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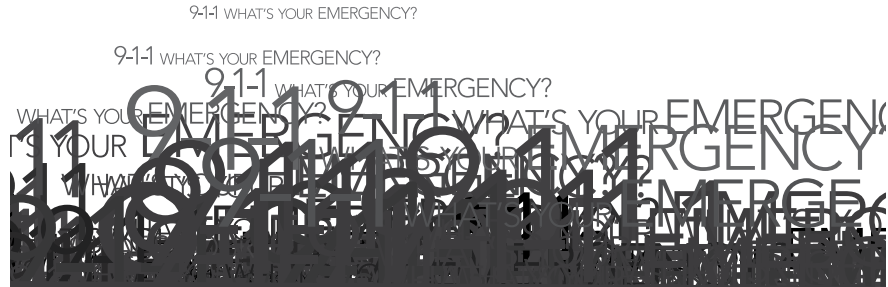
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Departments

- 10 Everything Matters**
Earth Day Canada
- 14 Fresh Sheet**
Local Winter Woes Remedy
by Chef Julian Bond
- 20 Liquid Organics**
Organic Sparkling Wine
by Katherine McEachnie
- 26 Earth Friendly**
Eco Personal and Home Products
by Connie Ekelund
- 30 Eco Tourism**
Maui's Historic Nature Trails
by Terry Tremaine
- 39 Eco-Chic Design**
Creating Healthier Environments with Plants
by Chris Karl
- 42 Green Transportation**
Electric Evolution
by Tony Whitney
- 46 Green Home**
Building a Green Home
by Walley Foster
- 50 Mind, Body & Spirit**
The Perils of PVC
by Kimberly Button

Profiles

- 36 Nature Conservancy of Canada**



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In this issue of *Good Life Living Green Magazine* we visit Maui and some amazing ecotourism sites, including Haleakala National Park. We learn how organic bubbly is made, and try some really fun electric cars. We hope you enjoy the read and that you feel we are successful in our mission to **"Inform and Inspire."**

Additionally, we are very proud to have aligned with The Nature Conservancy of Canada. This worthy cause will prove over the long term that sustaining our wilderness is not only critical for the wildlife that roam freely, but for the overall health of our planet. Please read the article on page 34 for a greater understanding of the types of things you can do to help this organization. *Donations are always greatly appreciated as well!*



We hope you enjoy the magazine and we welcome your comments!

Connie Ekelund
Group Editor

Visit us on Facebook and Twitter for exclusive contests and offers.



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Terry Tremaine - As Group Publisher of Fusion Publishing Inc., Terry keeps a very busy schedule juggling several magazines at a time. He has been in publishing for longer than he cares to remember, having first discovered the wonder of ink on paper in his school days. Currently the only writing he does is travel features, deeming them too onerous to delegate. Terry@GoodLifeLivingGreen.com

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Kimberly Button - After many years of debilitating medical conditions, Kimberly Button realized that, by going green and more natural in all aspects of her life, her health substantially improved. Button is the founder of greenWell, a green lifestyle consulting company that shows families and businesses how to create healthier and greener living and working environments. Kimberly is also a frequent speaker and workshop presenter. Kimberly@GoodLifeLivingGreen.com


Bob Mann - Bob founded Sustainalytics in the fall of 2007 and quickly launched the Sustainability Services team. In addition, Bob worked with Canadian Business for Social Responsibility, to help corporate leaders improve their understanding of how corporate responsibility performance was measured. Recently, has been asked to sit on the judging panel for the CERES Sustainability Reporting Award. Bob is also part of the advisory committee for the University of Toronto's Environmental Finance Professional Development Program and on the board of directors for The Sustainability Network. Bob@GoodLifeLivingGreen.com



Marcus Von Albrecht - Marcus is a professional chef, consultant and food manufacturer (www.mavafoods.com) with over 27 years in the food and hospitality industries. He lectures on both management and professional culinary training at colleges in British Columbia and sits on the boards of the British Columbia Chefs' Association, Canadian Food Safety Management, North American Grand Prix, Culinary Tourism Society of B.C. and AREGALA, (the culinary associations of Latin America). Marcus was also the first Canadian chef to cook on the summit of Mt. Kilimanjaro, Africa. Marcus@GoodLifeLivingGreen.com

Contests

Find Cal:

Similar to "Where's Waldo." Cal is our Ecological Ladybug Mascot. Search out Cal  and send us an email with the page location and be entered to win great prizes from our sponsors (see below). Enter contest here: www.GoodLifeLivingGreen.com/findcal.html

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Earth Day Canada

Coming Up Next...22 on the 22nd

The weather has always been a staple of conversation when we meet someone in passing or hunker down in a coffee shop. And this year, or winter to be exact, it reached new levels of interest as people and media pundits pondered the baffling lack of snow and warmer than usual temperatures.

The answer to “Where was winter this year?” has become a bit of a hot button issue, especially in light of Environment Canada’s prediction of a colder than average winter. Is it part of a natural cycle? Climate change? La Niña?

Regardless of where you land on the cause for this state of affairs, one truism stands out: allocating the cause to some outside force releases us from our individual responsibility—what each of us could accomplish if we committed to help lessen, and mitigate, the impact our daily actions have on the environment and the quality of life around us.



But what can we do?

Too often in our busy lives we look to the media, with their bite-sized snippets of information, to provide us with the guidance we desire. Unfortunately, while it can be a good source for identifying the issue(s), they rarely provide the practical information needed to address them. That responsibility falls elsewhere. Which is why Earth Day Canada exists.

Earth Day is about celebrating the choice to educate yourself on environmental issues and then translating that education into action. It’s about resolving to change the way you do things; addressing local needs; doing your part, however little or big, to leave as small a footprint as you can.

Of course, different circumstances require different efforts, but one thing is clear: we must be willing to step outside the ease of complacency, convenience and habit, to embrace new ways of doing things in our daily lives that will help make this a healthy, safe world for our families and communities long into the future.

Earth Day

CANADA



“Earth Day is about celebrating the choice to educate yourself on environmental issues and then translating that education into action.”

The 22nd of April marks the 22nd year people from across Canada will celebrate Earth Day, an event that has transcended the day to now include a whole month. During this time virtually every school child, workplace and municipality will participate in an Earth Day event of some sort. Will you?

Do your part

Events take place across the country throughout April and range from small private events to mass public celebrations of all things environmental. Earth Day continues to be the most recognized and celebrated environmental event worldwide, celebrated by over one billion people in over 170 countries.

Visit [Earth Day Canada's events page](#) to find many of the community-based Earth Day celebrations near you. The following are some Earth Day events happening across Canada this April.



Earth Day[®]
C A N A D A



Across Canada

Earth Day Canada is issuing two action-based challenges for all Canadians (kids, classrooms, groups, businesses, individuals and families) to make positive changes to their daily habits! The challenges run from April 1 to April 30, 2012 and encourage participants to take up new healthy actions.

Vancouver, BC

On Saturday April 21, it's your chance to put your knowledge of the city to the test in the city's first "Green City Race"—a team race against time using public transit or your own feet! To register or learn more, go to www.evergreen.ca/greencityrace.

Edmonton, AB

On April 22, join the 2012 Edmonton Earth Day Festival and enjoy a variety of exhibits, a new workshop area (for children and adults), music, food and more. Visit www.edmontonearthday.ca to find out more.

Toronto, ON

Every Saturday in April, Earth Day Canada's EcoMentors program (youth aged 15 to 24) and the Royal Ontario Museum will host environmental workshops/speaker events for youth. Each weekend will feature workshops related to the core themes of the ROM's Schad Gallery of Biodiversity. The series will end with a high-profile speakers' panel.

From April 13 to 15, Green Living Enterprises' Green Living Show, with programming support from Earth Day Canada, is opening Canada's largest consumer eco-show. Earth Day Canada's EcoKids Program will be hosting hands-on environmental activities for children and families in the EcoKids Zone.

From April 21 to 22 head out to Toronto Zoo's "Party for the Planet." Celebrate Earth Day at the zoo and learn how your whole family can be ambassadors for living in a more environmentally responsible way. Meet Earth Day Canada at the new Tundra Trek area for a fun-filled day of conservation and education.

Montreal, QC

Montreal is putting on a unique event this Earth Day, a scuba diving clean-up dive! Taking place in the Kahnawake Quarry, scuba divers are encouraged to "Dive Against Debris" and help clean the quarry. For more information, call Darcy Kieran at 514.482.1890.

Moncton, NB

With thousands attending last year's event, the Moncton 2012 Earth Day event is looking to break that record. On April 22 from 10 a.m. to 4 p.m., there will be food, music, kids' activities, workshops, a green expo and prizes to be won. Visit www.monctonearthday.com for a complete list of activities. 🌐

The History

Earth Day, founded in 1970 by Senator Gaylord Nelson of Wisconsin and Harvard University student Denis Hayes, is seen by many as the birth of the environmental movement and the most celebrated environmental event worldwide.

