THE NATCHEZ NATURALIST NEWSLETTER

(Natchez being a small, pretty town on the Mississippi River
in extreme southwestern Mississippi, USA)

by
Jim Conrad

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ACKNOWLEDGMENTS

I thank the owners of the plantations on which I lived during my years in the Natchez area.

Also thanks to Karen and Jackie Wise of Kingston, Mississippi who befriended me while I was there, moved my trailer when it needed moving – twice – and helped me in so many other ways as well.

NOTES BEFORE BEGINNING:

In this book often I mention eating cornbread. That's a cornbread of my own invention, very unlike the spongy cornbread people make from store-bought, packaged mixture, and baked in an oven. My cornbread is made on a campfire in a skillet with a top. Usually the batter is about two-thirds plain, dry, granular cornmeal, and a third wheatflour with baking soda added. Nearly always it contains chopped onions, sometimes cabbage, pears, carrots, broccoli, chili peppers, wild mushrooms -- whatever I have. The resulting creation is heavy, usually somewhat burnt on the bottom. Before it's done, I flip it, creating a hard surface on what was the top, so now both top and bottom are crusty, with the center softer. You can thump it like a drum, and it scratches on the way down. Really, I don't care much for what most people call cornbread.

Though the events in this book took place during the late 1990s and early 2000s, as of late 2018 I'm still alive, and may still be when you read this. You can catch up with me at http://www.backyardnature.net/j/jim.htm

PREFACE:
The Natchez Naturalist Newsletter

In early 1997, at age 49, I pulled a tiny, hangdog-looking trailer into the woods of a large plantation a few miles south of Natchez in southwestern Mississippi and began living there. Mornings I'd work in the plantation's garden, then the rest of the day I'd study and work on the Internet. I'd strung wires through the woods for the Internet connection.

During my years there, thanks to the Internet, I always felt well connected to the world, even though sometimes I spent entire months without speaking a single word to anyone. On the Internet I created several web sites and exchanged emails with people all over the world.

Still, in 2001, I began worrying that I was losing my ability to order my thoughts in a way that permitted me to communicate with others. Though I could think abstractly better than ever I was becoming an awful word-groper. Also, maybe around that time I was beginning to miss being part of some kind of human community.

Consequently, each week I began issuing, via email, the Natchez Naturalist Newsletter. The idea was that each week this would oblige me to exercise my mind with thinking patterns of the kind needed for regular conversation. Before long I felt my talking powers returning, plus I was gratified by how many people subscribed to the newsletter. Gradually a nice little cyberspace-based community crystallized around the newsletter.

In 2003 I had to leave the plantation, but a newsletter subscriber invited me to move onto his unoccupied property a few miles east of Natchez, adjoining Homochitto National Forest. I took my trailer there and continued my work and issuing the newsletter as always.

Therefore, some entries in this book were written at the first plantation, and some were written at the second. The "Broomsedge Field" and the hunters were at the first, the barn and the "Loblolly Field" were at the second. I've mingled the entries here so usually you can't know which plantation the entries were written at.

In 2004 I left the Natchez area and until now haven't landed anyplace that feels permanent. Maybe it's because wherever I find myself in the presence of a few trees and birds I feel at home. Now my newsletters are called "Jim Conrad's Naturalist Newsletters."

CHAPTER 1: JANUARY

COLD DAYS AT PEACE

This has been a chilly week with several frosty mornings. With the plastic tarpaulin over my trailer, the windows plugged with Styrofoam boards, and blankets draped over the ill-fitting door, inside the trailer I remain comfortable, even cozy. With windows and door-cracks sealed, it's dark inside and the trailer feels like a small cave.

At night I remain toasty inside a good sleeping bag and during days the heat of my computer and my own body keep the trailer's small space warm enough. I wear several layers of clothing and often work at the keyboard in fingerless gloves. My main problem is that sometimes the oxygen runs low and I must let in fresh air. Then heat escapes like a scared wren.

This entire last summer I never once turned on a fan (most days I wore clothing only for jogging and working in the garden), and I'm hoping to make it through this winter without once using the small electric space-heater kept for emergencies. Some years I've managed, others I've needed the heater, though never for more than a few minutes each day. This week last year we had a 14° morning and I was glad to have the heater then.

When I’m in a regular US home and either the air conditioner or heat pump drones on and on, it weighs upon me. I cannot but keep thinking of the vast environmental destruction being caused in the name of my physical comfort. Land lost to coal mining, the production of greenhouse gases, radioactive wastes... all to produce energy to have me feel cooler or warmer without needing to add or remove clothing.

When at night I turn off my energy-efficient computer and my little 40-watt, high-intensity reading lamp, not an electron of energy flows in my trailer. While I sleep, no ecological violence is committed on behalf of my comfort, and maybe that's one reason I sleep so soundly and awaken so glad.

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FIRE

On these cold mornings I am especially aware that each day for me begins with a touch of magic. I am thinking of the orange flash that erupts at the end of my match, then moves as a hesitant blaze into the tepee of dry branches and wood splinters I've heaped beneath the grill and skillet. Then for a few minutes a kind of dance between the fire and me takes place as I try to make the flame feel at home. If the air and wood are moist this can be hard but so far I've always managed to cook a meal.

There must be some kind of atavistic memory at work here, maybe a certain sequence in my genes resonating with the memories of morning fires accompanying untold generations of my evolving ancestors in their caves, their winter lodges of bark and fur, and on Africa's savannas.

Every campfire is a piece of the sun itself momentarily visiting me. Energy from the sun flowed through space and was captured on Earth by the bush or tree whose wood I am now burning. That sunlight energy was stored among the chemical bonds of the carbohydrates comprising the wood. Now as that wood burns, its chemical bonds break apart and the former sunlight energy is released.

If we are looking for an appropriate ceremonial communion with the agencies sustaining us as living beings, there can be no more appropriate act than to conscientiously ignite and nurture a fire just large enough to do its job, and then to be thankful for its service.

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SUNLIGHT IN THE LOBLOLLY FIELD

On chilly, sunny days such as we had earlier this week, I like to sit in the Loblolly Field. There, sunlight is the thing.

For example, down inside a dense, shoulder-high thicket of brown, frost-killed goldenrod there'll be a clump of scarlet blackberry leaves. I'll set next to them, being sure to position the red leaves between the sun and me. When my eye is about rabbit-nose high, looking up at the blackberry leaves glowing with the sun on the other side, I think that no one on Earth must be seeing anything as red as I am.

If I get into position fast enough, and I always do, during the first few seconds of looking at those red blackberry leaves I am showered with thousands of tawny goldenrod fruits knocked from the goldenrods' nodding heads as I sat down. As the goldenrods' fruits fall, sunlight ignites inside their fuzz parachutes.

