Green Scene: In Praise of Wetlands

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[photograph]
[caption: A bullfrog in a characteristic pose in the wetlands at Minnekhada regional park in northeast Coquitlam. Bullfrogs can be identified by their large size, bright green upper lips and yellow throat. Kiyoshi Takahashi photo]

[Title in Tri-City News: In praise of wetlands & native frogs
Sub-title: Wetlands are crucial & their preservation should be a priority for all of us]

In my version of the perfect world, all children would have a shallow wetland at the bottom of their street in which to explore the amazing variety of aquatic life that emerges from the muck every spring. What could be more fascinating to watch than tadpoles wiggle amongst the cattails and water striders skating on the surface while dragonflies dart above?

All too often, wetland preservation is overlooked when forests are converted to suburbs. Salmon streams are protected by regulations, albeit, sometimes, weak ones. However, ephemeral wetlands, i.e., those that seasonally dry up, and are not connected to salmon streams merit no protection whatsoever. Yet it is these ephemeral wetlands that provide critical habitat for two species of native frogs including one considered a species at risk.

Each spring, I rejoice when I hear the calls of male treefrogs in my neighborhood. They gather in suitable wetlands wherever such bodies of water may still be found and call to attract females. These tiny frogs, ranging from fingernail size up to five centimeters in length, emit a raucous chorus that seems impossibly loud for such small animals. In contrast, the quiet calls of the larger red-legged frog are seldom heard because they are typically made under water. While treefrogs are still somewhat common, red-legged frogs have undergone dramatic population declines and now are listed as a species at risk. In addition to loss of wetlands, both these native species are threatened by the presence of two larger introduced species, green frogs and, especially, bullfrogs. The fact that non-native frogs require permanent water bodies is what makes ephemeral wetlands so critically important for our native species.

Ephemeral wetlands, by nature, vanish as the heat of summer wears on. Thus, our native tadpoles must race against time to complete their transformation to adult frogs before their water disappears. Eggs are laid mostly in March or April and, by now, healthy wetlands should be full of tadpoles. These tadpoles must be ready to transform into adults by mid July or earlier. Failure to metamorphose into a frog before the water evaporates means sudden death. Adult treefrogs and red-legged frogs are fairly terrestrial and require forested areas with ample leaf litter and moist cavities in decaying wood. If you add the requirement for ephemeral wetlands to the need for surrounding mature forests, you get some idea of why native frogs are disappearing from the lower mainland.

The call of the green frog sounds like a loose banjo string being plucked while bullfrogs emit a low rumble often described as a “jug of rum”. You can expect to hear both calls in drainage ditches at sites

such as Colony Farm Regional Park and DeBoville Slough. These frogs require year-round water because their tadpoles take more than one summer to develop into mature frogs. Bullfrogs grow to dinner-plate size; they predate upon many animals such as smaller frogs and even, apparently, ducklings. The arrival of bullfrogs to a wetland usually results in the loss of native frog species in only a few years.

We also have two species of native salamanders that happily co-exist with frogs in local wetlands. These are the northwestern and long-toed salamanders. Like frogs, they are amphibians and, every spring, lay eggs in water. Unlike the algae-grazing tadpoles, salamander larvae are carnivorous and excel at eating mosquito larvae. In a biodiverse wetland, replete with native frogs, salamanders and dragonflies, mosquitoes are rarely a problem because of all the predators that feast upon them.

As we approach another summer in the lower mainland with the threat of mosquito-carried West Nile virus looming once again, we need to remember that healthy wetlands will be full of mosquito predators and should be considered valuable assets in our battle to keep mosquitoes populations under control rather than habitats to be drained or sprayed with toxic chemicals.