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OUR GREEN CLEAN AIR MACHINES

by Cheryl Wade

(Reprinted from the Fall, 1993 issue of HousePlant Magazine)

Ahh! The smell of a new building. At first it may seem like a sign of success, but is more likely the telltale sign of air pollution. The air in some buildings is 100 times more polluted than the air outdoors, and according to United States Environmental Protection Agency (EPA) studies, indoor air pollution is one of the nation's growing environmental health problems.

Modern airtight, energy efficient homes and offices trap the pollutants emitted from man-made materials, causing a phenomenon known as "sick building syndrome". Symptoms being reported range from headache, skin rashes, nausea and dizziness to respiratory and sinus ailments.

Three of the worst villains found indoors are the following:

Formaldehyde - foam insulation, plywood, clothes, carpeting, furniture, facial tissue and household cleaners.

Benzine - tobacco smoke, gasoline, synthetic fibers, plastics, inks, detergent and rubber.

Trichloroethylene - dry cleaning, inks, paints, varnishes, lacquers and adhesives.

But how can we avoid these pollutants emitted from building materials, furnishings and office equipment? Live and work outdoors? Not a realistic choice for most of us. The fact is that people spend over 90 percent of their time indoors surrounded by materials emitting these pollutants. Luckily, there is a natural solution - HOUSEPLANTS!

Pollution Solution - To combat these health-threatening chemicals, in 1980 NASA and the Associated Landscape Contractors of America (ALCA) completed a two-year study of the potential use of houseplants as an indoor pollution reducer on Earth and in future space habitats. NASA's Environmental Scientist, Dr. Bill Wolverton, placed potted plants inside sealed Plexiglas chambers and injected formaldehyde, benzene and trichloroethylene. According to NASA's final report, houseplants 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 philodendrons, spider plants, golden pothos, bamboo palms, corn plants, chrysanthemums and mother-in-law's tongues to fight formaldehyde. Benzene is best battled with English Ivy, *dracaena marginata*, Janet Craig, chrysanthemum, gerbera daisy, *dracaena warneckei* and peace lily, and tackle trichloroethylene

NEXT MEETING - Tuesday, October 2nd, 2007 **promptly** at 7:00 P.M. at **Ripley-Grier Studios 520 8th Ave. (between 36th and 37th Streets) Room 17B** (Take elevator to 16th floor and walk up one flight. **This address for October ONLY.)**

HITTING THE WALL WITH BROMELIADS: A unique talk and video by Michael Riley of his bromeliads, orchids, aroids, gesneriads and other plants grown epiphytically on the walls of his apartment - and how he does it. A remarkable display and informative talk you should not miss. Bring in plants for Show and Tell and for sale.

Remember, you must pick up your plant order at this meeting!

with *D. gerbera* daisy, chrysanthemum, peace lily, *Dracaena warneckei* and *marginata.* According to Dr. Bill Woverton, one potted plant per 100 square feet of floor space can help clean the air in your home.

Other Benefits - Just as our first grade teachers explained so long ago, plants replenish oxygen and reduce carbon dioxide released by humans. Plants can also reduce unhealthy microbes, and they add needed moisture to dry homes and offices. They help workers stay healthy and productive, and are great stress relievers, too.

The Search Continues - Since NASA's study, plants have been shown to absorb many other toxic indoor pollutants Now retired from NASA, Dr. Bill Wolverton works with the Plants For Clean Air Council (now called Foliage For Clean Air Council - Ed.). Through continued studies he has added orchids, **bromeliads** and azaleas to the list of effective combatants of indoor pollution. These studies and other private research such as the Biosphere 2 project in Arizona, continue to explore the interconnection of plants and people. (*I am indebted to the knowledgeable Helga Tarver, a long-time subscriber, for sending me this interesting, still pertinent article. It is reprinted with permission of the author and publisher. Ed.)*

A FEW RECENTLY BLOOMED PLANTS IN MY HOUSE

by Herb Plever

Billbergia decora - I have shown photos of this lovely, helicoid billbergia in BROMELIANA several times. The flower petals of billbergias in sub-species ***Helicoidea*** coil up like a watch-spring. The peach-red primary bracts of ***B. decora*** are leathery and they extend outward and downward to form an inverted open umbrella around the flowers. They stay in color for a much longer time than do most billbergias.

