

## What's Coming Up:

Janet Macunovich answers your growing concerns  
Issue 6, September 13, 2008

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The multi-season interest and reliability of tall stonecrop (at right, one of the many species and hybrids of *Sedum telephium*, also known as *Hypotelephium telephium*) are described in the first question of this issue. Those qualities plus the drama of fall bloom and dark leaf explain why so many new varieties come to market each year... and why gardeners may go an extra mile to restore a failed patch to health. Photo ©2008 Steven Nikkila

### After long run in starring role, sedum wilts, and does encore.

Deb's tale of woe: Last year my '**Matrona**' sedums that I have had in the bed next to my front walk **took ill and most died**. A slow death. **Wilting** like. I would remove them as they declined beyond hope.



I was bummed as I just loved them there where they provided three seasons of interest, and worked well with all the early- and mid-spring bulbs I had there as well as the self-sowing alyssum. I thought it might be because they were getting too big and crowded or was just a bad year. I decided to view it as an opportunity to divide the healthy one or two left and rework the bed by removing some soil -- it was three or more inches above the brick sidewalk after 19 years of top dressing and mulching.

So last fall, I **divided and replanted** healthy, nice sized pieces, replanted the daffs and added species tulips and other early small bulbs. I added lots of compost to the sandy soil then covered with old pine bark mulch. I felt pretty good going into winter.

Spring came and all the early bulbs did great and the sedums were coming along, too. Then sometime -- mid-June, I think -- **the sedums began showing the same symptoms** as last year. I pulled out three of the five when they looked too awful. I still have a couple left but they don't look right.

Some healthy-looking pieces that I put in my daughter's garden have the same problem. And a second tall sedum in my back garden, 'Purple Emperor,' showed similar symptoms. I will see how it does next year, but am not hopeful.

Have you seen this before? Is it just what happens when you grow the same plant for a long time in one place? Must I temper my reliance and fondness on sedums and try new plants?

**My sympathies, Deb. Plant diseases are heart breakers.** I don't often see tall sedum (*Sedum telephium*, *S. spectabile*, also known as *Hylotelephium telephium*) in this victim's role but like many other species it is susceptible to stem rot and stem dieback or crown rot when conditions are "right." Even without a laboratory confirmation of disease, whenever plants take this path I proceed as if there's **a crown-rotting fungus at work**. One of the necessary steps in that procedure is to avoid replanting a bed with the same or related species after an outbreak of something like crown rot fungus that **can linger in the soil**.

**You were right to divide and clean up.** However, the pieces you replanted may have been infected already or came in contact after division with spores on miniscule remnants of the old plants in the soil. Such infections and spores wait, then proliferate once critical factors converge, such as the onset of tough growing conditions that weaken the plant's natural defenses -- summer heat can do that -- occurring at the same time circumstances favor the specific fungus -- some fungi thrive in high heat, others in cool moisture, etc.

**Try again, with this twist** to squelch the chances of a repeat performance. Divide again, throw away or cut out every soft or discolored spot, then **immerse divisions in a 10% bleach solution** for about two minutes. **Replant them in a different bed** with unimproved sandy soil rather than organic-rich stuff, because -- congratulations! -- your garden has achieved "old garden" status. Your years of soil amending may have tipped the scales so that the beds are better suited to species that love rich soil rather than pioneer species such as sedum that thrive on the lean stuff you once had.



Many new plant varieties are introduced every year. That they're beautiful is a given. Other qualities may be untested. Will they be stronger than others of their kind, more disease resistant? As individuals we probably can't keep all the new varieties straight or watch enough of them side by side to rate them on a sliding scale. I've seen the relatively new *Sedum* 'Black Jack' reverting (above, left) from dark purple to a blotchy color and even to the gray-green of the plant from which it arose, 'Matrona.' I've also noted mottling and possible leaf disease (above, right). I may be seeing exceptions, however, so I am grateful to plant evaluation programs such as on the next page.

