



VOLUNTEER NEWS

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A TOUGH "NEW" PLANT

(Zamioculcas zamiifolia)

Zamioculcas is in the aroid family along with the spathiphyllum, philodendron, aglaonema and anthurium, although you may not suspect it to be from its looks. It looks very similar in shape to the cycad



Zamia furfuracea, also known as the Cardboard Palm.

The plant has thick, fleshy, and naturally glossy leaves. You may even think that the

plant has been polished, it is so shiny.

(see zamioculcas on pg. 2)

COORDINATOR'S CORNER

Spring is in full swing and the Florida Master Gardener Program is more active than ever. As I travel around the state, I have had the opportunity to meet with many of you and see some of the tremendous work taking place.

The 2000 Master Gardener Continued Training was held in Gainesville in early August and was very well received by those attending. One of the highlights of the event was the awards luncheon with our featured speaker, Felder Rushing, who entertained everyone with his outlook on gardening, and the new University of Florida Conference Center provided a terrific venue for learning.

A group of Agents from around the state have been hard at work planning the 2001 International Master Gardener Conference which we are hosting in Orlando May 28-June 1. The host hotel is the Hilton in the Walt Disney World Resort. This is an incredible opportunity for you to attend an International Conference. The four-day event features a trade show, keynote presentations, hands-on clinics, and numerous breakout sessions. The final day will be spent at Epcot, where there will be presentations, a reception, and plenty of opportunity to see the gardens. Don't miss the conference, people will be talking about for years to come. For more information, visit our website:

<http://www.ifas.ufl.edu/~conferweb/mg>

Keep up all the great work.

-Tom Wichman, Florida Master Gardener Coordinator

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This edition of the Master Gardener Volunteer News is coedited by Courtney Crocker, Bart Schutzman, and Tom Wichman.

(zamioculcas from cover page)

I grew this plant over 20 years ago as a "collector" plant and never gave it a thought as a potential indoor plant. About a year ago, one of the more progressive growers started producing this plant.

While over at their nursery about five months ago, I picked up one to see for myself if it was as tough as they said it was indoors. Well, we are writing about it today because it is.

Anyone that has been in my office will tell you that plants are not given special treatment. I learned that a long time ago from a successful grower who was always looking for plants with survival qualities.

His motto was real simple. If a plant will survive under stress, it will only do better with care.

Anyway, after bringing this plant back to my office, I set it in a corner with the paper sleeve that plants are shipped in for a month. During that time it lost a few leaves and was never watered. Then I took it out of the sleeve, removed the bad leaves and let it sit for two weeks before I watered it for the first time.

The part that really impressed me was the fact that it didn't just sit there, but started to grow. Not spindly growth but good strong stalks and leaves.

I've kept the plant pushed over in the corner where it remains looking good and producing new growth

regularly. No pest problems have shown up and I certainly haven't been caring for the plant.

While growing plants for over 25 years, seldom have I ever run across a plant that has performed so well indoors with so little care.

Zamioculcas zamiifolia has been nicknamed the "ZZ". It isn't a plant that you're going to find in your local chain store but the more upscale garden centers may carry it. It may be a little harder to find but well worth the effort.

(This article is originally published in Plant Care Tips from Zone10, Inc. at: <http://www.zone10.com>)



2000 MASTER GARDENER AWARDS OF EXCELLENCE WINNERS

Outstanding Master Gardener Award

Lake County

Demonstration/Educational Garden Award

Escambia County

General Achievement Award

Lake County

Special Audiences Award

Lake County

Service to 4-H and/or Other Youth Award

Santa Rosa County

Education Materials Development Award

Broward County

Written Mass Communication Award

Walton County

Beautification/Enhancement Award

Orange County

Verbal Mass Communication Award

Marion County

Personal Communication Award

Orange County

Extension Awareness Award

Hillsborough County

County Awareness/Educational Display

Hillsborough County

VERMICULITE: WHO SAYS IT ISN'T SAFE?

by Eric Moeller, W.R. Grace Co.

Recent erroneous reports have indicated that vermiculite is unsafe. This is simply not true. Vermiculite (a mineral) has been a key ingredient in commercial and "home recipe" potting soil for decades. Its unique ability to absorb up to five times its weight in liquids, high cation exchange capacity (up to 150 meq/g, equal to the finest peat moss), ability to aerate soils and unique shape-allowing small roots access to the nutrients that vermiculite stores -all make it a unique and valuable ingredient in many soil mixes. All of the scientific studies that have been done on vermiculite show that it is very safe and that there are no health risks associated with using it in potting soils or other garden applications.

The source of stories attempting to discredit vermiculite is a single newspaper in Seattle, Wash. that claims to have "discovered" a health crisis in the town of Libby, Mont., the site of a vermiculite mine that closed more than 10 years ago. The Libby Mine, as it was known, was the very first commercial source of vermiculite in the world, opening in the 1920's. The geology at Libby was unique in that it contained elevated levels of the mineral tremolite in an asbestos crystal form ("asbestiform"), which has been linked to human health risks. All of this is well known and documented in the 1970s and 1980s.

