

Rhododendron

FEW PLANTS CAN RIVAL the floral display of rhododendrons or azaleas. Rhododendrons are native to North America, Europe, Asia, and Australia, with the majority of naturally occurring species found in Asia. There are approximately 1000 different species in the genus *Rhododendron*, with many more hybrids and cultivars that have been developed for improvements or variations in flower color, foliage, growth habit, and hardiness.

Rhododendron Cultural Requirements and Care

Proper planting location is key to rhododendron and azalea success in the landscape.

SOIL CONDITIONS

Rhododendron species, similar to other Ericaceous species, prefer a rich, well-drained, moist soil high in organic matter. They have shallow, fine root systems that do not tolerate wet conditions or poor drainage. Rhododendrons also need an acid soil with a pH between 4.5-6.0.

LIGHT CONDITIONS

As a general rule of thumb, large leaf rhododendrons need more shade than smaller leaved rhododendrons or azaleas. Large leaf rhododendrons do best in part shade, preferring morning sun or dappled afternoon sun, and need protection from direct summer or winter sun (and winter wind). Azaleas and smaller leaved rhododendrons (most species) can tolerate full to part shade. All rhododendron species will become leggy and flower poorly if planted in shade that is too deep.

CARE

Rhododendrons should be mulched to retain moisture and cool the soil. Pruning is generally not necessary, but should be done after flowering when needed.

Insect pests of *Rhododendron* spp. include, but are not limited to: ambrosia beetles (various species), azalea bark scale (*Eriococcus azaleae*), black vine weevil (*Otiorhynchus sulcatus*), cottony camellia scale (*Pulvinaria floccifera*), lace bugs (such as *Stephanitis rhododendri*), rhododendron borer (*Synanthedon rhododendri*), rhododendron stem borer (*Oberea myops*), and two-banded Japanese weevil (*Pseudocneo-rhinus bifasciatus*).

Common diseases of *Rhododendron* spp. in the landscape include: leaf and shoot blight caused by Pestalotiopsis and Phyllosticta, branch cankering caused by Botryosphaeria and Phomopsis, and root rot caused by Phytophthora and Armillaria. Winter injury is a major predisposing stress that often facilitates disease development in this region.



Rhododendron catawbiense cultivar



Rhododendron 'Ruth May'



Rhododendron 'Nova Zembla'

Rhododendron Winter Damage

Similar to other broadleaf evergreens, winter damage can be common with evergreen rhododendron species. One of the biggest problems is desiccation injury on sunny, windy days. Transpiration increases due to the wind; however, the plant cannot take up water because the ground is frozen, leading to desiccation. This can result in leaf or branch damage. It is best to wait until growth has resumed before pruning any damaged branches.

The winter of 2018–2019 seemed to be especially hard on large leaf rhododendrons. It was likely a combination of factors that resulted in this damage. Overall, the winter was mild with limited snow cover. Snow normally acts as an insulator, protecting plants. Without the insulating snow, rhododendrons were more susceptible to drying winter winds. Problems could have also been due to fluctuating temperatures and freeze-thaw events that led to root damage, and the lower temperatures in March 2019 could have damaged plants already coming out of dormancy. The wet summer and fall of 2018 could have also contributed because of rhododendron sensitivity to wet, poorly drained soils.

Massachusetts Native Rhododendron Species

Rhododendron canadense – Rhodora Rhododendron maximum – Rosebay rhododendron Rhododendron periclymenoides – Pinxterbloom azalea Rhododendron prinophyllum – Roseshell azalea Rhododendron viscosum – Swamp azalea



Rhododendron 'Fanny,' deciduous azalea



Rhododendron calendulaceum (flame azalea)



Yellow deciduous azalea cultivar

Both azaleas and rhododendrons belong to the genus *Rhododendron*. Identifying a plant as either a rhododendron or an azalea can be confusing. Dr. Michael Dirr advises that "there are no clear-cut lines for distinguishing all azaleas from all rhododendrons" but offers the following as tips for distinguishing an azalea from a rhododendron.

	Rhododendron	Azalea
Leaves	Evergreen (most)	Deciduous (most)
	Often scaly or with small dots on the undersides	Never dotted with scales; frequently pubescent
Flowers	10 or more stamens	Mostly 5 stamens
	Bell-shaped (generally)	Funnel-like (generally)

^{*} Hybrids between true rhododendron and true azaleas (such as Encore™ azaleas) have intermediate stamen numbers



Rhododendron periclymenoides (Pinxterbloom azalea)

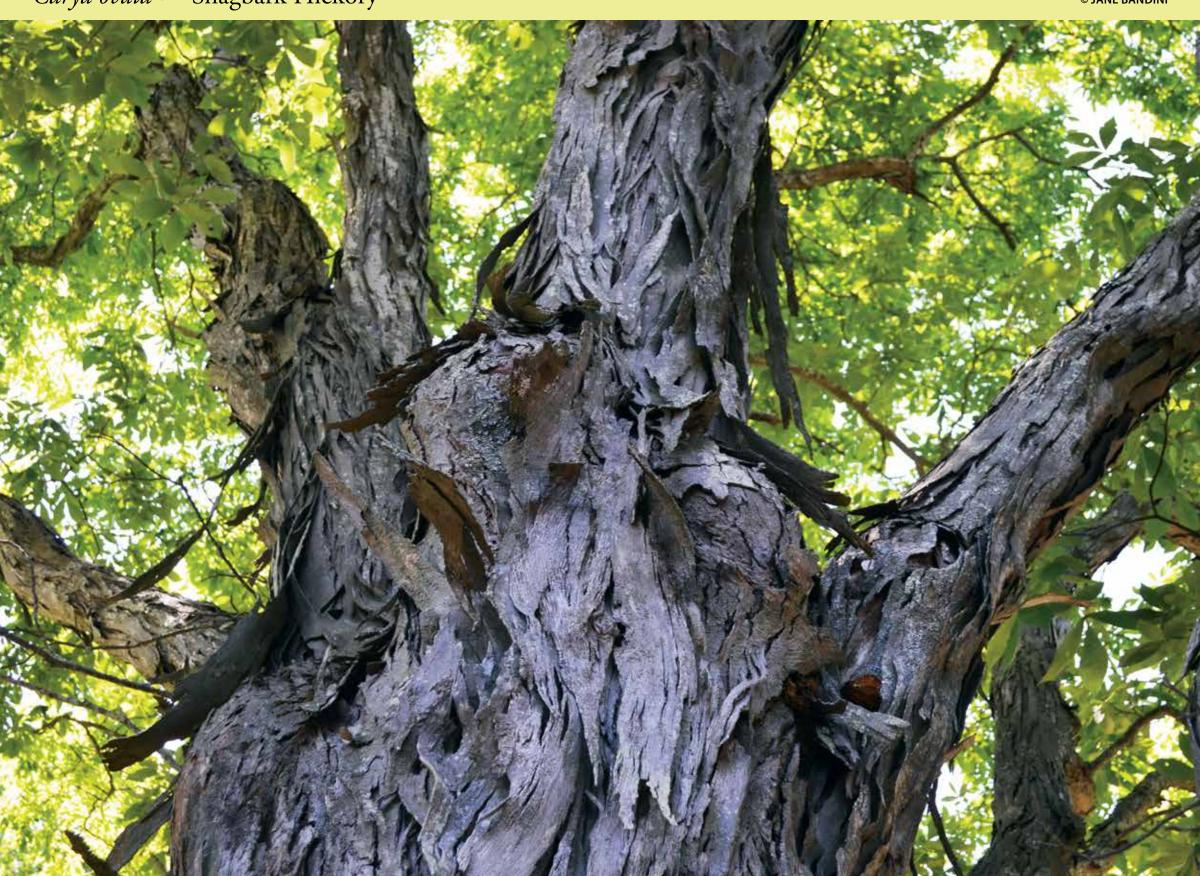
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For information on our photo contest for the 2020 UMass Garden Calendar, see the back cover

COVER:

RHODODENDRON 'BLAAUW'S PINK' – BLAAUW'S PINK HYBRID AZALEA PHOTO CREDIT: JASON D. LANIER

Among the 1000's of plants in the Rhododendron genus are the species commonly referred to as azaleas, which are prized for their masses of small, brightly-colored spring blooms, and of which there are seemingly countless varieties. The variety pictured is 'Blaauw's Pink,' which was introduced by Dutch breeder J. Blaauw & Company in 1953. 'Blaauw's Pink' is hardy to Zone 5 and has prolific, salmon pink, "hose-in-hose" blooms. These are not genuine double blooms, but instead have colored sepals that arise behind the true petals and give the appearance of a 10 to 12 petal double bloom. The exact parentage of this variety is not known, but the glossy, obovate, evergreen leaves and compact size reveal lineage in the Japanese Kurume line which dates back at least 300 years. A mature height averaging three and a half feet makes this variety a great choice for foundation and accent plantings. Like other evergreen azaleas, 'Blaauw's Pink' performs well in partial or filtered sunlight, which makes them particularly suited for woodland plantings and borders. The leaves often turn burgundy-colored in winter, adding seasonal interest.



JANUARY

Remove heavy snow gently from plants to prevent bending or breaking.

Snake plant (*Sansevieria*) is a low maintenance houseplant.

Plan to plant trees and shrubs this spring as soon as soil is workable.

Rising 80 feet tall or more with a spread of 30 to 50 feet, shagbark hickory (*Carya ovata*) is a majestic tree native to the eastern US. It grows in zones 4 to 8 under a wide range of environmental conditions but prefers moist, well-drained soils in full sun to part shade. With distinctive grey-brown peeling bark, golden fall foliage, and edible nuts, shagbark hickory boasts several desirable landscape traits. As an ornamental, however, it is best used in park-like settings because of its mature size and litter production (shedding bark, nut husks); a large taproot makes it challenging to transplant.

