The Other Silent Spring

Disappearing birds of young forests

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Rachel Carson's classic book *Silent Spring* sounded the alarm over the long-term effects of the misuse of pesticides, especially those that persist for decades in the environment. Carson described how the misuse of pesticides, in particular DDT, unintentionally led to raptor eggshell thinning and negatively impacted populations of non-target songbirds either by direct poisoning or indirectly through their food sources. The premise of her historic book was if corrective actions were not taken soon, eventually the sounds of spring would disappear. Carson was dismissed by some as an alarmist and her credibility was attacked by the chemical industry. Over time the truth of her warnings became quite evident in field studies and led to a new awareness in the use of pesticides.

Although not as insidious as pesticides, a similar decline is occurring with populations of birds and other wildlife that utilize grasslands, prairies, and young dense forest habitats. The vitality of these habitats is measured not only by their existence, but also by the time since the last major vegetative disturbance. Historically, these habitats followed natural, catastrophic destructive events such as firestorms, tornadoes, and massive insect infestations. Young, regenerating forests lay scattered across the predominantly forested landscape where patches of old forests eventually died and had fallen in on themselves. The process of constant, destructive change and death in the natural environment is the youthful renovation of habitats which result in a rich diversity of wildlife. Every species'existence is in a constant flow of temporarily disappearing and recolonizing in a diverse, ever-changing environment.

Forest environments are amazingly resilient. As long as there are connective forested corridors or pathways, wildlife can generally find those habitats that suit their specific life needs. Unfortunately, in many areas, man has chopped up the landscape to the point where these regenerative natural forces no longer function to the same extent as they did historically. Broken forested corridors are often not suitable pathways for wildlife recolonization and a fractured landscape can not be easily repaired without displacing human development.

Beginning in the 1930's, Indiana was entering a period of reforestation following an initial burst of human settlement when many forests were cleared to build and heat homes, communities, and provide space for agricultural crops and grazing. While there were a few public agency programs for planting trees, most of today's forests returned in the same resilient way they had historically, regenerating on their own following natural destructive events. Along with the resurgence of young forests came the wildlife species whose life and vitality depends on the dense thickets and brushy fields.

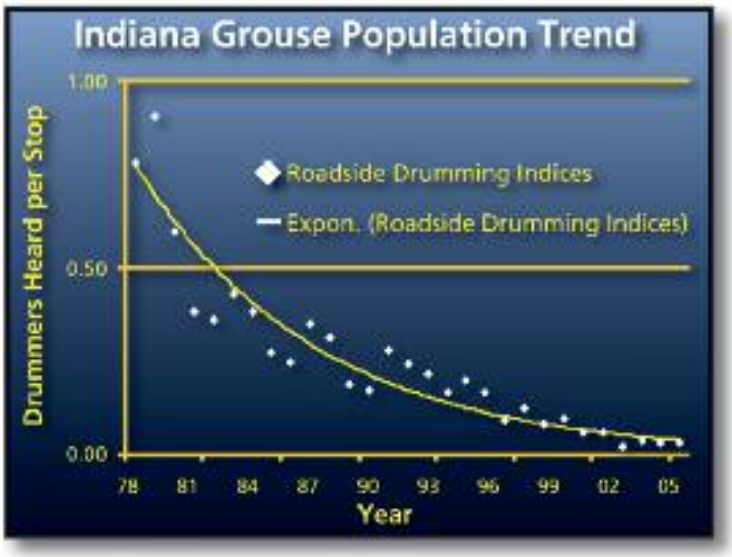
> These three birds [the American woodcock, the ruffed grouse and the whip-poor-will] … are "coal mine canaries" telling us by their absence that young forest habitats are quickly disappearing. Are we listening? Do we hear the emptiness? Will we listen?