Vermiculite is a naturally occurring mineral that is associated with other minerals in the earth. Minerals can have many crystal forms, just as carbon can occur both as coal and as a diamond. Tremolite can occur in the dangerous asbestiform type or in a massive form that poses no health risk. That is why in 1990 the Occupational Safety and Health Administration (a division of the U.S. Department of Labor) developed guidelines and procedures, based on dozens of scientific studies, to determine what type of minerals and crystal forms are dangerous. Vermiculite mined today may have very minor levels of tremolite (orders of magnitude less than was found in Libby years ago), but in nearly all cases it is not asbestiform and not dangerous. In no case is any vermiculite product today considered an asbestos-containing material under any of the most stringent

government guidelines.

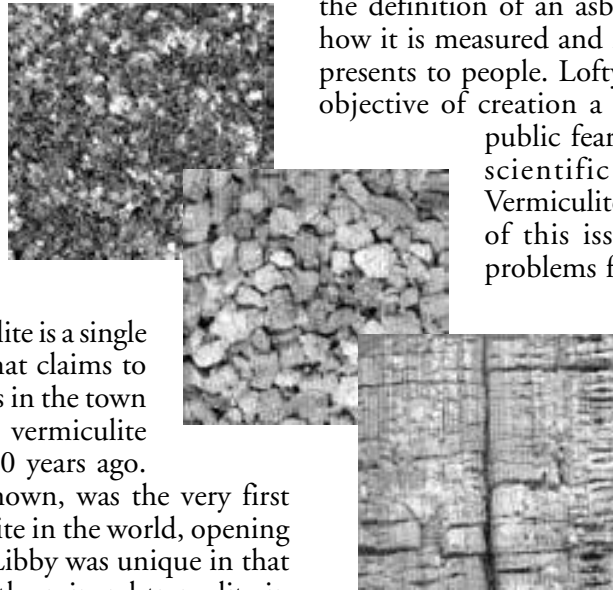
What is new today is that the Seattle newspaper is claiming that currently mined vermiculite products contain elevated levels of asbestos and that these current products possess the same health risks as the now-closed Libby Mine. This is also *not true*.

What may be true is that the Seattle newspaper and some regional EPA people are not happy with the 1990 OSHA standards, and they would like to the definition of an asbestiform mineral, redesign how it is measured and redefine what risk asbestos presents to people. Lofty goals all, but what is the objective of creation a media frenzy heightening public fears if not to circumvent the scientific peer-review process? Vermiculite is squarely in the middle of this issue because of the legacy problems from the now closed Libby Mine.

So what's a gardener to do? Any product that contains greater than 0.1% asbestos, must be labeled by law. So, gardeners should first check product labels. The government (through workplace

testing and monitoring) and the companies that produce the vermiculite, rigorously test vermiculite sold and used in today's garden products. Most companies have standards that are orders of magnitude stricter than the most rigorous government standards.

Ultimately vermiculite will be shown to be safe, just as appropriate review of scientific facts have proven other product scares in the past posed no danger to the public. Gardeners should be aware, informed and free to make their own decisions. In an age where under California Proposition 65 play sand must be labeled to contain silica, the most common mineral in the earth's crust, and even bottled water is claimed to pose a risk to human health, in the end it will be up to the gardeners to decide for themselves the true value of vermiculite in the garden.



Eric M. Moeller is an employee of the W.R. Grace Co. and a South Carolina Registered Professional Geologist #374.

New

*"Gardening
with Kids"*
Catalog



The nonprofit National Gardening Association, a leading resource for people who garden with youngsters -- in schools, homes, and communities -- announces its Spring 2001 "Gardening with Kids" catalog. Imagine growing a rainforest indoors..bringing recycling lessons to life with worm composting bins, obtaining an affordable, kid-friendly greenhouse, creating habitats for butterflies and other creatures. The Gardening with Kids catalog brims with more than 100 new items for using gardens and the environment to engage, delight, and teach. Our exclusive Kids Gardening Journal, new and exclusive 3-tier GrowLab Indoor Light Garden models, perennial flowers, and environmental education curricula are just a few of the new items featured.

To request a catalog, call 800-538-7476 extension 143 or buy online at www.kidsgardening.com

Information supplied by:
National Gardening Association
1100 Dorest Street
South Burlington, VT 05403
Phone: (877) 538-7476
(802) 863-5251
Fax: (802) 864-6889

DIAZINON

Diazinon-based products, popular home-and-garden pesticides for 40 years, are being phased out. Registration for indoor use, including for roach and termite control, will be canceled in March of 2001. Lawn-and-garden diazinon products will be eliminated for production by 2003 and taken from retail shelves in 2004. Manufacturer Syngenta claims the phase-out period, which calls for incrementally reduced production, allows time for the release of alternative products. Diazinon is marketed under such brands as Ortho, Spectracide and Real-Kill.

Source: "The Weekly Dirt" for December 12th, 2000 an e-mail newsletter from Garden Center magazine, editor, Carol Miller

CHEMICALLY SPEAKING



The EPA, Environmental Protection Agency, has a new website with an interactive pesticide label. As you point to each component of the generic label (e.g., active ingredients, directions for use, etc.) a pop-up message explains that part of the label. It is: <http://www.epa.gov/pesticides/label>

EPA has begun a national ad campaign to encourage people to read pesticide labels. The campaign consists of radio spots and billboards on trucks. The truck billboards will be in metropolitan areas in many states and travel interstates between metropolitan areas. Miami is listed as one of the cities.