Do not remove snow or ice frozen on a plant; removal could cause more damage.

Sunlight degrades chlorophyll so turf under snow often has better green color.

JANUH		foliage, and edible nuts, shagb its mature size and litter produ	•	•	namental, however, it is best u	sed in park-like settings
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
DECEMBER 2019 SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	FEBRUARY SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29		Sunrise 7:16 Sunset 4:25 New Year's Day Spend the day perusing seed catalogs and planning this year's vegetable garden.	Sunrise 7:16 Sunset 4:26 Sunset 4:26 First Quarter Moon Pruning oaks in winter may reduce risks associated with diseases and insects.	Sunrise 7:16 Sunset 4:27 Male winter moths can fly in eastern Massachusetts into January.	Got poor soil? Build raised beds and fill with quality topsoil and compost.
Sunrise 7:16 Sunset 4:29 Compost kitchen waste: fruit and vegetable scraps, coffee grounds, eggshells.	Sunrise 7:16 Sunset 4:30 A properly maintained compost bin does not stink.	Sunrise 7:16 Sunset 4:31 Blue spruce requires full sun with no surrounding plantings to thrive.	Sunrise 7:16 Sunset 4:32 Native plants evolved with and support native pollinators.	Sunrise 7:16 Sunset 4:33 Ever wonder why one bad apple spoils the bunch?	Sunrise 7:15 Sunset 4:34 Full Moon Overripe fruit gives off ethylene gas which hastens nearby fruit ripening.	Sunrise 7:15 Sunset 4:35 Water houseplants when the top 1 to 2 inches of soil feel dry.
Raise humidity around house-plants by grouping plants or using a humidifier.	Before buying new, germination test leftover vegetable seeds.	Japanese knotweed reproduces by underground, creeping stems called rhizomes.	Sunrise 7:14 Sunset 4:40 For longevity, durability, and beauty, plant an oak.	Sunrise 7:13 Sunset 4:41 Take inventory of seed starting supplies.	Sunrise 7:13 Sunset 4:42 Last Quarter Moon Award-winning flowers and vegetables are at all-americaselections.org	Sunrise 7:12 Sunset 4:43 Learn about 25 new weeds and their life cycles during this garden season.
Take a walk to observe and identify weeds plants in winter.	Sunrise 7:11 Sunset 4:46 Martin Luther King, Jr. Day Douglas-fir requires full sun; if there's shade, don't plant it.	Use decay-resistant wood like cedar when building window	Sunrise 7:10 Sunset 4:48 Extended ice cover can damage grasses by preventing gas ex-	Growing heirloom vegetables is a way of connecting with	Sunrise 7:08 Sunset 4:51 New Moon 'Mortgage Lifter' is a huge, tasty heirloom tomato variety from the late 1920s.	Sunrise 7:07 Sunset 4:52 Tree and shrub plantings can reduce both air conditioning and hosting bills
identify woody plants in winter. Sunrise 7:07 Sunset 4:53	27 Sunrise 7:06 Sunset 4:54	boxes. Sunrise 7:05 Sunset 4:56	change with the atmosphere. Sunrise 7:04 Sunset 4:57	30 Sunrise 7:03 Sunset 4:58	31 Sunrise 7:02 Sunset 5:00	and heating bills.

Pinch back geraniums to encourage bushier growth.

Viola spp. — Violas



FEBRUARY

Among cool-season turfgrasses, perennial ryegrass is most susceptible to winter injury.

Large garbage cans make inexpensive rain barrels.

Extend forced forsythia blooms by keeping branches cool and away from direct sun.

With their cheerful "faces" and wide variety of bright colors, pansies (*Viola* x wittrockiana) and violas (*Viola* spp.) are welcome additions to cool-season containers and borders. These easy-to-grow annuals are readily available as transplants from nurseries, or they can be started from seed about 4 months prior to planting outdoors. Pansies have relatively few problems: avoid overwatering, which can cause root rot, and manage slugs, which feed on leaves and flowers. Perennial violas look a lot like their cousins, pansies, but can offer the benefit of coming back year after year for early-season color.

Sow onions, leeks and celery now for transplanting into the garden in May.

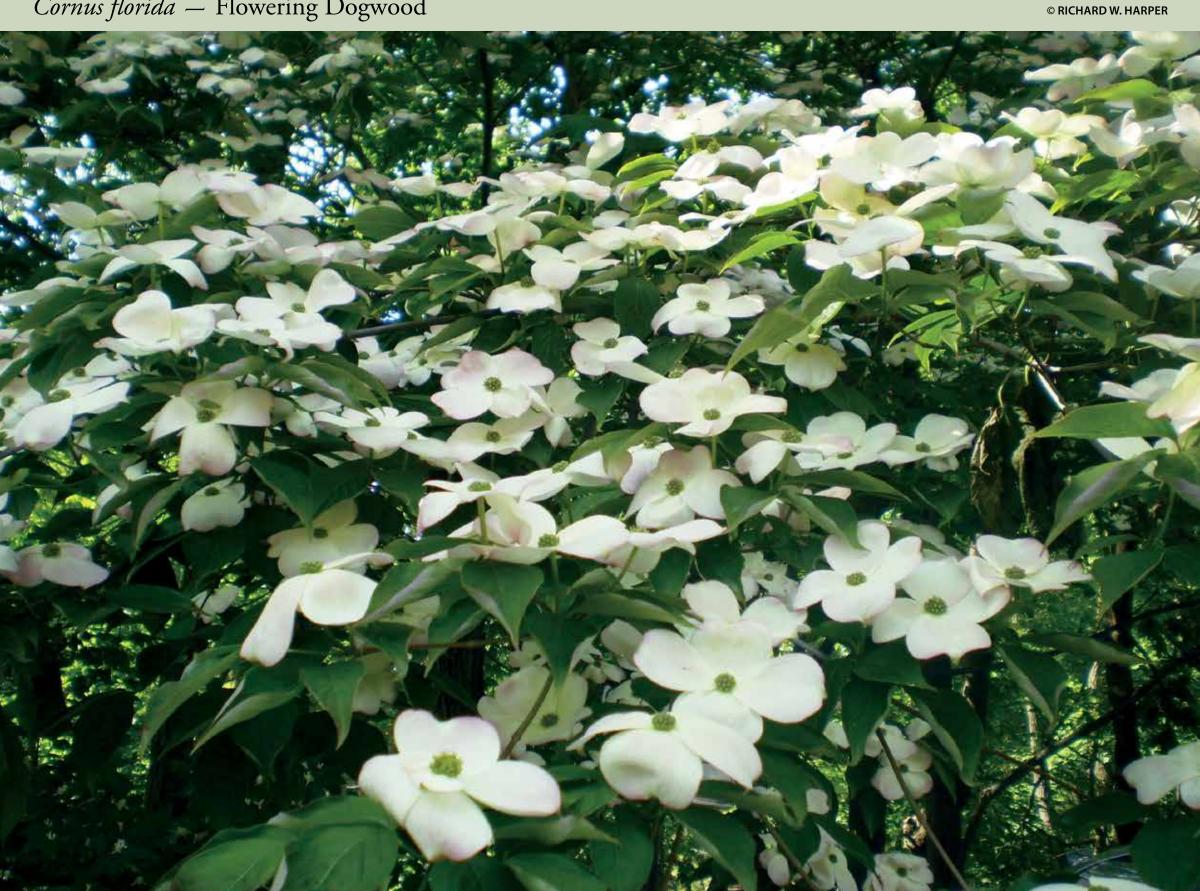
Watch for the appearance of early spring bulbs.

If you remove a tree, plant a

trée.

					cause root rot, and manage slu iing back year after year for ear	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MARCH SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31					Sunrise 7:01 Sunset 5:01 First Quarter Moon Rotate crops to reduce pests.
Sunrise 7:00 Sunset 5:02 Groundhog Day	3 Sunrise 6:59 Sunset 5:04	Sunrise 6:58 Sunset 5:05	Sunrise 6:57 Sunset 5:06	Sunrise 6:56 Sunset 5:07	Sunrise 6:56 Sunset 5:07	Sunrise 6:53 Sunset 5:10
Bury garden fencing 12 inches deep to deter groundhog bur- rowing.	Supplement natural light for houseplants with fluorescent or LED grow lights.	Clean and repair garden tools.	Paint handles of easily-mis- placed hand tools with a bright color.	Don't be afraid to reject nursery stock that appears diseased.	Replant frost-heaved plants when soil is not frozen or cover with mulch.	Bishop's goutweed, Aegopodium <i>podagraria</i> , is an invasive in Massachusetts.
Sunrise 6:52 Sunset 5:11 Full Moon	Nunrise 6:51 Sunset 5:13	Sunrise 6:50 Sunset 5:14	12 Sunrise 6:48 Sunset 5:15 Lincoln's Birthday	13 Sunrise 6:47 Sunset 5:17	Sunrise 6:46 Sunset 5:18 Valentine's Day	Sunrise 6:44 Sunset 5:19 Last Quarter Moon
Rotate houseplants weekly to keep them from leaning towards the light.	Above freezing temperatures, deer ticks can be active and car- ry TBDs (Tick-Borne Diseases).	Send ticks to the Laboratory of Medical Zoology at tickreport. com to be TBD tested.	Sow cilantro seeds indoors for culinary needs.	Prolonged snow cover often increases turf disruption by voles.	Use caution and rubber gloves when cutting hot peppers.	Winter salt spray can damage plants as far away as 30 feet.
16 Sunrise 6:43 Sunset 5:20	Sunrise 6:41 Sunset 5:22 Presidents' Day	18 Sunrise 6:40 Sunset 5:23	19 Sunrise 6:39 Sunset 5:24	20 Sunrise 6:37 Sunset 5:25	Sunrise 6:36 Sunset 5:27	Sunrise 6:34 Sunset 5:28 Washington's Birthday
Corn gluten meal will not ef- fectively control crabgrass.	Find the perennial plant of the year at perennialplant.org	Order tree seedlings from the local Conservation District.	Mount bluebird nesting boxes near the garden.	Variegated leaves require more light than all-green foliage.	Sensitivity to poison ivy can change at any time.	Dark-colored, fertile soils absorb and retain heat for an earlier gardening start.
Sunrise 6:33 Sunset 5:29 New Moon	24 Sunrise 6:31 Sunset 5:30	25 Sunrise 6:30 Sunset 5:32	Sunrise 6:28 Sunset 5:33 Ash Wednesday	27 Sunrise 6:26 Sunset 5:34	28 Sunrise 6:25 Sunset 5:35	29 Sunrise 6:23 Sunset 5:37

A heating mat is a good investment for starting seeds indoors.



