

**COMPLIMENTARY ARTICLE**

*From the Watershed Sentinel*

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by Barry Saxifrage

**When I read** in George Monbiot's book, *Heat*, that there is no climate-compatible solution for high-speed air travel, I didn't believe it. I couldn't accept that the world must stop nearly all of its flying.

At first I thought I could bike more, turn down the heat, and still fly. But Monbiot's indictment of people who know better, but are unwilling to make the necessary changes themselves, stung. To continue to fly, I had to prove to myself that my flying was OK.

Through two years of research, I watched my flying emissions overwhelm all my other efforts. I finally had to look at the elephant in the room sitting in front of me, and it had wings. Monbiot and others were right: a person can't live a climate-sustainable life and still fly. Air travel is the one major industry without an available technological solution to climate change.

### Join The Club

My research did reveal that I'm not alone in this collision between hope for a livable future and desire for high-speed air travel. Addiction to flying is forcing countless individuals, families, businesses and governments into untenable positions. Here are a few examples.

### Flying Over Patagonia

Patagonia founder Yvon Chouinard has been at the forefront of the environmental movement for decades. Patagonia's mission statement includes to "use business to inspire and implement solutions to the environmental crisis."

Chouinard knows the stakes. He states, "global warming is deadly serious for the future...we can't wait for the government; it'll be too late." He quotes David Brower: "There's no business to be done on a dead planet."

Yet, when asked if he personally struggles with any environmental issues he admits there is a "special place in hell" for him, paved with his own flying emissions. Organic cotton, yes. Stop traveling by plane to favourite fishing destinations, no.

### Hundreds Of Tonnes

Canada's leading environmental voice for decades, David Suzuki is one of CBC's greatest living Canadians and host of the popular TV show "The Nature Of Things" for years.

He ardently warned the public over a decade ago that global warming is the biggest threat to human beings' survival as a species outside a nuclear holocaust. Suzuki states that, to survive climate chaos, each person can emit no more than one tonne of carbon emissions from fossil fuels a year.

Yet by his own calculations, his yearly flying emissions are hundreds of tonnes more than what the average Canadian emits for everything in their lives. More importantly, his flying emissions are hundreds of times the sustainable limit he says we all must meet. Spurred on in part by his daughter, he is now starting to scale back some on his global jet-setting.

### Except For That

*National Geographic* recently produced one of the best primers on climate change, a Special Report titled "Changing Climate." Currently available on newsstands, the report summarizes what everyone "should know," and what each person "can do."

The senior editor describes his family's extensive efforts to reduce their emissions by bringing in a professional energy auditor and a top efficiency expert. They installed a ceiling fan, turned down the AC and the water heater, changed light bulbs, used power strips, drove less, biked more, walked to the farmers' market and so on.

When time came to add it all up they were in for a "big surprise" because their emissions were double the average Americans. Their many efforts were "small potatoes," more than wiped out by a single flight.

What did this highly-motivated family do when it ran smack into the elephant of their flying emissions? Skipping the flight "was never an option," and "if you put our plane trip aside...[we] were able to cut our personal CO2 emissions by almost half. Not bad."

In the carbon math of even the most environmentally aware, if the elephant in the room has wings, it doesn't count.

### The Business Of Stewardship

REI is the USA's largest consumer cooperative with more than three million active members. Its mission is to "inspire, educate and outfit for a lifetime of outdoor adventure and stewardship." REI has pledged to be carbon-neutral by 2020.

REI's single biggest source of emissions? Adventure travel flights. They account for 30% of all REI's emissions, while only serving a tiny 0.1% of active members. The share of REI's greenhouse gas emissions by these 4,000 people is

75,000% more per person than for the remaining 99.9% of members.

It gets worse. REI's total emissions grew 24% in one year from 2006 to 2007. The cause for the huge increase: "more people traveling."

So how does one of the world's premier, member-owned co-ops with a central mission of earth stewardship react to this elephant with wings trampling their efforts? Do they return "adventure travel" to its low-emission roots of sailing ships and trains, cycling and hiking? After all, it is hard to think of a continent more loaded with opportunities for adventure than North America. Or do they ignore their rapidly growing elephant? According to the *Seattle Times*: "The company will stay in the adventure-travel business, whose revenues and profits it doesn't disclose."