The first Earth Day saw thousands of "teach-ins" take place on university campuses across the United States to educate people about environmental issues and solutions, and encourage politicians to adopt them as a policy issue. It was wildly successful. Over 20 million Americans participated and the U.S. Congress moved to pass the Clean Air and Water Acts, and to establish the Environmental Protection Agency.

Building on the success of Earth Day in the United States, a small group of Canadians gathered in 1989 to organize similar events in Canada, with a focus on environmental education, action and empowerment. The approach worked. Earth Day proved so popular with schools, community groups and businesses that Earth Day Canada (EDC) was founded as a national environmental charity to create and facilitate positive public awareness for existing and developing environmental solutions.

EARTH DAY 2012



TAKE IT UP FOR EARTH DAY®

FOR YOUTH, ADULTS, FAMILIES AND BUSINESSES

Lifestyle choices are typically based on convenience, complacency and habit, but they come with a price. Earth Day Canada's *Take It Up for Earth Day* campaign can help you make better decisions about what food and resources you consume.

Starting **March 12**, *Take It Up for Earth Day* by visiting earthday.ca/takeitup and registering your commitment(s).



FOR KIDS, CLASSROOMS AND SCHOOLS

Through the kid-friendly campaign, *Act for the Planet*, Earth Day Canada's EcoKids program is offering kids a chance to get involved on their own terms!





Local Winter Woes Remedy

By Chef Julian Bond

The wanton woes of winter combined with, perhaps, a little extra of you to love, does not wane the rumbling of a hungry tummy in dire need of a feeding. This winter, replenish mind, soul and the cupboard coffers with a lightened load for you and your reusable grocery totes. Dump the boxes, bags and cans of highly processed, sugar-laden foods, and shop with a “make do” attitude. Chose ingredients sourced and produced as locally as possible. Prepared with the right know-how, any winter green or hearty squash can easily be cooked into a day brightener. Key to this strategy is to enhance each meal with a couple of pick-me-up splashes of vibrancy, courtesy of last year’s summer harvest or fall bounty.

It is time to pull out the preserves, root through the freezer and, if lucky enough, throw open the doors of your cold room. Even if you didn’t get around to canning tomatoes, pickling cucumber, jamming fruit or freezing batches of summer veggies and berries. thankfully, they can be sourced at grocery stores, farmgate stores and at winter farmers’ markets. This is an out-of-season way to support and prepare feel-good-inside-and-out local food choices.

Look past the supermarket shelves stocked with sun-soaked kiwis, strawberries, black plums and cherries. They have been transported from far way and more acclimate locales, carrying with them heavy carbon footprints and often sold by dollar-grabbing, conglomerate-style super stores who look past production practices.

“Prepared with the right know-how, any winter green or hearty squash can easily be cooked into a day brightener.”

I encourage you to forego the enticing red, pink and orange vegetables and fruits colourfully speckling the grocery aisles and embrace winter hardy greens, cold-stored fall harvests, and summer fruits and vegetables that can be purchased frozen, canned or dehydrated—perfect accompaniments or meal enhancers this time of year.

Using time-tested recipes found at a finger’s touch and with the use of a few basic culinary principles, we can lower our global food footprint in a very simple, effective and locally supportive way. Even sourcing a little outside of the box can do great things. For instance, there’s rabbit. It is an excellent source of white meat protein. Actually, it is higher in protein than chicken and also much lower in fat. Rabbit meat has been enjoyed for decades in many parts of the world and locally. During the Great Depression, Western Canadians were documented as appreciating rabbit as a food hero because raising this prominently-white meat option requires one-third of the water, feed and energy required to rear chickens. Factor in a 16 to 20-week maturation period and this over-achieving breeder has been perfectly promoted as a sustainable source of renewable protein for third world countries working to regain self-sufficiency with minimal land impact.

Cost-effective menu planning can also translate into local enjoyment. Up the hearty root vegetable sides and the cost of a prized, locally-raised cut of beef or pork can be within budget. A little known fact is that the famously pillowy and delicious Yorkshire pudding was not originally baked to sup up the accompanying roast beef gravy but was served beforehand as an appetite quencher in an effort to reduce the consumption of a very costly Sunday roast. Also, a traditional cost-saving practice and “make do” dish was bouillabaisse, the famous fish stew of Marseille. Traditionally, this hearty and cost-effective fish soup was a catch-of-the-day stew made simply by boiling the non-profitable seafood by-catch and less sought after species to feed the hungry fishermen whilst out pulling in more valuable catch. Russian peasants made beetroot and cabbage soups from hearty winter vegetables that could be stored for use over long periods of time. Portuguese salt cod and Scandinavians pickled herring are also terrific examples of taking a “make do” attitude. What was fresh and on-hand has been consumed with regularity, to then become traditional fare, letting the quality and freshness of the ingredients shine through.

Appreciating what can be efficiently and sustainably grown together is as natural a pairing as choosing a local wine. How else would be seen the Mediterranean practice of serving fish with olives or predominant wine regions' appreciation of game birds stuffed with grapes? This is not a new idea—for centuries and worldwide we have been utilizing commonly grown, found and fished-together foods as perfect pairings. Let's continue to trend toward local terroir, both on plate and in our glass.

Statistically, the food footprint of an average British Columbian requires the agricultural gains of approximately 0.524 hectares or roughly six city lots, according to the Ministry of Agriculture and Lands, to support yearly. Adding to this is that approximately 60 percent of our daily foods shipped are slated to be consumed both inside and outside our homes and shipped from as far away as Australia, California, Chile, Florida and Mexico by plane, train and automobile, and sometimes all three. With our current buying practices, we are effortlessly encouraging a staggeringly large food foot print that punishes our local climate.

Utilizing what is seasonally on-hand is key to reducing our everyday and growing food footprint. Education on these issues, alongside the necessary steps to protect our own local food-growing regions, like our bountiful Fraser Valley, is of utmost importance. With the integrity of our food systems in question, B.C. is thankfully promoting an even deeper food revolution. Specialty groups are actively facilitating and providing the necessary knowledge in favour and support for local sustainable food systems. Evidence of this expanding resurgence is Vancouver Farmers' Markets (visit www.eatlocal.org for a list of farmer's markets) in partnership with the Local Food First Consortium's construction of Vancouver's first multi-purpose building called New City Market (visit www.newcitymarket.org to show your support and find out more information). This specially designed building will house farmers' markets, facilitate local food processing and will offer warehouse and retail space in an affordably and year-round way.

Supporting local and direct customer-farmer relationships allow the farmer, fisher and producer to improve their profit margins and maybe even encourage many more small-scale endeavours, whose hopes can go beyond simply surviving. Hopefully, this will also encourage a new generation of local suppliers to take on similar approaches. Astonishingly, according to Farm Folk/City Folk (www.ffcfc.bc.ca), a new generation of farmers and producers are desperately needed as the average age of a B.C. farmer is 50-plus years of age.

So, pop open the preserves, try pumpkin as a vegetable side dish and cranberries as an accompaniment for more than just Thanksgiving and Christmas dinner. The means are there to easily browse recipes, whether international or local, that we can incorporate seasonal ingredients into any time of year alongside a perfectly paired bottle of B.C. wine.

Chef tip: Using your favourite roast chicken recipe, substitute a rabbit, jointed in a similar way. However, it does tend to dry out quickly, so do be sure to baste more frequently and cook for longer on a lower heat and covered for longer than a regular chicken.



Roast Rabbit

Serves 4

Ingredients

- 1 medium Rabbit (jointed)
- 2 sprigs Rosemary, chopped fine (sage or fresh marjoram also work)
- 4 cloves Garlic, halved
- 1 cup Seasonal ale (or chicken stock)
- 1 Lemon, juiced
- 3 tbsp Olive oil
- 1 large Onion (coarsely chopped)
- Salt & pepper to taste
- Parsley to garnish

Method

In zip lock bag, add all ingredients except parsley and olive oil. Marinate in refrigerator overnight.

Preheat oven to 375F. Pour ingredients into a large roasting pan, removing garlic cloves and adding olive oil. Season with salt and pepper.

Roast uncovered for 40 minutes or until thoroughly cooked through. Baste often.

Serve golden brown.

Chef's Tips:

Rabbit meat can be used in many of the same ways as chicken. But, because rabbit is so low in fat, it is easy to dry out in the cooking process. Lower temperatures and longer cooking times are necessary.

Small, young rabbits, 1.5 to two pounds, can be fried or stewed. For larger rabbits, slow cooking or braising is recommended.

For most recipes, the rabbit is cut into serving size pieces—two forelegs, four pieces from the two hind legs, and three or five from the back section. The kidneys are attached to the lower back and ideally should be cooked and served with this piece. The liver and heart can also be cooked with the rest of the rabbit or stewed separately and used in a gravy.

A 1.5 to 3.5 pound rabbit will render approximately two to 4.5 cups of cooked meat. Larger rabbits will provided about 1.5 cups of cooked meat per pound of start weight.