Photo ©2008 Steven Nikkila





The Royal Horticultural Society (RHS) assessment of *Sedums* (left) gives high ratings to the two varieties involved in this issue's first topic. *Sedum telephium* 'Matrona', on the market for over 10 years, is a vigorous variety with dusky purple foliage that may have quite a bit of gray green in it during summer. *S. x spectabile* 'Purple Emperor' is also a strong grower with darker foliage that holds its purple well in summer. Download the RHS report at <http://www.rhs.org.uk/NR/rdonlyres/30E56E99-83FD-45AA-B15B-9C10714F1F72/0/SedumBulletinHI.pdf>

## 2005 Herbaceous Perennial Trial Results

Neil Anderson<sup>1</sup>, Associate Professor, Floriculture  
 Mary Maguire Lerman<sup>2</sup>, Coordinator of Horticulture Programs  
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### USDA Zone 3

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<sup>5</sup>Private Trial Gardens, Lutsen, MN 55612

Visit the Trial Website: <http://www.florifacts.umn.edu/>

Funded, in part, by a grant from the MNLA Foundation & the Minnesota Agricultural Experiment Station.  
©2005, University of Minnesota, Minneapolis Park & Recreation Board

Gardeners in cold regions thank University of Minnesota for evaluations that include a plant's performance in hardiness zone 3. (Above, right.) Find it at <http://www.florifacts.umn.edu/FinalReport2005.doc>

Chicago Botanic Garden's Plant Evaluation Program (below) is testing *Sedum* now. Watch its website for results. [http://www.chicagobotanic.org/research/plant\\_evaluation/](http://www.chicagobotanic.org/research/plant_evaluation/)

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Plant Evaluation Program: [Download Plant Evaluation Notes below](#)

Field observation, years of experience and a passion for plants—all blend together in the Chicago Botanic Garden's Plant Evaluation Program. For 25 years, this program has been dedicated to the scientific study of perennials, annuals, vines, shrubs and trees.

The Garden's Plant Evaluation Program is one of the largest and most diverse in the nation. It is also one of the few programs in the United States that formally evaluates perennials.

The goal of the program is to determine, through scientific evaluation, which plants are superior for gardens in the Upper Midwest. Plants are rated on ornamental qualities, cultural adaptability, winter hardiness, and disease and pest resistance. It is the intent of the program to study and recommend plants that are readily available in area nurseries. [Study results are published and reported to both the professional industry and the gardening public.](#)

The evaluation studies are conducted over a long-term period:

- Four years for perennials
- Six years for shrubs and vines
- Seven to 10 years for trees

## When soil may harbor disease, choose new soil and plants carefully.

When **fungus or bacteria** gain and hold an advantage on roots or ground-level plant parts, the **ever-present infectious bits** may build in number and **may remain in the soil** on tiny particles of plant debris. Some can lay dormant for a year or more, then ambush susceptible new plants. Here are several **ways to snuff a soil-borne disease**.

**Replace soil** in a planter or small bed. Refill with **sharp sand, steam-sterilized soil** or from a **hot compost** pile. Dispose of suspect soil in a hot compost or use it near plants from a different plant kingdom -- under conifers if it came from a flowering-plant bed and vice versa.

**Starve the disease** for a year or two. Diseases are ubiquitous. We can't eliminate them but by **denying them hosts** to live on we can reduce a thriving population to scarce remnants that won't affect vigorously growing plants. To do this **leave the bed fallow** and/or **plant immune or resistant species**.

Leaving an area fallow can mean covering soil with a mulch and growing nothing there for some years.

**Use solar heat to kill disease organisms**. In a sunny area you can clear all vegetation, cover the moist bare soil with thick clear plastic, keep the edges pressed tight to the ground and let the sun bake it for at least one summer month. Can kill most bacteria, fungi, insect eggs and seeds.

To **plant immune or resistant plants**, first recognize that most diseases are specific to related groups of plants. Choose replacement **plants unrelated to those which succumbed before**. If you must grow plants related to those that failed or your investigation reveals you're dealing with a disease able to infect many plant families, look for varieties known for immunity or resistance to that infection.

To plant different families, **look up the scientific names of failed plants to learn their family and relatives**. The sedum described earlier in this issue is in the family Crassulaceae, which includes succulents such as jade, sempervivum, echeveria and aeonium. Hoping to replant sedum one day, that gardener may grow unrelated annuals in that spot for a few years. She would avoid planting *Echeveria* in favor of *Lantana* (verbena family), *Begonia* (begonia family), marigold (aster family) and others.

Lab test results may advise\* that you are **dealing with a disease that affects several or many plant families**. Or your

own research into a problem may lead you to suspect a disease of multiple host families because its symptoms are so like what you saw on your plants.