MARCH MARCH

Flowering dogwood (*Cornus florida*) is a small, native, understory tree with showy spring blooms. Commonly planted in the urban environment in private landscapes and parks, it can be found throughout the eastern-central United States from Florida in the south, north to Maine and west through southern Ontario, Michigan, and eastern Texas. It will grow on a variety of sites and soil-types with soil pH ranging from 6 to 7. Mature height reaches up to about 30 feet in the Northeast. Hardy to zone 5.

MANG	Michigan, and eas Northeast. Hardy t		iety of sites and soil-types with	soil pH ranging from 6 to 7. M	ature height reaches up to abo	out 30 feet in the
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Sunrise 6:22 Sunset 5:38	Sunrise 6:20 Sunset 5:39 First Quarter Moon	3 Sunrise 6:18 Sunset 5:40	Sunrise 6:17 Sunset 5:41	Sunrise 6:15 Sunset 5:43	Sunrise 6:14 Sunset 5:44	Sunrise 6:12 Sunset 5:45
Scout for tan gypsy moth egg masses; contact a professional to plan management.	Don't confuse tan gypsy moth egg masses for the gray spotted lanternfly egg masses.	Report spotted lanternfly to massnrc.org	Try before buying: are digging tool handles comfortable and long enough?	Check local regulations before burning brush piles.	Vegetable gardens need a minimum of 6 hours of direct sunlight.	Sudden wilting of houseplants may be due to root rot from overwatering.
Sunrise 7:10 Sunset 6:46 Daylight Saving Time begins	Sunrise 7:09 Sunset 6:47 Full Moon	10 Sunrise 7:07 Sunset 6:49	Sunrise 7:05 Sunset 6:50	12 Sunrise 7:03 Sunset 6:51	Avoid pruning maple or birch	Sunrise 7:00 Sunset 6:53
Sudden loss of leaves on house- plants may be due to rapid temperature change.	Thin crowded vegetable seed- lings to promote air circulation.	Skunks will eat bird seed, compost, and garbage.	Significant new root growth can occur in spring; transplant trees and shrubs early.	Store bare-root plants in cool, moist containers until ready to plant.	trees which "bleed" when pruned in late winter/early spring.	When buying summer bulbs, select those with no signs of sprouting.
15 Sunrise 6:58 Sunset 6:54	Sunrise 6:57 Sunset 6:56 Last Quarter Moon Snow mold on lawns is typically	Sunrise 6:55 Sunset 6:57 St. Patrick's Day Start broccoli, cabbage, and	18 Sunrise 6:53 Sunset 6:58 Wait to plant peas; germination	Sunrise 6:51 Sunset 6:59 Vernal Equinox Asparagus is perennial, remain-	20 Sunrise 6:50 Sunset 7:00	Sunrise 6:48 Sunset 7:01 Organic herbicides with acetic
Workable soil will crumble apart after being squeezed.	superficial and will fade as turf growth resumes.	kale indoors; transplant outside in 4-6 weeks.	is slow in cold soil, increasing chance of seed rotting.	ing productive for as long as 50 years.	Start asparagus beds from year- old plants called crowns.	acid will not control deep-root- ed perennial weeds.
Sunrise 6:46 Sunset 7:02	23 Sunrise 6:45 Sunset 7:04	Sunrise 6:43 Sunset 7:05 New Moon	Sunrise 6:41 Sunset 7:06	26 Sunrise 6:39 Sunset 7:07	Sunrise 6:38 Sunset 7:08	Sunrise 6:36 Sunset 7:09 Sunrise 6:36 Sunset 7:09
Spring snows will not hurt early spring flowers.	Transplant shock can last for several years after tree planting.		Cut back ornamental grasses to 2 to 3 inches before new growth resumes.	Mealybugs are common house- plant pests that resemble bits of cotton.	Consider hiring a landscape or lawn care professional for large weed problems.	naturalizes via bulbs and self- seeding.
Dig and grate horseradish roots for a spicy condiment.	Woody-stemmed herbs can stay productive during dry spells.	Perhaps the most important lawn mower component is a sharp blade.			FEBRUARY SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	APRIL SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
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Layering involves roots forming where a stem touches the soil

surface.

Gently brush the tops of tomato seedlings to get sturdy transplants.

For continual harvest, plant lettuce and cilantro every couple

of weeks.

Peaches and nectarines can serve double-duty as both a fruit producing tree and as a landscape specimen. Be sure to plant in full sun and well-drained soil, and watch for borers and a variety of insect pests that should be monitored for and potentially treated for if fruit production, in addition to aesthetic value, is your end goal. Hand thinning fruit to six inches apart will make larger, more tasty peaches. Depending on variety, peach and nectarine flowers can be showy or not-so-showy, so ask before purchasing. Avalon™, pictured here, has a showy pink flower and is a yellow fleshed nectarine. August Rose™ is a white-flesh peach with a showy whitish flower.

Remove slugs collected under pieces of damp newspaper laid

in gardens.

				ach and nectarine flowers can l ust Rose™ is a white-flesh peac		ask before purchasing.
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
MARCH SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MAY SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		Sunrise 6:29 Sunset 7:14 First Quarter Moon Start tomatoes, peppers, and eggplant from seed indoors; germinate at 75 °F.	Sunrise 6:27 Sunset 7:15 Dormant oil may be applied to confirmed magnolia scale.	Sunrise 6:26 Sunset 7:16 Do not spray opening magnolia buds with oil.	Sunrise 6:24 Sunset 7:17 Rain gardens are shallow depressions planted to capture stormwater runoff.
Sunrise 6:22 Sunset 7:18 Palm Sunday Adding organic matter helps	Sunrise 6:20 Sunset 7:19 Ideally, apply crabgrass prevention herbicides when Forsythia	Sunrise 6:19 Sunset 7:20 Full Moon Apply sunscreen before work-	Sunrise 6:17 Sunset 7:21 Prune summer and fall flowering shrubs such as clethra and	Sunrise 6:15 Sunset 7:23 Passover Make cold frames from cement blocks and storm windows to	Sunrise 6:14 Sunset 7:24 Good Friday Do not apply lawn fertilizer until the grass greens up at	Sunrise 6:12 Sunset 7:25 Monitor gypsy moth egg masses for tiny, newly hatching
retain moisture in garden soil.	is in full bloom.	ing in the garden.	panicle hydrangea.	harden off seedlings.	least 50%.	caterpillars.
Sunrise 6:10 Sunset 7:26 Easter Sunday Divide summer and fall blooming perennials.	Refresh landscape mulches, the first line of defense for annual weeds.	Sunrise 6:07 Sunset 7:28 Last Quarter Moon With increasing day length houseplants need water and fertilizer more often.	Sunrise 6:06 Sunset 7:29 Over-fertilizing may damage your houseplants.	Sunrise 6:04 Sunset 7:30 Leach houseplants with clear water if over fertilization occurs.	Most woodland ferns prefer slightly acidic, moist soil and light shade.	Plant certified seed potatoes for reliable growth and disease resistance.
Sunrise 5:59 Sunset 7:34 Plant potato pieces that have at least one "eye," or bud.	Sunrise 5:58 Sunset 7:35 Patriot's Day Use row covers over transplants to protect from cold winds.	Sunrise 5:56 Sunset 7:36 Leave spring bulbs' green foliage to rebuild bulbs' food reserves for next year.	Sunrise 5:55 Sunset 7:37 New Moon Earth Day Japanese maples can benefit from regular "sanitation" pruning to remove dead stems.	Sanitize pruners with rubbing alcohol after working with diseased plants.	Sunrise 5:52 Sunset 7:39 Arbor Day Create a grass-free zone around trees in lawn areas.	Propagate new rosemary plants by layering stems.
26 Sunrise 5:49 Sunset 7:42	Sunrise 5:48 Sunset 7:43	Sunrise 5:46 Sunset 7:44	Sunrise 5:45 Sunset 7:45	Sunrise 5:43 Sunset 7:46 First Quarter Moon	a ces in lawn areas.	Sy layering seems.

Plan and plant a cut flower

garden.





when using power equipment.

catching foliage.

gardening.

A new twist on a flowering favorite. Weigela florida 'Carnaval' flowers start out white moving to pink then red, resulting in all three colors at the same time! Czeckmark Trilogy™ is an improvement on 'Carnaval' with similar white, pink, and red flowers and better flower set. Both cultivars are deer resistant and attract bees and hummingbirds. Weigela is an extremely adaptable shrub with no serious insect or disease problems, though it prefers a well-drained soil and full sun. Annual pruning after flowering is usually needed to maintain a desirable shape. Hardy to zone 5.