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Jerusalem Artichoke au Gratin
(From my garden)
Serves 4

- Ingredients**
- 8-10 medium Jerusalem artichokes (grows like a tuber, easily)
 - 1 clove Garlic, minced
 - 1/2 cup Parmigiano-Reggiano cheese, grated
 - 100 ml Cream
 - 1/4 tsp Nutmeg
 - Parsley, chopped
 - Salt & pepper to taste
 - 4 medium Ramekins
 - 1 tbsp Butter

Method

Preheat oven to 400F. Peel and thinly slice (5mm) Jerusalem artichokes. Rub the inside of ramekins with butter.

In bowl, toss artichokes, garlic, cheese, nutmeg and parsley, and season with salt and pepper. Arrange in ramekins. Add cream and top with cheese. Bake for 30 to 35 minutes, until top golden and artichokes can be pierced easily.



Cranberry and Orange Compote
(Serve with roast rabbit)

- Ingredients**
- 7 1/2 oz Fresh cranberries
 - 1 medium Orange, peeled and segmented
 - 1/2 cup Sugar (can substitute 1/4 cup blue agave syrup—a natural sweetener)

Method

In a heavy bottom pan, place cranberries, orange segments and sugar.

Cook for seven minutes or until cranberries just start to burst.

Chill until ready to use. Can be stored in refrigerator for up to one week.

Maple Vanilla Carrots
Serves 4

- Ingredients**
- 1 lb Carrots, peeled and cut diagonally into 1/2-inch-thick slices
 - 2 cups Water
 - 1 Vanilla bean, halved lengthwise
 - 2 tbsp Pure maple syrup
 - 1 tbsp Unsalted butter
 - Sea salt & fresh cracked pepper to taste

Method

Combine carrots and water in a large skillet.

Using the tip of a paring knife, scrape vanilla seeds into skillet and add to carrots and water. Add syrup, butter, salt, and pepper, and toss.

Bring to a simmer, and cook until carrots are tender and most of the water has evaporated, approximately 10 minutes. 🌍



Winter Vegetable Stock Basics

Preparing vegetable stocks is so simple; you don't really need a recipe. This also allows you to stretch the value of your local or organic winter veggies by making your stockpot the destination for their odds and ends. Placing a plastic bag in the freezer which you periodically add to until you are ready to make the stock also helps you get ready.

When ready, add your chunky-cut assortment of vegetables to a deep sauce pan. Cover with cold water and bring to a medium simmer, do not boil. Try not to stir as this causes a cloudy stock. Simmer for approximately one hour. Strain and let liquid stock cool, then skim top for a clearer liquid.

No recipe needed. Remaining can also be frozen or set in the refrigerator for three to four days in a covered container. This is the perfect start for a hearty winter soup or stew.

Chef tips: For a light-coloured stock, use light coloured vegetables such as celery (including leaves), leeks (white part only), parsnip, garlic and parsley stalks. Parsnips and carrots also sweeten the stock. Season sparingly with herbs of choice, like bay leaves and fresh thyme.

For a darker stock, add to the above mushrooms, onion (with skin), carrots (no green tops as they add bitterness). Or begin by browning the onions and adding a dash of soy sauce.

For a strongly-flavoured vegetable stock, add small amounts of asparagus, broccoli stalks, cabbage, and cauliflower.

For a beef stock, use quality soup bones; start by browning on all sides then adding the vegetables. Sauté for a few minutes, then lower heat and top with cold water. Skim the top of liquid throughout process.



Caramelized French Onion Soup
Serves 4

- Ingredients**
- 3 – 4 medium Vidalia onions, thinly sliced (or other sweet variety)
 - 2 tbsp Butter, unsalted
 - 1/2 cup Shallots thinly sliced
 - 3 cloves Garlic, minced
 - 4 cups Beef stock
 - 1/2 cup Dry white wine
 - 1 tbsp Fresh thyme (or 1 tsp dried)
 - 1/4 cup Goat cheese
 - Salt & pepper to taste

Method

1. Melt butter in Dutch oven over medium heat. Add the onions and stir well to coat with butter. Reduce the heat to medium-low; cover and cook. Stir occasionally until onions are very tender; approximately 20 to 25 minutes.
2. Uncover and increase heat to medium. Continue to cook until onions are lightly browned, about 10 minutes. Careful not to let the onions burn as they will turn bitter.
3. Add shallots and garlic; cook, stirring constantly for about two minutes. Add white wine and increase heat to medium-high, stirring constantly for about three minutes. Add the beef stock and thyme; bring to boil. Reduce heat; cover and simmer, stirring occasionally for about 30 minutes. Season to taste.
4. Ladle into oven-safe bowls and sprinkle with crumbled goat cheese. Place under broiler to melt in slightly. Top with crouton of choice.

Chef tip: Recipe can be made vegan if vegetable stock is used instead of beef, onions are cooked in olive oil instead of butter, and if goat cheese is omitted.

The secret to a good onion soup is cooking the onions slowly and for a longer period of time, allowing their natural sugars to caramelize.

Organic Sparkling Wine

Pares Balta Winery Estate—Penedes, Spain

By Katherine McEachnie, AIWS, CSW



Pares Balta Winery is a family-owned estate with traditions going back to 1790. The very first vines were planted in 1790 on the estate that now surrounds the winery. Today, more than 200 years later, almost everything is different. One thing hasn't changed however, and that is their philosophy about respecting the land and careful management of their unique environment. They have been growing grapes and cultivating their vineyards in an ecological way since 1790, but did not officially become organically certified until 2004. The council that controls and certifies the ecological production standards in this part of Spain is called CCPAE (Consell Catala de la Produccio Agraria Evologica, www.ccpae.org) and they are responsible for reporting to the Department of Agriculture in Catalonia. This institution oversees operations to ensure that the winery is fulfilling all its obligations under the European Regulation 2092/91.

“There are three generations working at Pares Balta, so you could say they are winemakers with long traditions, but with new and fresh ideas.”

www.GoodLifeLivingGreen.com



Pares Balta family today



Pares Balta grows grapes without the use of herbicides, pesticides or any chemical fertilizer. They have their own flock of sheep that fertilize the soils and take care of the vineyards after harvest. They also have beehives and use bees to encourage pollination during the flowering season. The close proximity of the Mediterranean also influences the quality of the grapes for the better. Besides still wine production, Pares Balta winery produces a cava brut of very high quality. The vineyard altitudes vary from 170 meters to 800 meters above sea level and offer unique microclimates and diverse mixtures of soils to give a special personality to their sparkling wine.

There are three generations working at Pares Balta, so you could say they are winemakers with long traditions, but with new and fresh ideas. The grandfather, Joan Cusine Hill, born in 1917, came from a family of vine growers and from the age of seven, he helped his father cultivate the vineyards. He worked very hard in viticulture, but, sadly, passed away in 2010. His son, Joan Cusine Cusine, remains active in the vineyard, but the reins of the business have passed to his sons (the two grandsons of Joan Cusine Hill), Joan and Josep Cusine Carol, who work cohesively to guide the company into a new era of high-quality wine production. There are two winemakers and they just happen to be married to the two grandsons, so this is an all-family affair. Maria Elena Jimenez and Marta Casas are the wives of Joan and Josep respectively and are both enologists. They are two skilled young women whose efforts are reflected in the quality of the wines produced. Pares Balta Cava Brut shows off fine character and harmonious concentration with elegance and balance.

The younger generations have brought new and fresh ideas to the company but also show enormous respect for its traditions and have worked hard to protect the heritage of the winery. The old cellars of Pares Balta date back to 1790 and are now undergoing a major restoration. With a mosaic of different soils and a variety of micro-climates, they are able to successfully grow 18 different grape varieties, each exhibiting its own personality. Although this winery produces white wines and red wines of increasing quality, this article will focus on their rich and complex Cava Brut. They use three indigenous grape varieties—Parellada, Macabeo and Xarel-lo—in their prized Cava. This cava has won national and international acclaim.

The types of soils have a vital influence on the grapes and the resulting wines. The best soils are of poor organic materials. The Pares Balta vineyard has a diversity of calcareous soils, clay and some outcroppings of important quantities of marine fossils. There are rocky elements of sharp and edgy stones but also small round stones which have been polished by the sea for millions of years. This type of soil is very permeable and retains little water. This does cause stress to the vines, as they are forced to grow deep roots to tap into the water tables many metres below the surface and that prolongs their life, but also allows for the production of small yields of grapes with big flavour and concentration. No artificial irrigation is done, so the only water the vines, receive comes directly from the rainfall.

Some of the vineyards lie on terraces that were prepared centuries ago, but they were abandoned due to the high cost of maintaining them. This family of winemakers and grape growers, however, are slowly taking them back into use again. This is another testament to this family's respect for tradition.



The Pares Balta vineyard estate lies in the Penedes mountains, completely surrounded by wild nature and woods. As you can see in the beautiful photo, it is a viticultural paradise in a protected setting with no pollution and only 10 kilometres from the sea.