Back-lighted, the stiff, slender goldenrod-stems show up as silhouettes, some vertical, others diagonal. On one side of each black stem there's etched a thin glaze of luminous ice. Atop the silhouetted stems sunlight charges each goldenrod's pyramidal fruiting head consisting of thousands of fuzz-parachuted fruits with radiant translucency. Sunlight also etches a narrow but intense fire-rim around each head. Then, beyond the fuzz-blaze there's the blue sky, translucent itself as only the blue sky gorged with sunlight can be.

It's misleading just to say that a back-lighted blackberry leaf is red, for the leaf is mainly an intricacy in which each vein and veinlet is delineated as with black ink, every fungal infection causing a splash of urgent yellow or brown, and every bug-munched place with a lacy fringe. Viewing a red blackberry leaf with sunlight pouring through it, there are cell structures to see, systematically spaced stomata, and textures and contrasts beyond words.

Moreover, if you enter the Loblolly Field not in the middle of a sunny afternoon, but rather right after dawn as the day's first sunlight pours in, and there's heavy white frost encrusting the goldenrods' pyramidal fruiting heads and the bluestems' curling brown leaves, and you keep all this between you and the sun so that a frost-white world glistens as you move through it toward the sun, and sparrows and towhees rise from amid it all shaking white frost crystals into powdery snows, and here and there intensely green and blue and pink dew-sparkle-beacons flash on and off, and you stand there breathing out great clouds of steam, so vividly aware of your own wet breathing, cold air rushing in and out of warm, pink lungs, pink mouth and nose-holes and curling face-hair, and then there's the sky so blue, and you look and look...

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PEENTING THE LOCAL TIMBERDOODLE

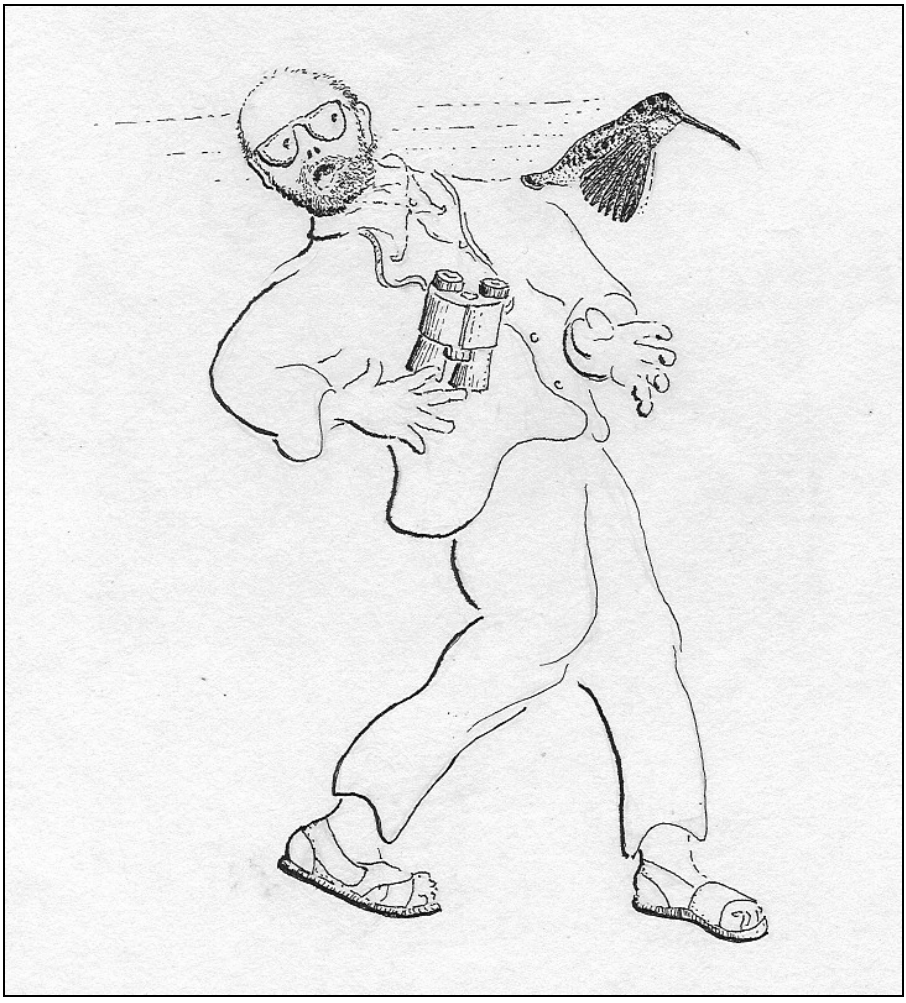
In a recent Newsletter I mentioned the American Woodcock currently at home in our Loblolly Field. Cheryl up in Michigan writes telling me how a naturalist she knew coaxed woodcocks into flight. It's done with the "Timberdoodle dance." Timberdoodle is another name for the American Woodcock, at least up there. The bird also goes by the names of Pepperdoodle, Bog Sucker and Big Eye.

The dance consists of first pinching your nostrils shut with your fingers, then calling "peent." Cheryl further writes, "As you make the 'peent' sound you bend your knees, which lowers your body 1-2 feet. Then you straighten back up, rotate your body ¼ turn and repeat the 'call and dip,' allowing 10-20 seconds between each 'peent.'... After each 'peent' rotate ¼ turn before 'calling and dipping.'"

On Tuesday night, at about 5:30, just when the sky was visible but everything else lay deep in shadows, I went near where I'd seen the woodcock and "peented." I didn't bother with bending my knees, but I did pinch my nose and rotate my body between each call. After several series of calls it got so dark that I figured any nocturnal bird by then would be busy at work, and so I started my return walk to camp.

But then all in less than a second I heard heavy flapping attended by a sharp whistling sound, and I looked up just in time to see an absurdly chunky-looking little being with stubby, rounded wings and a long, needle-like beak zooming past exactly at the level of my nose. If I had enjoyed more sense of presence than to jump backwards, throw out my arms and yell "Jeeze!" I might have been able to reach out and grab me a Timberdoodle.

I had assumed that the idea behind peenting was to encourage the courtship display, which is complex and interesting, and which I've seen in Kentucky but not here. However, maybe you peent just to attract the bird. If that's the case, I'm not sure I'll be peenting much, at least not wearing a helmet.



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RED-SHOULDERED HAWKS SCREAMING

This week's mostly warm, sunny days have been busy ones for the Red-shouldered Hawks. Usually by midmorning the air had warmed nicely, a slight breeze had begun stirring, and a very great deal of hawk screeching had begun cascading from the sky.