For instance, if you were dealing with the sedum in the previous topic you may have noticed **blackened spots on the** thickest roots and **crown** such as described for **stem dieback** (*Lasiodiplodia theobromae*), or **splits at stem bases** like **stem rot** (*Rhizoctonia solani*).\*\* You learn that the first problem has just a few hosts while the second has many, including spurge (*Euphorbia*), onion and young ornamental bulbs. You decide to play it safe and avoid planting annual *Euphorbia* 'Diamond Frost' for a time, and postpone dividing your bulbs.

\*Such tests are available for a fee through Michigan State University Extension and other land grant university plant pathology labs. Contact your County Extension office for details of collecting and submitting a sample.

\*\* *Rhizoctonia solani*. For an image, copy and paste this URL to your browser  
<http://www.forestryimages.org/browse/detail.cfm?imgnum=1402050>

## Are your own plants your garden's undoing? Allelopaths

Joyce wanted to look into **plants that inhibit the growth of other plants**, "such as the black walnut tree, sunflower seed shells, etc. but I don't know the technical term to use. I'm wondering if yarrow 'Summer Pastels' would appear on the list."

Look up **allelopathic plants**, Joyce. The right word is a powerful tool, whether we're looking in books, journals, on the Internet or asking experts about diseases, plant relationships and dastardly chemical tactics such as allelopathy.

Allelopaths produce chemicals and release them from their roots and fallen leaves to **stunt or even kill plants** of other species. It's a great way for a plant to avoid having to share the water and nutrients in its root zone.

Some plants are very sensitive to a given allelopath, while others manage to get along. For instance, **tomatoes** wilt and die under the influence of **black walnut tree** roots while a **bluegrass lawn** goes unaffected. It's good for a gardener to know allelopaths exist, to seek information about them and avoid placing a sensitive plant near an antagonist.

However, this science is new. Plant scientists have only recently realized that allelopathy is more common than we thought. They are working to identify which plants employ this domination technique, with an understandable focus on agricultural crops. I'm not surprised to have heard **conflicting stories about common yarrow**, *Achillea millefolium*. One report is that it does inhibit the growth of other plants. Another, from the well respected USDA plants database\*, is that it is not known to be allelopathic.\*\* As we learn more about this form of chemical warfare between plants, the truth will out. The overall list of problem plants will change and grow.

\*For more information, copy and paste this URL to your browser <http://plants.usda.gov/>

\*\*<http://plants.usda.gov/java/charProfile?symbol=ACMI2>

## This week in Janet's garden

### Grow with me! this week I will:

Review what's growing in each bed of my established gardens. How quickly the years pass and changes occur in imperceptible increments. Thanks, Kay, for suggesting yuccas for our zoo garden. I have been off-base in thinking that "next year we'll water better or get more rain." Over the years the trees in the area have grown and so has their demand for water. Keeping the beds under them as moist as 'once upon a time' will take more than a return to old ways. It would take a substantial increase in water. That's something our volunteer group would have trouble doing. So it's time to replace what once did well with truly drought tolerant species.

\*\*\*\*\*

Start planting bulbs, wondering as I do, "Where did another growing season go?!"

\*\*\*\*\*

Arrange special watering for the mums I'm about to plant. Drip-irrigated and pinched repeatedly through summer, they now support 'way more foliage than such restricted root



systems can gather from a space serviced by sprinklers. They need something as drenching and reliable as that one-pot, one-drip-line system the grower was using.

Worse, mums are not growing roots at this time of year. It's simply not their season for root growth. They won't "grow out" of their need for special watering because their root balls won't increase while they're in the ground this fall. That means they need daily water or they'll lose ground -- and flower buds and blossoms will be the first parts to die.

\*\*\*\*\*

Water plants well that were taxed by moisture-sucking pests such as aphids, leaf hoppers and scale this year, and make notes to help them beat their pests next year.

