

# GROWING PAINS



## Newsletter for the MiraCosta Horticulture Club of Oceanside

December 2018

Web-site: [www.mchclub.org](http://www.mchclub.org)  
President: Tandy Pfost 760-231-1248  
e-mail: [tandy.denny@gmail.com](mailto:tandy.denny@gmail.com)  
Editor: Kim Cyr 760-598-3368  
e-mail: [ritz4petz@roadrunner.com](mailto:ritz4petz@roadrunner.com)

### Announcements

**December meeting** – The holiday pot luck and Chinese gift exchange will start at 12:00.

**January meeting** will be held on Saturday the 12th because the college is still closed for the holidays on the first Saturday.

**Board elections** will be held at the April meeting when the nominating committee will present a slate. Nominations will also be accepted from the floor prior to the vote. Open positions are – President, VP Membership, Secretary, Treasurer. Carol Fehner VP Publications and Ed Fitzgerald VP Programs have volunteered to remain. Here is your opportunity to run things.

**Plant sale dates** – The annual plant sale will be held on June 1-2. There will be need for volunteers during the weeks prior as well as after for cleanup.

### President's Message

By Tandy Pfost

### Reading list continued

Has everyone had a chance to meet and hear Pat Welsh? She is a renowned gardener and horticulturalist in San Diego. Her Month-by-Month gardening guide for the area is ever-relevant. This book is a memoir of her life with gardens starting in England where she was born. It looks and feels like a diary.

### **Pat Welsh**

1. All My Edens 1996
2. Southern California Gardening, a Month-by-Month Guide

No pictures in this book but an interesting journey through hardships of farming in a growing nation. The Letters were first written in 1782 by Crevecoeur. Albert E. Stone has edited this version. It is fascinating.

### **J. Hector St. John de Crevecoeur**

1. Letters from an American Founder 1981

So, gardening = food, right? This story starts in the 1700s. the title speaks for itself.

### **James E. McWilliams**

1. A Revolution in Eating, How the Quest for Food Shaped America 2005

This is a fun read of articles written by the author about gardening and the plants that fill them. Growing up in Antigua, her favorite school subject was Botany.

### **Jamaica Kincaid**

1. My Garden (Book):1999

There are many books on this subject. I especially like this one with its glossy photos and plant details. Use for reference or just fun reading.

### **Gregory L. Tilford**

1. Edible and Medicinal Plants of the West 1997

Talk about a winning formula for a professional looking garden. It is all about how to use just five plants to create a well-designed perennial garden. There are layout drawings and suggested plants. Plants can be substituted.

**Nancy J. Ondra**

1. Five-Plant Gardens 2014

Air plants are very popular right now. Millennials are big into easily manageable plants for indoors, and these are it. I am not a collector, but this has a guide, facts, crafts, etc.

**Zenaida Sengo**

1. Air Plants, the curious world of Tillandsias 2014

The author describes over 1,000 species. There is also a key identifying in which zone each species can be found.

**James Lightner**

1. San Diego County Native Plants 2006

Many residents of San Diego travel to Baja. This a perfect guide laid out beautifully. Over 750 different plants are described. This book is published by the San Diego Natural History Museum. Jon Rebman was named 2011 San Diego Horticulturalist of the Year.

**Jon P. Rebman, PhD**

1. Baja California Plant Field Guide 3<sup>rd</sup> edition 2012

There is the internet to find out what public gardens there are to visit in a certain city. This is a little book that has all those gardens, specialty nurseries and compiled together.

**Nancy Conner, Demi Bowles Lathrop and Barbara Stevens**

2. Where on Earth, A Guide to Specialty Nurseries and Gardens in California 5<sup>th</sup> Edition 2017

This book is a Rodale Organic Gardening Book. Rodale has been around forever in the gardening world. This is a really fun book to read the local butterflies and hummingbirds and gardening for them. Butterflies and hummingbirds in one book! How cool is that.

