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the Cochise County Master Gardener

NEWSLETTER

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FLAX (genus—*Linum*)

Barbara Kishbaugh
Staff Writer

Linum grandiflorum 'Rubran', scarlet flax, planted as an annual produces a light delicate quality much like a cosmos. This flax grows quite tall, 1' to 1½' and is perfect for the back border of your flower garden. The blossoms are striking in color, formidable against the fern-like foliage of the leaves. The five flower petals fold together, opening fully as the earth comes around to meet the sun. The flowers are short-lived, with blossoms dropping each night, but new flowers appear daily all summer producing abundant color. Flax can be broadcast about to create wildflower areas sure to enchant the appreciative sower.

Linum usitatissimum, common flax or commercial flax, is the fiber-producing plant used in the making of linen and sailcloth and seeds which produce linseed oil.

Linum flavum, or golden flax, is a perennial and appears to be more dense than either scarlet or blue flax.

Linum perenne, blue flax, is also a perennial and has the same pleasant aspect as scarlet flax and is a good companion of other flowers.

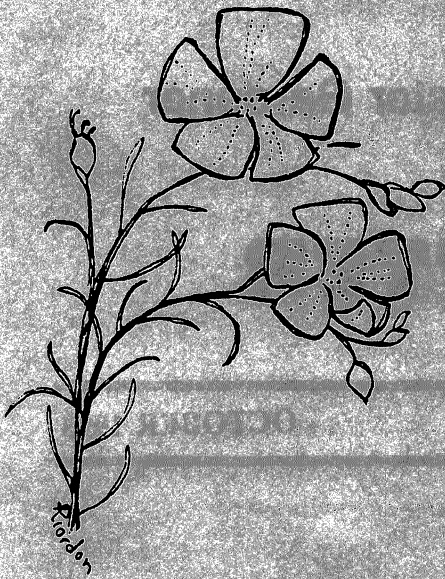
The small, flat seeds of flax may be planted in the fall or spring and requires only a light covering of soil. If planted in the fall, the flowers will give an early spring showing. Flax requires sun and good drainage but is tolerant of low water conditions which make it seem like a natural for our high desert. Order seeds through seed catalogs. Consider placing scarlet or blue flax against an open wooden fence. It gives definition without a feeling of solid mass.

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L. grandiflorum 'Rubran'



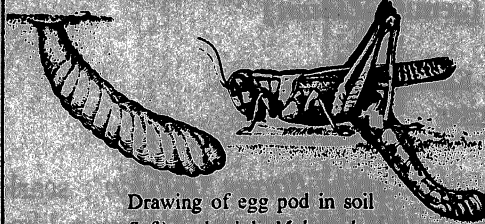
THE AGENT'S CORNER

Robert E. Call
Horticulture Agent

QUESTION: I have a lot of grasshoppers in my yard. They are eating everything! How can I control them?

ANSWER: In Cochise County we have several species of grasshoppers, some are very colorful and grow quite large. Grasshoppers emerge in the spring from eggs laid last year. Grasshoppers hatch as miniature adults and molt 5 or 6 times during a period of 40 to 60 days. The young feed in the immediate vicinity and then move on to "greener pastures" as food sources become depleted. Adults begin laying eggs shortly after they mature. Eggs are laid in the ground in pods that contain 15 to 75 eggs. A female can lay a total of 200 to 400 eggs during several weeks. Hatching rate depends on soil temperature and moisture and may continue for 3 months. Some species have more

than one generation per year. Grasshoppers feed on grasses and other plants. When populations increase they will feed on nearly any kind of vegetation including bark and leaves of deciduous trees. Adults continue to feed until cold weather kills them. Natural weather cycles cause fluctuations in populations. Mild winters and warm, dry springs increase hopper populations. Cold, wet weather cause slow development and favor grasshopper diseases. Cool summers and early falls delay maturity and decrease the egg laying period.



