

World Wide Web

From Tasmanian devils to polar bears, it's all connected



Almost any saying, even your favorite one, is sometimes false.

For example, one I live by is this: "We are no more and no less than the life around us."

Fortunately, at the level of an individual and her or his immediate social setting, it's often false. When somebody, amid brutality, prejudice, rigid ideology or recklessness, insists on behaving with kindness, tolerance, critical thinking or care, that particular somebody succeeds at being more than the life around her or him.

However, at the level of our species (*Homo sapiens*) and our planet (Earth), you'd be hard-pressed to think of an instance, near or far, in which the phrase is false. Here are three stories – each successive story shorter, each linking eerily to the other, as we are all linked on Earth – for good or ill.

Story #1: Tasmanian devils and brominated flame retardants. The devils are carnivorous marsupials that now survive only on the Australian island state of Tasmania. The devils are experiencing a rare, communicable cancer called devil facial tumour disease, which may finally drive the species to extinction. Scientists have recently found that the devils are carrying in their fat high levels of polybrominated diphenyl ether (PBDE) flame retardants. These chemicals, manufactured by humans as a chemical approach to limiting fire damage in homes and buildings, are linked to cancer, suppression of reproduction, thyroid disruption (PBDEs are similar to the thyroid hormone, thyroxin), reduced immunity to disease and damage to developing brains. Researchers are wondering whether the PBDEs are acting in conjunction with the devils' immune system that is being genetically weakened due to reduced numbers of devils.

If PBDEs are accumulating in the fat of Tasmanian devils, you'd probably guess they're everywhere. You're right. For instance, wastewater sludge at the McMurdo research station, the largest human habitation in Antarctica, recently showed some of the highest environmental levels of PBDEs yet recorded. The wastewater PBDEs came from dust off couches, TVs and other equipment at the base.

At the opposite end of Earth, PBDEs are 71 times higher in Canadian and European Arctic polar bears than in ringed seals, their main source of food. Because PBDEs impact thyroid and sperm function, they are considered a potential cause of the increased hermaphroditism and decreased reproduction that is being observed among polar bears.

In between the North and South Poles, breast milk of U.S. women has been found to be carrying PBDEs at levels approximately 100 times higher than in European women, reflecting greater U.S. use of PBDEs.

Story #2: Loons and mercury. Like watching northern lights, hearing a loon call is one of the most vivid memories of my life: It was a wild, musical wavering across a calm Boundary Waters lake. When invaded by mercury, however, loons become lethargic, their vision reduced, their muscles less coordinated. Adult loons feed their chicks less; and the chicks ride on their parents' backs less, exposing them to cold and predation. Partly due to mercury contamination, scientists fear the current reproduction of loons may be too low for them to continue in portions of Maine and eastern Canada.

Most mercury is spewed into the world via chlorine chemical manufacturing, because mercury is used to extract chlorine gas from salt. Chlorine is one of the chlorine/bromine/fluorine group of elements which has been eminently useful to the chemical industry and eminently devastating to fish, wildlife (e.g., the devils), humans and our shared stratosphere (e.g., chlorofluorocarbons eating the ozone layer). Running a close second as a mercury source is coal-burning power plants because coal is naturally contaminated with mercury. Third as a source is the melting of auto scrap. In 2003, auto manufacturers agreed to stop using mercury switches, but as older cars continue to be scrapped, mercury continues to be emitted. (It would take less than a minute per car to remove the mercury switches before melting the car).

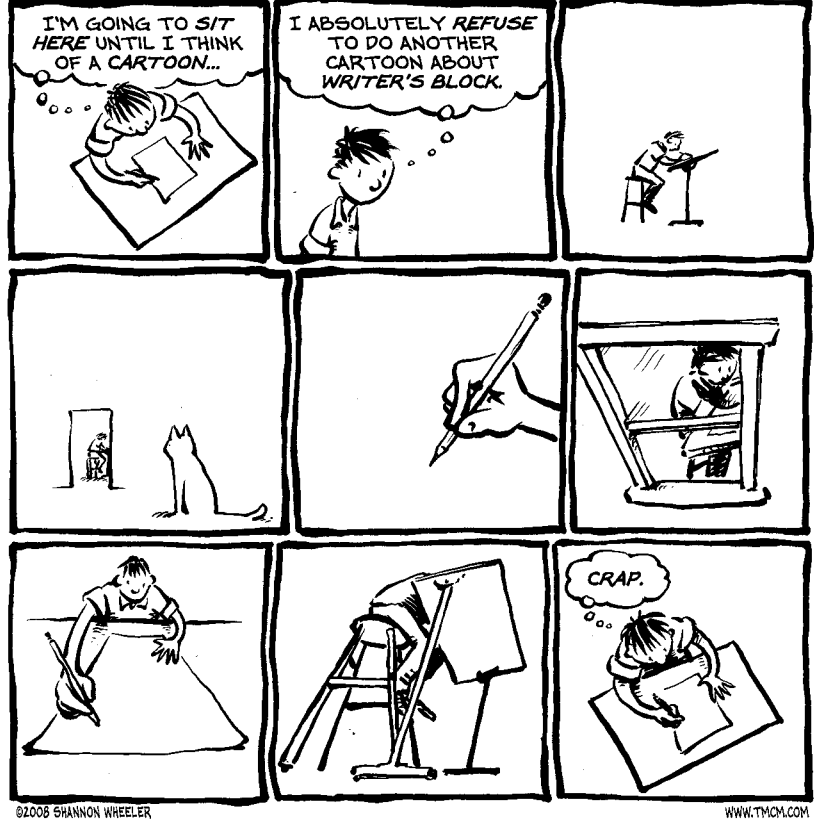
Story #3: Everyone and greenhouse gas emissions. Greenhouse gas emissions are our species' contribution to current climate change, and the three main sources of greenhouse gas emissions are coal-burning power plants, oil-consuming vehicles and buildings.