**Sally Roth**

3. Attracting Butterflies & Hummingbirds to Your Backyard 2001

At one time this book was on the NY Times best seller list but here is another fascinating read. "the first four presidents were passionate botanists whose country seats became laboratories for their

grander vision of an independent agrarian republic in the New World." It provides some insight into what "gardening" was really like and some trials and errors.

**Andrea Wulf**

1. Founding Gardeners, The Revolutionary Generation, Nature, and the Shaping of the American Nations 2011

## CHINESE AUCTION GIFT EXCHANGE

Here are the rules for the Chinese gift exchange. If you want to participate please bring a plant or a wrapped garden related gift with a suggested max value of up to \$25.

You will be given a raffle ticket. When your number is called, you may choose a gift from the exchange table and open it, or take another member's gift (if it is not frozen). **After a person's number has been called, that person will pick the next ticket number.**

A gift is frozen when it is taken by a 3<sup>rd</sup> member. The member you take it from cannot immediately take it back from you but must take something from the exchange table or someone else before He/she can take back the gift from you.

If you have questions, ask Dottie. 760 806 6678

This is a fun game as long as you *\*don't get too attached\** to the gift you draw.

### Ten years after the crisis, what is happening to the world's bees?

Theconversation.com

Ten years ago, beekeepers in the United States raised the alarm that thousands of their hives were mysteriously empty of bees. What followed was global concern over a new phenomenon: Colony Collapse Disorder.

Since then we have realized that it was not just the US that was losing its honey bees; similar problems have manifested all over the world. To make things worse, we are also losing many of our populations of wild bees too.

Losing bees can have tragic consequences, for us as well as them. Bees are pollinators for about one-

third of the plants we eat, a service that has been valued at \$168 billion worldwide.

### ***The current status of bees worldwide***

Since the alarm was first raised, many countries have created new monitoring methods to judge the status of their bee stocks. As a result, we have much more data on bee populations.

It is clear that bees in the United States are still struggling. Beekeepers can tolerate up to 15% losses of colonies over winter, but the US was massively above this threshold, having lost 28.1% of colonies over the 2015-16 winter.

Honey bees are not the only bees that we should care about: wild bees are vital pollinators too. Some plants are pollinated by only one wild bee species.

Unsurprisingly, we have much less data on wild bees than honey bees, and the data we do have point to bigger concerns. For our wild bees we only really have good data for populations that are endangered or that have completely disappeared. Between 2008 and 2013, wild bee diversity in the US dropped by 23%, and a previously common bumblebee species was recently listed as endangered.

### ***Do we understand why?***

For all bees, foraging on flowers is a hard life. It is energetically and cognitively demanding; bees have to travel large distances to collect pollen and nectar from sometimes hard-to-find flowers, and return it all to the nest. To do this they need finely tuned senses, spatial awareness, learning and memory.

Anything that damages such skills can make bees struggle to find food, or even get lost while trying to forage. A bee that cannot find food and make it home again is as good as dead.

Because of this, bee populations are very vulnerable to what we call “sublethal stressors” – factors that don’t kill the bees directly but can hamper their behaviour.

Modern agriculture and industry have created a host of sublethal stressors that damage bees’ cognition. For example, diesel fumes and neonicotinoid pesticides both reduce bees’ foraging efficiency by disturbing chemical communications in their brains. Modern intensive agriculture disturbs

bee nutrition, which impairs their brain. Climate change interferes with the relationship between bees and the plants on which they feed.

In addition, managed honey bees are afflicted by a range of pests, viruses and predators that have been spread around the world as a side-effect of international trade. The worst is the ominously named *Varroa destructor* mite, which causes brain development disorders.

### ***What can we do?***

At the global level, to preserve our bees we have to improve the environments in which they collect food. Every small action can make a difference. Planting flower borders with bee-friendly flowers in your garden can provide food for both wild and domestic bees. You can reduce or eliminate the use of herbicides or pesticides when gardening. Even mowing the lawn less often can help bees out.