My plant bloomed again in January (right after our meeting), and I was struck with the fact the inflorescence kept its shape and color for 18 or 19 days before collapsing inward and fading. The photo here shows the primary bract "umbrella" in a semi-open position.

Billbergia decora

Many members have requested that it be included in a plant order, but it has not been available commercially anywhere. However, I am glad to see that (thanks to Reginald Deroose) it has become available, and was included along with some new hybrids in the special plant order to be delivered at the October meeting.

Tillandsia zecheri (Till) ***var. cafayatensis*** (Palaci & Brown) - I got this plant about 30 years ago from the late Dorothea Muhr who lived in the mountains in the Argentinian province of Jujuy. Confusion was created when it was named ***Tillandsia muhrii*** in her honor, but this is not the same plant as the species ***Tillandsia muhriae***. In 1983 Walter Till found a plant in Jujuy which he described as ***T. zecheri***. In 1994 taxonomists Palaci and Brown made an extensive exploration of Jujuy and reported they could find no evidence there of ***T. muhriae*** and confirmed that the name ***T. muhrii*** was an illegitimate homonym for ***T. muhriae***. They examined the characters in the description of the plant called ***T. muhrii*** and found that they fell within the range of the characters of Till's ***T. zecheri***. To avoid further confusion, they invalidated the name ***muhrii*** and placed the plant in synonymy with ***T. zecheri***. (See their BSI Journal article in 1994, Vol. 44, No. 3.)

However, they found great variations between different populations of ***T. zecheri*** (no surprise), especially with regard to the trichome covering of the leaves. Using a spectron scanning optical microscope to study the trichomes of the different populations, they showed in photos published in the aforesaid Journal article three types of tri-

chomes:

1. circular shape with no elongation of the wing cells. These trichomes would appear on the leaf surface as flat and appressed.

2. some elongation of the wing cells from the leaf surface would make the trichome indument appear densely lepidote.

3. Substantial elongation of the wing cells from which the leaf surface would appear pruinose and hairy because the trichomes are raised up.

Based on these differences they described a *T. zecheri* COMPLEX with three varieties: ***var. cafayatensis*** with a flat, appressed covering (indument), *var. zecheri* with densely lepidote leaves and ***var. brealitoensis*** with pruinose, hairy leaves.

The plant I got from Dorothea appears to fall within ***var. cafayatensis*** as the trichome covering is appressed and not very dense so that the green chlorophyl in the leaves comes through faintly and the leaves appear both cinerous and green. The photo of that plant in the opposite column does not clearly show the green unless you zoom in on it. Then you will see that it has strong, longitudinal nerve lines. **This character was not mentioned in the description of any of the varieties in the *Tillandsia zecheri* Complex. *Variety cafayatensis*** is described as having a narrower inflorescence (up to 2 cm.) than ***var. zeheri*** (up to 3 cm.), and my plant's inflorescence is 1.6 cm wide.

Tillandsia zecheri var. cafayatensis is a strong, rapid grower without cultural problems; it flowers readily in my east window. It makes 1 to 3 pups depending on how soon I take off the first one.

Tillandsia zecheri var. cafayatensis

Unfortunately, none of the varieties of *Tillandsia zecheri* are available from any of our Tillandsia sources at this time. ❑

THE DOWN-UNDER JOKERS EXPECT TO SEE YOU IN CAIRNS NEXT YEAR

by Herb Plever

WARNING! This article contains insidious, subliminal vibes intended to overcome your initial better judgment. If you check on line at www.bsi.org for information about the 2008 World Bromeliad Conference you will find the following message from Lynn Hudson, Chairperson of the conference:

"Crikey! The 18th World Bromeliad Conference goes Down Under!