With so much nature surrounding the estate, it is common to see wild animals around the vineyards. Wild boars, rabbits, foxes and Bonelli's eagle are seen regularly. Unfortunately, the wild boars have rather exquisite taste buds and prefer to only dine on the ripe grapes.

In organic farming and sustainable viticulture, it is very important to treat the plants at the right moment. The only treatment Pares Balta uses for oidium, bacillus thuringiensis and the grape worm cochylis (which attacks the grapes) is what is commonly known as a Bordeaux mixture. This mixture is permitted in organic viticulture. It is a combination of copper sulphate and lime dissolved separately in water, then mixed together. Copper ions affect the enzymes in the fungal spores, thereby preventing germination, however this mixture must be used pre-emptively before the fungus has attacked. Grapes are sensitive to disease, and in order to reduce disease pressure (especially mould and mildew) the winery also does a leaf removal to increase air circulation and expose the grapes to sunlight. In addition, they practice green harvesting, whereby they thin out the grape clusters, reducing them by up to half—the amount depends on the climatology of the year—but the grapes left on the vine will develop more concentrated flavours and ripen with more character than if their nutrients were shared.

On the higher sites in the vineyard, the thermal winds and diurnal temperature ranges fluctuate considerably, slowing down ripening, which helps to retain acidity in the grapes, which is essential for outstanding quality sparkling wine.

Wine quality depends first on the health of the grape and second on the work of the winemaker who is responsible for transferring the personality of the vine into the bottle. The Pares Balta wines are made from 18 grape varieties grown on their own five vineyard estates. At Pares Balta they believe that each wine should carry the characteristics of the soil and they make an effort to try to put what is uniquely their own heritage into the wines. The Pares Balta Cava Brut is made with 58 percent Parellada grapes grown at 616 meters above sea level in the Finca El Subal vineyard, 25 percent Macabeo grapes and 17 percent Xarel-lo grapes, both grown between 230 and 325 meters above sea level in the Finca Pares Balta vineyard.

When you sip a glass of this Cava Brut chilled, you will experience a fresh minerality and toasty aroma followed by fresh and alive pear and apple flavours. This bubbly has refreshing acidity and is ultra dry, with a light and very pleasant finish, leaving you wanting more. The Parellada grapes contribute florality and freshness, the Macabeo grapes offer fruit and complexity and the Xarel-lo grapes provide structure.

Why not share a bottle of this exquisitely dry Cava Brut with friends and family? You can buy it at BCLDB for \$19.99 (product number SKU #366872). 



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Eco Personal and Home Products

By Connie Ekelund

Fashion

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Maui's Historic Nature Trails

By Terry Tremaine
Photos by Connie Ekelund

Mauie's principal industry is tourism and residents recognize visitors are ever more likely to seek out properties utilizing environmentally-friendly practices. The Fairmont Kea Lani in Wailea is a market leader with numerous awards for its eco-friendly practices, including the Hawaii Green Business award. This luxury resort offers family-friendly accommodation and services watched over by the 10-year-old in-house Green Team.

Wailea appears to be in a lush area, but is actually situated on the dry windward side of Haleakala, the volcanic mountain which is the foundation of Maui. A good portion of the mountain, including the volcano crater, has been protected within the boundaries of Haleakala National Park since Hawaii National park was established by the U.S. Congress in 1916. From the time of their arrival some thousand years prior, the area has been central to the life of the Polynesian people.

"A good portion of the mountain...has been protected within...Haleakala National Park since...1916."

There are some 27 miles of trails throughout the park. Haleakala rises to over ten thousand feet, so hiking can be strenuous, combined with sudden changes in the weather due the height variation. The changes in terrain are remarkable.

We followed the Pipiwai Trail from the Pools at Ohe'o up to the Waimoku Falls. This is considered one of the better hikes on Maui. The two-mile-long trail winds up through changing fauna to the four-hundred-foot waterfall which cascades down a sheer lava rock into a small pool. The hike will take anywhere from three to five hours.



About two-thirds of the way up, the trail passes through a bamboo jungle. If you've never been through bamboo before, this is a remarkable experience, particularly when there is a breeze and the bamboo stalks bang against one another, creating an unusual racket due to the hollow centre of the stalks.

About ten miles from the entrance to the park is the town of Hana on the eastern tip of Maui. From Wailea we had driven to Hana. That sounds simple enough, there being only two routes. However, the more southern one is not suggested for rental vehicles, and while the northern route is just 52 miles, with gorgeous views of beaches, lookouts, and stunning scenery, there are also some 600 curves and more than 50 bridges. It is no secret; the highway is tough to navigate. Many of the curves, one guess was 220, are hairpin, with a bridge positioned at the point. To add to the challenge, the bridges tend to be one-lane wide, with drivers having to wait their turn—presuming they are able to see the approaching car around the point. Further, many sections of the highway, maybe better described as just a road, are only a car-and-a-half wide; often at stretches where cars are about to face each other with no prior clear visibility. Visitors would be advised to pull over to allow residents more familiar with the route to get by.

Hana is a small town in what's considered to be one of Hawaii's last unspoiled frontiers. According to author James Michener, its Hamoa Beach is the nicest in the world. Travaasa Hana is the principal resort, with a long history; originally opened as a luxury resort in 1946, it has changed hands numerous times, with the current owners gaining the property just recently. They have undertaken to reposition the experience as an all-inclusive luxury resort in the tradition of premium properties found in the South Pacific. They have also initiated a program of eco-friendly initiatives in keeping with the beauty of the area.



Ecotourism is a consciousness of the impact of travel. Sustainability in tourism has different aspects: environmental, cultural, biodiversity (natural), and social. Depending upon the destination, some aspects are more relevant than others. Social aspects are extremely relevant in poor countries with underdeveloped social security systems and weak labour laws, while tourism close to sensitive natural areas must take the local environment into account. The limitation of energy use and waste production might be more relevant in mass tourism resorts, while respect for local traditions and culture is essential when visiting indigenous peoples.

Categories	Rating System
• Environment	▲ Fair
• Culture	▲▲ Good
• Nature	▲▲▲ Excellent
• Social	

Maui Eco-Tourism Rating

Environment: ▲▲▲

Hawaii seems ideally suited for ecotourism and sustainable travel, as people visit because of the ecology—the ocean, the beach, the mountains, and the overall beauty of the place.

Culture: ▲▲

Hawaii has a long history of environmental stewardship. Ancient Hawaiians knew about and practiced sustainability in their daily lives. All they had was the land under their feet and the ocean to gain subsistence from, and those resources had to last not only for their own lifetime, but also for the lifetimes of generations to come.

Nature: ▲▲▲

Hawaii is second only to California in the number of marine reserves in the National System of Marine Protected Areas. The Haleakala National Park protects 30,183 acres of land on the island of Maui.

Social: ▲

Truly indigenous people are scarce in Maui as it has become a tourist favourite. That said, there are certain customs and traditions that continue, such as the Luau and the Hula.



Nearby is the Kahanu Garden, a tropical botanical garden with a collection of Hawaiian and introduced plants. When the Polynesians arrived on the island, they brought with them plants used for various practical purposes from throughout the Pacific, including macadamias. A tour of the property will introduce plants used for food, building, clothing, medicine and religion. However, the most significant element in the park is the Piʻianihale Heiau, likely the greatest engineering and construction feat in all of Polynesia. This sacred lava-stone temple dates back to the fourteenth century and is named for the ruling Piʻianihale family. It is the size of two football fields and fifty feet high. Visitors are asked to provide the respect due any religious structure.