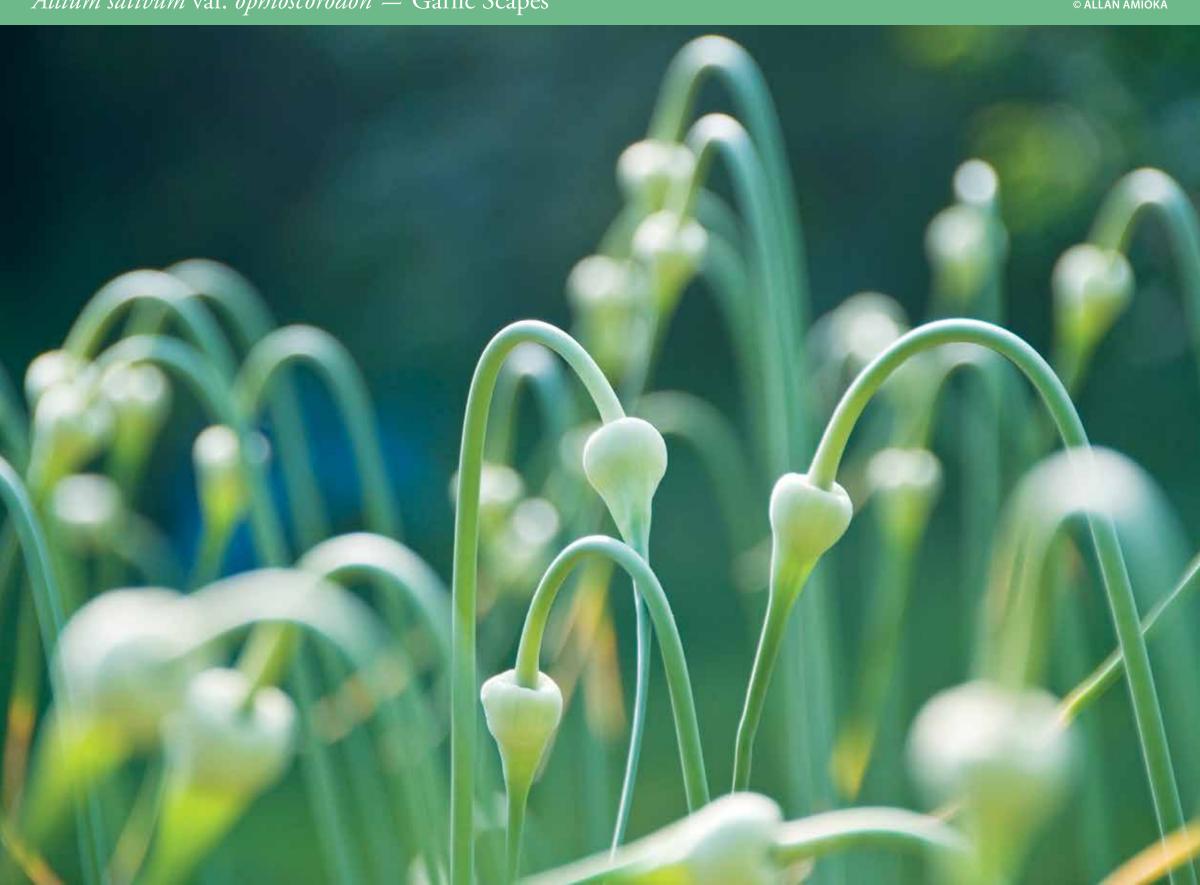
ma	aintain a desirable shape. Harc	dy to zone 5.			J	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
APRIL SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				Sunrise 5:42 Sunset 7:47 Houseplant potting media should hold nutrients, moisture but drain well, to admit oxygen.	Sunrise 5:41 Sunset 7:48 If using grub control containing chlorantraniliprole (Acelepryn), apply in May.
Sunrise 5:39 Sunset 7:49 Sufficiently water in grub control materials according to label directions.	Sunrise 5:38 Sunset 7:51 Harvest no more than a third of the stems on a rhubarb plant.	Sunrise 5:36 Sunset 7:53 Orchard and ornamental plum (<i>Prunus domestica</i>) are vulnerable to black knot canker.	Sunrise 5:36 Sunset 7:53 Plant bare-root strawberry plants in soil containing aged manure or compost.	Sunrise 5:34 Sunset 7:54 Full Moon Control dandelions when they are in bloom.	Sunrise 5:33 Sunset 7:55 Watch for perennial weeds that came in with fall-planted nursery stock.	Sunrise 5:32 Sunset 7:56 Avoid a heavy harvest on asparagus beds less than 3 years old.
Sunrise 5:31 Sunset 7:57 Mother's Day Hang monitoring traps to detect adult emerald ash borers.	Sunrise 5:30 Sunset 7:58 Clematis thrives in rich, slightly alkaline soil.	Sunrise 5:29 Sunset 7:59 Cacti and succulents require less water and fertilizing.	Be alert for garden pests such as flea beetles, root maggots, and cabbage worms.	Sunrise 5:27 Sunset 8:01 Last Quarter Moon Use Btk (Bacillus thuringiensis var. kurstaki) for gypsy moth caterpillar control.	Sunrise 5:26 Sunset 8:02 Btk works best once caterpillars are feeding, but before they are 3/4 inch long.	Stake perennials that tend to flop.
Sunrise 5:24 Sunset 8:04 Thyme makes a good ground cover on dry slopes.	Sow sweet corn and bush beans in the garden.	Sunrise 5:22 Sunset 8:06 Tomatoes should not be planted outside until soil temperatures reach 60 °F.	Avoid stockpilling, Buy the least amount of pesticide needed.	Unless rain is frequent, water garlic regularly now to promote large bulbs.	Sunrise 5:19 Sunset 8:09 New Moon Pull flower stalks from rhubarb to keep plants vigorous.	Pesticide absorption through their skin can harm frogs and toads.
Sunrise 5:18 Sunset 8:11 Eid al-Fitr Prune spring flowering shrubs after they have bloomed. Sunrise 5:14 Sunset 8:17 Wear hearing protection when using power equipment.	Sunrise 5:17 Sunset 8:12 Memorial Day Prepare hanging baskets to showcase flowers and eyecatching foliage	Vine crops such as pole beans are good candidates for vertical gardening	Sunrise 5:16 Sunset 8:14 Grow vegetables vertically to save garden space	Sunrise 5:15 Sunset 8:14 Commonly found in landscapes and lawns, yellow nutsedge has a triangular stem	Sunrise 5:15 Sunset 8:15 First Quarter Moon Transplant squashes, pumpkins, cucumbers, and melons at the 1 to 2 true leaf stage.	Sunrise 5:14 Sunset 8:16 Kousa dogwood (<i>Cornus kousa</i>) is highly resistant to dogwood anthracnose

save garden space.

a triangular stem.

to 2 true leaf stage.

anthracnose.





more compact plants.

growth.

stems.

Garlic scapes are the slightly exotic-looking flower stalks that appear in early summer on hardneck varieties of garlic. Early in their development, just as the scapes begin to curl, they are at their most tender. They have a mild garlic flavor at this stage and are perfect to harvest for culinary uses such as stir-frying, pickling, and making vegetable stock.