"The Americans named Australia 'Down Under' a long time ago. It is the large island shaped like the head of a Scotty dog, the nose points across the Indian Ocean to Africa, the ears across the Arafura Sea to New Guinea and the neck faces the Pacific Ocean separating it from South America.

"Cairns is on the South American side, up top in northern Queensland, above the Tropic of Capricorn and anchored just below paradise. It is typical of tropical places – lush and green with brightly coloured fauna and flora. Cairns is where the mountains of the rainforest meet the waters of the reef full of brightly coloured coral and fishes.

"Right in the centre of the City of Cairns opposite Sofitel Reef Casino is the Cairns International Hotel and this will be the base for

"Bromeliads Down Under", the 18th World Bromeliad Conference from 24–29 June 2008. Have a look at this five star hotel: http://www.cairnsinternational.com.au. (There are alternative, cheaper accommodations available in Cairns. Ed.)

"How can you get to this beautiful place? You cannot just drive over, even an airtight VW would run out of petrol and there are no service stations in the ocean for refueling. It is too far to swim and there are creatures in those oceans that have hungry stomachs and big teeth!

"You could come over by cruise ship, we have large liners dock here and you could stroll to the hotel.

"You could come by airplane, entering on the eastern side at either Sydney or Brisbane. From there you can come up to Cairns by airplane, by sea, by train or by road - so many decisions!! We will talk about that at another time." ❑

Bob Hudson, President of the Cairns Bromeliad Society and Lynn Hudson Chairperson of the WBC will be our hosts. This means you will be in constant laughter and, if you let them, you might be doing a lot of drinking. Hey, it's a vacation, so have a good time. BROMELCAIRNS is their society's bulletin, and it always has a wonderful joke page. Here is a sample from the February issue:

"Lynn and Bob were sitting in the living room and Bob said to her: "Just so you know. I never want to live in a vegetative state, dependent on some machine and fluids from a bottle. If that ever happens, just pull the plug." So she got up, unplugged the TV and threw out all of his beer."

"See what I mean? If you want to have a great time with a bunch of warm, wacky growers who know how to grow beautiful bromeliads, join with Sylvia and me in attending the next World Bromeliad Conference in June, 2008 in Cairns, Australia. You look warily at me and ask: "Wot?"(that's how they say "what" down-under). "Do you think I'm crazy? It takes more than a day to fly there and it costs a ton!"

Not necessarily true say I. We plan on flying to California and spend a few days there; then we'll fly to Hawaii and/or Figi and/or Tahiti and spend 3 or 4 days there and then fly on to Cairns with connection from Sydney or Brisbane for the conference. We also would have liked to visit New Zealand, but it will be the height of their winter, and it will be extremely cold as it is closer to Antartica. The temperature in sub-tropical Cairns should be in the 60°s F. We can visit different places on the way back. How's that sound? "Fine", you say, "but that'll cost a fortune!" We'll try to organize enough attendees to form a group starting in Los Angeles to qualify for group rates for the flight. The round trip flight from New York to California is about $320. Think about it!

NEWS and NOTES

IT'S A BOY!!! - Congratulations to Cynthia Henn Percarpio who gave birth to a baby boy on July 13th. Cynthia and the baby are doing well and she will attend the October meeting.

AMERICAN FROG DAY - an annual event promoting the study of poison dart frogs and other amphibians who in habitat reside in bromeliads. Saturday, October 13th at the Staten Island Hotel, 1415 Richmond Avenue from 9 to 4. At least one tropical plant vendor, Black Jungle, will be selling bromeliads. George Axiotakis will give a talk on bromeliad culture. Admission is $7; $6 for students/seniors. For directions and other info, go to www.frogday.org.

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