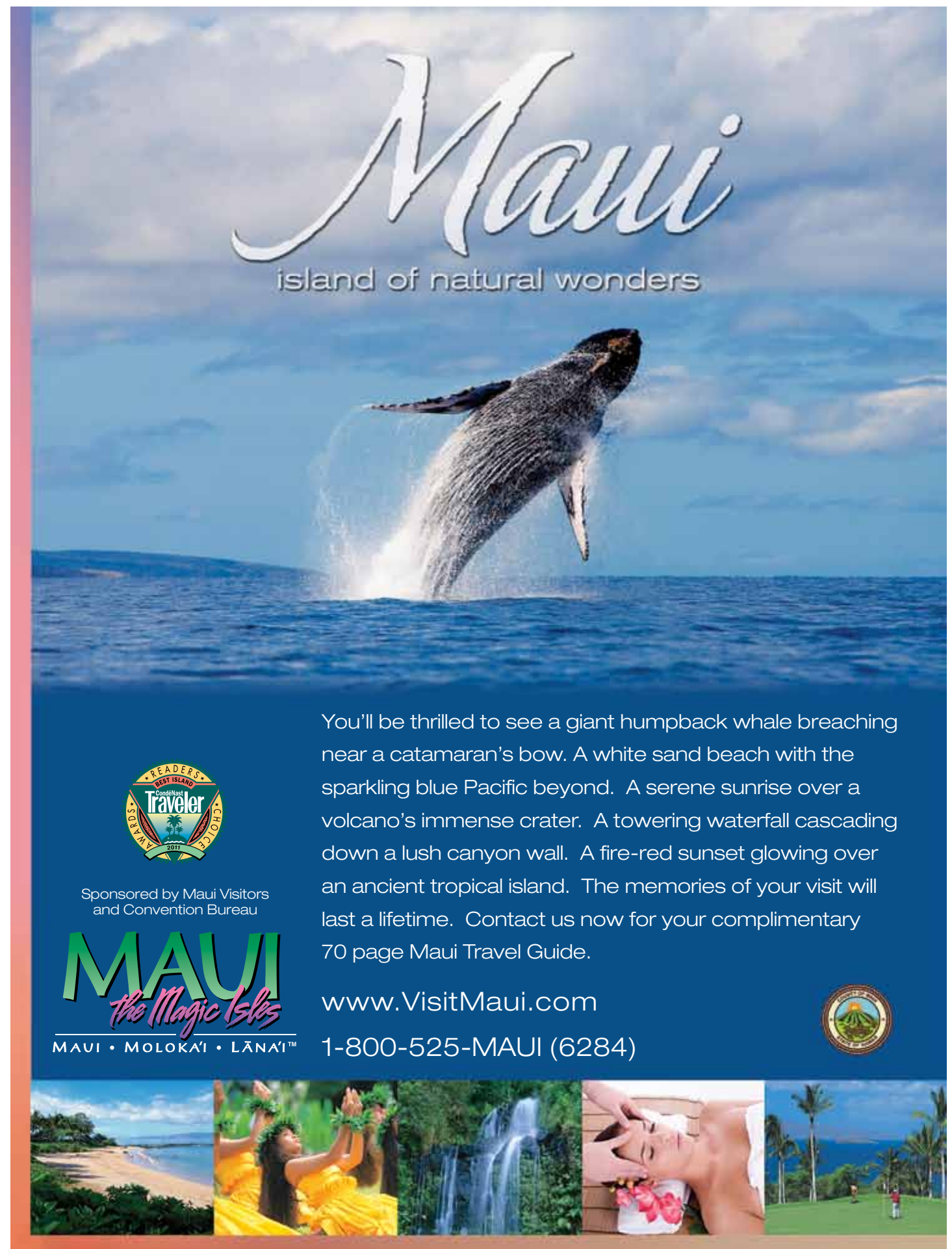
On your return from Hana, I would suggest stopping along the way at the iconic Mama's Fishhouse near Lower Paʻia. Maui's first fresh fish restaurant opened in 1973. Set in a coconut grove on a sandy beach, the restaurant is renowned for its food preparation, incorporating the best of Hawaii. The menu not only details how each species of fish is prepared, but also names the fisherman who caught it, leaving little doubt as to its freshness. Again, this property has initiated its own eco-friendly programs to minimize their impact on the surrounding area.

Maui is an extraordinarily visitor-friendly island, offering a worry-free environment with a wealth of natural beauty and excellent services. It's most encouraging to also see local businesses are taking the initiative to introduce eco-friendly practices. 🌐

Maui Contacts:


Maui Visitors Bureau
www.visitmaui.com

Haleakala National Park
www.nps.gov/hale




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Winter Backyard Visitors

How to Encourage Birds to Visit Your Snow-Covered Garden

Snow-covered trees and frozen ground might suggest to some of us that nature has gone to bed until spring, but at the Nature Conservancy of Canada (NCC) we know winter is one of the busiest and most dynamic times for our work and for some of Canada's most beloved species—on our properties and in your own backyard.

If you'd like to make your backyard more attractive to birds this winter, here are a few key tips:

Provide a sturdy bird feeder that can stand up to winter weather. Ensure that it's tightly sealed to keep the seeds dry. Make sure it doesn't sway too much in heavy winds.

Place your feeder in a quiet area where it's easy to see and convenient to refill. Find a spot close to natural shelter such as evergreen trees. Make sure the seed isn't blowing out or getting wet. If it is, move the feeder to a more sheltered spot.

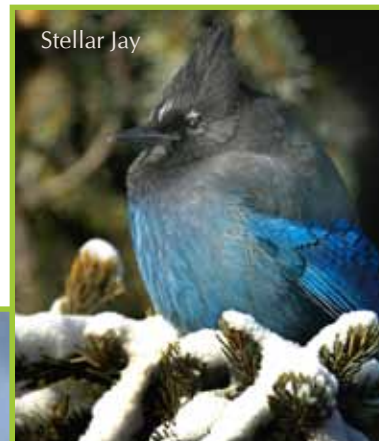
Think about safety. Make sure the feeder is in a location where predators such as cats can be detected and avoided. Keep the feeder some distance away from reflective glass to avoid window strikes by the birds.

Habitat loss is the leading cause of population declines in many bird species, so planting native vegetation is one of the best ways you can help the birds that visit you this winter.

In most locations, the best all-around attractant is black-oil sunflower seed. Take the time to find out whether your visitors prefer seeds or suet.

We hope you'll enjoy watching your backyard visitors come and go from your bird feeder this winter.

The Nature Conservancy of Canada is the nation's leading land conservation organization, working to protect our most important natural areas and the species they sustain. Since 1962 NCC and its partners have helped to protect more than 2.2 million acres (890,300 hectares), coast to coast.
www.natureconservancy.ca



Stellar Jay



Cedar Waxwing



Chipping Sparrow



Dark-eyed Junco



Evening Grosbeak



Common Eider



White Crown Sparrow

Find Out More About Some of These Feathered Visitors:

House finch - Found in southern areas of Canada. A regular visitor to bird feeders, the house finch favours black-oil sunflower seeds. These birds also enjoy wild or cultivated fruit and tree sap.

Downy woodpecker - The most common species of woodpecker in Eastern Canada. Downy woodpeckers are known for their long, barbed tongue and sticky, glue-like saliva, which help them catch insects.

Northern cardinal - Found in southern Ontario, Quebec, New Brunswick and Nova Scotia. The best months for seeing a northern cardinal are November to March, when they often visit backyards and feeders.

White-breasted nuthatch - Found across Canada. White-breasted nuthatches can descend tree trunks and branches head-first. Their preferred habitat is open deciduous or mixed forest, which can include urban and suburban green spaces.

Common redpoll - Found across Canada. Common redpolls have throat pouches to temporarily store seeds for eating later. They may fill their pouches with seeds quickly, then fly away to swallow the seeds in a more protected, warmer spot.

Blue jay - Found in central and southern eastern Canada. Blue jays may seem to have vivid blue feathers, but the colour is actually a trick of the light. These birds are common in urban and suburban areas, especially where large oaks are present.

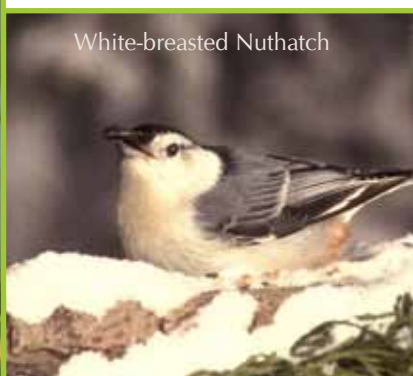
Cedar waxwing - Found across much of Canada. In winter, cedar waxwings can be very confident and will come into gardens for berry bushes and trees, and to splash and drink from fountains or bird baths.

Black-capped chickadee - Found across Canada. This bird can remember where it hid food for at least 28 days. It drops its body temperature at night by 10 to 12 degrees below its daytime body temperature to conserve energy.

Evening grosbeak - Found across southern Canada. The evening grosbeak's preferred habitat is thick coniferous forest, but it has successfully adapted to mixed deciduous habitats.

Dark-eyed junco - Found across Canada. A widespread and common small sparrow, the dark-eyed junco is most familiar as a winter visitor to bird feeders.

By creating a friendly environment for birds in your backyard, you will be helping to increase their habitat across the country.



White-breasted Nuthatch



Red-breasted Nuthatch

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Creating Healthier Environments with Plants

By Chris Karl

Recently, I met with an architect who designs healthcare facilities. He relayed how he absolutely detests the use of live plants in the properties he designs. “I don’t like that I can’t control the life cycle of the plant and how it continually changes its look,” he said with obvious disdain. I believe this obviously sedentary and obese architect has become, like so many people in this country, so far removed from nature and healthy living that he has forgotten the benefits of a healthy lifestyle and being in the company of greenery. Here is a man who designs for a population that is predominately sick and unable to control their own lifestyle, and that have been forced to rely on an out-of-touch designer who does not know or understand the healing power of nature. I wonder when we lost our ability to appreciate the primal connection we all share with the natural world?

More and more companies today are reducing or eliminating plants in the workplace to save money. They fail to realize, however, that this cost-cutting measure is short-term thinking that will compromise their employees’ well-being. Just as plants oxygenate the environment and soothe the soul, obesity cannot be altered with empty calories, but requires thoughtful nutrition to turn around a life that is heavily compromised and destined not to function optimally without those changes.

