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From the Selected Works of Richard B. Philp

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Nature Notes: Environews # 6

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Invasive species: Florida, an unintentional welcoming home to dozens, if not hundreds of invasive species, now has a couple more. The lion fish, that lovely looking but venomous native of the Pacific and Indian Oceans, began showing up in south Florida waters almost twenty years ago and has now spread to the waters of the panhandle and up the Atlantic coast perhaps as far as Cape Cod. It is a predator that is consuming native fish and disrupting the local ecosystems. No one knows how it arrived in Florida waters but it seems unlikely that it got there on its own hook. Theories range from a deliberate release (the source of many other invasive species), to a hurricane-related event, to the accidental leakage of fertilized eggs from a luxury hotel aquarium. The only control measure so far suggested is to encourage sport fishers to catch them and eat them. Apparently they are quite tasty and safe once the venomous dorsal spines are removed. There are several sites on the internet that tell how to do this and prepare them. Injection of venom causes intense local pain and swelling, nausea, vomiting and cardiac shock may occur.

More recently the giant African land snail has made an unwelcome appearance. These snails, as long as a man's hand, eat just about any form of vegetation and may consume stucco and plaster as well. They can survive in a fairly cold climate and produce over 1000 offspring per year with a 90% survival rate. In Miami-Dade area over 1,000 per week are being caught.

As if that isn't enough, in 2012 a dock from the south pacific broke loose during the 2011 tsunami and washed up on a beach in Oregon. It carried 120 species of algae, worms, mussels and shrimp, nine of which were invasive. Feral pigs, long a problem in the American southwest, have been showing up in northern states including Michigan and New York. Can Canada be far behind?

Alcoholic fruit flies: The fruit fly *Drosophila melanogaster* has developed a high tolerance to alcohol that evolved from feeding on alcohol-producing fruit. When it sees endoparasitic wasps it preferentially lays its eggs in a high alcohol substrate. The larvae accumulate high levels of the alcohol which protects them from the wasps.

Mumbai leopards; new animal control system? : Sanjay Ghandi National Park is a 100 km² urban wilderness surrounded on three sides by teeming poor suburbs of Mumbai. This human-nature interface is fraught with problems as is often the case. The high population of stray dogs has provided an attractive hunting ground for leopards that find them easy prey and thus easy living. Unfortunately a number of maulings and killings of people have also occurred. Trapping is not viewed as an answer because other cats simply move in to replace the trapped ones. Removal of stray dogs and garbage is viewed as the only effective solution but a very difficult and expensive one.

Canadian beaver vindicated: *Castor canadensis*, long castigated (get the pun?) for flooding logging roads, people's basements and just about any other place where people don't want water, has now been shown through the work of Glynnis Hood to play an important role in mitigating

drought. There was significantly more standing water in drought areas where they had been introduced than in beaver-free areas.

A slimy summer for the Great Lakes : The wet spring combined with phosphate runoff could mean an excessively large bloom of the blue-green algae in Lake Erie, perhaps even worse than the 2011 bloom which was the worst on record to that date. Climate change has caused warming of lake waters, compounding the problem. Not only do the algae create an unsightly, smelly mess making beaches uninhabitable but the bloom can harbour E. coli and produce toxins that are irritating to skin, creating a health hazard.

Chinese medicine has image problems: Doubtless there are many valuable remedies in traditional Chinese medicine that would be useful to the west. But it suffers from an image problem from the frequent reports of poaching of endangered or threatened species to acquire animal parts believed to possess medicinal properties. Rhinoceros horns, tiger penises, bear's paws and gall bladders, are a few such items. The latest to be added to the list is the air bladder of the totoaba fish. This marine giant, typically growing to 6 feet (2 metres) or more, has a giant swim bladder that is believed to boost fertility, skin vitality and circulation. Since a single bladder can fetch \$10,000 on the black market. It's no wonder these fish are being poached in the Sea of Cortes (Gulf of California).

More Climate Change Effects: In Greenland warmer and longer summers has meant more grazing for reindeer which are becoming fatter, and a chef is growing vegetables like potatoes and tomatoes in his garden and herbs in his greenhouse. In the south, farmers are growing hay and sheep farms are expanding.