

Wyoming Tribune Eagle of September 22, 2016: "We must change our thinking." Casper Star Tribune, September 24: "Humans are sleepwalking toward disaster."

Last week I reread a 2012 Chris Madson article in "Wyoming Wildlife" discussing the snow-white arctic geese that visit Wyoming as part of the western Central Flyway. During fall migration, and again in March, they arrive en masse in the Platte Valley. Inasmuch as arctic geese in the western Central Flyway have increased each year by ten percent, they have become too numerous to sustain themselves, writes Mr. Madson.

He describes several causes for their population explosion. One is abundant food. Grain production has increased across the winter range and in the southern part of migration routes. The copious food supply improves survival and ensures that females arrive at nesting sites with large fat reserves, which means a head start for egg production and the raising of goslings. The most significant contributor to the overabundance of arctic geese, however, has been climate change. For the past sixty years, more temperate weather has prevailed in the North: "Snow records at Barrow, Alaska, show that average snow melt today is four days earlier than it was in 1940."

Four days may not seem much, but it causes significant shifts in hatching days. Studies between 1951 and 1986 show that, by the end of this period, clutches hatched more than two weeks earlier than at its beginning. By contrast, a late snow melt in earlier decades caused females to skip nesting: it meant that goslings may not be ready to fly when the first blizzards arrive.

Increased hatching success carries the seeds of collapse, notes Mr. Madson. Nesting colonies along the southern and western shores of Hudson Bay have destroyed vegetation and damaged the soil. Even if these areas could be protected from the geese, "they would take decade to heal, if they ever fully recovered."

Similar damage has happened at the Queen Maud colonies: "More than 100 square miles of tundra have been stripped of vegetation." Geese are gregarious birds; hence, they require "large tracts of real estate for their nurseries."

Because of deteriorating habitat, some of the birds have set out in search of new country with better conditions for their young. However, large wetland systems suitable for breeding "are surprisingly rare." Hence, their populations are beginning to decline, limited as they are by the ecological and physiological forces that control animal life everywhere.

Human life, too, shows an overabundance of populations. Like arctic geese, we are running out of habitat. In centuries past, countries with exploding populations sent their surplus elsewhere—think of the penal colonies the British Empire established in Australia, or the religious dissenters who left Europe to establish American colonies. That's not possible today.

If we go further into the past and examine our distant forebears' repeated migrations out of Africa, we note that the pattern began in prehistoric times. The first exodus seems to have been prompted by a climate change that turned African jungles into savannas. With that, the first humans lost their accustomed habitat, a tree canopy that provided food by way of abundant fruit plus sleeping quarters high up, safe from large predators. Once they began ambling through grasslands, early humans found themselves visible and vulnerable. They may have left the African savannas in search of another jungle. What they found instead were sea shores and rivers where they had to catch fish to survive; high plains populated by mastodons and icy tundras of arctic flora they had to figure out how to hunt. Our ancestors learned they had to kill to survive. No more, that distant Eden with fruit hanging within reach.

The situation today is no less desperate than that of early African migrants. Consider this:

According to NASA, since the start of 2012, more than 27,000 fires have destroyed nearly 2 million acres—and that's just in our neck of the woods, the western US! Extremely dry conditions, unusually warm weather, and trees killed by outbreaks of pine bark beetles provide “ideal conditions” for the blazes.

Bees are dying off so fast, scientists warn they may go extinct—in China, that's already the case. The French Parliament banned bee-killing neonicotinoid pesticides after more than 300,000 bee colonies collapsed, but in the US, where annual mortality rates have been as high as 80%, corporate interests continue to block any pesticide ban, for it may impact monoculture, e.g., miles of corn or alfalfa fields. In 2014, overall bee colonies crashed to their lowest level in 20 years. Where will agriculture go—where will alfalfa go—without bees? Take a look at Chinese workers, climbing trees to hand-pollinate fruit blossoms.

When we avoid contemplating the human-caused degradation of what we call home, we sleepwalk toward disaster. For the sake of the future we need to change our thinking—not twenty years from now, but immediately. Unlike geese, humans have the capacity to correct their ecological errors. Zero population growth and environmental care are a must.