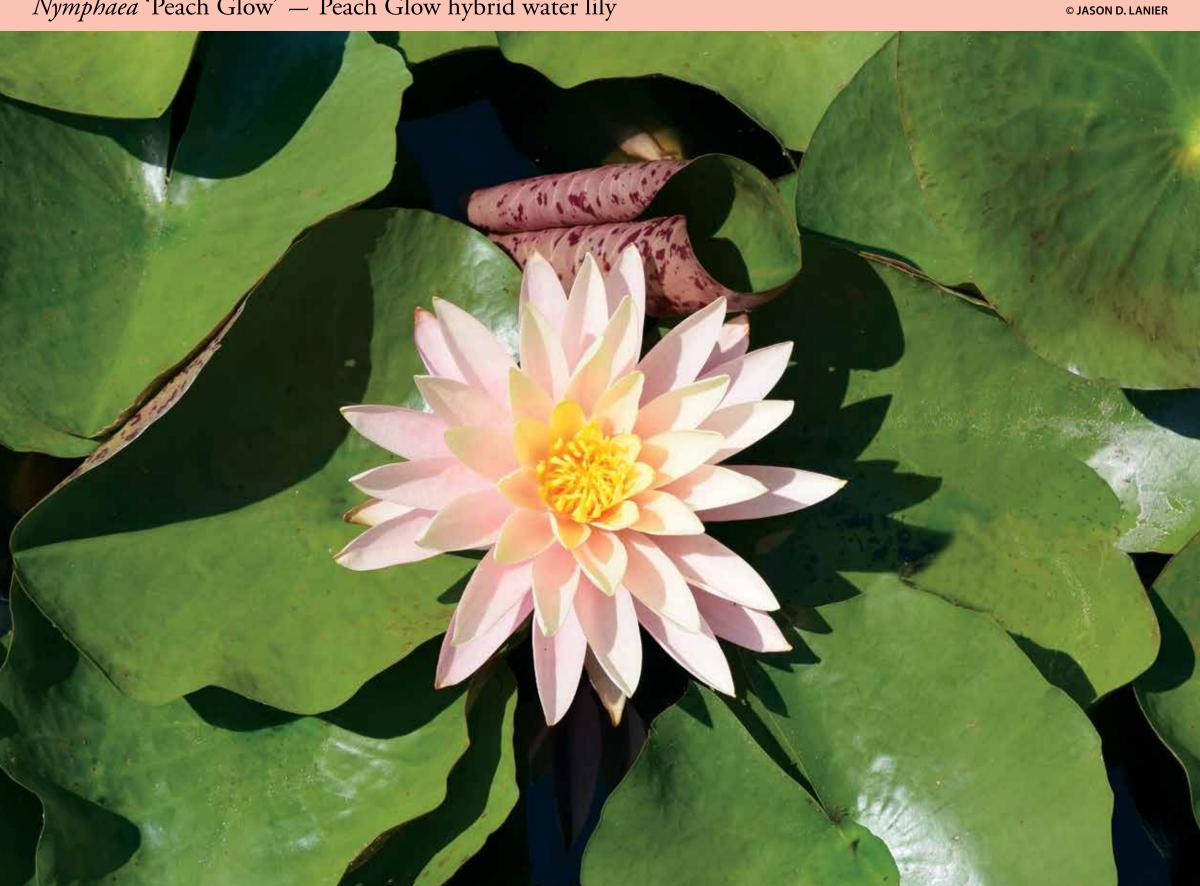
JUNE	Cutting off garlic scapes also when the lower leaves start to	encourages more robust garlic			o not plan to eat the scapes. Ha	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	Sunrise 5:13 Sunset 8:18	Sunrise 5:13 Sunset 8:18	3 Sunrise 5:12 Sunset 8:19	Sunrise 5:12 Sunset 8:20	Sunrise 5:12 Sunset 8:20 Full Moon	Sunrise 5:11 Sunset 8:21
	Leave grass clippings on the lawn to retain nutrients and reduce need for fertilizer.	Plant showy flowers in a variety of shapes, sizes, and colors to attract pollinators.	Grow nasturtium and borage for their edible flowers.	Hill potatoes one to three times to create a broad flat hill 6-8 inches deep.	Take time to inspect house- plants for insects, mites, and diseases.	ldeally, transplant on a cloudy day just before rain.
Sunrise 5:11 Sunset 8:22	Sunrise 5:11 Sunset 8:22	Sunrise 5:11 Sunset 8:23	10 Sunrise 5:10 Sunset 8:23	Sunrise 5:10 Sunset 8:24	12 Sunrise 5:10 Sunset 8:24	Sunrise 5:10 Sunset 8:25 Last Quarter Moon
Stake eggplants and peppers soon after transplanting.	Learn to recognize and report all life stages of the spotted lanternfly.	Spotted lanternfly feeds on many species of native and fruit trees.	Garlic flower stalks are known as scapes.	Harvest garlic scapes when they begin to curl.	To avoid disease issues, don't use overhead sprinklers to irrigate boxwoods.	Use herbicide-free dry grass clippings around the base of roses.
Sunrise 5:10 Sunset 8:25 Flag Day	15 Sunrise 5:10 Sunset 8:26	16 Sunrise 5:10 Sunset 8:26	Sunrise 5:10 Sunset 8:26	18 Sunrise 5:10 Sunset 8:27	19 Sunrise 5:11 Sunset 8:27	20 Sunrise 5:11 Sunset 8:27 Summer Solstice
Cultivate carefully around peas; they have shallow roots.	Move houseplants outside for summer and keep them from direct sunlight.	Handpick and destroy Colorado potato beetles and larvae.	Remove all but 2 or 3 runners on newly planted strawberries.	Side-dress vegetable crops with an all-purpose natural fertilizer.	Plant buckwheat as a cover crop in unused garden areas.	Allow mild moisture stress to occur between waterings for a more resilient lawn.
Sunrise 5:11 Sunset 8:27 New Moon Father's Day	22 Sunrise 5:11 Sunset 8:28	23 Sunrise 5:12 Sunset 8:28	24 Sunset 8:28	25 Sunrise 5:12 Sunset 8:28	26 Sunrise 5:13 Sunset 8:28	27 Sunrise 5:13 Sunset 8:28
To reduce lawn size; use groundcovers, trees, and shrubs.	Hill soil around leeks every few weeks to blanch the stems.	Weed onions, shallots, garlic, and leeks regularly.	Monitor areas underneath bird feeders for new weed problems.	Avoid needless injury to trees and shrubs from mowers and string trimmers.	Scout for Japanese beetle adults.	Use 1 tablespoon baking soda per gallon of water for powdery mildew spray.
Sunrise 5:13 Sunset 8:28 First Quarter Moon Remove suckers on indeterminate tomatoes, leaving 2 to 3	Sunrise 5:14 Sunset 8:28 Trim tall-growing late season perennials such as a ster for more compact plants	Wary mowing direction often to promote upright grass shoot growth			MAY SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	JULY SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31





Leopard plant, or *Ligularia* spp., is a striking perennial for shady, moist locations. Its rosette of attractive, large leaves gives way to thick stalks — some as tall as 6 feet — containing clusters of vivid yellow daisy-like flowers. Bloom times vary from early summer to early fall, depending on species or cultivar. Ligularia is hardy to zone 4 and cultivars abound,

	cluding many selected for folionate in cluding many selected for folionate in cluding many selected for folionate in cluding in cluding many selected for folionate in cluding	—	or their flowers. Slugs, snails, ar	nd Japanese beetles feed on <i>Li</i>	gularia leaves; scout for these p	ests and prune out
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	AUGUST SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		Sunrise 5:15 Sunset 8:27 Asian longhorned beetles emerge in Massachusetts around July 1.	Report suspected Asian longhorned beetles: 508-852-8090.	Sunrise 5:16 Sunset 8:27 If using grub control containing imidacloprid, apply this month.	Sunrise 5:17 Sunset 8:27 Independence Day Take some fresh vegetables to the picnic.
Sunrise 5:17 Sunset 8:26 Full Moon Naturalize with bottlebrush buckeye, a large shrub with showy white blooms.	Sunrise 5:18 Sunset 8:26 Shop the flower garden for table arrangements.	Sunrise 5:18 Sunset 8:26 Wash vases thoroughly with hot, soapy water before using for cut flowers.	Sunrise 5:19 Sunset 8:25 Squash have separate male and female flowers; only female flowers produce fruit.	Sunrise 5:20 Sunset 8:25 Want a pink hydrangea to be blue? Aluminum sulfate can help acidify the soil.	Not all <i>Hydrangea macrophylla</i> can change from pink to blue (or vice versa).	Sunrise 5:21 Sunset 8:24 Plants in containers dry out much faster than plants in the ground.
Sunrise 5:22 Sunset 8:23 Last Quarter Moon To determine if houseplants are watered adequately, check root zone soil.	Harvest pickling cucumbers when they are 2-6 inches long.	Dormancy is a natural adaptation of turfgrasses to survive heat and drought stresses.	Sunrise 5:25 Sunset 8:22 Fertilizing dormant lawns will encourage weeds.	Early blight and septoria leaf spot are the most common tomato leaf diseases.	Sunrise 5:26 Sunset 8:20 Use drip irrigation, mulch, wider spacing, and proper fertilization to reduce disease.	Sunrise 5:27 Sunset 8:19 Leave alone a tomato hornworm with white cocoons on its back.
Sunrise 5:28 Sunset 8:19 The cocoons belong to a parasitic wasp which will kill the	Sunrise 5:29 Sunset 8:18 New Moon Cut sprigs of herbs to make	21 Sunrise 5:30 Sunset 8:17	Sunrise 5:31 Sunset 8:16 Steam or stir-fry young seed-	23 Sunrise 5:32 Sunset 8:15 Even minor levels of herbicide drift can cause problems for	24 Sunrise 5:33 Sunset 8:14 Pick zucchini before it reaches	Stay alert for plant sales at local
Withhold water from onions and potatoes to harden bulbs and tubers for storage.	flavored vinegars. Sunrise 5:36 Sunset 8:11 First Quarter Moon Empty containers of standing water are mosquito breeding grounds.	Harvest some new potatoes. Sunrise 5:37 Sunset 8:10 Kill mosquito larvae with Bti (Bacillus thuringiensis israelensis).	pods of bolted radishes. Sunrise 5:38 Sunset 8:09 Sow seed of mustard greens for a fall harvest.	non-target plants. Sunrise 5:39 Sunset 8:08 Scrub carrots; don't peel them before eating.	the size of a baseball bat. Sunrise 5:40 Sunset 8:07 Eid al-Adha Water sprouts from the base of trees look weedy; remove them with hand pruners.	nurseries and garden centers.



AUGUST

control broadleaf lawn weeds.

weeks before storing.

gentle thumb pressure.

While the Northeastern native *Nymphaea odorata*, or American white water lily, occurs naturally in numerous local lakes and ponds, those with an interest in water gardening are grateful for the extensive modern selection of *Nymphaea* spp. cultivars and hybrids. 'Peach Glow' is a hybrid developed in the 1990s by noted water lily breeder and enthusiast Dr. Robert Kirk Strawn, via a cross of *Nymphaea* 'Rembrandt' and *Nymphaea mexicana*. This variety gives rise to numerous large, fragrant flowers that range in hue from white, to peach, to orange. It is suitable for water depths ranging from 6 to 36 inches, and has a typical spread of 3 to 5 feet, making it best suited for medium to large-sized ponds. 'Peach Glow' performs and flowers best in full sun, and is hardy to zone 4.