### **Nation State**

England has made some of the most forceful calls to action of any government. How does flying fit in to the British government's strategy? According to the UK's own Tyndall Centre on Climate Change, aviation emissions account for over 10% of the UK's total, and comprise the fastest growing source. At current rates, aviation alone will use up all 100% of total allowable emissions for every aspect of English life and industry within decades.

Yet last year, government employees flew over a million miles per workday on government business, not including military flights. In the age of the Blackberry, the web, instant global messaging and video conferencing, the official response seemed overly pat: "The Government would never indulge in unnecessary air travel."

The government also has a high-profile push to expand airports including Heathrow, the world's busiest airport. It also refuses to levy the same taxes on aviation fuel as it does on gas for road transport, providing flyers with a 30% to 40% savings on fuel costs over what drivers pay.

The British government, like individuals and corporations, doesn't acknowledge the elephant with wings sitting on the scale as it strives to counterbalance climate change.

### **Why Does It Matter?**

Everyone has their areas of hypocrisy and contradictions. Why focus on environmentally aware folks and their oversized flying emissions?

Because, when world-wealthy, highly-motivated, climate-knowledgeable people can't come to grips with their biggest climate impact, one that is a non-essential luxury well beyond the reach of 90% of humanity, what hope do we have for a bottom-up, grass-roots emissions solution?

It seems we are going to have to "wait for government" to solve climate change, after all. But, sadly, even our government laws and proposed solutions are unlikely to reduce flying emissions.

Flying has a special status that exempts it from limits imposed on other emission sources: no fuel tax; not included in Kyoto; not included in any cap-and-trade schemes; not even on the emissions balance sheets of any nations.

Worse, all our laws to reduce climate changing emissions, whether carbon taxes or cap-and-trade, rely on the marketplace to distribute a limited amount of fossil fuels based on price alone. The people who can afford to buy the fuel get it.

People who fly frequently are the world's wealthiest, the last folks on earth affected by carbon pricing. Just look at the last few years. Jet fuel has quadrupled in cost, yet aviation miles continue to grow at 7%, and aviation emissions at 5%, year after year. If years of relentlessly rising fuel prices coincide with record increases in flights and flying emissions, how will further cost increases from carbon taxes cut the bulk of emissions?

In fact, all the world's climate changing emissions are skyrocketing even while fossil fuel prices climb to new heights. What's going on?

### **The Missing Puzzle Piece**

Professor Stephen Pacala of Princeton suggests an answer. His latest research shows that 50% of all global climate changing emissions are caused by the wealthiest 8% of the population. The majority of emissions are caused by the folks who are the least sensitive to price. It helps explain why flying is growing despite price increases.

If the most wealthy cause the majority of emissions, we have trouble ahead. To significantly blunt demand by the most wealthy, fossil fuels will need to be extremely expensive. Long before we get to a price that changes the wealthy folks' behaviour, most other people will have been priced out of their ability to fuel their cars or maybe even buy their food.

If so, our current tools will lead to carbon riots long before they lead to big carbon cuts. Voters will ultimately reject a system that hurts the majority of folks and doesn't even solve the problem.

Aviation is the biggest, clearest example of the fundamental flaw we have with our current schemes. It highlights why our best plans are in danger of failing spectacularly.

We need a tool that addresses the huge emissions of the wealthiest folks world wide. A single price for carbon alone won't do it. Carbon rationing, a personal emissions cap, tiered pricing or something else might. Now is the time to start that discussion.



**Complete and extensive sources for this article are available from the Watershed Sentinel or on line at [www.watershedsentinel.ca](http://www.watershedsentinel.ca)**

# Getting There is Half the Fun

by Carrie and Barry Saxifrage



**W**hen we did our first carbon footprint, the only truly bad news was that a single trip to Southern California to visit our families was equal to an entire year of driving our Subaru Legacy. That one flight was far more greenhouse gas than a person can emit for an entire year's transport, if they don't want to contribute to devastating climate consequences. Everything else in our footprint we could work with: line drying our clothes, biking more, buying local products, turning down the heat, getting a more efficient car.