Several mornings this week I planted apple trees, wearing nothing but a pair of shorts and sandals, and the sunlight, breezes and hawk calls overhead made a heady mixture as I worked. Often three or four birds

flew tight circles near one another, sometimes almost touching in midair, all the while issuing their shrill calls. One call was a kind of "*kee-yar*," and another was a constantly repeated, sharp "*eep, eep, eep*."

The males swooped a lot. High in the sky a male would suddenly draw in his wings, dive headfirst, level out, then, as on a roller-coaster ride, shoot back skyward carried by his momentum, performing a U. I suppose that the tighter the U, the faster the dive, and the higher he climbed with his built-up momentum, the more impressed any watching female might be.

The funniest thing was when a male rested at his perch and a female deigned to visit. The male gave the clear impression of being surprised, even intimidated, by the visit. Especially the male's body language showed that he was of two minds. On the one hand he was desperately eager for the female's attention but, on the other, he was more than a little respectful of her larger, more powerful build and sharp beak and talons.

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PACKRATS AND SPATULAS

Our Eastern Woodrats, *Neotoma florida*, are very different from Norway Rats, the typical "alley rat." Eastern Woodrats possess large ears and large eyes, while Norway Rats have squinty little eyes and small ears. Woodrats possess bushy tails while Norway Rats have naked ones. Woodrats are called packrats out West, and I think they should be called packrats here, too.

Packrats tend to wander around in the night gathering things. Long ago I learned not to leave anything small lying around, else one of my Eastern Woodrats would pack it off. But during the course of a year sometimes I simply forget to hang my kitchen utensils on their hooks on my outside-kitchen's roof beams, and sometimes I simply forget to chuck my chopsticks and knife into the jar where woodrats can't get them.

Consequently, now nearly all my kitchen utensils are missing. I am now down to a pair of mismatched chopsticks, a bone-handled hunting knife too heavy for them to carry off, and a butter knife. All my spoons, forks, kitchen knives and my two spatulas have been stolen one at a time.

Monday when my last spatula disappeared I tried to track it down. Without a spatula I can't properly flip my daily cornbread. I used to flip cornbread by tossing it into midair from the skillet, with a certain wrist motion it took years to perfect, but then the handle came off my skillet. Now I need a spatula.

Beneath the wooden platform on which I sit during breakfast I found a collection of about a hundred stolen dried peppers and various mismatched chopsticks. A woodrat was there looking at me with that big-eared, wide-eyed, goofy look woodrats have, but I didn't bother her.

Beneath my trailer I found a foot-high pile of shiny items, mostly aluminum foil from trash my handful of visitors have left here over the years. Rummaging in the pile I found a butter knife, but not a trace of my two lost spatulas or my favorite "anodized stainless steal forever-sharp" knife.

A small trail was clearly visible leading from below my trailer into the wild clutter of shattered limbs left by the collapse of the big Pecan tree during Hurricane Lili. I plunged into that jungle and followed the trail to the other side, to a collapsed shack once lived in by a tenet farmer, now little more than a few rotten timbers and some very rusty sheets of roofing tin. There the trail went beneath the tin sheets and the Pecan's trunk lay exactly atop that. In short, my spatulas were lost. If I should move things too much, the Pecan's trunk might shift onto me.

I rather like my woodrats, and I accept my lost utensils as just chastisement for my general forgetfulness. My woodrats knock about beneath the trailer each night and explore my kitchen as soon as night falls. They are good company, but I do miss my spatulas and "forever-sharp" knife.

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ANDROMEDA GALAXY OVERHEAD AT DUSK

About an hour after dusk nowadays one of the most majestic views in the night sky is available right overhead. It's the Andromeda Galaxy, also known as M 31.

This is one of those things that you'd never give a second glance if you didn't understand what you were seeing. For, what's to be seen is nothing more than a very small, faint smudge in the sky. In fact, right now moonlight makes it a bit hard to see, but if you wait for a few nights before looking, until the moon is below the horizon at dusk, I think it'll be clearly visible for you.

The understanding needed to appreciate the Andromeda Galaxy is that all the stars in our night sky belong to our own galaxy. About 1,900,000,000,000 stars -- or "solar masses" as they are called today -- populate our galaxy. Usually galaxies are portrayed as vast, whirlpool-like swirls of stars. Such galaxies have "arms" composed of untold numbers of stars spiraling outward from an intensely bright center. Not all galaxies are spiral shaped, but our own galaxy is considered to be a spiraling one, and efforts are being made to map the various arms.

Now here's the wonderful thing about the Andromeda Galaxy: When we see it, we're seeing something outside our own galaxy. It's a whole other galaxy. It's like being a fish in an aquarium, with all the stars we see in our sky being objects inside our own aquarium. The Andromeda Galaxy is a completely different aquarium across the room containing nearly as many "solar masses" as our own galaxy.

A light-year is the distance that light travels in a year, which is about 6,000,000,000,000 miles. The diameter of our own galaxy is about 100,000 light-years. No star visible in our sky with the unaided eye is farther away than 100,000 light-years. Well, the Andromeda Galaxy, the "nearest large neighbor galaxy" to our own, is 2,900,000 light-years away.

Here's how to find the Andromeda Galaxy. At this latitude around 8PM, face northward and look high into the sky. One of the most conspicuous constellations there looks like a crooked, somewhat squashed M. This is the constellation Cassiopeia. Notice at the top, left of the M's left hump there's a smaller star. That star more or less points to the Andromeda Galaxy. Hold your arm skyward and make a fist. The Andromeda Galaxy's blur lies about a fist's distance from Cassiopeia, in the direction pointed to by that smaller star. Binoculars show the galaxy as a blur.

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GIANT GARLIC

Here and there in the forest large patches of garlic appear. Usually the ruins of an old house stand nearby, often just a brick chimney rising among tall trees. Sometimes there's not even that, just a relic population of garlic hanging on where once a garden was tended. Naturally, having such a supply of garlic, I eat prodigious amounts of it, and must smell accordingly.

Such a garlic patch grows all around my trailer -- hundreds of plants, nowadays with green leaves over a foot tall. There's one place where the garlic plants are at least twice as large and dark green as the others, and that's at the edge of my living space where periodically throughout my days I go pee.

The deal is that in the human body when amino acids (the building blocks of proteins, of which our muscles are made) are broken down -- and our bodies are continually replacing old tissue -- urea is produced as a waste product. The nitrogen in my urea then undergoes an amazing series of changes brought about by soil microbes to become a *fertilizer* for my garlic plants.

Therefore, whenever I pee I stand there visualizing a nitrogen cycle beginning with nitrogen atoms in the foods I eat incorporating themselves into my body, my body constructing with those atoms all kinds of wondrous tissue and organs, then during the process of continual rejuvenation my body finally getting rid of the nitrogen as waste urea, which would poison me if it were not properly cleansed from my system. My garlic plants receive my abandoned nitrogen as if it were manna from heaven.