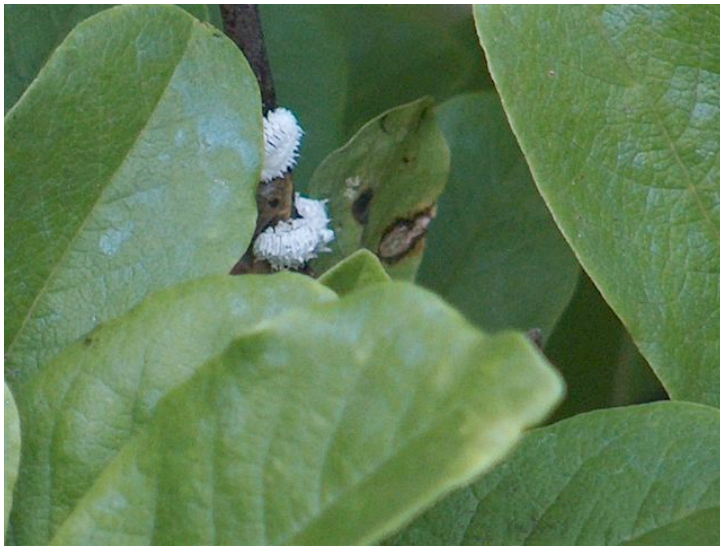
Of those dastardly suckers, scale alone are still visible. But it's too late now to curtail their damage. Most scales have finished feeding for the year and died, leaving only their shells glued to the twigs they inhabited. The eggs they've left behind beneath their dead shells can't be killed with insecticides until the young emerge from them next spring.



Look for now-dead adult scales' shells on twigs and the telltale black sooty mold that grew on branch surfaces from the scales' excrement. At left are scales on an oak twig. If you see that your tree or shrub bore a heavy load of scale this year you may want to consider attacking the next generation of insects as they emerge from the eggs. (It's not a "must." Many scale insects have boom years then bust years and otherwise healthy plants are capable of handling that cycle.) Start a war on scale with a smothering film of dormant oil applied just before that plant's budbreak next spring.

Scale insects (at right, you're looking at Fletcher scales, a pest of yew) develop hard shells once they mature. Then they are nigh impossible to kill with insecticides. That's why we aim to kill the armorless youngsters -- called crawlers. There are crawler-stage Fletcher scales here, near-white figure below the armored adult. Photo ©2008 Steven Nikkila





Magnolia scale is on a different schedule than most other landscape scales. Its adults, armored now, won't die but will overwinter and finish their feeding next spring. Next year's crawlers won't emerge until midsummer and that will be the time to use an insecticide if this insect has been numerous enough to set your tree back. "What's Coming Up" reader Laura McEvilly captured this shot of scale on her star magnolia this August. Photo ©2008 Laura McEvilly

## The 45mph garden



You can put a gardener behind the wheel but you can't take the flowers out of his eyes. Look at what's catching driver's eyes and raising questions this week.

It's hardy to USDA hardiness zone 4 (and warmer parts of zone 3), small (20-30 feet), adaptable to many soils and it produces large fluffy white blooms at the end of summer. So why don't we see more **Japanese angelica trees (*Aralia elata*)**? The fact that they look like knobby sticks during spring plant-buying time might explain it!

Japanese angelica tree in bloom September 1. Photo ©2008 Steven Nikkila

**Wrap-up with Grins and Grow-ans** that turn our green thumbs up or down

**Grins:** To finding fun even in researching plant diseases. So many plant diseases have very descriptive common names. I may find that a plant is reported susceptible to many ailments including brown patch, scab, wilt, black spot, black rot,

scorch and shoot blight. If I don't want to read up on every item in the list I can note the scientific names of just a few with common names that sound like what I saw. That sometimes speeds the discovery process.

**Grow-ans:** To making jokes about how great fish fertilizer is for the soil when a gentle soul is despairing over too many fish in a pond and how to find homes for the excess.



## Who's Janet?

**An eternal student of gardening,** Janet Macunovich has embraced the perspectives of Thomas Jefferson (who said he was 'an old man but a young gardener') and philosopher-garden writer Allen Lacy (who can 'spend an entire lifetime in one corner of one garden and still not know all that's going on there'). She aims to keep studying gardening all her life, at universities' and botanical gardens' courses, in books and at lectures, in hers and others' gardens. "It's such a privilege to work in other peoples' gardens," says Macunovich, "where the same plants I grow in my yard show me all the aspects they can take in different situations. Some years I work in 100 gardens and don't see the same thing twice. To observe, question, research and experiment in gardens, to talk with, learn from and explain what I've learned to others, that's better than gold." Email questions to her at JMaxGarden@aol.com.

## Places to catch Janet in-person:

**Thursday, September 18, 7 p.m., "The Art of Fall Garden Clean-up."** An illustrated lecture at the main library, Waterford Township, Michigan. Free. To attend, call 248-618-7694 to reserve a seat.