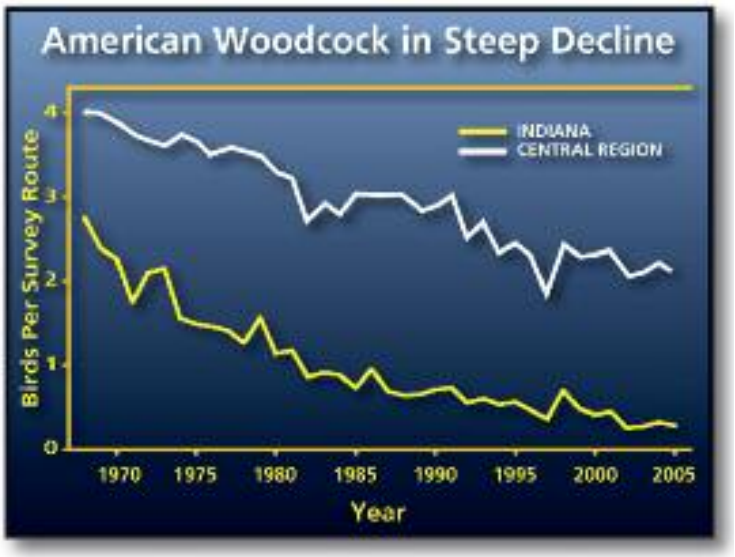
Some of the easily identifiable avian icons of young forest habitats are ruffed grouse, American woodcock, and whip-poor-wills. These birds are more often heard than seen, because their brown, mottle cryptic appearance helps camouflage them against predators, especially the females who are ground nesters. Naturalists have frequently described the distinctive courtship displays of these birds as harbingers of spring.

In late March through April a male ruffed grouse proclaims his breeding territory by engaging in a "drumming display" upon a downed log, a tree root wad, or a small mound of earth in a protective woody thicket. The male grouse beats his wings rapidly creating a vacuum of air, producing a low hollow, drumming sound similar to the sound of an antique tractor motor starting or the distant pounding of rubber automobile tires on a rough country road. When you are relatively close to a drumming grouse, you can feel the sound as much as hear it, probably because the sound waves created by the air vacuum resonate off a person's head and chest. Besides proclaiming the male's territory, the drumming sound attracts female ruffed grouse that come to the male to breed. The best time to hear a grouse drumming is at dawn the first week of April, although this year-round resident may drum occasionally at other times of the year.

The courtship display of a male American woodcock is a combination of a nasal "peenting" sound made on the ground in a small forest opening or brushy field followed by a short 30-40 second circular aerial flight that ends with the flute-like twittering of air passing through the male's wings as he quickly spirals down to the same spot to peent again. Like the ruffed grouse, the male woodcock conducts these repetitive displays not only to proclaim a breeding territory but to attract females for breeding. Migratory woodcock generally arrive in early March and begin their dawn and dusk courtship displays in late March through to early May.

Whip-poor-wills begin arriving in late March and the males will begin distinctive, repetitive "whip-poor-will" calls in mid April from dark to the early dawn hours. The calling of a whip-poor-will continues through the summer with the intensity influenced by moon phases and the breeding





Photos by Jacob Dingel

Ruffed Grouse, *Bonasa umbellus*. Whip-poor-will, *Caprimulgus vociferus*. American Woodcock, *Scolopax minor*

cycle. Depending on a person's perspective the calling, which can vary from a few dozen calls to several hundred repetitions, can either be entertaining or an incessant disturbance, especially if you are trying to hear something else or sleep.

Unfortunately, populations of ruffed grouse, woodcock, whip-poor-wills along with many other young forest birds like yellow-breasted chats, towhees and golden winged warblers have dramatically declined as the majority of our forests reach maturity. In the public's zeal to protect natural areas, there is a public misconception of not "seeing the forest for the trees." Vegetative disturbance is a means of revitalizing habitat diversity within a very dynamic forest ecosystem that needs young trees just as much as old trees.

