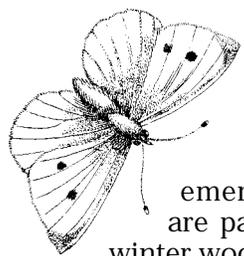




THE NEXT STEP Toward a Healthier Future

A BI-MONTHLY NEWSLETTER OF THE SEBASTOPOL TOXICS EDUCATION PROGRAM



Let's Talk Moths

As springtime emerges, many folks are packing away their winter woollens. But how do we pack them to protect them from clothes moths?

Moths are the bane of folks like me who like to stock up on things and keep them forever. The adult moths don't actually eat clothes, but rather lay eggs on or near them. The hatched larvae then eat the wool, feathers, or hair in stored clothes, carpets, furs, blankets, and natural brushes. They'll chew through light paper and slip through tiny cracks in lids to get in.

My grandmother knitted and crocheted custom garments to make ends meet, and her Oakland apartment fairly reeked of **mothballs**. Now that we know more about the toxicity to humans of many moth products, I wonder how much the mothballs played a part in her painful diseases and untimely death.

When buying a product for clothes moths, read the label carefully for warnings. If it kills a pest, it can be harmful to humans too. The toxics **naphthalene** and **paradichlorobenzene (PDB)** are common ingredients. They do not repel the moths, but can kill them when used in a sealed container. (No wonder my grandmother was using increasing amounts of loose mothballs in her closets—they weren't even effective.) These toxic pesticides can do harm when you set up or open the con-

tainer, when they leak from the container, and when the clothing is worn.

Camphor (from the camphor tree) is a traditional approach, and is somewhat effective in both repelling and killing moths, but it can be toxic to humans – about half as toxic as naphthalene or PDB. If you keep your woollens in a sealed bag with camphor, air them out well before using them.

A highly-effective and least-toxic approach to protecting your wool clothes is to clean them and put them in tightly-closed containers.

(1) Clean clothes and remove moth eggs. You can do this by washing items or putting them through a dryer (if it's safe for the item). You can also put them in a hot attic or room with temperatures over 99° for a week, or above 106° for at least four hours. Cleaning the items is vital, because they say that moths and larvae are attracted initially not to the wool but to the sweat and food odors.

(2) Protect your clothes by storing in tightly-sealed containers, like chests, boxes, or bags. You can wrap clothes in heavy brown paper and seal tightly with heavy-duty tape, or place in thick plastic bags.

(3) Use repellent herbs. You can also put an **herbal sachet** in with your clothes. This year I'm trying an herbal moth repellent I created based on my research. If you try this too, please let us know how it works for you. You can also make extra sachets and give them as gifts. Note: Keep wormwood out of reach of kids, so they don't inadvertently eat it. To create the sachet:

Proper Disposal of Toxics

Did you know that toxics like pesticides, antifreeze, paint, solvents, bleach, etc. shouldn't be put in the trash or down the drain? That's because they can easily go from there to poison our shared environment and water supply.

So what do you do with them? Bring them to a **Household Toxics Roundup!** Upcoming dates are: 3/28 & 3/29 Gualala, 4/12 Sonoma, 4/26 Rohnert Park, 5/17 Santa Rosa, and 6/21 Healdsburg. For more information about times, places, and appropriate materials, call the Sonoma County Waste Management Agency at 565-3375, or see < www.recyclenow.org > .

And stay tuned for news about the new year-round Household Toxics Waste Facility being created at the Central Disposal Site. Check their website or this newsletter for the opening date!

A. Combine

1 oz. dried wormwood (artemisia)
4 oz. dried lavender flowers
2 oz. dried rosemary leaves

B. Mix in

30 drops lavender oil
5 drops rosemary oil
5 drops vetiver extract

C. Fill sachets

You can make pretty little bags, or just tie up old fabric scraps or rags.

By the way, while **cedar oil** can kill small larvae, **cedar chests** lose this oil quickly and have not been proven to discourage moths. It seems that the old tight-fitting cedar chests kept moths out by their tight seals rather than the aromatic wood.

(4) Remove potential habitat. It can also be useful to vacuum your storage area well, to remove debris that can support moths, and to eliminate debris around the house, such as old birds' nests, dead rodents, etc.