But no flying? Giving up flights to great vacation destinations wasn't too hard because there are so many things we love to do close to home and the pleasures of flying faded as the climate consequences came clear. But what about our family visits? We love the yearly visits to California. It connects us with our parents, siblings, nephews and nieces. We relied on our ability to fly in choosing to live so far from our families. If we can't in good conscience fly to see them every year, how will we maintain those relationships?

Time for a road trip!

Time was indeed the main issue, because flying is so much faster. We could have done the entire road trip to Southern California within the two weeks of our son's spring break, if we pushed. But we wanted to explore. So we arranged to add two more weeks and be available for work by email. Then we loaded up the Prius with wetsuits, and drove the coastal route to Los Angeles.

We found fossilized clams on a white, wind-swept Oregon Beach. We were miniaturized in time and stature

by the huge trunks of the coastal redwoods. We read Cannery Row aloud, and recognized the place names around Monterey Bay. We watched elephant seals and sea lions lounge and sea otters frolic. We toured Hearst Castle. We visited our favourite winery. We looked up lots of old friends we hadn't seen in years and spent the lovely nights with their families. We rode a cable car. We played "Punch Prius" until we reached Berkeley, where they became too thick to play anymore. We drove along twisting roads high above the glittering sea, drinking in the light. We zipped through gridlock in car pool lanes from Santa Barbara to Orange County, gaping at the single occupant SUVs around us. And, whenever we could, we pulled on our wetsuits and splashed into the chilly, roiling Pacific to play in the waves.

Our Prius averaged 21 km/liter (49 miles/US gallon). Although we traveled 3000 km more than the flight distance due to side trips, we still spent only about \$100 per person on gasoline. Best of all we produced 75% less emissions than we would have just on our flight... more than 2 tons saved. In total, we have reduced our yearly transportation emissions from 8 tons apiece four years ago to less than 1 ton apiece this year.

And we still got to have a great time with our family in Southern California. In addition, we reconnected to the landscape and to our friends along the way in a way that flying doesn't allow. In fact, getting there was half the fun.



*Barry Saxifrage creates websites and tracks new climate change information. Carrie works as administrator at Linnaea School, a K-8 school on Cortes Island that emphasizes connection to the natural world. The Saxifrages enjoy growing food and exploring by rowboat.*

