

# Missouri Environment & Garden

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## Wintery Weather Folklore

The infamous woolly bear (*Pyrrharctia isabella*) caterpillars are on the move, seeking a sheltered spot for the winter (Figure 1). At one time or another, most of us have heard the myths that this caterpillar is a predictor of the coming winter weather. One version of the myth is that longer black bands of setae (hairs) on the caterpillar is an indicator of an upcoming harsh winter, but shorter black sections signify mild winter conditions. Another version of the myth is that woolly bear caterpillars crawl in a southerly direction in an attempt to escape an impending bitter winter, whereas those heading north indicate a mild winter. Yet a third version is that a dark head capsule is predictor of harsh weather at the beginning of winter, while a dark rear section of the caterpillar indicates that late winter conditions will be severe. Along with this, the woolly bear caterpillar has thirteen body segments, which supposedly correspond to the length of winter.

Apparently, these myths have circulated for centuries. However, these types of myths spread dramatically when a story was published in the New York Herald Tribune in 1948. Dr. Howard Curran, an entomologist for the American Museum of Natural History, traveled to Bear Mountain State Park, New York with some friends and conducted a small study. The brown bands on 15 caterpillar specimens were noted and he subsequently made a prediction about the upcoming winter based on these popularized results.

In fact, the color bands on the woolly bear caterpillar indicate its life stage. These caterpillars molt six times before they become adults. With each molt, the coppery-brown mid-section becomes progressively longer. Interestingly, these caterpillars can survive extremely low temperatures (-90°F). After overwintering, woolly bear caterpillars feed in the spring, form a cocoon made from their setae, and pupate. About two weeks later, the yellow-orange moth (also known as the Isabella tiger moth) with a 1¾ to 2¼ inch wing-span emerge and are found from early April through September.

While it is tempting to handle these fuzzy caterpillars, the setae can cause a dermatitis-type reaction in some. However, unlike some other caterpillars, the woolly bear's setae do not contain a substance that often results in a very painful sting. Regardless of the myths, woolly bear caterpillars are prevalent in fall and are a fun way to speculate about winter!

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Michele Warmund, Professor  
Division of Plant Sciences  
warmundm@missouri.edu



Figure 1. Woolly bear (*Pyrrharctia isabella*) caterpillar. Photo credit: Bugguide.net



Figure 2. Adult moth of *Pyrrharctia isabella* found in the summer. Photo credit: Bugguide.net

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# Fall Garden Cleanup

By November, many gardeners are a bit “battle weary” from performing gardening chores. Fighting insects and diseases as well as other problems throughout the growing season can leave one ready for a break. However, November is the time of year when, in the garden, we should follow Benjamin Franklin’s adage: “An ounce of prevention is worth a pound of cure.” The latter takes the form of fall cleanup which can add significantly to the success of next year’s garden.

Garden cleanup does more than just improve the appearance of the garden during the (seemingly) lifeless months of winter. It is an important part of preparing the garden for the coming growing season by reducing the amount of disease inoculum and insect infestation that might be present. Prevention is the best cure for any plant-related problem. While disposing of the remnants of this year’s garden might not totally prevent problems from occurring next year, it is certain to lessen them.

Fall clean-up starts with removing all plant debris from the garden and disposing of it properly. Remaining vegetables (other than winter vegetables) and annuals should be pulled. Healthy plant material can be added to a compost pile; debris from diseased or insect infested plants should be discarded. When in doubt, discard plant material removed.

Herbaceous perennials can be cut back to their crowns any time after they have gone dormant. This usually occurs after the first hard freeze of the fall. Mulch those perennials that benefit from winter protection after several freezes have occurred and the soil has cooled. The same is true for winterizing roses.

Additionally, thoroughly weeding garden space in the fall will help to curb weed populations the following growing season. Careful hand or mechanical weeding is best, although non-selective herbicides such as glyphosate can be used on living weeds. However, keep in mind that post-emergence herbicides applied in cool or cold weather take longer to kill target weeds. Using rates at the high end of labeled recommendations is advised whenever the air temperature falls below 65o F.

Weeds that already have matured and set seed should be carefully removed from the garden. It has been estimated that one large pigweed can produce between 100,000 and 600,000 seeds. Carelessly pulling a weed and dragging it out of the garden is a good way to spread seeds and insure a large population of weeds next growing season. Instead, cut the weed and carefully place it in a large plastic bag before removing it from the garden.