Source: University of Florida, IFAS extension newsletter *Chemically Speaking* November/December 2000 issue. It is available at: <http://pest.ifas.ufl.edu/news.htm>

COMMERICAL BIOLOGICAL WEBSITES FOR THE MASTER GARDENER

Commerical Biological Control

Association of Natural Bio-control Procedures:

<http://www.anbp.org>

Suppliers of Beneficial organisms:

<http://www.cdpr.ca.gov>

Biological Control for Protected Crops

IOBC,SEARS Grenhouse IPM:

<http://www.cpitt.uq.edu.au/iobc/welcome.html>

NC State BioControl Contents:

<http://ipmwww.ncsu.edu/biocontrol/biocontrol.html>

Pesticide Compatibility

Kappert Biological Systems:

<http://www.koppert.nl>

Label and MSDS Data Sheets:

<http://www.CDMS.net>

Biological Control and Integrated Pest Management

UF Pest Alert:

<http://exlab7.entnem.ufl.edu/pestalert>

IFAS:

<http://www.ifas.ufl.edu>

Cornell Biological Control:

<http://www.nysaes.cornell.edu/ent/biocontrol>

Univerty of California Home Page:

<http://www.ipm.ucdavis.edu/>

Oregon State Univ., Database of IPM Resources
(DIR):

<http://www.ippc.orst.edu/dir/>

Florida Agricultural Statistics

USDA, Florida Agriculture Census:

<http://www.nass.usda.gov>

Florida Dept. Agric.& Consumer Serv.:

<http://www.fl-ag.com>

Free Information

USDA, National Biological Control Institute:

<http://www.aphis.usda.gov/nbci>

Marion County Master Gardeners' Spring Festival



Saturday and Sunday, March 10th and 11th, 2001, will be Marion County Master Gardeners' 7th Annual Spring Festival. Location is Rowan Agricultural Center, 2232 NE Jacksonville Road in Ocala.

A multitude of garden "necessities", including hundreds of plants, garden supplies, ornamental lawn & garden furniture and accessories, will be showcased. Educational seminars are scheduled both days. Gary Knox, Professor of Environmental Horticulture at the University of Florida, will present "Planting and Care of Crape Myrtles" on Saturday, March 10th, at 1:00pm. Other seminar topics are Rose Culture for Central Florida and Animal Awareness and the Homeowner.

FREE Parking, admission, and seminars. For more information, call (352) 620-3440, or (352) 620-3447.

EASTERN LUBBER GRASSHOPPER

Common name: Eastern lubber grasshopper

Scientific name: *Romalea guttata* Houttuyn

(Insecta: Orthoptera: Acrididae)

Introduction

Periodically, grasshoppers have been of economic importance in Florida. A few species sometimes occur in large enough numbers to cause serious damage to citrus, vegetable crops and landscape ornamentals. One of the species most commonly causing damage is the Eastern lubber grasshopper, *Romalea guttata*.

Distribution

The eastern lubber grasshopper is limited to the southeastern and south central portion of the United States. The northern boundary is central North Carolina west through southern Tennessee, Georgia, Alabama, Mississippi, Louisiana, Arkansas, to Texas. It occurs throughout Florida.

Life Cycle

Adults of *Romalea guttata* exist throughout the year in Florida, with their numbers dwindling during the winter. They have one generation per year, with eggs beginning to hatch in late February in South Florida while the rest of the state usually doesn't see this species until mid-March. Eastern lubbers, like all grasshoppers, grow through successive stages after molting. These stages are referred to as nymphal instars. Lubbers have a total of five instars before molting into the adult stage. The length of these instars vary slightly but average 15 to 20 days each. The highest number of adults can be observed during the months of July and August.

Females will begin laying eggs during the summer. After mating, females use the tip of the abdomen to dig a small hole into a suitable patch of soil. Usually at a depth of about two inches, she will deposit up to 50 eggs contained within a light foamy froth. Each female will lay from one to three egg masses. These eggs will remain in the soil through late fall and winter and then begin hatching in March. The young grasshoppers crawl up out of the soil upon hatching and seem to congregate near suitable food sources.



Description

The lubber is surely the most distinctive grasshopper species within the southeastern United States. It is well known both for its size and its unique coloration. The wings offer little help with mobility for they are rarely more than half the length of the abdomen. This species is incapable of flight and can jump only short distances. Mostly the lubber is quite clumsy and slow in movement and travels by walking and crawling feebly over the substrate.

Nymphs The immature eastern lubber grasshopper differs dramatically in appearance from the adult. Nymphs (immature grasshoppers) typically are completely black with one or more distinctive yellow stripes. The front legs and sides of the head are often red.

Adults Adult males and females are usually 6.0 and 8.0 cm. long, respectively. The body is quite robust while the legs remain relatively slender. The general color of adults is dull yellow with varying degrees of black spots and markings. The front pair of wings (tegmina) are yellow with numerous scattered black dots, while the hind wings when exposed reveal a bright red/rose coloration with a black border.

The color of adult lubbers also varies throughout most of the insect's range. One phase is nearly entirely black with a few marks of tawny yellow. The adults of this phase seem to resemble the nymph. However, the different phases are indeed the same species.

Habitat

Eastern lubber grasshoppers seem to prefer open pinewoods, weedy fields and the weedy vegetation along roadsides. Occasionally, on rural highways in the central portion of the state, enough flattened lubber grasshoppers will accumulate on the road to cause a minor slick!