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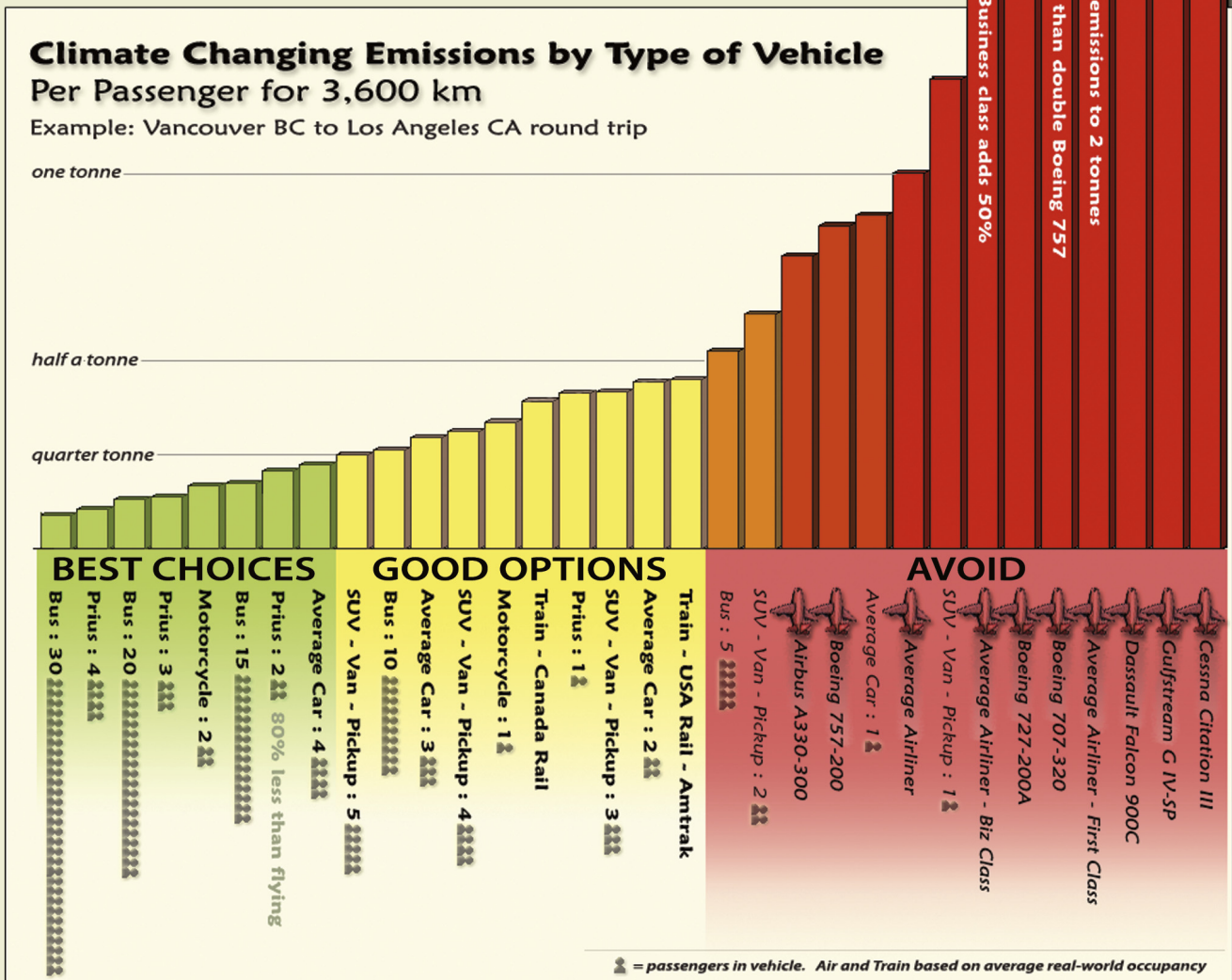
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# Plane or Train? Bus or Van?

By Barry Saxifrage

If you are trying to lower your carbon dioxide emissions, long distance travel by plane is the worst way to go. The best choices are by bus, hybrid car, or some motorbikes. (Sorry, Harleys don't count.) Overall, the closer to full capacity the vehicle is, and the lower its fuel consumption, the less greenhouse gas emissions per passenger of course. So a gas-guzzling SUV or van with 5 passengers is better than an almost empty bus. But even that almost empty bus emits half the emissions, just over a half tonne, compared with the average airplane.

**Notes:** Graphic by Barry Saxifrage at StonebreakerDesigns.com based on following sources. FLYING: Air travel emissions based on data from top-rated [www.atmosfair.de](http://www.atmosfair.de) flight calculator. TRAINS and LONG DISTANCE BUS: emissions and national occupancy averages from [www.ghgprotocol.org](http://www.ghgprotocol.org)'s Mobile Combustion CO2 Emissions data. Bus average occupancy = 17 passengers. SUV-VAN-PICKUP: 14.5 L/100km (16.2mpUSg) and AVERAGE CAR: 10.3L/100km (22.9mpUSg) both explained at [http://daily.sightline.org/daily\\_score/archive/2008/02/08/planes-trains-and-automobiles](http://daily.sightline.org/daily_score/archive/2008/02/08/planes-trains-and-automobiles) PRIUS: 4.8L/100km (49mpUSg) from my personal data for this trip. MOTORCYCLE: 3.9L/100km (60mpUSg) national average from [www.ghgprotocol.org](http://www.ghgprotocol.org) data. This graphic is available online at [www.stonebreakerdesigns.com](http://www.stonebreakerdesigns.com)





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