From experience I know that this summer when my garlic plants' green blades will have died and shriveled away I'll go dig up enormous white garlic bulbs at my peeing place. The bulbs will have no odor of urine at all in them, of course, for my discarded urea will have been transformed by magical processes into pure garlic essence.

And how good will be that garlic in a salad or soup, or eaten raw on my tomato sandwiches. And all the time as the garlic aroma wafts about me I'll be thinking what a wonder it is that at that moment many nitrogen atoms will be making a return trip to my body, that again they will find

themselves inside my muscle tissue and the DNA and RNA of my genes, and, eventually, sure as anything, at least some of those nitrogen atoms will be peed again in the vicinity of some needful garlic.

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GRACKLES

A couple of times each day a flock of 300 to 400 of those foot-long, black, long-tailed, sleek-looking birds called Grackles, *Quiscalus quiscula*, announces itself with a sound which, when heard from a distance, is reminiscent of a rain coming through the woods. The flock draws closer, squeak and chuck calls of individual birds emerge from the general din, and finally the diffuse bird-cloud filters noisily through treetops around me.

It's as if the birds can't decide as a flock which tree to light in. Maybe a hundred will land in one tree but the rest will pass a few hundred yards beyond to another tree, and some birds won't land at all, just keep going, and when the ones in the first tree see this they take wing again, but by then the ones who didn't land now are landing... Well, it goes on like this, and in the end the entire flock more or less keeps together as it drifts through the forest.

On Thursday as I worked in the garden part of such a loud, rambling, undisciplined flock landed in a large Water Oak nearby. I wondered whether they were eating that tree's small, orange-fleshed acorns. All the birds I could see were only squawking and looking around at their neighbors so I decided that they were not.

However, soon part of the flock rose up and flew to join their companions across the hill. As they passed directly above me I heard expressive sounds I would not have thought any bird capable of making, sounds maybe you'd expect from a troupe of half-drunk, completely uneducated and uninhibited elf-thieves chortling over something dumb they'd done.

Something plopped onto the ground beside me as they passed overhead. It was half of a Water Oak acorn, so some of them had indeed been foraging. In fact, in our area acorns are this bird's second-most important food source, after corn scavenged from fields.

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TURNIP APHIDS

This week I've been studying aphids and I find them pretty interesting creatures. First of all, there are many kinds of aphids, and each species has its own special life cycle. The one on my turnips is the Turnip Aphid, *Lipaphis erysimi*. A typical aphid life cycle goes approximately like this:

A wingless female hatches from an egg and begins sucking juice from its host plant. Without assistance from a male, this female -- instead of laying eggs -- gives birth to a number of wingless females like herself. Wingless virgin females then produce generation after generation of wingless virgin females. About when summer comes along, certain of them begin producing offspring that develop wings, and this new generation of winged aphids then flies to a new plant, which may be a completely different species from the host plant of their mothers.

On this second host plant, new generations of mostly wingless females are born. As colder weather arrives in late fall, suddenly another generation of winged aphids is produced, but this time about half are males. Sexual reproduction takes place the usual way and the females return to the kind of host plant we started with in the spring, and lay eggs on it. These eggs overwinter and next spring the cycle begins again.

The life cycle of my Turnip Aphids differs from the above scenario. Since Turnip Aphids live mostly where winters are not severe, the overwintering egg stage usually is skipped. As my January turnip leaf shows, the females just keep producing females all year round, and both eggs and males are usually very hard or impossible to find.

Turnip Aphids do often switch host-plant types, though the new host species must be a member of the Mustard Family, which includes radishes, kale, collards, and weeds such as Bitter Cress and Shepherd's Purse. In places where Canola, or rape seed, is grown, Turnip Aphids have become serious pests.

The ability of aphids to reproduce is mind-boggling. Wingless adult females can produce 50 to 100 offspring. A newly born aphid becomes a reproducing adult within about a week and then can produce up to 5 offspring per day for up to 30 days! The French naturalist Reaumur

during the late eighteenth century calculated that if all the descendants of a single aphid survived during the summer and were arranged into a French military formation, four abreast, their line would extend for 27,950 miles, which exceeds the circumference of the Earth at the Equator!

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FORAGING GRAY SQUIRRELS

Most mornings in dawn's twilight, before the sun's rays begin shooting in from the east, several Eastern Gray Squirrels, *Sciurus carolinensis*, work among the slender branches at the top of oak trees in the woods. Sometimes there's five or more. Acorns cluster at the outer branches so when a squirrel goes there the branches yield. A squirrel's acorn-nabbing foray usually begins with a brief pause on the stable part of a branch, then there's a hurried rush to a branch-tip acorn, and then a rush back onto the stiffer part of the branch. Sometimes a squirrel misjudges a branch's strength and momentarily finds himself dangling, or worse.

If you ever see such a group of foraging squirrels, notice how each individual runs along a branch for a second or two, then freezes, then runs some more, then freezes. When several squirrels in a tree all move in this stop-motion manner, it's a funny thing to see. My guess is that they pause because that helps them spot approaching hawks and owls. Seeing how all squirrels stick to such a disciplined program of stops and goes, we have a hint as to how serious the predator threat is for them.

By the time morning's sunlight hits the treetops, the squirrels are gone. I suppose that's because the bright light makes them more vulnerable to predators. They don't always return to their dens for the rest of the day, though, for often in the middle of the day I hear the "*Aaarghhhh!*" call typically made by aggravated female squirrels while they're being chased by several males. These chases can go on for hours.

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HERMIT THRUSH

Each morning as I prepare my campfire breakfast, a Hermit Thrush comes visiting. He seldom gets closer than about six feet but he definitely likes to watch me from not far away. More than once he's landed on a water bucket and cocked his head sideways so that one eye looked

directly into my own eyes. Saturday morning he briefly landed on the table less than a yard away.

Hermit Thrushes belong to the same bird family as the American Robin, so they are about a robin's size and shape (a little smaller), hop on the ground like a robin, and share with robins that curious ability to appear to hold their bodies in one place while, in a flash, their two legs scratch the ground below, stirring up insects and earthworms. Unlike robins, Hermit Thrushes are fairly drab-looking birds, mostly rusty-gray on their backs, and with a few modest speckles on their pale breasts.

Thrushes and thrashers should not be confused. Brown Thrashers, found here year round, are of a similar color and also bear speckled breasts, but they are in the same family as Mockingbirds and Catbirds, so they are larger birds, with much longer beaks and tails. Several thrush species visit our area, but only the Hermit Thrush is a winter resident. During migration, unless you hear their songs, it can be hard to distinguish the various thrush species. The main visual fieldmark of the Hermit Thrush is its reddish tail and rump -- the rump being that part of the back right above the tail.