The accumulation of weedy plants species along drainage ditches within citrus groves and vegetable fields will sometimes attract lubbers, which in turn end up feeding on cultivated crops as well. Along the coastal regions of the southern section of the state, lubbers may often invade residential areas and feast on certain ornamental plants, especially daylilies.



Defensive Characteristics

Eastern lubber grasshoppers possess a variety of abilities to defend themselves. Their bright color pattern is a warning to predators that the lubber contains toxic substances. Indeed, there are several records attributing the demise of individual birds to failure to exercise caution when selecting prey items. Also, small mammals such as opossums have been known to vomit violently after ingesting a lubber, and to remain ill for several hours.

If the red, yellow, and black coloration fails to keep a predator at bay, then the lubber may secrete a foamy



spray from the thoracic region (the portion of the body where the legs and wings are attached.) This spray consists of a number of compounds, some of which are irritants. This bubbly froth is accompanied by a relatively loud, frightful hissing sound. The insect contracts the abdomen to force air out of the spiracles along with the defensive secretion. The sound is produced as the spray is being forced

out of these tiny holes in the thorax called spiracles. Eastern lubbers, like most all grasshoppers, can also regurgitate recently consumed plant material. This regurgitant is mostly liquid and has a dark brown color. This is commonly referred to as 'tobacco spit'. The tobacco spit is partially digested food material along with some semi-toxic compounds from the insect's crop region. This substance can easily stain clothing.



Management of Lubbers

The size of the eastern lubber grasshopper is a little misleading when one considers they require far less food material than most of the more injurious species of grasshoppers that are only one-third as large or smaller.

Lubbers lend themselves to a non-chemical control method. The eastern lubber grasshopper rarely occurs in high enough numbers to cause significant damage to gardens and ornamentals. In most cases the homeowner can easily rid oneself of any individual lubbers by hand. Lubbers are large, slow moving, and essentially harmless to humans. All that would be necessary to rid the area of any pests is a small net or homemade smashing device (such as a broom.) Armed with a net and garbage bag one should be able minimize any potential damage within minutes. If chemical control is necessary, there are several insecticides registered for use on ornamentals, fruits, and vegetables to control grasshoppers. The following is a listing along with some trade names: chlorpyrifos (Dursban) carbaryl (Sevin), cyfluthrin (Decathlon, Tempo), rotenone (Rotacide). For specific recommendations consult the insecticide label or refer to the Florida Insect Management Guide.

Grasshoppers are much easier to control when they are nymphs. As they mature, and grow larger, higher rates of toxicants must be applied for effective control.

by Clay Scherer, University of Florida
UF/IFAS Extension Publication Number: ENY-6

<http://www.ifas.ufl.edu/~insect/ORN/lubber.htm>

MOSQUITOES HAVE DISCRIMINATING TASTES, UF RESEARCHERS FIND

By: *Cindy Spence*

Source: *Jerry Butler, Karen McKenzie (352) 392-1901 x 152*

GAINESVILLE—If you think mosquitoes like you better than they like other people, you're probably right, say University of Florida researchers. In a study to determine whether the tiny vampires choose their victims or feed indiscriminately, UF entomologist Jerry Butler and research assistant Karen McKenzie found that mosquitoes do, indeed, choose.

“Undoubtedly, mosquitoes have preferences,” Butler said. “People do differ, and in any group of ten, one person will be fed on more than others.” Mosquitoes have evolved and survived — even thrived, Butler points out — because of their ability to choose the best hosts for their blood meals, which they need to lay eggs. They find their hosts, initially, through a keen sense of smell.

All people have to do to attract mosquitoes from even 40 miles away is breathe. As they exhale, their carbon dioxide and other odors mix to produce a plume that travels through the airstream. The plume acts like a dinner bell to mosquitoes, letting them know a warm-blooded meal is within range.

They fly up the plume in zigzag fashion until they arrive, for example, at a backyard cookout. Then they localize on eddies of other odors in the airstream and then, within yards of a person, they use vision and heat sensing to make a selection.

“Mosquitoes use odor to sort attractive people from the unattractive people to find those that are most tasty,” Butler said. “They are looking for the highest rates of human attractants.”

What are those attractants? That's the next challenge for Butler and McKenzie. Already they know that natural secretions through the skin and skin care products affect mosquitoes' appetite.

Take perspiration. By itself, it appears to be neutral, but as it ages bacteria begin developing, and that makes perspiration into a very strong attractant, Butler said. Bathing helps, but some after-bath products don't.

The things you put on your skin to soften it and make you beautiful can be very strong attractants,” Butler said. “Many of the ingredients in cosmetics can and will attract mosquitoes. And while a repellent may offset that, most times the cosmetics and creams last longer than the repellents.

Medications, too, can change an attractive person into one who is repellent or vice versa. These include heart and blood pressure medicine and drugs to treat high cholesterol.

McKenzie saw this effect firsthand when a research volunteer was diagnosed with a brain tumor in the middle of her experiment. Before his tumor was removed, he was repellent. After surgery, however, he became very attractive to mosquitoes.

Such findings have added to the intrigue for Butler and McKenzie. They theorize that mosquitoes, who need cholesterol and B vitamins but can't make them on their own, can sense which host is the richest source of these ingredients.