Drawing of egg pod in soil (left) and adult *Melanoplus bivittatus* (Say) in act of ovipositing (right). Walton, USDA

Control: If desert surrounds your property it can become very difficult to control grasshoppers because of large populations that can become migratory. Disturbing egg pods in the soil by tilling or plowing will expose egg pods, decreasing their viability. Young small hoppers are easier to control than adults. "Picking and squashing" is a time consuming but effective control measure. Several chemical insecticides will control grasshoppers as well as the abrasive nature of diatomaceous earth. *Nosema locustae* is a naturally occurring disease organism of grasshoppers. Bran and sweeteners are added to *Nosema* to attract the hoppers. Grasshoppers are cannibalistic and infection spreads as healthy hoppers eat sick ones. Also the females pass this disease

on to future generations through laid eggs. *Nosema* will take longer to destroy grasshopper populations than conventional pesticides. This is a living organism and must be stored in the refrigerator and has a limited shelf life. Contact your local nursery or garden catalog for current recommendations. **Always read the label of pesticides and use them accordingly.**

Source: *Insect Pests of Farm, Garden, and Orchard*. 1979. R.H. Davidson and W.F. Lyon. pp. 117-119

UPCOMING EVENTS

October 9 (10 - 4) & 10 (11 - 2): Desert Survivors Native Plant Sale, 1020 W. 22nd Street, Tucson

October 23 & 24 (10 - 5): Tucson Botanical Gardens/Native Seed Search *Fiesta De Los Chiles*, 2150 N. Alvernon, Tucson (fee)

October 23 & 24 (9 - 5): Desert Botanical Garden Fall Landscape Plant Sale, 1201 N. Galvin Pkwy, Phoenix (fee)

October 30 - Nov. 1 (8 - 5): Boyce Thompson Southwestern Arboretum Annual Fall Sale, Superior, AZ (fee)

November 6 (2 - 9) & 7 (noon - 5): The Men's Garden Club of Tucson Fall Desert Harvest Show, Park Mall, Tucson

February 17 & 18, 1994: High on the Desert Gardening and Landscape Conference, Sierra Vista—watch for details!

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SOLAR GREENHOUSES- PART IV: COOL WEATHER GARDENING IN GREEN- HOUSES

Cathé Fish

Benefits of a passive solar greenhouse are evident in cooler months: a warm place to get out of the cold and wind and still be able to garden. What is grown depends on the average night temperature of the greenhouse. Tender crops such as tomato, pepper, and eggplant set fruit best if the night temperature is above 55 degrees.

Many of us can't afford to heat a greenhouse at night. Fortunately, many crops are productive in 'cool' greenhouse, including broccoli, Brussels sprouts, cabbage, cauliflower, chives, collards, kale, leeks, lettuce, mustard, peas, radishes, spinach, and Swiss chard.

The advantage of growing in a greenhouse is a constant supply of fresh greens and cherry tomatoes. Eating a salad of your own fresh lettuce during the middle of winter is a treat you must grow yourself to enjoy. Many of the tastiest varieties of lettuce and gourmet greens are too perishable to be seen in a grocery store.

Fall and winter lettuces, spe-

cially bred to cope with shorter days and cold, include Arctic King, North Pole, Winter Density, and Winter Marvel. Special greenhouse lettuces include Arkel and Magnet. These varieties are available from *The Cook's Garden*, Londonderry, Vermont 05148-0535. They also offer 13 varieties of loose leaf 'cutting lettuce' such as the intensely red Valeria which resprouts vigorously from a cut stem after harvest.

Another catalog, *Vermont Bean Seed Co*, Garden Lane, Fair Haven, Vermont 05743, has over 30 types of gourmet winter greens, including many quick growing Asian greens. These include ornamental and tasty little cabbages with names like Tatsoi, Tyfon, and Tsoi-Sim. This company also offers a catalog called *Totally Tomatoes* with 250 varieties of tomato.

Mesclun is a French term for a 'mixture' of young lettuces, greens, and herbs. All over Europe bags of mixed leaves are offered in open markets. Many greens used for mesclun have been in U.S. gardens since the 1600's. Examples include chicory, rocket, cress, chervil, and dandelion.

Mache is a European green, cultivated for its mild, nutty flavor. Unlike most lettuce, it can be harvested even after the plants bolt.

Arugola, also called rocket, is a popular salad green in Europe. It has a unique flavor that is not

spicy or peppery. One of the easiest salad crops to grow, arugola adapts easily to indoor gardening. The leaves are harvested when 6 inches tall. Radicchio is an Italian heading chicory. Europeans value the bitter side of their taste more than we do. With the recent development of milder varieties, demand is growing for these gourmet salad plants. In the U.S. radicchio refers to the red varieties of perennial chicory. They resprout and are ready for another harvest 6 weeks later.