Of course I do not overlook the point that I am a genuine hermit each morning being visited by a genuine Hermit Thrush. Nor do I ignore Walt Whitman's lines:

Solitary, the thrush,
The hermit, withdrawn to himself,
avoiding the settlements,
Sings by himself a song.

*****

JANUARY'S FOREST GREEN

Though nowadays the forest is mostly brown and gray, there's ample greenness to please the eye. Right now I'm taking a five-minute walk in the woods, and here are the main green things I notice:

Trees:

WATER OAKS: still bearing ±1/3 of their leaves
LOBLOLLY PINES: scattered, common
SOUTHERN MAGNOLIA: scattered, a bit less common
AMERICAN HOLLY: occasional, largely extirpated
EASTERN REDCEDARS: remnants from when this land was cleared

Evergreen vines:

GREENBRIARS: several species
JAPANESE HONEYSUCKLE: introduced weedy vine
YELLOW JESSAMINE: soon to flower
CROSSVINE: semi-evergreen

Evergreen ferns:

CHRISTMAS FERNS: Abundant on the forest floor
SOUTHERN SHIELD FERNS: Some winters get frostbitten
EBONY SPLEENWORTS: Common small ferns

Other:

CANE: Abundant in the forest understory
MISTLETOE: Common, especially on Black Oaks
SPROUTING SPRING FLORA (many emerging spring herbs and grasses)

The greenness being talked about here is a dark, bronzy, tattered and diffuse one. It's very different from spring's rambunctious, sunlight-charged yellow-greenness. Our current greenness is a placid, almost somberly mature color, a dark, residual hue full of the sense of biding its time during this season of waiting.

The two main species providing our January forest-greenness are the Water Oak, and Cane. Water Oak, our most common forest tree, slowly loses leaves throughout the winter. When spring's new leaves begin emerging, some of last year's green leaves will still be present. Cane, a native bamboo averaging 8-12 feet high but sometimes much taller, in

places forms "brakes" so dense you can hardly shoulder your way through them.

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FART-BLOW
When a deer is frightened it reflexively alerts other deer by issuing a kind of loud blow-sound and by stamping the ground. Similarly it is a natural function of a good hermit to fart whenever the need be. At dusk once this week I was standing as silently and quietly as I could next to a field of blackberry brambles, hoping to spot a rare species of sparrow that sometimes sings at dusk. Without thinking much about it, I let a fart rip. Unbeknownst to me, a deer had walked up right behind me, probably not seeing me because of the darkness and because I was so still. My detonation occasioned the deer's sharp blow and this in turn scared me out of my wits. There must have been a moment when both deer and I were airborne with our wheels spinning.

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STORM JOG
Saturday morning at dawn I awakened sweating in my sleeping bag, for during the night the air had turned unseasonably warm and humid. I jogged wearing only shorts and shoes, and before long I was good and sweaty, feeling as if I were a detached awareness with my body on auto-pilot running below me. That's a good feeling, when the body is working well and the fresh air rushes into the lungs feeling like high-octane fuel, and the trail below invites you on and on.

Suddenly there came a roar into the trees and at a distance heavy rain could be heard coming through the forest. In a second the gloomy warm air all around was sliced through by a fist of cold air feeling exactly as if it were a blast off of ice. Double-speeding back to the trailer, the wind roared and the trees bent, and my lungs and heart revved to a fast-paced cadence.

Beautiful it was to run in the wind, to be hard and fast in a grand theater of gentle rage.

*****

WIND ROAR ICE MOON

The cold front that moved through here late this week was an amazing thing to behold. On Tuesday the thermometer in my Waxmyrtle read 72°F at noon. Then the wind rose into a roar and by Friday morning it was 15°.

Wednesday night at midnight, embedded in the wind's howling, a persistent sound of an animal gnawing on plastic awakened me. I imagined the Opossum having finally succeeded in knocking my large thermal mug off its high perch, now eating away the mug's plastic cap to get at the hunk of cornbread stored there from the previous day. I abandoned my toasty sleeping bag and went to save the mug and cornbread.

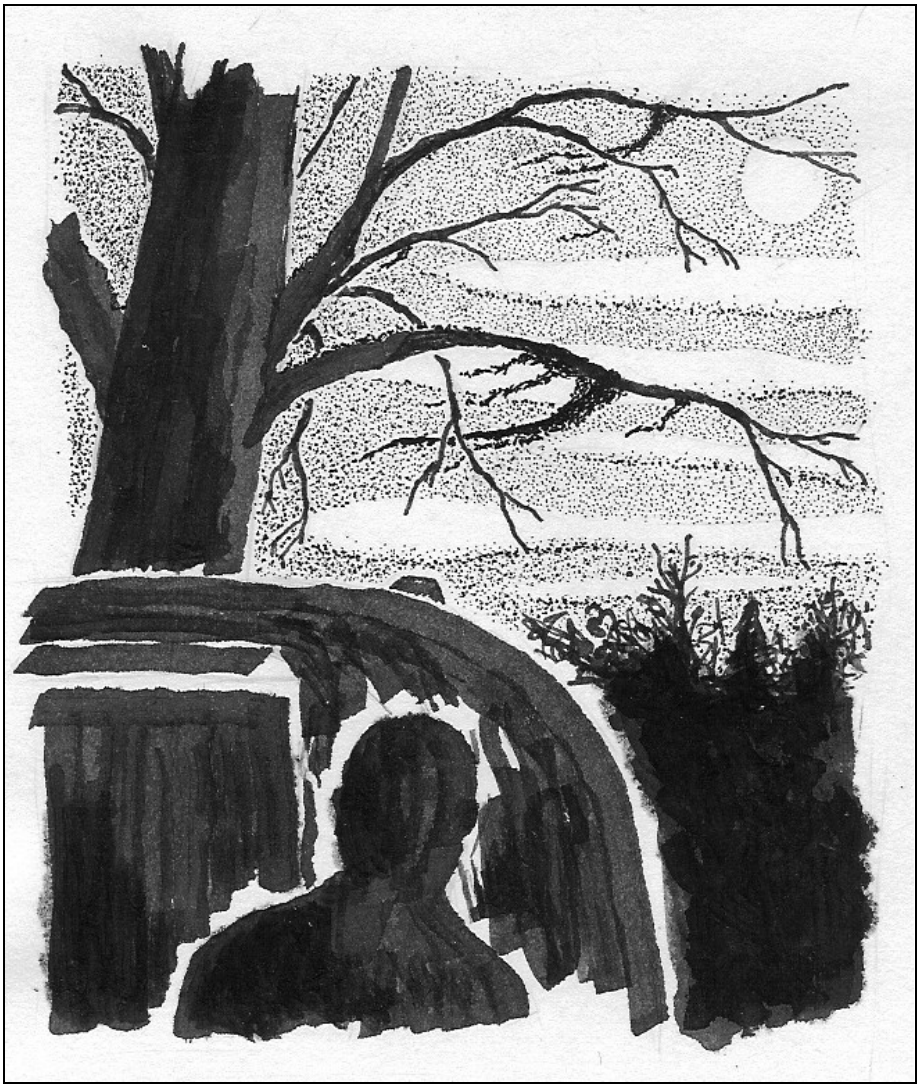
But the mug stood in its place and the cornbread was safe. The gnawing issued from inside the woodpile where probably an Eastern Woodrat was chiseling at something. After figuring all this out I turned around, and above the trailer's roof in the frigid darkness I beheld a transfixing sight.