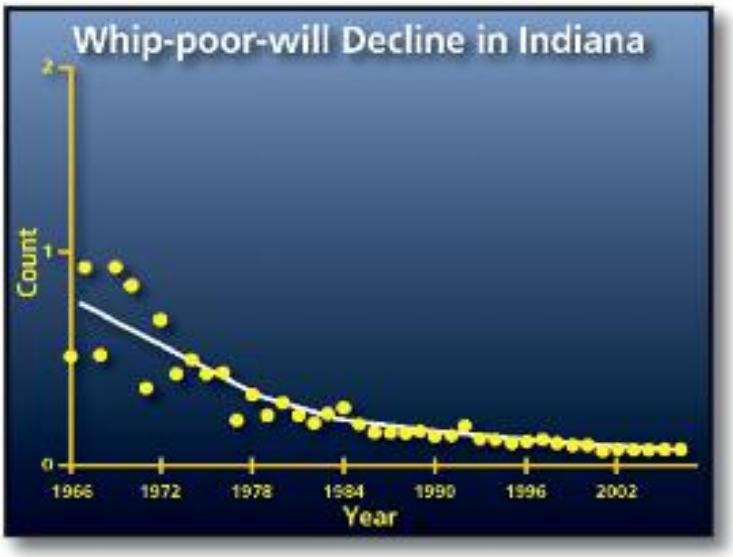
Ruffed grouse populations in Indiana are now less than 3% of what they were just 25 years ago. Ruffed grouse have essentially disappeared from neighboring Illinois and have already done so in a number of areas in Indiana where they existed just two or three decades ago. Breeding ground surveys for woodcock conducted in Indiana are showing a similar decline. Not too many years ago, on our way to conduct grouse drumming surveys we frequently saw the reddish-pink eyes of whip-poor-wills sitting along the forest roads. The incessant calling of whip-poor-wills was an annoyance as we tried to count the number of drumming grouse. Now we no longer see the whip-poor-will eyes in the headlights and frequently hear neither grouse, nor whip-poor-wills, nor woodcock.

These three birds and distinctive calls are "coal mine canaries" telling us by their absence that young forest habitats are quickly disappearing. Are we listening? Do we hear the emptiness? Will we listen? It's happening not only here, but across the eastern United States.

In his book, "Restoring North America's Birds – Lessons from Landscape Ecology" (2000) noted ornithologist, Dr. Robert Askins, titled one chapter, "Another Quiet Decline: Birds of the Eastern Thickets" that recorded the plight of birds of young forests. Public perceptions are often a hard nut to crack, even when there are biological facts to the contrary. We tend to mix our emotions with our perceptions as to how the world should be, even if we are only seeing a snap-shot of history frozen on one beautiful sunrise or sunset. We tend to see forests as only large, mature trees while mentally discriminating against young, small trees that have an equal value in providing viable habitat for wildlife. We fail to recognize that some wildlife use old forests, some use young, and some use both.

We, as humans, have permanently modified the earth and there is no going back to a completely natural world without dismissing ourselves from this earth. It's now our incumbent responsibility as good land stewards to assure a diversity of habitats exists in what remains of our forests. We have to get past our biased perspectives and recognize that dramatic vegetative disturbances are temporary and are always an important revitalization of dynamic forest ecosystems.

While man-made disturbances like harvesting timber or prescribed fires may not be natural, nor pretty at the outset, they are manageable tools that can be directed to specific forest stands to replicate or mimic the effects of natural disturbances in creating and maintaining a diversity of habitats. Logging is not just about removing renewable, woody commodities from a forest; timber harvesting is a very useful tool in managing vegetation to assure a variety of habitat types for a diversity of wildlife.

To hear the drums of a grouse, the peents of a woodcock, and the calls of the whip-poor-wills are as refreshing as the cool crisp forest air we breathe. The increasing empty silence of our woodlands is a sign that our world is less healthy, and is a testament to our failure to act.

Our failure to maintain a diversity of habitat types in our forests is benign neglect for those wildlife species needing young forests to survive. A managed forest is still a forest, if left to be a forest after a natural or man-made disturbance. The key is to keep our forests as forests and not let them disappear under a growing sea of asphalt or be converted to some other non-forest land use. An active timber management program under the guidance of professionally trained natural resource managers perpetuates a renewable resource while maintaining a diversity of habitats for wildlife.