A growing body of research demonstrates that access to a natural environment indoors, where we all spend the majority of our waking hours, may improve health and well-being. As a design professional, I have seen first-hand the healing and calming benefits of plants in the workplace. Human beings are hard-wired to appreciate nature. Despite our “plugged in” and sedentary lifestyle since the 1950s, humans were hunter-gathers for over 10,000 years and living as part of nature.



“Because plants...exchange water and gases with their surroundings, they have a unique ability to tackle many environmental problems.”

Today we have become so far removed from nature that some of us are unable to appreciate the beauty of a living, breathing plant within our workplace. Being around plants reduces stress and engenders a feeling of well-being and improved energy in most people; a benefit that is even more acute if correct lighting is in place. Because plants have a large surface area and exchange water and gases with their surroundings, they have a unique ability to tackle and improve many environmental problems.

“A pleasing and positive workplace that is presented as a spiritually satisfying sanctuary with natural light and greenery is enormously beneficial for a person’s well-being,” says Dr. Gilda Carle, psychotherapist, author and professor. “Being able to access and enjoy surroundings that reduce stress and engage the senses is highly therapeutic for people.”

Here are my selections for the top five plants, which not only heighten and satisfy our senses with their funky and trendy style, but also help to keep our workplace environments happier and healthier:

1. Ficus Pandurata. The Ficus Pandurata or Fiddleleaf



Ficus Pandurata

Fig grows best in a high to medium-high light environment and is an interesting variation on the standard, well-known *Ficus elastica* rubber plant. The large leaves can add a striking accent to the home or office.

2. Polyscias Fabian. A native of Brazil, Polyscias or Geranium-leaf Aralia or Arilia Favian is an evergreen shrub or small tree with a compact habit. While it is widely used for hedges in the tropics, in the United States, we use it as a beautiful, eco-friendly border, as well as a captivating, stand-alone, “look at me” tree.



Polyscias Fabian

3. Dracaena Janet Craig Compacta. Dracaena is a genus of forty species of subtropical, evergreen, woody plants grown for their statuesque form and ornamental foliage. They are sometimes mistakenly identified as palms, but are actually more closely related to lilies. The name Dracaena is derived from the Greek word “drakaina,” a female dragon. The link between plant and beast is the resinous red gum produced when the stem is cut which, when thickened, is supposed to resemble dragon’s blood. It is used as a varnish and in photo engraving.



Dracaena Janet Craig Compacta



Dracaena Marginata Character

4. Dracaena Marginata Character. Originally from Madagascar, Dracaena are known for their visually arresting ornamental foliage. An increasingly popular indoor plant in the modern workplace, the plant, which can grow up to 15 feet in height, is supported by an aged and knobby trunk which gives it a unique character.

5. Philodendron Red Congo. The Philodendron Red Congo is a new and distinct cultivar of Philodendron. It is a product of the cross or breeding between Philodendron ‘Imperial Red’ as the female parent and an unidentified cultivar of the Philodendron tatei. This plant grows vigorously in an upright but spreading or open manner. New Red Congo leaves are brownish-maroon to almost red in colour, while the large mature ones are dark green in colour with a touch of red. The plant’s leaf petioles remain reddish-purple to bright red with long-lasting petiole sheaths.



Philodendron Red Congo

It isn’t necessary to fill every available space with a plant to achieve this; just a few good-quality specimens located in select rooms, and where employees work or take their rest breaks, can be sufficient. “The reasons why this has a beneficial effect are a subtle but complex mixture of the physiological (improved humidity, reduced noise etc.) and psychological,” says Kenneth Freeman, International Technical Director at Ambius, who has led many research initiatives on the benefits of plants in the workplace. “Being around plants certainly seems to reduce stress and engender a feeling of well-being in most people, a benefit that is even more acute if correct lighting is in place. The fact that a workplace has been prepared to spend money on something that has no obvious function than to make the environment more attractive may also be a contributing factor, by sending a signal to staff that management cares about its employees and visitors.”

“There is now general agreement within the scientific community that plants improve the indoor environment, and are useful weapons in the fight against the modern phenomenon known as sick building syndrome (SBS),” says Freeman.



“No specific cause of SBS has been identified, but poor air quality, excessive background noise and inadequate temperature and light control are thought to be important factors. Because plants have a large surface area and exchange water and gases with their surroundings, they have a unique ability to tackle many environmental problems.” In particular, plants can reduce levels of carbon dioxide, which can accumulate in buildings from the breathing of its occupants and the by-products of heating systems and electrical equipment. Plants also increase the relative humidity, which should be between 40 and 60 percent RH for maximum human comfort. Plants reduce levels of certain pollutant gases, such as formaldehyde, benzene and nitrogen dioxide, as well as airborne dust levels. Plants also reduce air temperatures and background noise levels.

Commercial buildings in large urban markets are often very large and easy to get lost in. In many office towers and hospitals, there is a need to channel pedestrian traffic towards significant landmarks, such as exits, check-in desks, escalators and common passageways. Plants offer an attractive and practical solution, providing a living barrier that gently guides people to where you want them to go. Choosing the right plants and containers for this purpose is very important. Spiky plants or those with sharp-edged leaves would clearly be inappropriate in an area designed for heavy pedestrian traffic flow. Containers need to be robust, take up the minimum of floor space and, in some situations, be linkable to form an impenetrable wall. 🌍

Electric Evolution

By Tony Whitney

Drivers who want to shed their dependence on the internal combustion engine have reason to celebrate right now. For the first time in many decades, Canadians can now head for an auto dealership and buy an electric car—something they haven’t been able to do since the 1920s. After years of promises, delays and aborted EV (electric vehicle) projects (some spectacular, others little more than golf carts), several major automakers have electric cars rolling off their production lines and a handful of minor manufacturers are also building vehicles. Two production EVs—the Chevrolet Volt and Nissan Leaf—have arrived at the dealerships. Mitsubishi’s i-MiEV will follow quite soon. And, as a bonus, there are a couple of specialty products available, too—the Tesla and the Fisker Karma—plus a fascinating EV from British Columbia.

Even fans of EVs who believe they have lots of electric car savvy would probably be surprised to learn that back in 1898, an electric car broke the World Land Speed Record and it was the first road vehicle to put this record beyond 100 km/h—very fast for its time.

Few realize how widely-used electric cars were in the late 19th and early 20th centuries. For a while, they were more popular than internal combustion engine cars, which were regarded as noisy and smelly—which they certainly were at the time. Sadly, they faded from sight in the 1920s as internal combustion engines got the upper hand thanks to greater refinement, cheap fuel and long range. Interest was not revived until more recent times as consumers became more concerned about the environment.

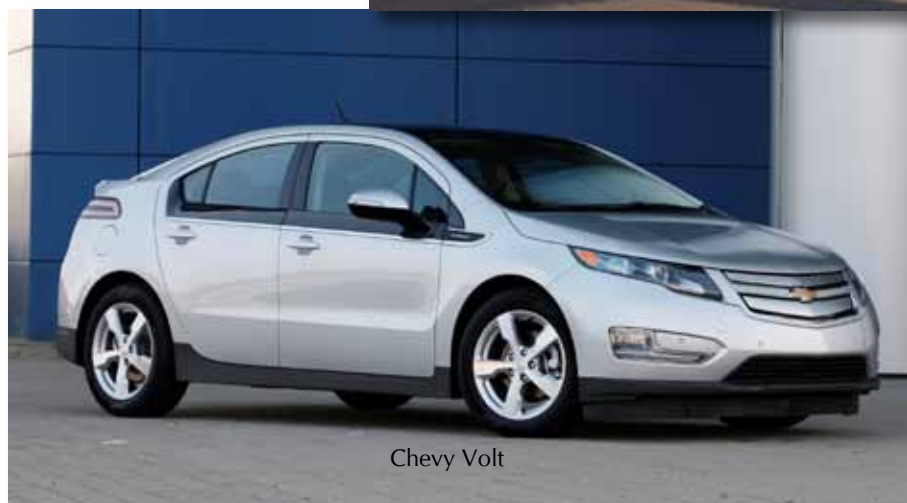
There was a “mini revival” in the late 1990s when the GM EV1 and Ford Ranger Electric pickup debuted, but these were leased to selected drivers and ultimately called in. The GM EV1 remains the first electric car of the modern era.

Most automakers have experimented with electric vehicles of some kind over the past 20 years, but none have ever made it to a production line—until the breakthrough by Chevrolet, Nissan and Mitsubishi. The move from lab to dealership was aided considerably by technological advancements made by battery and motor manufacturers over the past decade. The Nissan Leaf and Mitsubishi i-MiEV depend solely on battery power, while the Chevrolet Volt has an on-board battery charger in the form of a small gasoline engine for use when power ebbs. The Volt thus has a much greater range than its two rivals.