The gibbous Moon hung above the eastern horizon like a finely etched chunk of white ice. Five long, flat clouds lay below it, evenly spaced like stair steps leading from Earth to Moon. The Pecan tree with its swaying Spanish Moss rose black-silhouetted to the left.

In recent years it's seemed to me that the blackness experienced when I close my eyes at night isn't as pure as the blackness remembered from childhood, and the same can be said of silence, and of the odors and tastes of things. The blackest blackness I can manage now is somehow a bit pale, and I never experience real silence, there always being a sort of ringing in my ears.

But Wednesday night the silence was palpable and pure, and the leafless Pecan tree's silhouette against the moonlight-flooded sky was black as my childhood's blackest hole. The Moon dazzled not only with eye-hurting glare but also with a savage, cutting clarity. It erupted with glare, while the stair-step clouds wore luminescent edges.

The wind roared, the sky cut, the Earth lay stunned, and I stood there thinking this: That maybe the reason the senses dull as one grows older is that only children possess the resilience to survive glimpsing how exquisitely alone and vulnerable life on Earth really is.



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COLDNESS BRINGS A MOOD******
Several friends emailed me expressing concern about the cold weather, for they knew me well enough to guess that I'd try to make it through the freeze without using my space heater (which I did!). But, this cold snap was no problem at all. It brought a kind of mood worth savoring.

During late afternoon before the night of the big freeze the sky spread over with a mysteriously heavy blueness that was so opaque and shadowy that when I looked into it, it seemed as if I heard a deep-bellied *Ommmmmmmmm*. Deep in the night, alert to the coldness and quietness outside, I in my sleeping-bag cocoon imagined myself as an embryo in an egg suspended in distant empty space. Friday morning during my jog, chunks of ice coagulated in my beard, and I ran laughing, feeling the ice with my stuck-out tongue.

Later, sunlight slanting in from the east during breakfast was dazzlingly bright and clear, and how amazing it was that in such coldness the titmice should sing their spring song and my friend the Hermit Thrush should come looking at me just as he does on any warm day. The campfire blazed with orange flames and the smoke that drifted upward, having the last three mornings blown hard into my face as the wind streamed from the north, was nothing but friendly now.

Sometimes a taste of bitterness is required to remind us of the wonder of sweetness. This cold snap was bitter, and what comes now is pure sweetness.

*****

STINKHORN
On Monday the season's first Stinkhorn, *Mutinus elegans*, a weird but fairly common sort of mushroom, appeared among the leaf-mulch in one of our organic gardens. It's called a stinkhorn because it stinks, and if you see what it looks like you'll understand why country folks sometimes call it Dog-pecker Mushroom, or some such honest name. Some books call it "Devil's Dipstick" but I think that that's just a made-up name to get around the fact that it looks so unsettlingly like a dog's penis.

Stinkhorns secrete disreputable-smelling, greenish goo. Flies and other insects attracted by the stench walk over the goo's surface. In doing so

the fungus's spores stick to the feet, and then when the insect flies away it carries those spores to new locations, thus serving as the mushroom's dispersal mechanism. This strategy must be effective because stinkhorns are found worldwide.

A curious part of the stinkhorn life cycle is that the part aboveground "hatches" from a distinctly egglike structure forming in the ground. The first such "egg" I shoveled up in the garden I thought was surely a turtle egg. It had a somewhat leathery "shell" and a more or less gelatinous interior, just like you might expect of a turtle egg. However, stinkhorn eggs are strictly fungal, and you can eat them, too -- just slice and fry. I've read that you can eat the aboveground part as well, but it's mostly hollow and it stinks, so I can't imagine it being appetizing.

Stinkhorns teach that just because you *can* do something, that doesn't mean that you necessarily *should* do it.

CHAPTER 2: FEBRUARY

WITH A SONG IN MY HEART

Here's something worth thinking about: Investigators have found that even when newly hatched White-crowned Sparrows are kept where they can't hear any kind of bird song, when they're about a month old they begin singing simple notes. This bird babble, known technically as subsong, continues for about two months. When the birds are about 100 days old, their subsong "crystallizes" into a form that thereafter doesn't change much. The singing of White-crowned Sparrows of this age who have never heard other birds of their species sing is not nearly as rich and pleasant to hear as that produced by birds who have grown up hearing their own species sing, but experienced birders can definitely hear the White-crowned Sparrow element.

Think of it: The power of the genetic code is so great that it enables a bird to sing its song, even if the bird has never heard that song before. Melodies can be passed through the dimension of time encoded in the genomes of living things.

Furthermore, when a female Canvasback duck is about a year old and builds her first nest, she builds a nest exactly like all other Canvasbacks, even if she has been kept in isolation, and couldn't have learned Canvasback nest-building technique from other ducks.

These facts cause me to wonder to what extent the songs and "nesting instincts" in our human hearts are genetically fixed. Just how much of each of us is any more than what our genes say we have to be?

*****

SASSAFRAS ROOT

I have some fine kinfolk in Kentucky who know what I like, so the other day my cousin Miles dug some sassafras root back behind his house and my cousin Eva Ray packaged it up and sent it to me. When the package arrived I could smell the sassafras through the cardboard.

My cousins had read in this Newsletter that we have Sassafras trees around here but they are so uncommon that I don't want to harass them

by chopping at their roots. In contrast, in the hedgerow behind my cousins' homes in Kentucky, Sassafras grows like a weed. Same with Persimmons. Both Sassafras and Persimmon trees are abundant in Kentucky, but around here they're uncommon.