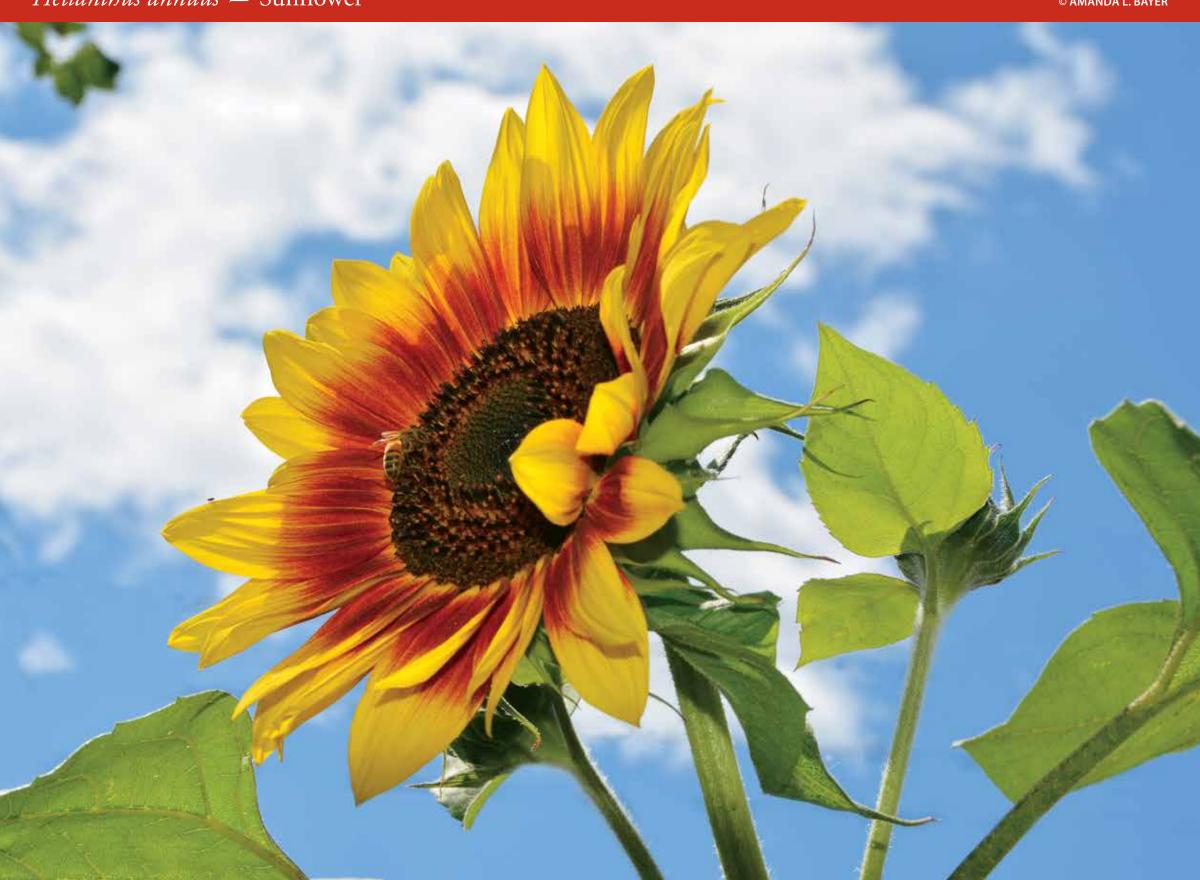
nuuu		•	s. 'Peach Glow' performs and fl			cad of 5 to 5 feet, making
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
JULY SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	SEPTEMBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30					Sunrise 5:41 Sunset 8:06 The twospotted spider mite likes hot, dry conditions. Preserve predatory mites.
Apply water directly to the root area of trees and shrubs, not the leaves.	Sunrise 5:43 Sunset 8:03 Full Moon Use row cover or Bt (Bacillus thuringiensis) for controlling caterpillars on cole crops.	Sunrise 5:44 Sunset 8:02 Chinch bug infested lawns can look drought stressed but don't respond to watering.	Sunrise 5:45 Sunset 8:01 Now is the time to plant crops like lettuce, beets, and carrots for fall harvest.	Sunrise 5:46 Sunset 8:00 UMass has a Plant Problems Diagnostic Lab: test, don't guess.	Sunrise 5:47 Sunset 7:58 Deadheading can encourage more blooms and helps keep plants tidy.	Sunrise 5:48 Sunset 7:57 Dig, divide, and move daylilies after they've finished blooming.
Sunrise 5:49 Sunset 7:56 Visit local public gardens to get	Sunrise 5:50 Sunset 7:54 When transporting houseplants	Sunrise 5:51 Sunset 7:53 Last Quarter Moon To dry flowers for indoor ar-	Sunrise 5:52 Sunset 7:52 Shallow-rooted trees like	Sunrise 5:53 Sunset 7:50 Do not handle hairy, white and	Sunrise 5:54 Sunset 7:49 Allow grapes to fully ripen on	Sunrise 5:55 Sunset 7:47 Overwatering melons as they
ideas for landscaping with new or underused plants.	in summer avoid leaving them in a closed car.	rangements, cut before they reach full bloom.	hemlock, birch, and fir are more prone to drought stress.	black hickory tussock moth caterpillars.	the vine. Test for ripeness by tasting.	near maturity may reduce sweetness.
16 Sunrise 5:56 Sunset 7:46	Sunrise 5:57 Sunset 7:44	18 Sunrise 5:58 Sunset 7:43 New Moon	19 Sunrise 5:59 Sunset 7:41	20 Sunrise 6:00 Sunset 7:40	21 Sunrise 6:01 Sunset 7:38	22 Sunrise 6:03 Sunset 7:37
The best time to control Japanese knotweed is when it is in flower.	Blanch cauliflower by tying leaves together above the head 1-2 weeks before harvest.	Harvest and use split tomatoes immediately.	Repot houseplants if needed several weeks before bringing them inside.	Repot houseplants in pots no more than 2 inches larger in diameter. than current pots.	White varieties of onions don't store as well as red or yellow varieties.	Use crop preservation methods for surplus harvest: drying, freezing, canning.
Dig potatoes after tops have died down. Sunrise 6:04 Sunset 7:35 Sunrise 6:04 Sunset 7:35	Sunrise 6:05 Sunset 7:33 Keep harvested tomatoes at room temperature, not in the fridge. Sunrise 6:12 Sunrise 6:12 Sunrise 6:12 Sunrise 6:12 Sunrise 7:22	Cantaloupe is ripe when fruit	20	Remove blossoms from tomateur to program a pointing fruit	When planting grasses, select	Premature color change of tree
Fall is the best time to	in a dry, airy spot for 2 to 3 weeks before storing	separates from the vine with	Make notes on yields of this year's vegetable varieties	toes to encourage existing fruit	species and varieties well-suited to the site and use	leaves is often a sign of environ- mental stress

year's vegetable varieties.

to ripen.

to the site and use.

mental stress.



SEPTEMBER

Apply deer repellents to valuable trees and shrubs in the

landscape.

Sunflowers are arguably one of the most easily recognized flowers, and they are bred and grown for both their ornamental value as well as edible seeds and oil. Traditional flowers have bright yellow ray flowers surrounding the brown disk flowers in the center. Cultivars offer ray flowers in shades of red, yellow, and orange and disk flowers in browns, reds, and yellows. Mature sizes can range from tiny dwarfs to enormous giant versions. Sunflowers are a favorite of pollinators and offer both nectar and pollen. Pollen-less varieties are also available that are less messy as cut flowers.

OLPIL		versions. Sunflowers are a favor flowers.	orite of pollinators and offer bo	th nectar and pollen. Pollen-le	ss varieties are also available th	at are less messy as cut
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
AUGUST SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	OCTOBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Sunrise 6:13 Sunset 7:20 To avoid a defensive stinging response, don't slap at yellow-	Sunrise 6:14 Sunset 7:19 Full Moon Chopping up cornstalks will	Sunrise 6:15 Sunset 7:17 Sow oat or crimson clover cover crop to recycle nutrients and	Sunrise 6:16 Sunset 7:15 Sort through recently harvested shallots and garlic for replant-	Sunrise 6:17 Sunset 7:13 Apple scab is the most com-
Sunrise 6:18 Sunset 7:12	Sunrise 6:19 Sunset 7:10 Labor Day	Jackets. Sunrise 6:20 Sunset 7:08	hasten their breakdown. Sunrise 6:21 Sunset 7:06	build organic matter. Sunrise 6:22 Sunset 7:05 Last Quarter Moon	ing stock. Sunrise 6:24 Sunset 7:03	mon disease on crabapple. Sunrise 6:25 Sunset 7:01
Now is the most important time to fertilize the lawn.	Store potatoes in a dark place at 35 to 40 °F.	Ensure houseplants are pest- free before moving them back indoors.	English ivy is a favorite food of spider mites.	One male winterberry is needed to pollinate 6 to 10 female plants.	Leave some peppers on plants to turn red for mild, sweet flavor.	Now is a good time to control poison ivy.
The oil in poison ivy is still active in dead stems and roots.	Cool season mites (e.g. spruce spider mite) may remain active into October.	Spinach seeded now can overwinter with row cover protection.	Use bulbs to create a succession of blooms from late winter to early summer.	Sunrise 6:30 Sunset 6:52 New Moon Harvest mature green tomatoes before frost.	Ripen green tomatoes in a paper bag with an apple or banana.	Sunrise 6:32 Sunset 6:49 Rosh Hashana Repair entry points to deter fall home-invading insects.
During the first fall after transplanting, conifers often shed a	Sunrise 6:34 Sunset 6:45 Fall is a good time for corrective tree pruning; look for rubbing broaders and grades.	Sunrise 6:35 Sunset 6:44 Autumnal Equinox Do not save seed from hybrid	Sunrise 6:36 Sunset 6:42 First Quarter Moon Plant astilbes in low, damp	Sunrise 6:37 Sunset 6:40 Ripe apples snap off easily when gently lifted with the	Sunrise 6:38 Sunset 6:38 Turfgrass planting projects are best completed by the end of	26 Sunrise 6:39 Sunset 6:37 Donate excess produce to local food partities
lot of older needles. Sunrise 6:41 Sunset 6:35	branches and cracks. Sunrise 6:42 Sunset 6:33 Yom Kippur	plants. Sunrise 6:43 Sunset 6:31	30 Sunrise 6:44 Sunset 6:30	palm of the hand.	September.	food pantries.

Mix a batch of potting soil for

winter use.