In their laboratory, Butler and McKenzie are screening materials to determine whether they attract or repel mosquitoes. They built an olfactometer, a machine that measures mosquitoes' preferences for various odors, and connected it to a computer.



Small discs of cattle blood and odorous gel are covered with a membrane to mimic skin, and then mosquitoes are released into the olfactometer. When a mosquito chooses a “host” and feeds, an electrical charge is transmitted to the computer, which records the feeding. Butler and McKenzie can then analyze the data to determine which substances the mosquitoes found most attractive.

Their research goes beyond relief for barbecue guests. They hope to help people to protect themselves from mosquito-borne diseases. “If you reduce the feeding rates just a little, you reduce the probability of transmission of diseases greatly,” Butler said. “Only one mosquito in a thousand carries disease organisms.

“People who think they attract mosquitoes are the ones at largest risk of mosquito-borne disease,” Butler said. “They’ll have a hundred mosquitoes feed on them when a normally repellent person might have five. It’s that kind of ratio.”

After mosquitoes choose a host, they look for a landing strip. It’s no accident that they often land in hard-to-reach places.

“They like to feed on humans, and they know what the human response is going to be so they sneak in and bite when it’s the least dangerous to them to feed on you,” Butler said. “Then they feed quickly, just eight to ten seconds, and they’re gone; the length of time they’re on a host regulates whether they get squashed.”

If you’ve ever watched a mosquito land on you and noticed it doesn’t bite right away, there’s a reason for that. Just any old spot won’t do.

They search the skin surface with their mouth parts till they find a site that feels or tastes good, then insert their stylet. The stylet moves through the tissue “like an oil-drilling rig” working around objects and turning at angles. When it detects the mother lode — a capillary — it taps right in.

Butler says the study has far-reaching implications for backyard barbecues — and who is on the guest list.

“If you can figure out who, among your friends, is attractive to mosquitoes and be sure to invite that person to all your outdoor gatherings, you might be able to spare your other guests from mosquito bites,” Butler said. “In any group, there should be one person who is highly attractive to mosquitoes.” What a price for popularity.

Wild NEWS

Here are some interesting things happening in the months of March and April:

March:

- ✓ Male frogs and toads move to ponds, streams, and ditches to breed during rainy nights.
- ✓ Largemouth bass spawning throughout central Florida.
- ✓ White bass run up the Oclockonee River above Lake Talquin.
- ✓ Mourning doves nest now through November.
- ✓ Carolina wrens are nesting now.
- ✓ Swallowtailed kites return to south Florida wetlands.
- ✓ Plant columbine, coral bean, and other wildflowers to attract hummingbirds.
- ✓ Last chance to see manatee concentrations in the Caloosahatchee River this winter.

April:

- ✓ Sooty Terns take over Dry Tortugas for nesting.
- ✓ Bobwhite quail nest now through September.
- ✓ Migrant warblers concentrate on coasts after cold fronts.
- ✓ Watch for hummingbirds feeding on blooms of columbine, buckeye, and others.
- ✓ Black bears begin moving after winter’s inactivity.
- ✓ Long-tailed weasels, minks, and river otters will be born April through May.
- ✓ Endangered Gray Bats return to Florida caves to raise their young.
- ✓ Pine barren treefrogs begin calling.
- ✓ Most Florida snakes begin mating rituals.
- ✓ Beginning of Sea Turtle nesting season on Florida beaches.

Source: University of Florida, Department of Wildlife Ecology and Conservation

Available : www.wec.ufl.edu/extension

WHY CLEAN YOUR PLANTS?



Anyone who has been reading the *Plant Care Tips* for any length of time has heard me talk about indoor plants and . . .

- Reduced light
- Less light
- Acclimating to lower light levels

There I said them again.

Plants as they move indoors are moving to lower light levels. These levels can be ten times lower than what the plants were produced in. As your plant slowly acclimates to its new environment, it will slowly begin to accumulate dust and dirt. This dust and dirt again reduces the light levels that the plant receives.

Because of the lower light levels the plants respond slowly. Growth is slowed and water uptake is slowed. Plants in the nursery have a great advantage. Most of the watering is all done overhead. The pot, soil, leaves and everything else gets watered. It also gives the leaves a good natural cleaning.

Cleaning your plants, doesn't just give more light to the plant, it also permits the plant's functions to work. Remember when you were a teenager and

had oily skin?

The skin pores got all clogged and, well, you get the idea. Your plant is the same way. Plants also must breathe, through the pores - the stomates. Removing the dust and dirt provides better light to the leaves and allows your plants to breathe and perform the necessary functions to survive.

Removing the Pest

Another benefit to cleaning the plant is pest removal. Pests such as mealybugs, scale, and mites love to hang out on the underside of leaves. Periodic cleaning helps remove these pests in the process of cleaning the plant. This isn't to say that every week plants get a bath. But regular "scouting" is essential for good plant health. This "scouting" isn't something that is left up to only the homeowner. Professionals must do the same thing but on a much larger scale. We even wrote about it in our e-zine for the professional spray applicator -- *SprayTips* are available at: <http://www.spraytech.com>.

