

Green Scene: Tuna – A Cautionary Tale

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When you think about tuna, what comes to mind first – a can of tuna or an amazing group of fish found throughout the temperate and tropical oceans of the world? Tuna are magnificent swimmers and, unlike other fish, are partially warm-blooded which helps to account for their great speed and endurance. Considered to be among the fastest fish in the world with speeds up to 70 km/hr, larger tuna can cross the Atlantic Ocean in only a few days and some species can dive to great depths. Without a doubt, they are truly impressive fish.

The “true” tuna include albacore, bigeye, longtail, blackfin, yellowfin and three species of the largest, the bluefin, which can reach 4.5 meters in length. Bluefin are highly prized for use in sushi and fetch unbelievably high prices. Sadly, such high prices mean they are being literally fished out of the sea with the help of planes and fuel-guzzling boats which spot and chase them down. Essentially all of the true tuna are considered to be species in various stages of endangerment even though fishing for them continues relentlessly. Some bluefin are now being raised on “tuna ranches” on the shores of Australia and the Mediterranean but this is hardly a sustainable practice since these fish are captured from the wild when young.

There is also a larger group of related tuna-like fish which includes a number of species sold as tuna. These are all smaller fish, a meter or less in length, and include skipjack, black skipjack, mackerel tuna, bonito and others. If the tuna you mostly deal with comes from cans, then, all these tuna fall into the category of “light” tuna as opposed to white (which is albacore). In addition, yellowfin is also considered to be “light” tuna. This group of “light” tuna does not presently include species at risk with the exception of yellowfin. Because the amount of tuna commercially caught has increased four-fold since the 1960s, some people fear it is only a matter of time before the populations of some these other species also crash. Skipjack currently accounts for 60% of the tuna harvest while yellowfin (24%), bigeye (10%) and albacore (5%) account for most of the rest.

I think salmon are also a remarkable group of fish – but I do enjoy a meal of sustainably-harvested wild salmon. Tuna are a slightly different story - not only because some of them are species at risk but also because of concerns about their mercury content. Mercury is a potent neurotoxin which causes a number of symptoms if ingested at high levels. Because tuna are predators and eat high on the food chain, they can, over their lifetime, acquire high concentrations of mercury. Some species of tuna have been found to have such high levels of mercury in their flesh that they should not be a frequent item of a healthy diet. This is especially true of the larger, “true” tuna including albacore. A further concern is that these mercury levels can be quite variable from one individual fish to another.

Oddly, despite information on tuna cans about the dolphin-friendly fishing practices used to catch them or their content of healthy omega 3 fatty acids, no warnings appear with regard to potential mercury content. For that, you must go to Health Canada’s website which is a source of information I rarely check before shopping for groceries. Apparently, because a court ruling in California in 2009 determined that methyl mercury is a naturally-occurring substance, no warning of mercury content is required on cans of tuna. As is increasingly the case for most food labeling in Canada, we simply abide by whatever Americans decide is best.

While it is true that methyl mercury is a naturally-occurring substance, the high levels of it found in many long-lived fish is most certainly not. Most of the mercury these fish ingest originates from coal combusted to produce electricity, steel or cement. Sadly, it is entirely possible to remove over 90% of the mercury from these air emissions but such pollution control equipment, although available, costs money to install. The coal industry has been powerful enough to convince politicians that taking such measures to protect

people's health is simply too costly. As a consequence, mercury from coal combustion is carried in the air, deposited into the oceans where bacteria convert it into methyl mercury at which point it enters the food chain. In addition to tuna, mercury levels can also be high in swordfish, orange roughy, halibut, sea bass and other long-lived fish that predate on other fish.

While the Health Canada website contains recommendations to limit the ingestion of some fish due to mercury content (<http://www.hc-sc.gc.ca/fn-an/securit/chem-chim/environ/mercur/cons-adv-etud-eng.php>), to my mind, more clear and complete information is found through the following link: <http://www.nrdc.org/health/effects/mercury/walletcard.pdf>. Frustratingly, these fish should never have become contaminated with mercury because effective regulations to require cleaner air emissions could have prevented it in the first place. Thankfully in December, the Environmental Protection Agency announced new regulations which will significantly reduce mercury emissions and other pollutants from coal-burning plants in the USA. If other countries, including Canada, can be convinced to follow suit, our oceans will become much healthier ecosystems as a consequence.