In light of that, consider the links among these stories. Tasmanian devils. Brominated flame retardants. Polar bears. Ringed seals. Breast milk. McMurdo wastewater. Loons. Mercury. Chlorinated chemical manufacture. Coal-fired power plants. Oil-burning vehicles. Severe drought in 2007 in Tasmania. Polar bears depend on ice to hunt for seals and the early break-up of Arctic ice reduces their time for hunting. Climate change is studied at McMurdo research station in the Antarctic...

Can we humans become more than the life around us is saying we are?

How to Be Happy

by Shannon Wheeler



LETTERS TO THE EDITOR

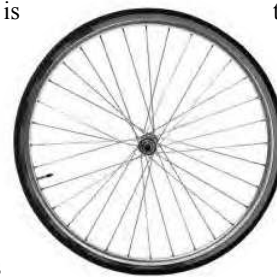
WEARABLE ART

Thank you for bringing the topic of "green" jewelry to the local community. The discussion of diamond alternatives in your recent Weddings issue (1/10) may have misled readers into thinking that I believe cubic zirconium is a good, or even preferred, alternative to "conflict diamonds." In fact, they are generally not recommended in wedding rings due to their tendency to chip. The hardness of a gem is important to consider when choosing a piece to be worn "forever."

For those who choose to include gemstones in their wedding wear, I prefer to recommend natural sapphires and/or rubies because of their durability and vibrant rainbow of colors. I like to think of a wedding set as a physical embodiment of each couple's unique relationship and an opportunity to create an inspired piece of wearable art that can be treasured for generations to come.

Thank you again for highlighting some of the current issues in the jewelry industry.

Heather Nolan
Eugene



DON'T GROUP CYCLISTS

This is in response to Dylan Wilks' letter (12/27).

I am a careful bicyclist (not perfect), who cares about my environment, future generations, community, health and well-being where I choose not to release CO2 into our atmosphere, which causes global warming. I am a bicyclist who does not ignore stop signs, traffic lights and signals when I turn. Please do not group all bicyclists together and state that all bicyclists are the same in their actions.

I was bicycling in the bike lane on 5th Avenue heading towards Charnelton on the first Friday in December when a woman opened the door to her pick-up truck. I was hit by her door and landed where the cars drive. Luckily, there wasn't a car behind me. I was also very fortunate not to break any bones. A week later, I was at the four-way stop at Broadway and Olive heading towards Charnelton. I stopped, and a vehicle headed towards the library. Next, it was my turn. But the vehicle behind the vehicle that just proceeded towards the library pulled out and missed me by about 5 feet!

The city certainly didn't "cater" to bicyclists when, in November, Mayor Piercy cast the deciding vote for a massive regional freeway plan (the RTP is more than \$250 million) that takes a big step back from efforts to reduce driving and will dramatically increase global warming.

We are challenged morally to change our behavior as individuals, but the bigger challenge is for our leaders to come up with a coordinated survival plan.

Our local government can play an important role in initiating projects and programs, removing obstacles and creating incentives and fostering an environment of cooperation and experimentation and urgency.

Planet Glassberg
Eugene

GREAT TRAIL ARTICLE

Thanks to James Johnston for his well-written, informative and accurately detailed article on four hikes in the Greater North Cascades (10/4). I could take off tomorrow — he's as good as Bill Sullivan on how to get there and actually hike — and I have an understanding of the larger ecosystem I'm entering.

Kudos to someone who is knowledgeable, inspired and that fairly unusual talent these days — a really good writer.

Let's have more articles by him!

Carol Armstrong
Eugene