

Volume 6, Sheet 2
February 5, 2005
Clean Air Plants
Sherwood's Forest Nursery & Garden Center
2651 Barrett Station Road

Welcome to the February Meeting!

We thank Dave Sherwood for hosting this meeting and being a major sponsor of Children's Garden Club from its birth. Dave and I when laying out the calendar through with everyone this month staying indoors with Mother Nature's winter season still apron us it would be appropriate to talk about indoor plants and how they help us clean our air. Then with the Builder's Home & Garden Show & Standard Flower Show up coming March 10-13 Dave, Sue Reed and self agreed it would be great to do some hands on dish gardens or terrariums. The dish gardens would be prefect for class 17 Dish Garden of "I Spy "Youth Horticulture Division

Most people appreciate plants for their beauty, the food and fiber they provide, I often wonder how many are aware of their importance they play in the environment. We hear so much these days about outdoor pollution, acid rain, auto emissions and global warming to name a few concerns. But what about our indoor air quality, Legion Air Disease scientist have discovered from tobacco smoke, many household chemicals. With today's energy efficient concerns of air-tight homes and offices if your ventilation filters are not working corrects this could become a fresh air exchange problem. Ever increasing levels of pollutants such as trichloroethylene, benzene, carbon monoxide, xylene and formaldehyde are being detected in many indoor environments. Beyond the Legion Air Disease, many buildings have gotten a to be know as "Sick Building Syndrome" different furnace filters and more fresh air exchange has helped reduce this. For an example, formaldehyde is one of the most common indoor pollutants, is emitted, or "off-gassed", into the air from sources such as certain types of insulation, fabrics, carpeting, plywood and household cleaning items (chemicals). A good example would be when you visit a new home there is a "newness" smell – the new fresh concrete etc., some are ok but who knows sometimes.

For your information a break down of the most found villains –

- Formaldehyde - foam insulation, plywood, clothes, carpet, furniture, facial tissues, and household cleaners.
- Benzene – tobacco smoke, gasoline, synthetic fibers, plastics, inks
- Trichloroethylene – dry cleaning, inks, paints, varnishes, lacquers and adhesives.

Help is on the way! With space travel, NASA is studying life support systems for the space stations, research is being led by Dr. B.C. “Bill” Wolverton and he has found that plants have the ability to remove pollutants from the air and break this substance down for use in plant growth processes. Over the past 30 years he has studied plants as a means of converting and cleaning up our environment.

It is a known fact that photosynthesis of plants and microorganisms purifies and revitalizes the Earth’s atmosphere. So why not apply the same principal to the indoor environment, research to confirm the ability to interior plants remove polluting chemicals from the interior environment says Dr. Wolverton.

To combat these health-threatening concerns a combined research was conducted in 1989 by NASA and the Associated Landscape Contractors of America (ALCA) to study the potential of house plants as an indoor air pollution reducer on Earth’s and in future space habitats. The final report showing house plants, especially those requiring low light, removed nearly 87 percent of the air pollutants within 24 hours.

Although all plants are good, different plants are better filters for different chemicals, reports NASA. Use philodendron, spider plant, golden pothos, bamboo palm, corn plant, chrysanthemum, and mother-in-law’s tongue to fight Formaldehyde. Now Benzene is best battled with English ivy, *Dracaena marginata*, Janet Craig, chrysanthemum, gerbera daisy, *Dracaena warneckeii*, and peace lily. Trichloroethylene is best tackled with gerbera daisy, chrysanthemum, peace lily, *Dracaena warneckeii*, and *Dracaena marginata*.

According to Dr. Wolverton, one potted plant per 100 square feet of floor space can help clean the air in an indoor environment. As we have all learned plants do replenish oxygen and reduce carbon dioxide released by humans. Plants can also reduce unhealthy microbes, and they also add

needed moisture / humidity to the atmosphere, beyond being a great stress reliever.

Present day Dr. Wolventon is retired from NASA and is part of the Plants for Clean Air Council.

In new studies orchids, bromeliads, and azaleas have been added to the list of effective plants to combatants of indoor air pollution.