The Volt is a mid-sized sedan and a very handsome piece of styling work. It differs from the i-MiEV and Leaf with its use of the gasoline engine that’s used only to charge the batteries. This motor is not linked to the wheels at all and is there only for charging. If the driver travels beyond battery range, the motor kicks in and charges them up. But since the Volt has a range well within the average North American out-and-home commute, it’s possible that the owner may never buy any gasoline at all—just charge the Volt from a household supply overnight.



Kia Optima Hybrid



Chevy Volt



Toyota Prius v hybrid



Mitsubishi i-MiEV

Mitsubishi and Nissan both opted for a compact hatchback layout. Both cars also have a range well within commuting needs and the speed to ensure safe and efficient freeway use.

All three of these vehicles proved very pleasurable to drive in several tests I carried out—refined, roomy and responsive. Most drivers getting behind the wheel of an electric car for the first time are amazed at their refinement, quietness and almost instant response to the accelerator pedal.

Although they fall more into the “exotic car” class, the sporty Tesla and Fisker Karma are listed for sale in Canada, albeit at high prices. The Tesla base price is \$125,000 and the Karma starts at \$87,900. Chevrolet’s Volt sells for \$41,545 and the Leaf starts at \$38,395. The Mitsubishi i-MiEV is the most affordable of the current crop at \$32,998.

The next EV we’re likely to see is a version of the already exceptionally fuel-efficient Smart two-seater. These diminutive city cars will make a perfect base for an EV and should prove widely popular. They go on sale in Europe next spring, but North America won’t get them until fall.

EVs have always held appeal for entrepreneurial would-be automakers and in that category, Canada has at least one product that’s out on the roads—the Chico, built by Von Mynheer Automotive in Kelowna, B.C. It’s primarily a “fun car” right now, but the platform has promise for a variety of applications.

One of the challenges electric vehicles of all kinds face is charging times. Charging times vary from car to car, but, generally speaking, a 120-volt supply is more or less an all-night job, a 220-volt supply is faster and a charging station can top up 80 per cent of the battery in 30 minutes. Charging stations are beginning to appear at various locations around cities and before too long, are likely to be found everywhere from office buildings to community centres.

Progressive developers are looking at the idea of making them a standard installation in all their buildings and there may come a day when parking your EV in a charging location for half an hour will be something you can tackle in your condo building or down at the office.

While EVs are coming on strongly, the pace of hybrid development continues to quicken. Most major automakers have a hybrid somewhere in their line-ups and some (with Toyota and Lexus out front) have several.

The Toyota Prius is North America’s leading hybrid and the automaker is moving on by announcing a growing “family” of similar vehicles with different roles. The first Prius Family product we’ll see in Canada is the 2012 Prius v mid-size hybrid, a variant of the current car that offers over 50 percent more cargo space. Said Warren Orton, Director of Toyota Canada: “With 60 percent of the Canadian hybrid market, Toyota is a recognized leader in hybrid technology. The Prius v is a significant new hybrid model for us as we begin the expansion of the Prius family.” Orton added that the “v” stood for versatility and with all that extra cargo space, the car would meet the needs of growing families with active lifestyles. While at the same time offering all the economy and environmental benefits of current Prius models. The price runs from \$27,200 to \$36,875.

Also new for 2012 is Kia’s mid-sized Optima Hybrid sedan and it’s a handsome car and thrifty, too. Its 2.4-litres and electric motor mean you can drive 100 km on electricity alone and with 206-horsepower on tap, it’s no slouch either. The hybrid Optima comes fully equipped and costs \$30,595.




Nissan Leaf

Not to be outdone, affiliated automaker Hyundai has its Sonata Hybrid in the dealerships for 2012. One of the most beautifully styled vehicles in its class, the Sonata Hybrid adds impressive economy to those looks. Power comes from a responsive 2.4-litre 4-cylinder working, as is the case with all hybrids, in conjunction with an electric motor. Popular convenience features are standard on the basic Sonata, but a “premium” model includes leather seats. They cost from \$29,999 to \$34,499.

Even at the top end of the market, hybrids abound now. Among luxury automakers now offering hybrids are such luminaries as Mercedes-Benz and Porsche, and there’s just no telling where the next products are going to come from, but come they will. Some manufacturers—Volkswagen and Audi included—have opted to go the diesel route to green motoring, rather than develop hybrids (Mercedes offers both) and it does make a lot of sense when considering long engine life, penny-pinching fuel economy, extended range and other factors. Modern automotive diesel engines are quiet, have very low pollution levels and seemingly last forever—and sometimes, that’s the greenest way of all to go with a vehicle drivetrain.

Of course, lots of people don’t want four wheels at all, especially city dwellers, and for them, there are increasing numbers of electric bicycles and scooters available. Electric bicycles are not only wonderful downtown commuter vehicles, they also give older people who may not be “cycling fit” the opportunity to get out and about. And, after all, you can pedal an electric bike and give the motor a break now and again—thus adding some kind of workout to your ride.

Electric scooters—like those in the popular Motorino range—are classified as bicycles and riders don’t have to get a driver’s license or be insured. Larger electric motorcycles (Motorino builds them, too) require a license, though they are classified as “limited-speed vehicles.” Neither type is permitted on highways, but that’s not their purpose in the first place after all.

Before too long, you won’t have to actually buy an EV at all to enjoy its benefits. Smart is adding its electric two-seater to the car2go rental fleet (already available in some parts of Canada with conventional vehicles) and the first North American location is San Diego. The Canadian operations won’t be far behind. 



Tesla EV

Building a Green Home

By Wally Foster

A “green home” is a comfortable, energy-efficient home that meets one’s needs. A home is defined as “an environment offering security and happiness” and the “greening” of it should relate to your personal preferences.

A home does not have to be “certified” to be green. Certification will cost between six and 14 percent over the cost of the home and the payout period will be 20 to 30 years, or the life cycle of the house. On the positive side, it has been shown that certified homes will sell before non-certified in a given price range.

This article will explain the areas where certification procedures focus and award points to determine whether your green home rates good, better or best.

I will be using the LEED system as a guideline because they focus on both energy use and design. Systems like R-2000 and Passivhaus focus primarily on energy use intensity. My objective is to give you a sense of where you should focus your attention and money to have a cost-effective, comfortable, and energy-efficient house.

LEED looks at eight areas and awards points for meeting the various criteria. The areas are listed in order of priority based on the percentage of points awarded:

- Energy and Atmosphere (28%)
- Site Sustainability (16%)
- Indoor Air Quality (16%)
- Materials and Resources (12%)
- Water Efficiency (11%)

- Innovation (8%)
- Location and Linkages (7%)
- Awareness and Education (2%)

The first criterion that Energy and Atmosphere looks at is the level of energy efficiency of the house using the Canadian Energuide. A zero rating would be an uncomfortable house with major air leakage, no insulation and high energy consumption. A rating of one hundred would be a house that is well insulated, air-tight, well ventilated and heated by a renewable energy source such as wind or solar.

Today’s new houses typically rate between 65 and 72 on the Energuide Rating System. A new, energy efficient house would rate between 80 and 90 and would typically have the following features:

- Well insulated
- Air-tight
- Efficient heat recovery ventilator
- Smaller windows
- Facing south
- Overhangs (shading)
- High-efficiency appliances

Other evaluations include:

- Use of a heat pump
- Efficient heating and air conditioning systems
- Energy Star lighting fixtures and appliances
- Hot water systems with “tight plumbing core” and “on-demand recirculation loops” (minimizes or eliminates the need to run the hot water tap and wait for the hot water)
- Insulated hot water piping
- Drain water heat recovery

“When landscaping, avoid invasive species, minimize the demand for water (irrigation) and synthetic chemicals, and maximize drought tolerant plants.”

In terms of water heater selection, the first choice would be a heat pump water heater or solar water preheat. The second choice, a tankless water heater; and the third, a 150 to 300-litre gas or electric water heater.

It is interesting to note that most houses distribute their energy in three main areas:

- Space heating and A/C 57%
- Lights and appliances 23%
- Hot water 20%

To summarize, you would get the biggest bang for your buck in terms of an energy efficient house by:

- Tight envelope
- Super insulation
- Efficient windows
- Energy Star appliances and light fixtures
- A tight insulated and recirculated hot water system with solar water preheat

Note that in all North American and European rating systems for green houses, energy efficiency is of paramount importance.

The second most important criteria evaluates site sustainability. The three most important considerations are landscaping, surface water management and compact development.

When landscaping, avoid invasive species, minimize the demand for water (irrigation) and synthetic chemicals, and maximize drought tolerant plants. Lawns are not encouraged.

Surface water management should minimize erosion, run off and paving, and maximize vegetative cover.

“Local products are defined as those manufactured within 500 miles...”

Compact development encourages land conservation and the promotion of community liveability, transportation efficiency, and walkability. Housing densities of 20 homes per acre get maximum points. The lowest density recommended is 7 homes per acre which would have a lot size of about 26 yards by 26 yards—rather small for a house, driveway, garden and play area. This inconvenience would be off-set by the fact that public transportation, shopping, parks and recreation would all be within a short walking distance.

