLOOKS³

Sunrise: 6:08 AM Daylength: 15h 20m Jul 29–Aug 2: Temp.: Below Normal; Precip.: Below Normal
 Sunset: 9:28 PM Change since July 16: –14m Jul 31–Aug 6: Temp.: Below Normal; Precip.: Normal

^{1,2,3} Sources: North Dakota Agricultural Weather Network, www.sunrisesunset.com, and National Weather Service, respectively.

^{4,5} Rain data begin April 1. GDDs for garden vegetables are not available. GDD data in this table are for corn, which responds to temperature as most vegetables grown in gardens. Data begin May 1 with base minimum and maximum temperatures of 50 and 86°F, respectively.

Credits

Sources:

Hunt, K. 2015. The 10 craziest shark attack stories of all time. www.thrillist.com/travel/nation/shark-attack-stories-bethany-hamilton-mick-fanning-and-other-survivors.

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