Seed greens several times a month for a constant supply and fertilize weekly. I use compost tea. Leaf lettuce needs plenty of water. Water for head lettuce is most critical as the inner head begins to swell. Even one day of dry soil can make the leaves tough and bitter tasting.

Harvest lettuce heads by cutting below the crown. Be sure to harvest before there is any elongation of the central crown of the plant. Once bolting begins, quality goes downhill. Mesclun and cutting lettuces are harvested when about six inches tall, with scissors, cutting the plants about one half inch above the ground. They then resprout and grown again.

Don't have a greenhouse? All of the 'cool' weather plants described above will also survive our local winter with the help of a cold frame or tunnel. I've also grown greens in my winter garden with the help of a floating row cover.

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October Reminders

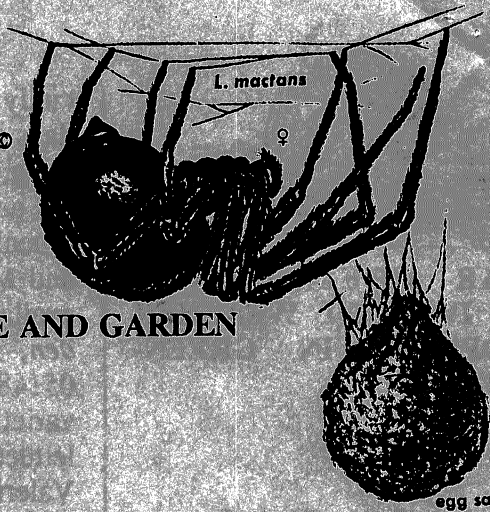
- Be ready for first frost
- Thin the seedlings
- Overseed lawns
- Plant spring bulbs
- Don't let weeds go to seed
- Divide perennials

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WHAT'S BUGGING YOU?®

by T.J. Martin

BLACK WIDOW SPIDERS IN THE HOME AND GARDEN



COMMON NAME: Black Widow Spider

SCIENTIFIC NAME: Latrodectus species.

DESCRIPTION: ADULTS - Female: glossy black (or sometimes brown) with the characteristic red "hour-glass" shape on the underside of her abdomen. She can reach a half inch long with long, thin legs up to two times body length. The abdomen is large and bulbous, rather teardrop in shape when viewed from the side and ending with a pointed "spinneret". She will usually be found hanging upside down in her web with the red hourglass clearly visible. The female will seldom leave the web.

Male: Somewhat smaller than the female, he has a slightly more elongate body shape and different coloration. He may be black or dark brown with small red dots on the sides of the abdomen or he may be a mottled brown/gray/orange color. Because of the differences, he is often not recognized at all. At maturity he will leave his web in search of a mate.

EGGS: The eggs can be found in a tan sac in the web of the female. She may produce up to nine egg sacs during the year and each sac may contain up to 500 eggs.

Young: The young Black Widow Spiders are like miniature adults with mottled brown/gray/white coloration and the characteristic long legs and bulbous abdomen shape. They may appear to be spotted or striped and will get darker in color as they mature and molt.

LIFE CYCLE: The female lays her eggs in a web sac attached to her web. She can be VERY AGGRESSIVE in her defense of her eggs! After the spiderlings hatch, those that survive set up housekeeping in their own webs. Outside, the young are often dispersed by the wind, while inside large numbers of them may be found in the same area. As they mature and grow larger, the mottled coloration will darken, finally becoming glossy black or brown and acquiring the characteristic red markings of the adult. Final maturity usually happens during the summer causing the "sudden appearance" of Black Widows from a up- to-now unnoticed population of mottled immature spiders.

TIME OF YEAR: Black Widow Spiders are with us the year 'round. Populations will peak during the warm months which is when last year's broods will mature and new eggs will be laid and hatched. Due to our mild winters, some will even survive the "cold" season outside but they will usually seek more protected places to spin their webs and may even try to move indoors.

WHAT TO LOOK FOR: Look for webs that look like they were spun by a very drunk spider! The Black Widow typically spins a very messy-looking web that bears little resemblance to the stereotypical neat and symmetrical web of most spiders. The web will be very strong and can be rather large in proportion to the arachnid that created it. The spider itself may be easily seen hanging upside down from the web, or more likely, s/he may be hiding at the outside edge of the webbing or even in a dark crevice or corner nearby.