(This article is originally published in *Plant Care Tips* from Zone10, Inc. at: <http://www.zone10.com>)

GMP UPDATE

A survey conducted by KRC Research in October, 2000 indicated that few consumers fear genetically engineered food. Sponsored by the Grocery Manufacturers of America, the survey results demonstrate that over three-quarters of the respondents were aware of genetically modified crops and over half were aware of genetically-modified food recalls. In contrast to popular media, the public remain positive about the benefits of agricultural biotechnology. Two-thirds of the respondents said they would buy produce that had been genetically modified to require fewer pesticides or if the foods were modified to contain more vitamins or nutrients. (The Grower, December 2000).

Stephen G. Pategas

American Society of Landscape Architects

The Purple Robe of Royalty

The showy bloomer was spotted in the windows of a castle in Holland and in a hotel in New York City. I spotted it at a Florida Nursery and Allied Trades Show in Orlando a few years ago. Commonly called royal or royalty plant or simply medinilla, *Medinilla myrantha* (Melastomataceae or the Tibouchina family) is a stunning plant. Native to Southeast Asia, it belongs to a group of evergreen shrubs, some of which are vining or epiphytic. The genus was named for J. de Medinilla, governor of the Mariana Islands (east of the Philippines) in 1820.



Royal plant grows as an epiphyte in its native habitat. Its hanging blossoms emerge with pastel pink flowers that turn deeper pink. They mature into long-lived purple berries, which slowly turn black with pink floral appendages. Since birds eat these berries, the showy grape-like clusters may not last as long as desired. The butterfly-attracting blooms appear year-round with the heaviest concentration in the spring through the fall.

Medinilla is hardy in zones 10-11, and typically reaches five or six feet in height in south Florida. The large fleshy leaves will suffer temperatures into the 40's and the roots even lower.

At B&C Tropicals Inc. of Homestead, FL (800-444-0072/305-247-4648) it is grown under 30% shade and should never be used in full sun. Ideal growing conditions include high humidity, moist, well-draining soil, a balanced slow-release fertilizer applied in spring and summer, and moderate water. Mites, thrips, and snails are a minor problem. The versatile royal plant can be grown in the ground as a shrub, on a trellis, in a hanging basket, or in a container. *M. magnifica* is more common and exhibits pendulous blossoms with large pink basal bracts above clusters of pink to coral-red flowers with yellow stamens.

TERMITE UPDATE



An aggressive species of termite, *Coptotermes havilandi* has appeared in Key West, FL. Experts believe that the termite, which is a weak flyer, arrived from Cuba or the West Indies on a boat. It lives in soil as well as wood and is viewed as a much more significant pest than the West Indian powderpost drywood termite because each of its colonies is populated by as many as a million individuals. Insecticide injections have been effective against *C. havilandi*, but fumigation does not work when they are living in the ground.

(Pesticide and Toxic Chemical News, Vol.28, No. 30)

FLOWER AND GARDEN TOUR OF HOLLAND FOR 2002

TENTATIVE AGENDA AND TOUR HIGHLIGHTS

May 4 Saturday: Departure

Depart Orlando. Fly Delta Airlines via Atlanta/Orlando to Schipol Airport in Amsterdam.

May 5 Sunday: Amsterdam

Arrive Amsterdam.

Our tour of the Dutch horticulture industry will begin with a view of the flower markets in Amsterdam. We will go from Schipol Airport by bus into the heart of Amsterdam, and will visit the market, and have an opportunity to view sidewalk flower stalls so prevalent in this part of the world. After lunch at a quaint "brown cafe" (similar to the British pub), the afternoon will include visits to Anne Frank's house, or perhaps view the city from a glass-topped canal boat. At 5:00, observe (or join in) the national custom of sitting at a sidewalk cafe, sipping tea or Dutch gin, and watching the afternoon fade into evening.

For dinner, we will sample the specialties of Indonesia, Holland's former colony. The chief dish here is rijsttafel, a heaping bowl of steamed rice served with 20 or more side dishes ranging from spicy chutney sauces to mild bananas and peanut-coated pork. The group will return by train to the nearby city of Hillegom, where the group's base will be Hotel Flora.

May 6 Monday: Woody Ornamental Production in Windmill Country

The group will travel south by van to visit nursery production in the vicinity of Gouda. Production and marketing will be discussed with nursery operators as you tour the nursery. View the transport of nursery plants by barge along the scenic canals of Holland. Here, as wherever you go in the Netherlands, the landscape is marked by distinctive architecture, windmills, pump stations, and meticulously maintained residential gardens.

A side trip to Kinderdijk is a must in this part of Holland. A short canal boat ride will take you through the city which boasts a greater concentration of windmills than any other town in the world.

From Kinderdijk, the van will proceed to Delft. Once a Royal capital, the city has long been famous for its distinctive and beautiful Blue Delft china. As time permits, there are many sights to see within an easy walk of the Nieuw Kerk, a late Gothic church built in the 15th century, and a crypt full of Dutch royalty.

May 7 Tuesday: World Flower Center of Aalsmeer, Holland's Struggle to Control the Sea, and Automated Nursery Management

We'll set the wake-up alarm early today, to tour the Aalsmeer Flower Auction at 7:30 am. Although there are

similar auctions elsewhere in the country, the Aalsmeer Auction is the largest floral auction in the world, with 52 acres under cover. Here you will witness the unique auction "clock" system, where international buyers bid on floral products, and learn how the products are received, sold and shipped within hours of being harvested.