Ten years on from the alarm over disappearing bees, it is fair to say we now know the nature of the problem and what can be done to fix it. It’s up to us to take the steps needed to sustain these precious pollinators of our food for the future.

## **Why Trees Shed Their Leaves**

Deanna Connors

In temperate forests across the Northern Hemisphere, trees shed their leaves during autumn as cold weather approaches. Common deciduous trees in the Northern Hemisphere include several species of ash, aspen, beech, birch, cherry, elm, hickory, hornbeam, maple, oak, poplar and willow.

Most deciduous trees have broad leaves that are susceptible to being damaged during cold or dry weather. In contrast, most evergreen trees either live in warm, wet climates or they have weather-resistant needles for leaves.

Shedding leaves helps trees to conserve water and energy. As unfavorable weather approaches, hormones in the trees trigger the process of *abscission* whereby the leaves are actively cut-off of the tree by specialized cells. The word *abscission* shares the same Latin root word as that in scissors, *scindere*, which means “to cut.” At the start of the *abscission* process, trees reabsorb

valuable nutrients from their leaves and store them for later use in their roots. Chlorophyll, the pigment that gives leaves their green color, is one of the first molecules to be broken down for its nutrients. This is one of the reasons why trees turn red, orange, and gold colors during the fall. At the end of the abscission process, when the leaves have been shed, a protective layer of cells grows over the exposed area.

The shedding of leaves may also help trees to pollinate come springtime. Without leaves to get in the way, wind-blown pollen can travel longer distances and reach more trees.



### **Mushrooms could solve the war on plastic, says Kew Gardens**

[telegraph.co.uk/news/2018/09/12](http://telegraph.co.uk/news/2018/09/12)

Fungi could be the key to winning the war on plastic, leading scientists at Kew Gardens has said.

The first ever report on the state of the world's fungi has today revealed that if the natural properties of fungus can be harnessed and developed, plastic could be broken down naturally in weeks rather than years.

Kew Gardens and a team of over 100 scientists from 18 countries have compiled the paper, which shows how different organisms can decompose plastics, clean up radioactive material and even speed up the production of biodiesel.

Found last year by a team of Chinese scientists on a rubbish dump in Pakistan, *Aspergillus tubingensis* breaks down bonds between plastic molecules and then splits them using its mycelia. The process takes a matter of weeks, rather than the decades it usually requires for plastic to naturally disintegrate.

"This ability has the potential to be developed into one of the tools desperately needed to address the growing environmental problem of plastic waste," says the report.

Speaking yesterday at Kew Gardens, senior scientist Dr Ilia Leitch said: "We are in the early days of research but I would hope to see the benefits of fungi that can eat plastic in five to ten years."

It is hoped that fungi could revolutionize the recycling process and provide a sustainable decomposition method for plastics.

The report also seeks to enhance the image of fungi, citing its importance in beer (yeast), penicillin, washing powder and cheese.

The most famous type of fungi - mushrooms - are consumed the world over, with the market for edible species worth £32.5 billion.

In an effort to find out which 'lost' species are truly extinct and which species are simply under-recorded due to lack of survey work, Kew runs a 'lost and found fungi' citizen science project.

The British public have been urged to help identify and record species to add to the 1,200 already recorded for conservation assessments.

It is believed that 93 per cent of fungi are currently unknown to science, and the best estimate puts the number of species at 3 million - six times as many as there are plants.

"We have to change our way of thinking about fungi," said Ester Gaya, senior mycologist at Kew. "We would be covered in litter and dead matter if it weren't for fungi, but there is still so much more to know about it.

"We want to know what ecosystems there are, what is under threat and what we actually know about them," said Gaya, speaking inside Kew's fungarium - the largest in the world and home to more than 1.25m dried fungal specimens.

Around 2,000 new species of fungi are discovered worldwide each year and highlights from 2017 included finding fungi in dust, on an oil painting, and one new species lurking under a fingernail.

# Merry Christmas!