In an upcoming issue we'll talk about **grain moths**, so if you have any knowledge or sources of information, please let us know!

~ Rebecca Dwan with Patricia Dines

Sources: *Olkowski/Daar, Common-Sense Pest Control.* P. Allen Smith Gardens.

Springtime with Permaculture

It's spring and a great time to put your energy toward your garden or patch of earth. Spring is often one of the busiest times of the year for farmers and gardeners, as we do garden cleanup, control of invasive weeds, new plantings, and watch the colorful flowers bloom.

So then how can permaculture (permanent culture) aid us in these seasonal activities? By helping us have healthy land with less toil. Less toil you say? Absolutely!

By applying the permaculture principle, **Work Within Nature**, we can utilize natural patterns of the earth to do some of our work for us. By observing how nature works, we can solve our garden problems, eliminate toxics, and give ourselves food, medicine, beauty, and habitat. By creating partnerships with other species, we can also recycle much of our own wastes in a way that provides for the earth rather than destroying it.

One great example of this is starting a **worm box**. These creatures of the soil readily digest most organic matter into an incredible natural fertilizer, full of life and nutrients, that produces healthy plants and healthy soil. This partnership with the worms creates an alternative to chemical fertilizers while redirecting tons of organic waste from landfills. All this just by providing the worms with food – our food scraps! Starting a worm box is easy, educational, and fun. For more info, see STEP issue I/6.

By working within natural systems and utilizing another permaculture principle, **Succession of Evolution**, we can create mature and low-maintenance landscapes, and solve the problem of “weeds.”

In nature, the Succession of Evolution usually happens over a period of generations. It starts with **pioneer plants**. These plants (also known as “weeds”) invade an area where the

soil has been disturbed or degraded by human activity, fire, or other natural disturbances. Pioneer plants help restore the soil and create an environment for the next succession of plants and animals to come into the system. This next succession is normally bigger plants like shrubs and trees whose seeds are carried by birds and other animals. Over time, these plant and animals species continue to be succeeded by bigger, longer-living species until it reaches what we call old growth eco-systems. These can last for hundreds to thousands of years.

By mimicking nature, we can create healthy landscapes with appropriate plantings that provide for human and non-human needs.

The first step is to choose which pioneer plants to grow. There are many plants that grow topsoil like “weeds” do, while providing humans with food and medicine. These include

yarrow, comfrey, society garlic, daikon, most plants in the mustard family, fava beans, clovers and all legumes, and many others. You can choose either perennials, to leave in year-round, or annuals that you can rotate with the next season's annual flower or food plants.

With these pioneer plants growing, you'll soon find that many of the invasive plants you don't want have less desire, room, and ability to grow. Plus you'll attract and feed beneficial insects, that are beautiful *and* help keep pest populations in control – cutting your labor needs without toxic chemicals.

The second step, to create a more dynamic and resourceful system, is to plant larger shrubs and trees on the north side of your space (to avoid shading other plants). Especially look for those that offer fruit and other food (stacking functions), and then, instead of extensive weeding, you can harvest and enjoy your forest garden. There may be some additional pruning time invested, depending on the trees you select. But this is far outweighed by the savings



A Quick Start for Your Spring Garden

For a quick start to your spring garden – remember **sheet mulching** – which lets you suppress weeds, feed worms, build topsoil, and avoid tilling! With this simple technique, you lay cardboard or newspaper over weeds, overlapping them for full coverage. Then cover this with organic matter (compost or mulch) and plant your plants. The sheet mulch materials will decompose into healthy topsoil for your plants.

of time and money, the avoidance of herbicides and weeding, and the enjoyment of fresh organic home-grown food.

Every day, nature gives us plenty of opportunities to harvest an abundance of resources. How we use, store, and direct this energy determines the health of our ecosystems and our communities. Permaculture shows that, by understanding nature's cycles, we can solve our weed and insect problems while creating beautiful and healthy gardens and landscapes that offer us, and nature's creatures, many benefits.

For more information about permaculture principles and techniques, look on the Internet or in books at local stores or the library.

~ Erik Ohlsen

ABOUT STEP

The Next STEP is published six times a year for Sebastopol residents by the **Sebastopol Toxics Education Program (STEP)**.

STEP's mission is to support Sebastopol citizens in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

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