Break up mushrooms and puffballs on the lawn with a rake.

Blueberry plants thrive in acid

soil.



OCTOBER 1

Use chicken wire to protect newly planted spring bulbs

from rodents.

Inventory leftover seed, fertilizer, and pesticides prior to

winter storage.

Cut down and discard fernlike asparagus shoots after a killing

frost.

Commonly called American cranberrybush because of its cranberry-like clusters of bright red drupes, *Viburnum opulus* var. *americanum* is a North American native shrub with three seasons of interest. Many white, lacecap flower clusters cover the plant in spring; dark green, maple-like leaves provide interest in the summer; and the bright red berry-like drupes ripen in late summer. Berries persist into fall and the leaves develop shades of burgundy. Unfortunately, American cranberrybush is highly susceptible to Viburnum leaf beetle, with plants in the shade experiencing the most damage.

Jack O'Lanterns were originally carved from turnips and potatoes by the Irish.

Sink a trash can into the ground

for a mini root cellar.

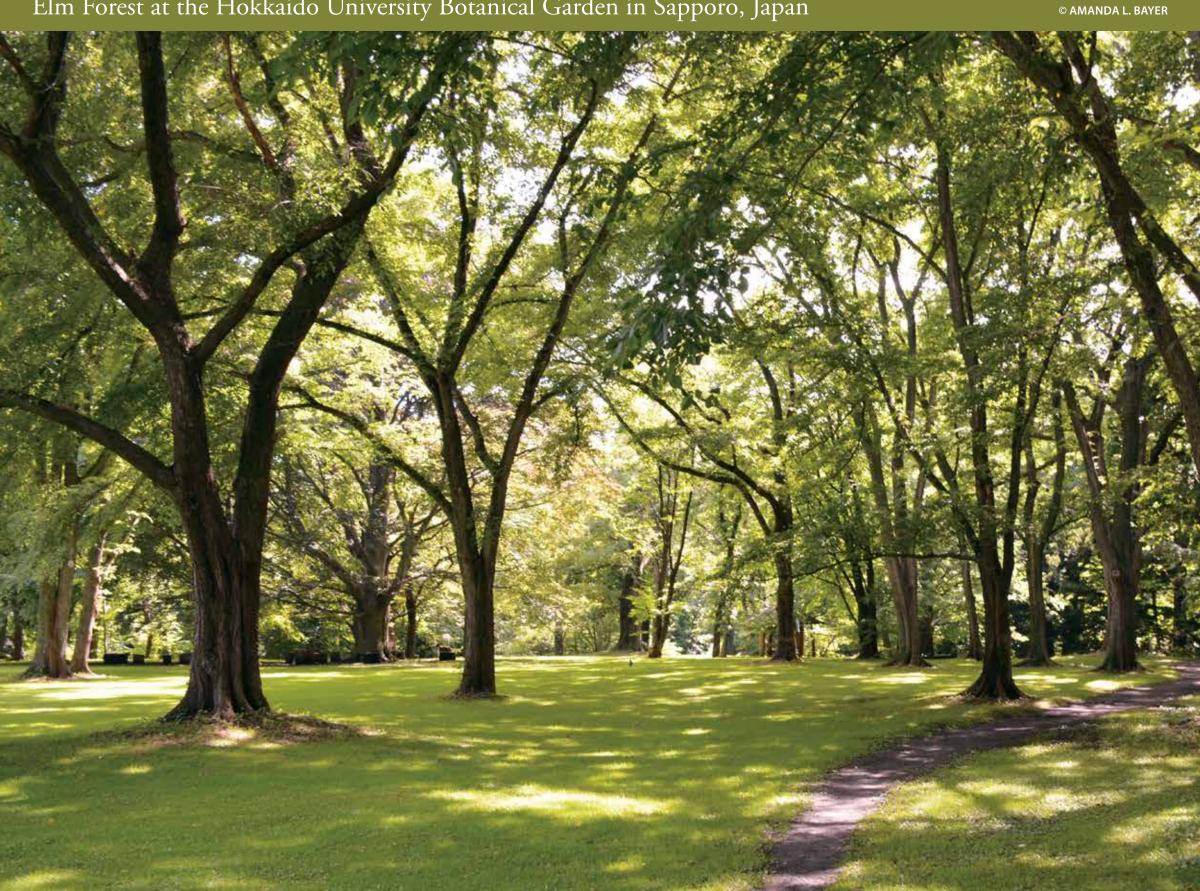
וטוטט			ke drupes ripen in late summer. ptible to Viburnum leaf beetle,	. Berries persist into fall and the with plants in the shade exper		gundy. Unfortunately,
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SEPTEMBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	NOVEMBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			Sunrise 6:45 Sunset 6:28 Full Moon Oriental bittersweet is dioecious: male and female flowers are on separate plants.	Sunrise 6:46 Sunset 6:26 Do not use the stems and berries of invasive Oriental bittersweet for wreaths.	Sunrise 6:47 Sunset 6:24 During fall clean-up, leave messy refuge areas for overwintering pollinators and
Sunrise 6:48 Sunset 6:23	Sunrise 6:49 Sunset 6:21	Sunrise 6:50 Sunset 6:19	Sunrise 6:51 Sunset 6:18	Sunrise 6:53 Sunset 6:16	Sunrise 6:54 Sunset 6:14 Last Quarter Moon	Sunrise 6:55 Sunset 6:13
…beneficials. But note that refuge areas can also help over- wintering pest insects.	Mousetraps baited with apple slices can be used to capture meadow voles.	Harvest pumpkins when they are completely orange.	Fresh dill will keep in the freezer for 6 months.	Winter rye can handle tempera- tures as low as -30 °F.	Regularly prune suckers from crabapples and apples as they develop.	Divide spring blooming peren- nials such as astilbe and iris in fall.
Sunrise 6:56 Sunset 6:11	Sunrise 6:57 Sunset 6:09 Columbus Day	13 Sunrise 6:58 Sunset 6:08	Sunrise 6:59 Sunset 6:06	15 Sunset 7:01 Sunset 6:05	16 Sunrise 7:02 Sunset 6:03	Sunrise 7:03 Sunset 6:01
Construct paths wide enough for the garden cart.	Lime can be applied to lawns any time that the soil is not frozen.	Get a soil test with a pH mea- surement to determine how much lime to apply.	Correcting soil pH in the lawn can discourage some weed species.	A woolly bear's color depends on how long it's been feeding, its age, and species.	Plant peonies with "eyes" no deeper than 1 to 2 inches.	Tree leaves breakdown into rich compost mainly free from weed seeds.
Sunrise 7:04 Sunset 6:00 New Moon	19 Sunrise 7:05 Sunset 5:58	20 Sunrise 7:06 Sunset 5:57	Sunrise 7:08 Sunset 5:55	Sunrise 7:09 Sunset 5:54 Avoid pruning evergreen	Sunrise 7:10 Sunset 5:52 First Quarter Moon Dig and store dahlias, gladi-	Sunrise 7:11 Sunset 5:51 Protect trees from grade
Clean and store the humming- bird feeder.	Apply a layer of well-rotted manure over rhubarb beds.	Start new amaryllis bulbs for holiday blooms.	the biggest and healthiest cloves.	shrubs as any new growth may not harden off by winter.	oli, cannas, and other tender "bulbs."	changes resulting from yard construction projects.
25 Sunrise 7:12 Sunset 5:49	26 Sunrise 7:14 Sunset 5:48	27 Sunrise 7:15 Sunset 5:47	28 Sunrise 7:16 Sunset 5:45	29 Sunrise 7:17 Sunset 5:44	30 Sunrise 7:19 Sunset 5:43	31 Sunrise 7:20 Sunset 5:41 O Full Moon Halloween

Store firewood outdoors, away

from exterior walls of the house.

Lichens break down rock into

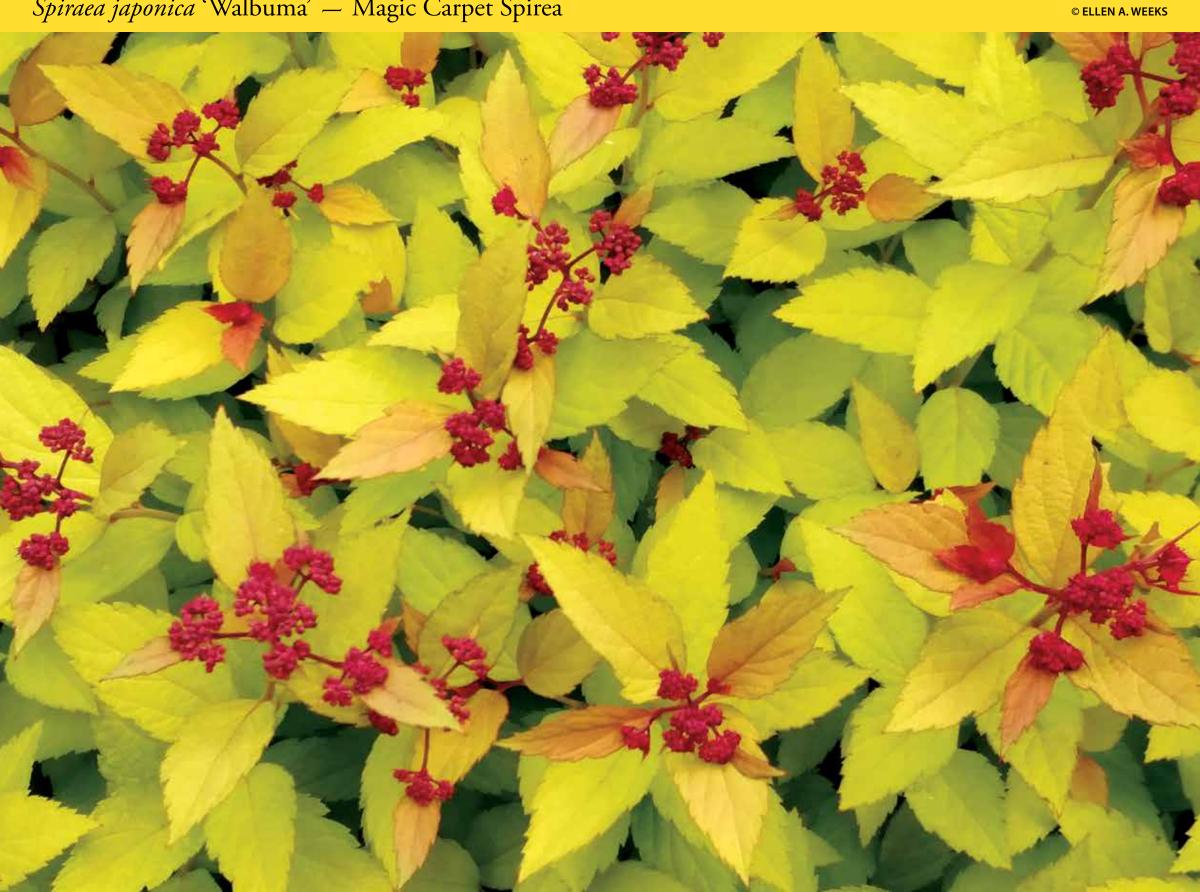
soil.