The third most important criteria is indoor air quality. Most of the points are given for actions like sealing the ductwork and vents during construction to prevent contaminating the house with saw and drywall dust on start-up, fresh air flushing before moving in, isolating automotive emissions from the garage from the HVAC system, good heating and cooling distribution throughout, and a bonus for an efficient heat recovery ventilator.

Air filtering is only necessary with forced air ventilation and moisture control should be maintained at or below 60 percent relative humidity. Houses designed with radiant heating systems (hot water) and natural cross flow ventilation also get excellent ratings. Radon protection is only required if it is above 200 Bq/cu metre (Coastal B.C. and Vancouver Island are less than 50 Bq/cu metre).

Radon is a radioactive gas that is the second leading cause of cancer in North America. Areas around Clearwater, Barriere and Castlegar are known to have levels of radon that exceed 200 Bq/cu metre.

The fourth criteria, worth about 12 percent of the points, is materials and resources, which relates to using environmentally preferable products from the region. The use of low-emission volatile organic compounds (V.O.C.) is encouraged. For example, the use of products containing urea formaldehyde resins is not approved.

Products with a minimum of 25 percent recycle content are encouraged.

Local products are defined as those manufactured within 500 miles and delivered by truck, or 1,500 miles away and delivered by train.

The other focus under materials and resources is the reduction or minimization of construction waste that goes to land fill or incineration sites. Offsite construction/fabrication of exterior and interior walls is highly recommended to get maximum points as well.

The fifth criteria is water efficiency—worth about 11 percent of the total points. It looks at three areas:

- Water reuse
- Irrigation
- Indoor water use

The first point addresses the reuse of municipal water (grey water) and the capture and controlled use of rainwater. One of the surprising discoveries that I made was that some provinces and regulating agencies in Canada and the U.S. require you to use potable water to flush your toilet. The rationale for that escapes me. Even third world countries wouldn't think of flushing human waste with drinking water.

Toilets, especially the standard flush toilets, can account for up to 30 percent of the potable water used in a North American home, so using rainwater or grey water to flush would be a significant “green thing” to do.

Another important consideration that I feel has been ignored in this section is the use of urine diverting composting toilets. They use virtually no water, have no mechanical maintenance issues, and generate humus and nitrogen-enriched urine (mixed with grey water) to fertilize the landscape and garden. In future articles we'll be discussing how simple and inexpensive it is to install such a system.

For LEED certification, points are given for how much of your roof is used for rainwater collection and the capacity of the rainwater storage tank. For example, for a 2,000 sq. ft. roof, the smallest water storage tank allowed would be 624 gallons. The irrigation system must be water efficient and cover 100 percent of the landscape. To this end, LEED requires timers, pressure controllers to prevent misting, a minimum 50 percent drip irrigation, high efficiency nozzles and spray heads, and smart “evapotranspiration” control systems linked to the internet, radio et cetera, et cetera...WOW. I think this is one area where form is not following function. To make this complex system work you have to rule out the use of grey water. There is much in the literature to suggest this type of complex and expensive system cannot handle grey water, especially mixed with urine, for any length of time without plugging. I have no doubt that it will work with clean rain water or municipal water, but the focus is to maximize the use of grey water and urine, negating the need for chemical fertilizers AND reducing wasteful consumption of potable water! There are water management systems for your home that do use grey water and diverted urine, and brilliantly, that will be discussed in future articles.

The sixth criteria, innovation, worth approximately eight percent of the total points, focuses on passive solar orientation of the house and indoor moisture control (which is covered for the most part by the B.C. building code). It addresses such things as waterproof backer board in the shower and floor drains by the washing machine and hot water tanks. The Innovative Design subsection allows for you to submit systems that you have added, such as composting toilets with urine diversion and simpler, more effective grey water irrigation designs that were not considered in the certification process.

The seventh criteria is location and linkages for seven percent of the points. The focus here is to avoid building on environmentally sensitive sites and to encourage building near or within existing communities with existing infrastructure like water, sewer, public transit, shopping and recreation.

The final criteria is awareness and education for two percent of the points. The owner is provided with a manual detailing the materials and systems in the home and training on how to optimize the more complex systems such as HVAC and irrigation.

So, we have summarized what the certification process looks at and where the emphasis is placed. In subsequent articles we will look at applying these guidelines to the building of a low tech, low cost, energy efficient house and how close we can come to a silver, gold or even platinum rating. 🌍



The Perils of PVC

By Kimberly Button

Sure, you already know how bad plastics can be for the environment, when mountains of the stuff add up in landfills and pollute the habitats of marine life. While concern for the environment can cause you to reduce your use of plastics, here's another reason that could definitely put an end to your use of certain types of plastics—they can be hazardous to your health.

There are many different types of plastic, and they each have their own properties. Some plastics are considered riskier than others, but perhaps the granddaddy of them all is PVC plastic. PVC (polyvinyl chloride) is perhaps the most toxic plastic out there, yet it is common inside your house, and we're not talking about PVC pipes and plumbing fixtures. No, the PVC plastic inside your home that warrants the most concern is the soft, flexible types of PVC plastic, the kind which is most commonly found in your shower curtain.

A study released by the Environmental Defence and the Canadian Environmental Law Association, as well as the U.S. Center for Health, Environment and Justice, found that your vinyl shower curtain could unknowingly be releasing a host of toxic chemicals into your indoor air that contribute to respiratory problems, headaches, neurological problems, and more.

Scientists found that more than 100 volatile organic compounds (VOCs) were released into the air when some types of new vinyl shower curtains were brought into the bathroom. Some of those VOCs, such as phenol and ethylbenzene, are considered a human health concern by the Canadian Environmental Protection Act.

VOCs are not a welcome addition to your indoor environment because they are comprised of little bits of chemicals such as benzene and toluene which you do not want to be exposed to, but become unattached from their original product, such as the shower curtain, and then stay in your home's indoor air. If you don't have great air circulation in your home, they can stick around for a very long time.



Why are there so many chemicals coming out of PVC shower curtains? The answer is, in part, because shower curtains must use substances known as phthalates. Phthalates are chemicals that cause a plastic to be soft and flexible. But those substances are being linked with endocrine disruption, which means that they can interfere with a variety of your hormones, including estrogen, testosterone, thyroid and more.

Sounds a little confusing? An easier-to-understand explanation is to think back to when you opened a new package of a vinyl shower curtain or shower curtain liner. Remember that tell-tale “plastic” smell that is associated with vinyl shower curtains, kind of like smelling a plastic beach ball? That smell is actually the problem chemicals off-gassing from the product.

The smell and airborne chemicals are not the only concerns, though. Heavy metals such as lead and mercury, which have serious health concerns of their own, were also found on some of the shower curtains.

The off-gassing chemicals reach their peak within the first month of installing a new vinyl shower curtain, with the highest amounts in the first few days after hanging up a new curtain. So, if you have had yours for quite a while, the amount of chemicals coming off of it is probably quite small.

What can you do to protect yourself from the potential health dangers of PVC? Clearly, the first move that you should make is to change the types of shower curtains that you purchase. Switch from a PVC (also called vinyl) shower curtain to one made with a better type of plastic known as EVA (ethylene vinyl acetate). Though EVA is still a plastic that looks and feels just like vinyl, it does not off-gas a “chemical” smell and is currently believed not to have the same health risks.

EVA shower curtains are relatively easy to find and generally do not cost much more than the vinyl ones. IKEA phased out PVC shower curtains over a decade ago, and other major retailers are considering or have already adopted policy changes about reducing PVC products in their stores. That does not mean that vinyl shower curtains are not on many store shelves, though. When choosing a plastic shower curtain, look for the EVA designation on the package and skip anything that says PVC or vinyl.

Even better, to reduce your use of plastics, choose a fabric shower curtain, instead. Fabrics have a much longer shelf life than the plastic versions, which will be more quickly tossed into the trash. Fabrics also will not off-gas the chemicals that would be found in PVC plastic. Fabrics can also be easily washed, reducing mould and other allergens that can build up in the bathroom.

If you are concerned about eliminating PVC shower curtains from your home, you should also be concerned about some other products, too. Many children's toys, especially water activity toys, are made with PVC. Cling wraps made for food use can often be made of PVC. Rain coats are another example of an item at home made from the plastic that you might not even be aware of.

The use of PVC plastics is not just a concern for your personal health inside your home. The manufacturing and creation of PVC plastics is a highly toxic process that puts entire communities in harm's way. Manufacturing PVC releases dioxins into the air and water. Dioxins are a highly toxic group of chemicals that can cause a variety of serious health problems, including cancer. Burning PVC forms dioxins, too. When all of those throw-out PVC shower curtains end up in landfills, the chemicals used in the plastic can leach into the soil and groundwater as the plastic breaks down.

Whether you're wanting to make a change for environmental and health reasons, or simply an act of social responsibility, making a switch to EVA or fabric shower curtains is an extremely easy and especially affordable way to simply reduce your exposure to toxic chemicals and make your next bath even more enjoyable. 🌍



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