I got to drinking Sassafras tea when I was a kid. Each spring Papaw Conrad would say he needed some "to thin out the blood" after sitting inside all winter, and he'd always make sure I got my share. In fact, all the old folks around there spoke of needing their blood thinned at winter's end, and Sassafras tea was known as the drink that would thin it. In college my professors were of the mind that winter didn't thicken blood, and that Sassafras tea didn't thin it. They shrugged off my family's tradition as just another hillbilly superstition.

However, history books tell us that sassafras tea was once much used medicinally, first by native Americans, then by the colonists. It was believed that the tea made the body more resistant to diseases in general. Eventually our culture's affinity for synthesized name-brand medicines caused nearly all interest in sassafras to die away. Sassafras began making a comeback right before World War I when it was shown that people who drank sassafras root tea were more resistant to severe sore throat infections and colds than those who did not. Later it was found that sassafras has a general antiseptic power, and that it also induces the liver to cleanse toxins from the system. Is that "thinning the blood?"

The original natural flavor of root beer was sassafras root. Though I have seen chips of what appeared to be sassafras wood sold in US stores meant for making sassafras tea, on the Web I read that, because sassafras root contains the dangerous chemical safrole, the wood cannot be sold in the US for human consumption. Sassafras root bark can be sold because it contains less safrole than wood, so maybe the woodchips I saw were classified as bark, despite their appearance.

I can't say that sassafras tea makes me feel any better or keeps me healthy because I nearly always feel good and seldom get sick. But I can say that on a cold morning with an orange flame flickering beneath my pot of steeping sassafras root, a good cup of sassafras tea more than hits the spot. It evokes memories, spreads a sweet warmness all through my body, fills me with a sense of well being, and I'm pretty sure it thins my blood, too.

*****

"PAPAW'S DIRT"
Before the package of Sassafras root arrived, cousin Eva Ray emailed me that the roots were still a little dirty but, she added, "It's Papaw's dirt."

What she meant was that the roots were dug from land that used to belong to Papaw Conrad, and therefore to us older folks in the family it was invested with a touch of sacredness. This was the dirt that Papaw plowed with a team of horses, the dirt on which he'd set his rabbit traps, and the dirt that stuck to his shoes when he just wandered around looking at things, which people used to do.

Maybe the two most profound way to divide humanity into two parts is this:

)1Those who do and those who don't have a feeling for family

)2Those who do and those who don't have a feeling for the land

In the old days nearly everyone fit into the "do" part of each grouping. Nowadays the trend is definitely toward the "don't" side. That's too bad, for my impression is that people living in emotional solitude are generally unhappy and dysfunctional in one way or another. Similarly, those with no feeling for the land tend to live their lives without regard to the environmental consequences, the cumulative effects of which, done by so many who also have no feeling, is to threaten all life on Earth.

Of course there are remedies for this state of affairs, and they are simple and well known. Most religions, most philosophers, most Black mammies and most backcountry Papaws agree on them: "Live simply"; "don't be a hog"; "be decent to one another." But there's something in the human character that causes us to choose other paths.

Anyway, Papaw's dirt on the sassafras root was a double-barreled hello from my family and from the Earth. Many a good, hot cups of tea I have enjoyed this week ruminating on the thoughts those dirty roots stirred up.

*****

VULTURES AND THE NITROGEN CYCLE

In a certain spot along the road along which I jog each morning, on recent mornings about twenty vultures have been hanging out, for below them there's the remains of a pretty doe whom the hunters wounded. She had pulled herself to behind a log beside the road, lain down and died.

It's a mixed flock attending the corpse -- both Turkey and Black Vultures, with more Black than Turkey. When I approach the flock the birds make a racket as their wings clumsily slap against tree limbs and make whooshing sounds lifting heavy bodies upwards. Beneath the trees where the flock hangs out the ground is heavily splotched with white droppings.

When I jog, my body goes onto autopilot. I don't think about running, but rather the mind effervesces or obsesses on completely unpredictable topics. These days, seeing the ground beneath the trees growing whiter morning after morning, my thought process usually goes something like this:

In my mind's eye I see the hunter wounding the doe, I'm touched by the deer's fear and pain, and I see her lying down to die there behind the log. The vultures come, and then two kinds of processes begin.

The events of one are expressed in terms of vultures, the ripping apart and gorging of flesh, bird digestion and bird defecation.

The events of the other are expressed in terms of nutrient cycling.

As I jog, my mind replaces black images of vultures in winter trees with the pregnant thought that an atom of nitrogen lies at the heart of every molecule of every amino acid. Amino acids not only are the building blocks of protein, of which muscles and many other body parts are made, but also they are the basic constituent of DNA, which carries the genetic code for all living things. Nitrogen atoms lie at the center of molecules of ADP and ATP, which enable energy transfer during photosynthesis and many other vital processes. Obviously, without nitrogen, life as we know it on Earth is simply impossible!

So, when the deer lay down to die, she bequeathed to her local ecosystem untold numbers of nitrogen atoms. Now the vultures are helping spread those atoms over the ground around the doe's body, and later when rain comes dissolving the white splotches, the doe's nitrogen will seep into the ground. Comes spring, the grasses, vines, bushes and trees in that spot will be a little greener, will photosynthesize a little more lustily, because of this generous bequest. In my mind's eye, the ever-increasing numbers of white splotches of vulture shit are no less than spontaneous funereal blossoms appropriate for a dignified passing.

In fact, as I jog I understand that this is how I'd like my own body to be received into death. In view of the fact that I have accomplished what insights I now have as a passenger inside this body, it's clear that it would be disrespectful to discard the body into the hands of those whose beliefs and behaviors are opposite to mine.

Please, if any reader ever hears of my passing, please do what you can to keep the morticians, preachers and politicians away from this body. At my death I wish to lie atop the ground and have my nitrogen received into vultures and ants exactly as has this deer, to have the wild boar and coyotes rejoice in gnawing my bones prior to redistributing my calcium to the Earth from which it came. I do not want this honored body's final metamorphosis to be impeded by embalming fluid and I do not want my spirit insulted by the presence of any religion's formulated prayer or anybody's stock phrases at all. I wish my body spontaneously to sing in the wind as black wings rise, to become white rain that helps spring grass grow.

*****

ODOR OF YELLOW JESSAMINE

Near my trailer, Yellow Jessamine, *Gelsemium sempervirens*, climbs into young Sweetgum trees, letting a few of its bright yellow, foxglove-like blossoms dangle fairly low. Saturday afternoon after a long hike in the cool sunlight I passed by this plant and of course I had to take a sniff.

Though the odor was almost timid, for a moment it hit me like a good kick in the stomach -- the mingling of sparkling sunlight, fresh air and this unexpectedly sweet perfume evoked a practically suffocating half-second-long pang of romantic yearnings and memories. In that half

second pure Eros tinged with poesy and "music of the spheres" rampaged through my soul like all the redneck hounds of Hell.