Be especially watchful in storage buildings, attics, crawl spaces etc. where humans rarely go and the

food (insects, etc.) population is plentiful. In the house, they will often be found in the garage, the back of the pantry or any corner that is out of the traffic pattern. Be extra careful when unpacking seasonal clothing or equipment. In the garden, they will often make their webs between the interior branches of shrubs and trees. Unused pots, netting or tools should be carefully examined instead of just grabbing and going.

If you engage in a lot of outdoor sports such as camping, look closely before using an outdoor latrine. Black Widows are commonly found in the corners and under the seats in these buildings and an encounter can be very dangerous (not to mention extremely painful and embarrassing!).

PROBLEMS AND DAMAGE: On the plus side, most spiders are very good to have around the home and garden to help control insect pests. On the negative side, the Black Widow Spider is one of the few spiders in the U.S. that are considered dangerous and possibly lethal to humans.

CULTURAL CONTROLS: If the spiders are in an area where they pose no danger to humans or companion animals you can probably just leave them as they are and enjoy the fact that they are eating their weight in insect pests on a regular basis. If they do pose a threat or you simply can't live with them, then probably the best way to get rid of them is by frequent and thorough cleaning away of their webs and the destruction of the spider and any egg cases.

MECHANICAL CONTROLS: Simply using a broom to squash them is a time-honored and effective method of spider control. Just about any solid or semi-solid weapon can be used as long as you can quickly and effectively maneuver it (these critters move FAST) while keeping a safe distance.

NATURAL CONTROLS: The spiders themselves are probably their own worst enemy. Few of the young survive to maturity and the males generally get the worst of the deal after the mating ceremony is completed. As usual, trying to attract birds and friendly toads and lizards to your garden can't hurt either.

BIOLOGICAL INSECTICIDES: Black Widows are very hardy creatures and the larger they get the harder they are to kill. You can try the insecticides used on hard-shelled beetles, but don't be surprised if repeated doses are needed or they don't work at all on the big ones.

CHEMICAL CONTROLS: Please consult the Agricultural Extension Agent or a Master Gardener Volunteer for current recommendations. Phone 458-1104 in Sierra Vista or 384-3594 in Wilcox. Personally, I have had success with the formulations ment for use on wasp nests. Whatever you use, FOLLOW LABEL DIRECTIONS EXACTLY and take the necessary precautions to protect yourself, other humans, non-target animals and the environment.

HOW TO AVOID A BLACK WIDOW SPIDER BITE: The first, last and always rule for avoiding bites or stings from venomous creatures is: NEVER PUT YOUR HANDS, FEET OR ANY OTHER PART OF YOUR ANATOMY WHERE YOUR EYES HAVE NOT BEEN YET!!!! Always look before reaching into corners, boxes, woodpiles or stacks of pots or other supplies. Black Widows like dry, dark, undisturbed areas and can set up housekeeping anywhere where two or more surfaces are close enough to attach webbing to.

Rule number two: Leave the creature alone! Spiders, like almost all other animals, will avoid humans and will run away if any avenue of escape is left open to it. Don't allow children or anyone else to poke

Address correction requested

sticks into the web or otherwise annoy the spider. The animal may get angry or scared enough to bite. This is especially true if there is an egg case present!

CURRENT MEDICAL INFORMATION: The bite of the Black Widow is usually painful and there will be a puncture-type wound. The venom appears to affect the nervous system and the entire body can become affected. There may be dizziness, headache and muscle cramping and perhaps some nausea and vomiting. The victim should be kept as calm as possible and an ice pack may be applied to the bite wound to reduce the pain and swelling. (Be sure to wrap the ice in a cloth to prevent cold damage to the skin.) You may also use an over-the-counter pain reliever such as aspirin, acetaminophen or ibuprofen. At this stage it is suggested that you call the Poison Control Center (1-800-362-0101) or your local hospital for further information.

If the muscle cramping becomes severe or the victim experiences difficulty in breathing, it is highly suggested that you go to the emergency room of the nearest medical facility in case further treatment is necessary. This is especially important in the case of small children, elders or anyone else who may be at extra risk because of small size, disability or prior illness. This is of special importance for anyone with high blood pressure or cardiac problems. Although most adults in good health can expect to recover from a Black Widow bite, it is wise to not take chances.

The practice of applying a constricting band above the bite is no longer recommended because of the possible damage due to decreased blood flow. After arrival at the hospital the patient will be observed and treated according to the effects of the venom on that individual. This may mean simple observation, medication for the pain or in rare cases, an antivenin may be given.