



Humble Pie

*A Green Hearts essay by Ken Finch
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“Ecosystems are not only more complex than we think, they are more complex than we can think. This should lead us to be cautious, and a little bit humble.” So said Jack Ward Thomas 20 years ago. Thomas – a past Chief of the U.S. Forest Service – pointed to a crucial truth: we don’t understand nature well enough to be casually messing with it. My only quarrel with Thomas is that I’d suggest we need to be *massively* humble, not just “a little bit.”

I recently read about the growing loss of Eastern hemlock trees in the Southern Appalachians due to damage from the Hemlock wooly adelgid, an Asian insect accidentally brought to the U.S. This bit of worrisome ecological news reminded me of the cascade effects in nature: a seemingly minor change can set off an unforeseen torrent of ecological mayhem. To wit, killing off the evergreen Hemlocks so greatly affects transpiration (the loss of water from plant leaves and needles) that it changes stream flow -- an important variable in the forest water cycle. Further, the loss of the Hemlocks’ streamside shade causes a rise in water temperatures, endangering aquatic species that require cold water, such as Brook trout. Extending the cascade: as the climate warms, the adelgids are successfully moving farther north, where they now threaten the forest ecology of the Northeast. And the cascade’s next step will be . . . well, actually, we don’t know.

As John Muir famously stated, “When we try to pick out anything by itself, we find it hitched to everything else in the universe.” This is the essence of ecology: endless layers of intertwined connections and relationships that even our very best minds can not fully understand. Yet still we plunge ahead, modifying and mutilating the ecology of our planet – be it “fracking” for more natural gas, removing entire mountaintops for coal, flooding the Mississippi Delta with farm chemicals, or twiddling our societal thumbs while excessive CO₂ emissions cause the Arctic to melt, the oceans to rise, and dangerous climate extremes to become the new normal.

No species has ever caused so much harm to the ecology of Earth, and that harm is accelerating, not slowing. Do we care? The bulk of Americans do not. At least, not enough to demand the difficult actions needed to reverse the trends. We love nature, but not to the point of inconveniencing ourselves. And we just cannot seem to comprehend that our own fate is inextricably tied to the rest of the ecological world.

Alas, even if we did understand, knowledge alone will not be enough. It will take caring – *way* more caring – and colossal doses of humility. Humility to accept that we do not understand the full impacts of our actions. Humility to understand that we are not the primo species on Earth – in fact, that there is no primo species, because we are all interdependent. Humility to admit that we contemporary humans cannot indulge in our every consumptive whim without threatening the health and happiness of our own descendants. And humility enough to see that science alone cannot solve all ecological issues; that science must be accompanied by deep spirituality that embraces the web of life beyond just *homo sapiens*.

I don’t often wallow in such sobering thoughts. Indeed, Green Hearts’ work is focused on children, because in them lies ecological hope and salvation. Children do not need to be coerced into conservation by bad news; instead, they need to be loved and amazed into it. They need to observe, awestruck, as a tiger-striped caterpillar weaves a green-and-gold chrysalis, liquefies itself inside its pendulant pod, and then re-emerges as a gorgeous Monarch butterfly. They need to watch a Pronghorn run the prairie at 55 miles per hour, and feel the spray from a breaching Humpback whale. They need to find shapes in the clouds and daydream away sunny hours under a blue sky, with a whiff of lilac sifting through their brain. For in those quiet, joyful actions are planted the seeds of humility: an emergent grasp of the wisdom, genius, and beauty of nature. And in that humility lies hope for the future.