**Saturday, September 20, 9:00 - 11:00 a.m., "Garden by Janet - Bring your gloves and tools!"** At a Macomb Township garden we're evaluating and continuing a years-long program of improving the lot of various trees on the property. In this one spot are great examples of what may go wrong with new trees plus all that can go right when the gardener recognizes and acts to correct problems. Although this session is geared to talking, looking and planning, it's impossible to rule out some digging and trimming -- so leave those dress whites at home! Free. Email or call Janet (JMaxGarden@aol.com or 248-681-7850) for details and to reserve a spot in this limited-space workshop.

**Saturday, September 27, 9:00 a.m. - 1:00 p.m., "Holiday Decorations from Your Garden."** A hands-on workshop sponsored by the Alpine Master Gardeners and the Michigan State University Extension. At the Livingston Township Hall in Gaylord, Michigan. \$30. For more information, contact Amanda at 989-983-4401, spiderwebranch@peoplepc.com.

**Saturday, October 4, 2008, "Ohio State University Extension Master Gardener Conference."** A whole day and a great line-up of topics, including Janet's descriptions of "Cutting back the rambunctious garden," "Doubling Up Perennials" and "The Collector: Engaging harmony from intriguing diversity," and "Mixed Borders." In Warren, Ohio at Kent State University, Trumbull campus. Open to Ohio State Master Gardeners and friends. For a description of the conference and registration information, check the website\* or call Steve Hudkins at the OSU Extension (330-637-3530).

\*Paste [www.ohiomastergardener.com](http://www.ohiomastergardener.com) to your browser bar.

**Thursday, October 9, 4:00 - 7:00 p.m., "Garden by Janet - Bring your gloves and tools!"** At a Farmington Hills garden, we're dividing perennials. Come learn a thing or two, try your hand at splitting the species you've hesitated to tackle, and bring your own divisions to share if you like. Free to my newsletter readers. Email or call Janet (JMaxGarden@aol.com or 248-681-7850) for details and to reserve a spot in this limited-space workshop.



**Saturday, October 18, 10:00 a.m. - 1:00 p.m., "Cutting Back the Rambunctious Garden."** A hands-on workshop sponsored by the Detroit Garden Center. Learn to prune shrubs, trees and perennials that want to outgrow your garden. At the Nature Zoo on Belle Isle in Detroit, Michigan. \$35. For more information, call the Detroit Garden Center at 313-259-6363 or email [detroitgardenctr@yahoo.com](mailto:detroitgardenctr@yahoo.com).

**Tuesday, October 21, 9:00 a.m. to noon, "It's big but we can move it"** We've got a number of shrubs and dwarf conifers to move at a garden in Franklin, Michigan. Come see and hear how. Free to my newsletter readers. Email or call Janet ([JMaxGarden@aol.com](mailto:JMaxGarden@aol.com) or 248-681-7850) for details and to reserve a spot in this limited-space workshop.

### **About attending Gardens by Janet sessions:**

We gardeners are let-me-see, hands-on people and that's how we learn best. In these sessions, I offer you that kind of chance to grow. You can visit me where I'm working and you can either watch or work with me side by side. I hope you'll bring your gloves and join in so you realize the most value for the time.

At the **gardens I tend through my business, Perennial Favorites:** I've worked for many years with some of my clients, who not only trust me with their landscapes but also understand my enthusiasm for teaching. They open their gardens to small groups who want to see and practice "how to." When the work I'm scheduled to do may be of interest to you and the situation allows on-lookers or apprentices, I invite you in.

I've volunteered in the **Detroit Zoo Adopt-A-Garden** program for 20 years. During that time more than 100 people have worked with me, some for a day and others for years. We have fun, we learn, we accomplish much. The program requires that regular garden volunteers complete an interview and orientation process but you can try it for a time or two on a temporary pass as my student. **If you'd like to join me at the Detroit Zoo,** email [mstgarden@yahoo.com](mailto:mstgarden@yahoo.com). Make the subject line of your email "I'll help at the zoo with Janet." That email will put you in touch with my good friend Deb Tosch who keeps my group's schedule straight while I plan and lead the work. You'll receive upcoming work dates and instructions for getting to the zoo and meeting up with my group.

Watch this space to join me in other non-profit gardening events and in gardens I design and tend.