Fall also is an ideal time to improve garden soil. The addition of compost, well-rotted manure or other forms of organic matter is more easily accomplished in the fall when the soil (generally) is more workable. For annual flower beds and vegetable gardens, incorporating several inches of well-decomposed organic matter is considered a “best management practice” for gardens. Limestone and other slowly soluble fertilizers can be incorporated at the same time, if called for by soil tests.

If you are fortunate enough to have a cold frame, hot bed or other “season extender”, clean it in the fall. A clean, “ready-to-go” cold frame is more likely to be used next spring than one that is overgrown with weeds and filled with debris. If you don’t have a season extender, consider building one as a winter project.

Also, turn off and frost proof irrigation systems. Drain hoses and store them out of the sun. Drip irrigation systems should be carefully removed and stored for use next year. Fall is a good time to clean and store garden tools. Metal surfaces should be free of soil and covered with a thin film of soil before storing. Tools with a cutting edge should be cleaned and sharpened in preparation for next year’s growing season.

Power garden equipment such as mowers and tillers can be winterized at this time as well. Check the owner’s manual for how this should be accomplished. If mechanical problems developed over the past gardening season, now is a good time to have them resolved. Garden equipment mechanics are much busier in the spring than in the fall.

Finally, think spring. While the image of this year’s garden is still vivid, start making plans for next year. What were the major problems/disappointments of the recently-completed growing season and how might they be prevented next year? Which varieties worked well and which did not? Do those that were disappointing deserve a second chance or is it time to try something new? Since time tends to dull the memory of most, sketch a planting plan for next year and start to form a gardening “to do” list. Remember, winter is only 90 days long.

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*David Trinklein, Associate Professor  
Division of Plant Sciences  
TrinkleinD@missouri.edu*

## December Gardening Calendar

Category	Week				Activity
	1	2	3	4	
Houseplants	x	x	x	x	Water houseplants with tepid water. Cold tap water may shock plants.
	x	x	x	x	Be sure newly purchased indoor plants are well protected for the trip home. Exposure to icy temperatures for even a few moments may cause injury.
	x	x	x	x	Overwintering geraniums like bright light and cool temperatures. Keep soils on the dry side.
	x	x	x	x	On cold nights, move houseplants back from icy windows to prevent chilling injury.
		x	x	x	Holiday poinsettia plants do best with sun for at least half the day and night temperatures in the 50's or 60's. Keep plants away from drafts, registers and radiators and let the soil should dry only slightly between thorough waterings. Be sure to punch holes in decorative foil wraps to prevent soggy soil conditions.
	x	x	x	x	Hairspray works well to keep seed heads and dried flowers intact on wreaths and arrangements.
	x	x	x	x	If you plan to have a live Christmas tree, dig the planting hole before the ground freezes. Mulch and cover the backfill soil and the planting hole to keep them dry and unfrozen. When you get the tree, store it outdoors in a cool, shady, windless area until the last minute and mulch the roots to prevent cold injury. Don't allow the tree's roots to become dry and spray the needles with an anti-transpirant to reduce moisture loss. Set the tree up in your coolest room. Don't keep the tree indoors for more than one week and plant outdoors promptly.
	x	x	x	x	Be sure the root zones of azaleas and rhododendrons are thoroughly mulched. Any organic material will do, but mulches made from oak leaves, shredded oak bark, or pine needles are preferred.
	x	x	x		Christmas trees hold needles longer if you make a clean, fresh cut at the base and always keep the trunk standing in water.
	x	x	x		Only female holly trees bear the colorful berries. There must be a male tree growing nearby for pollination, if fruits are desired.
	x	x	x		Hollies may be trimmed now and the prunings used in holiday decorations.
Miscellaneous	x				Apply mulches to bulbs, perennials and other small plants once the ground freezes.
	x				All power equipment should be winterized before storage. Change the oil and lubricate moving parts. Either drain fuel systems or mix a gas stabilizing additive into the tank.
	x				Clean and oil all garden hand tools before storing for winter.
	x				If you feed rabbits corn or alfalfa, they may leave fruit tree bark unharmed.