No trip to Holland would be complete without a short stop at a wooden shoe factory. This one is located in Amstelveen, where wooden shoes are made before your eyes, and are available for purchase in many different styles.

Next stop will be at one of Holland's most interesting museums, where displays explain the vital importance of water management, in a country which has been threatened by the sea many times. A movie shows actual film footage of the last great flood in Holland, which prompted the most recent efforts to control the North Sea with a mammoth network of dams and pumping stations.

After lunch at a tea house next to the museum, we'll reboard the van and visit three commercial flower operations with the finest automation technology in the world. Dutch growers operate with one to two employees per acre compared to six to eight in the U.S. due to use of sophisticated automation.

May 8 Wednesday: Bulb Fields of Lisse and Keukenhof Gardens

We will travel south through the picturesque villages of Noordwijk and Katwijk, and drive through the wooded town of Wassenaar, known for its old mansions and stately manor houses.

A highlight of your trip to the Netherlands will be today's visit to beautiful Keukenhof Gardens. En route, we will drive through bulb fields abloom with hyacinths and a host of tulips. We will grab a quick Dutch lunch at the gate and hurry in to see the world's most spectacular bulb display. Pack your camera and lots of film, for the bulbs and flowering trees should be at their peak. But don't get so carried away with the outdoor spectacle that you miss the indoor greenhouse shows, which feature new varieties of daffodils, lilies and, of course, tulips. After touring Keukenhof, we will return to our hotel late afternoon.



FOR MORE INFORMATION PLEASE RETURN INTEREST FORM ON PAGE 15

May 9 Thursday: Het Loo Palace

Today we travel through one of the treasured forests in The Netherlands to Apeldorn and the Het Loo Palace. The driving route to Apeldorn will take us through the National Park de Hoge Veluwe, a forested area popular among the Dutch for its camping, hiking, biking and natural beauty. A stop in the forest for ice cream or pennekoeken (pancakes) is a much sought-after pastime among the Dutch.

May 10 Friday: Floriade

Gardening is a treasured leisure time activity in The Netherlands. Every ten years the floral and nursery industries, the Dutch government and various international sponsors join together to transform a parcel of land into a magnificent garden display known as Floriade. After the 6-month garden show, the area becomes a public park for the people of The Netherlands to enjoy.

We will visit Floriade, walk through and enjoy the many gardens of Floriade. The design of the gardens, the special garden features and many new and unique flowers make the Floriade a wonderful experience.

May 11 Saturday: Museums

We will return to downtown Amsterdam to visit the Van Gogh and Rijksmuseum and to take a cruise through the beautiful canals of Amsterdam. The Van Gogh museum houses the largest collection of artwork by this great artist in the world. The collection is displayed chronologically, thus allowing each visitor to study the changes in his artwork throughout his lifetime.

The Rijksmuseum houses "Nightwatch" by Rembrandt and many other famous pieces of artwork. The beauty of 'Nightwatch' cannot be fully appreciated without seeing the detail of this great picture from six feet away.

May 12 Sunday: Depart Holland

Het Loo Palace, in the woodland setting of Apeldorn in the heart of the Netherlands, was the favourite summer residence of the Stadholders and Royal Family of the Netherlands from 1686 to 1975. Since 1984 the palace has served as a museum after a spectacular restoration of the buildings and the gardens, returning them to their



original seventeenth century state. The palace with its interiors dating from King-Stadtholder William III and Queen Mary II up to the reign of Queen Wilhelmina, reflects the lifestyles of the members of the family of the Dutch House of Orange-Nassau over three centuries.

The wings with their permanent and visiting exhibitions of historical objects, documents, paintings, china, silver, royal garments and court costumes, and present a picture of the historical ties of the House of Orange-Nassau with the Netherlands. One of the biggest collections of national and international orders and decorations in the world is housed in the department Museum of the Chancery of the Netherlands Orders of Knighthood. The spring and summer planting of the baroque garden parterres with pergolas, statues and vases, in exactly the same Dutch fashion as in the seventeenth century, is unique in Europe. Just as in the seventeenth century, the fountains and cascades are always playing. The Stables house royal carriages, hunting carriages, sledges and vintage court cars, including the famous 'wagon' in which Queen Wilhelmina went out on painting excursions and her white state-funeral coach.

Practical Information

Weather: Average afternoon temperature in Amsterdam in May is 60 degrees F. Weather this time of year is often rainy and cool. A warm coat/jacket and comfortable raingear is a must.

Luggage: MG's should plan to restrict luggage to one full-size suitcase and one carry-on bag (or backpack). Causal clothes will be appropriate for all activities. Jeans are fine for most days' agendas; "better casual" attire for touring and dinner in Amsterdam.

Money: MG's are advised to carry Traveler's Checks rather than cash.

Medicine: Travelers should bring adequate supplies of any prescription drugs necessary.

Note: U.S. medical insurance is not accepted in the Netherlands.

Requirements

Each U.S. citizen must have a valid passport; U.S. citizens are not required to have visas; International citizens should check with the appropriate embassy to ascertain applicable passports and visa requirements. No special immunizations or health exams are required.

Cost of the trip will be approximately \$2,500.

DR. BOB'S GARDENING TIPS

Dr. Bob's gardening tips is a collection of short articles written to help home gardeners deal with the vast array of Florida plants and pests. Each article is illustrated with colored photographs and contains concise information on a particular plant or horticulture practice. In an effort to keep the articles timely, they are arranged chronologically by month of the year. More detailed information on the subjects in the articles can be obtained by simply clicking on the references following the articles.