NOVEMBER

Did you know that the first Japanese elm brought to America is on the UMass Amherst campus, and is at present the oldest and largest specimen in the country? The tree was brought back from Sapporo Agricultural College (now Hokkaido University) in Sapporo, Japan by Prof. William Penn Brooks in 1890. Sapporo Agricultural College was founded by William Smith Clark, the third president of Massachusetts Agricultural College (now UMass Amherst). Japanese elm (*Ulmus davidiana* var. *japonica*) is an elm species highly resistant to Dutch Elm disease and is used to develop resistant elm hybrids. Cultivars such as 'Morton' (Accolade) are also gaining popularity.

MUYEI			<i>Ulmus davidiana</i> var. japonica) i uch as 'Morton' (Accolade) are a		nt to Dutch Elm disease and is	used to develop
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Sunrise 6:21 Sunset 4:40 Daylight Saving Time ends	Sunrise 6:22 Sunset 4:39	Sunrise 6:23 Sunset 4:38	Sunrise 6:25 Sunset 4:36	Sunrise 6:26 Sunset 4:35	Sunrise 6:27 Sunset 4:34	Sunrise 6:28 Sunset 4:33
Purchase local firewood to reduce the risk of spreading invasive wood-boring insects.	Don't prune <i>Hydrangea macro-</i> phylla in fall; buds of many culti- vars form on "old" wood.	Check the overflow lines on rain barrels to remove debris.	Winter cover crops in the veg- etable garden will deter winter weeds.	Remove debris from water gardens.	Never top (cut off the central stem) a tree.	Hire a certified arborist to re- move high branches in trees.
Sunrise 6:30 Sunset 4:32 Last Quarter Moon Use wood chippers carefully.	Sunrise 6:31 Sunset 4:31 Don't apply wood chips or sawdust directly to the garden.	Sunrise 6:32 Sunset 4:30 Compost wood waste with grass clippings or manure for about a year before using.	Sunrise 6:33 Sunset 4:29 Veterans Day Cyclamen do best in cool bright locations indoors.	Place cyclamen in full sunlight and keep night temperature at 50-60 °F.	Start paperwhite narcissus now for fragrant blooms in 4 to 5 weeks.	Sunrise 6:37 Sunset 4:26 Grind dried herbs with a coffee grinder.
Sunrise 6:38 Sunset 4:25 New Moon After the last mowing of the	Sunrise 6:40 Sunset 4:24 Set up windbreaks of burlap or	Sunrise 6:41 Sunset 4:23 Are flower garden labels legible	Sunrise 6:42 Sunset 4:23 Keep houseplants out of direct	19 Sunrise 6:43 Sunset 4:22	Sunrise 6:45 Sunset 4:21 Frosted or frozen lawns should	Sunrise 6:46 Sunset 4:20 First Quarter Moon Group yellow-twigged dog-
season, winterize the lawn mower. Sunrise 6:47 Sunset 4:20 Mulch garlic and strawberries with 6 to 8 inches of straw or leaves just before ground	snow fence around evergreen shrubs. Sunrise 6:48 Sunset 4:19 Store beets, turnips, and carrots in the ground by mulching	and firmly anchored in the ground? Sunrise 6:49 Sunset 4:19 Water on the leaves of African	sunlight after spraying with insecticidal soap. Sunrise 6:50 Sunset 4:18 Store power equipment manuals in a 3-ring binder for easy	Mushrooms growing on trees is a sign of internal decay. Sunrise 6:52 Sunset 4:18 Thanksgiving Day Use dried summer sage in	be off limits to foot and vehicle traffic. Sunrise 6:53 Sunset 4:17 Male winter moths may fly in eastern MA around	wood with dwarf conifers for a beautiful winter landscape. Sunrise 6:54 Sunset 4:17 Mesh bags from oranges are great for storing onions and
freezes. Sunrise 6:55 Sunset 4:16 Onions and garlic need good air circulation in storage.	heavily (10 to 12 inches). Sunrise 6:56 Sunset 4:16 Full Moon Clearly mark driveways and paths to curb lawn damage from snow removal equipment.	violets can cause leaf spots.	reference.	turkey stuffing.	Thanksgiving. OCTOBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	garlic. DECEMBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31



2020

DECEMBER

Misting houseplants to increase humidity doesn't work well and

may promote diseases.

Groundcovers can reduce weeds in ornamental land-

scapes beds.

Bookmark plant source websites or save catalogs for

reference.

Using splashes of the yellow-green color known as chartreuse can be another way to brighten and enliven your garden in addition to (or in place of) flowers. It pairs well with almost every color, particularly blues and purples, and acts as a neutral. Using spots of chartreuse will draw attention, as well as make smaller spaces feel more spacious. For shade gardens, including plants with chartreuse foliage adds the illusion of light in a dark area. Magic Carpet Spirea is a neat, compact, mounded shrub with clusters of small pink flowers that contrast nicely with the bright gold foliage. An added bonus is the vibrant red of the new leaves in the spring and its russet red foliage in the fall. Spirea requires full sun and is hardy to zone 4.

Review this year's pest and weed management efforts and make a plan for 2021.

DLULI				•	ast nicely with the bright gold f uires full sun and is hardy to zo	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOVEMBER SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JANUARY 2021 SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Sunrise 6:57 Sunset 4:16 Lawn grasses need a gradual temperature decline in late fall	Sunrise 6:58 Sunset 4:15 Don't waste the autumn harvest. Stored produce loses	Sunrise 6:59 Sunset 4:15 No plant is deer proof but American holly (<i>llex opaca</i>) is	Sunrise 7:00 Sunset 4:15 Bear in mind landscape proportions: huge trees will dwarf a	Sunrise 7:01 Sunset 4:15 Microgreens or sprouts are an
Sunrise 7:02 Sunset 4:15	Sunrise 7:03 Sunset 4:15 Last Quarter Moon	Sunrise 7:04 Sunset 4:15	9 Sunrise 7:05 Sunset 4:15	rarely damaged by deer. Sunrise 7:06 Sunset 4:15	small house. Sunrise 7:06 Sunset 4:15 Hanukkah	easy kitchen counter crop. Sunrise 7:07 Sunset 4:15
Do not expect houseplants to make lush growth during winter months.	Clip evergreen shoots selectively for seasonal decorations.	Keep cut flowers cool; they'll last longer.	Dig the hole for a live Christmas tree before the ground freezes.	Store soil from the hole in a warm location for later planting.	Be sure to cover the hole to prevent injury.	The Aztecs used Poinsettia bracts to make a red dye for cloth.
Sunrise 7:08 Sunset 4:15 Calcium or magnesium chloride deicers are less harmful to	pensylvanica) is a salt tolerant	Sunrise 7:09 Sunset 4:16	Sunrise 7:10 Sunset 4:16 The leaf sap of aloe is a handy first aid treatment for minor	Sunrise 7:11 Sunset 4:16 Store kitchen scraps for the	Sunrise 7:11 Sunset 4:17 Homegrown snacks: popcorn	Next year, grow popcorn with a fun seed color: pink, red, black,
lawns than sodium chloride. Sunrise 7:13 Sunset 4:18	Sunrise 7:13 Sunset 4:18 First Quarter Moon Winter Solstice	increases property value. Sunrise 7:14 Sunset 4:19	burns. Sunrise 7:14 Sunset 4:19	compost pile in the freezer. Sunrise 7:14 Sunset 4:20	and kale chips! Sunrise 7:15 Sunset 4:21 Christmas Day	or blue. Sunrise 7:15 Sunset 4:21 Kwanzaa
Low light and temperatures may reduce African violet flowering.	Multi-level plant stands accom- modate many houseplants in a small space.	Protect the trunks of young trees from rodent damage.	Build a rack to hang garden tools.	Spread pinecones with peanut butter and roll in sunflower seeds for birds.	Small-leaved plants like azalea and beech are good choices for bonsai.	Bonsai root-to-shoot ratio should be the same as for a full- sized plant.
27 Sunrise 7:15 Sunset 4:22	28 Sunrise 7:16 Sunset 4:23	Sunrise 7:16 Sunset 4:23 O Full Moon	30 Sunrise 7:16 Sunset 4:24	31 Sunrise 7:16 Sunset 4:25 New Year's Eve		

Rhododendron leaves curl in

the cold.

