GREEN SCENE

Invasive Species

by Elaine Golds

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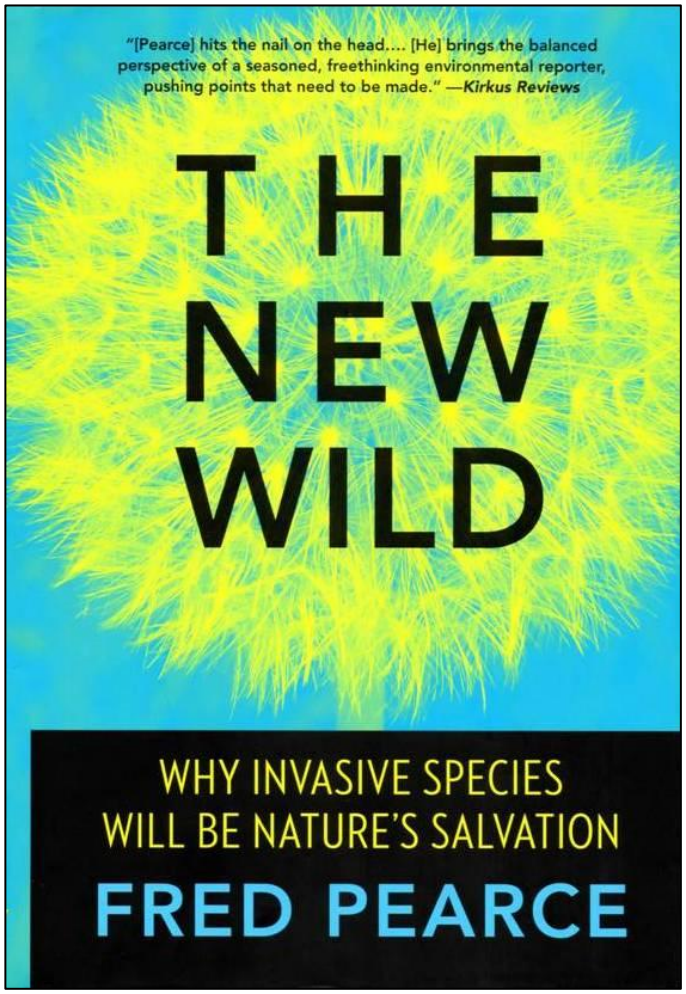
Many people in this community who enjoy volunteering to help the environment have likely participated in invasive plant removal events. For example, volunteers with the Friends of DeBoville Slough have patiently and effectively been keeping knotweed under control along the dikes of DeBoville for over a decade. The local Rotary club has been active along with several other groups in removing invasive plants in Port Moody's Shoreline Park. Most of us have got the message that some plants can become pests when they predominate over the growth of our native vegetation. Thus, I was quite intrigued to come across a new book by Fred Pearce which purports to explain why invasive species could be nature's salvation.



Cover of '*The New Wild*' by Fred Pearce. Beacon Press 2015

Pearce is a British environmental consultant and the author of several books, most of which I have thoroughly enjoyed and from which I learned about environmental problems around the globe. I was intrigued by this book's subtitle. It's certainly true that some invasive plants offer benefits to wildlife. For example, Himalayan blackberry produces berries on which birds feed and their thorns create protected areas for nesting which predators such as cats, raccoons and coyotes find difficult to penetrate. But, is it really possible for invasive species to be considered as "nature's salvation"?

Pearce certainly makes a good case the threat attributed to Japanese knotweed in Britain is overstated. This plant, which is also a problem in the Lower Mainland, evolved to be a so-called pioneer species after volcanic eruptions; it is typically the first plant to grow on volcanic slopes in Japan where its tenacious roots can grow through lava flows. While it is certainly a problem in Swansea, Pearce suggests it is not such a big problem throughout most of Britain. As Pearce points out, Swansea, a former world centre for copper

production, has polluted soils and many abandoned industrial sites in which few plants can grow. It was, in fact, an ideal location for knotweed to take hold. As a consequence, Swansea is the only community in Britain to mandate knotweed inspections prior to land sales. However, even there, only 3% of such inspections result in knotweed treatment being required.

Swansea is also the location where research is taking place on the development a "biocontrol" for knotweed. I was sorry to read in Pearce's book that the Japanese plant louse which specifically eats knotweed cannot thrive through cold nights, late springs and wet summers. Too bad – it appears this remarkable plant louse with an appetite only for knotweed would not do well in the Lower Mainland. Nonetheless, it seems the solution for most invasive species lies in identifying such useful species which, in their natural homeland, help to keep the population of aggressively-growing species under control.

It was also interesting to read about efforts to control cordgrass in California. The problem started, as it often does, with biologists who introduced an eastern species of cordgrass to help restore marshes. This cordgrass interbred with the native Californian species to provide a hybrid with, guess what, hybrid vigor. This hybrid quickly covered open mudflats and impaired the operations of oyster farmers. Thus, an eradication campaign was initiated. However, it was then discovered an endangered bird, the California clapper rail, was thriving on the hybrid cordgrass and its removal was reducing their number of rails. This dilemma continues with hybrid cordgrass removal still taking place except in areas where the endangered rail nests.

Pearce's book is replete with fascinating anecdotes regarding the impact of invasive species. He makes a good case that the threats posed by invasive species are sometimes overstated. He also reminds us, that with global warming, the habitat range of many species is shifting northwards and that we should expect some unanticipated consequences from this. Pearce rightfully points out that people are the true culprit when it comes to invasive species. Wherever we have settled across the planet, natural habitat has been significantly altered often with unintended consequences.

For example, earthworms were absent in Canada and the northern States until several species were inadvertently introduced from Europe. Their impact was to reduce leaf litter on the forest floor which caused problems for some salamanders and ground-nesting birds. However, no one is suggesting we should try to stop this earthworm invasion. Apparently 90% of Alberta's boreal forest remains safely worm-free. I would argue that oil and gas extraction pose a far greater risk to our neighbor's northern forests.

While I disagree with Pearce's provocative suggestion that invasive species will be this planet's salvation, it is also true that natural forces will always favour the survival of the most adaptable species. Nature creates winners as well as losers. I would certainly support Pearce's call for more intelligent tinkering with regard to the invasive species we choose to persecute.