These gardening tips can be accessed on the Web at <http://hort.ifas.ufl.edu/gt>.

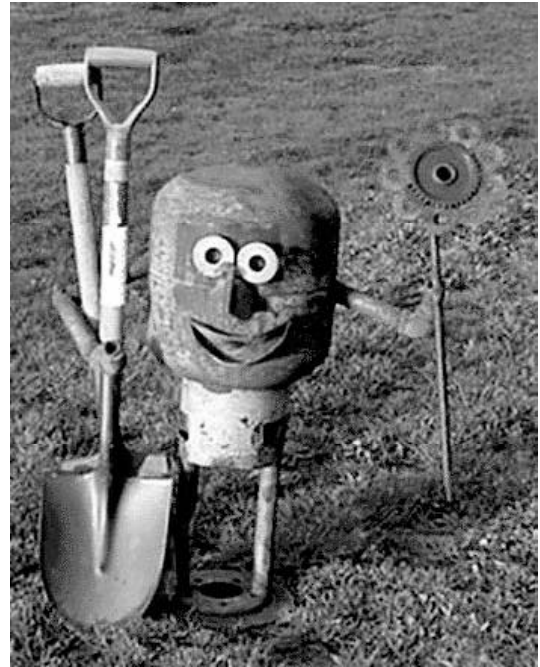
PESTICIDE POTPOURRI

EPA has created a new interactive website "Learn About Chemicals Around Your House" to teach children about ordinary household pesticide products that may contain harmful chemicals. The website includes information about toxic substances stored in different rooms in the house, and answers commonly asked questions on safe use and storage of these pesticides and other toxic products. The site also contains educational games, and tells children what to do if accidents occur. The site is available at:

<http://www.epa.gov/opptintr/kids/hometour/index.htm> (EPA Pesticide Program Update 04/20/00).

The Gardeners' Creed

- I want it.
- I want it all.
- I want it now.
- If it will not grow in my zone or is prohibitively expensive, I want it most of all.
- I am perfectly willing to forego any necessities of life such as food for my children in order to have it.
- I recognize my horticultural dependency.
- I recognize your horticulture dependency.
- I am willing to aid and abet your dependency, as you will mine.
- This makes us infinitely happy.
- Any money saved by virtue of comparison shopping equals found money, and therefore is not counted as spending.
- If everyone else has it, I must have it too.
- If I have planted everything I have already purchased, I must immediately buy more.



-An email from MG Jan Sieve's daughter, a new MG in Palm Beach County.

FLOWER AND GARDEN TOUR OF HOLLAND

Please return this form to receive more information regarding the trip to Holland in May of 2002.

Name _____

Address _____

Phone _____

E-mail _____

Number of interested persons _____

SEND TO: Florida Master Gardener Coordinator
P.O. Box 110670
Gainesville, FL 32611-0670

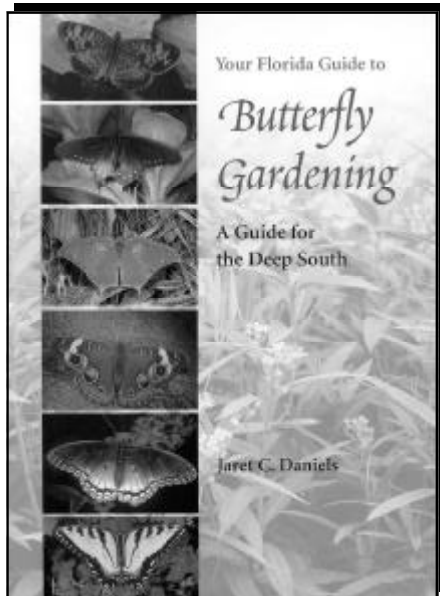
Cut Here

YOUR GUIDE TO BUTTERFLY GARDENING

A Guide for the Deep South

Jaret C. Daniels

This colorful illustrated guide shows you how simple it can be to start a butterfly garden today! The book, the third in the popular Your Florida Guide series, offers a thorough look at Florida's most important butterflies and the plants they prefer for food, shelter, and egg-laying. The guide helps you select plants for a yard where butterflies can live and return year after year. It includes planting diagrams, easy one-day container projects, and full garden layouts designed for each of Florida's three major growing zones and suitable for gardens throughout the Deep South.



The author, an avid lepidopterist, persuaded his household to allow their garage to become a butterfly farm and raised many of the creatures pictured in the book. The full-color photographs, all taken by him, show butterflies, the caterpillars they develop from, food plants, host plants, and garden designs.

Of special interest is a section on conservation that describes the way individuals can act locally to improve the quality and biodiversity of their environment.

Jaret Daniels is the former manager of the Boender Endangered Species Laboratory at the University of Florida, Gainesville, and currently Curator of Lepidoptera for the Butterfly Kingdom Conservatory in Hilton Head, South Carolina. He has written extensively

on butterflies and other beneficial insects in such publications as *Fine Gardening*, *American Butterflies*, and *Tropical Lepidoptera*. For the past nine years he has worked on the ecology and conservation of several endangered and threatened butterfly species in Florida and the Caribbean, including the Schaus Swallowtail.

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