This is one of the problems with being a hermit, of keeping things simple for long periods of time: Little things like incidental flower-whiffs can knock you flat. If I had been nibbling cellophane-wrapped K-Mart candy all morning, or if lately I had been indulging my libidinousness, that Yellow Jessamine flower's odor would hardly have registered.

This experience recalls one of my theories. And that is that, in the end, most people who lead lives of regular lengths usually end up amassing pretty much the same measures of the world's pleasures and pains, its ecstasies and anguishes. If a life lacks down-home sensuality, then more ethereal satisfactions blossom out of nowhere.

*****

FROG EGGS & RELIGIONS

One morning this week while listening to Public Radio I wandered over to the pond to admire some frog eggs. While cogitating on them, the radio reported that officials in Georgia sought to remove the word "evolution" from that state's school curricula.

That juxtaposition of my frog-egg reverie with the news from Georgia cast me into a certain combative mood. How dare they seek to rob me of one of the most important words I use when cataloging the wonders I ascribe to the Creator. This news from Georgia got me to thinking this: Maybe now is as good a time as any to clearly and concisely explain why I am so antireligious -- why I am a hardcore, dyed-in-the-wool *pagan*.

It is precisely because I regard all religions as artificial, unnecessary barriers between people and the higher states of spirituality to which they naturally aspire.

We look into the heavens, experience love, or contemplate frog eggs, and we become aware that something, somewhere, has created these marvelous things and circumstances, and that this Creator and the creation itself are worthy of adoration. Human spirituality begins like this and should continue through our lives in the same vein, perpetually

growing and maturing. The highest calling of every community should be to nurture its citizens' quests for spirituality, to inspire them toward ever-more exquisite sensitivities and insights, and to encourage them to love, respect and protect that tiny part of the creation into which we all have been born.

Instead, religions divert the energies of our innate spirituality-seeking urges into the practicing of mindless ceremonies and rituals having little or nothing to do with the majesty and meanings of the universe. Religions insist that we must disbelieve the evidences of our own minds and hearts, and submit to primitive scriptures interpreted and transmogrified by untold generations of clerics who, history reports, all too often have hustled to promote their own bureaucratic and political agendas, and continue to do so today.

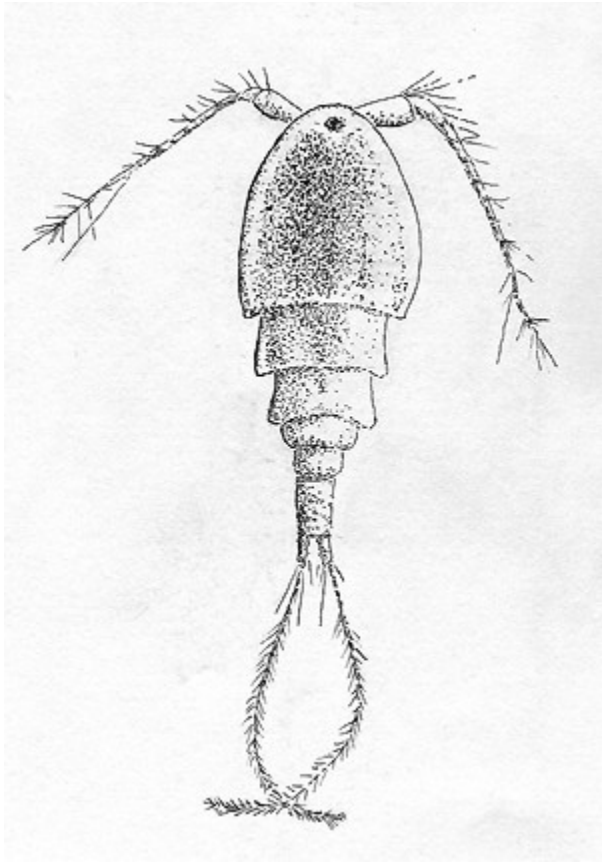
In my opinion, anyone wishing to "get right with God" should begin with cleansing from his or her own life all traces of religion. And the first step in doing that is to get straight in one's mind what is religion (dogma in scriptures), what is spirituality (one's personal relationship with the Creator and the creation), and what is love (intense empathy and well meaning). You do not need to believe in someone else's curious dogma in order to be spiritual, or to love your neighbor and do good works.

Finally, why is a diatribe like this appropriate for a naturalist's newsletter? It is because this newsletter springs from my passion for all that is natural -- the Creator's Earthly creation. Natural things on our planet are now being destroyed at a rate greater than at any other time in the history of the Earth. That destruction is being committed at an ever-increasing rate by human societies such as our own that are more and more rationalizing and excusing their excesses in terms of religious doctrine.

*****

CYCLOPOID COPEPODS

Last Sunday I passed by a woodland pond, so down on my belly I went with the handlens. I focused down through the water until my handlens edge touched the water and suddenly a vast migrating cloud of tiny beings came into focus. They were pale cream animals with single black eyes and forked antennae jerkily paddling through the water. They were tiny crustaceans (like crayfish and shrimp) called copepods. In fact, they were one of the few copepods I could identify, because of their single eyes and curious antennae. They were Cyclopoid Copepods.



Yes, a cloud of them, millions and millions surely, completely invisible until I got close enough for my nose to touch the cold water, a cream-colored cloud streaming along the bank about an inch below the water's surface. Long I watched, sometimes so attentively that I forgot to breathe. A kind of Cyclopoid Copepod reverie came over me so that it became as if I myself were in that cloud, my brothers and sisters all around me as far as could be seen, flowing, flowing, flowing, suspended inside a three-dimensional universe spangled with alga cells glowing yellow green in sunlight flooding through crystalline water.

Abruptly a creature shot onto the scene shaped like a **T**, a fast-moving, streamlined thing ten times larger than my little Cyclopes, its long, stiff antennae bright red and its transparent body boldly splotched green as if

in places it photosynthesized (and maybe it *did* photosynthesize). This rambunctious creature, another form a copepod, careened among my Cyclopes so fast I couldn't see what it was doing but I could guess that it was preying upon my flock. I felt as if I were witnessing an outrageous slaughter of innocents, yet I was fixed in another dimension of reality and could do nothing about it.

To calm myself I rose from the water's edge, caught my breath and looked into the silent woods awhile. I brought out my little "Golden Nature Guide" called *Pond Life* and read about Cyclopoid Copepods. "They seize and bite their small prey," the book said.

So, while the big T-shaped copepod ate them, they themselves preyed on clouds of grazing beings even smaller than they...

Then the big tree trunks around me echoed my cackling, for what other response is there when we glimpse how this world really is put together?

*****

SNAIL SHELLS IN THE LOESS

You simply can't walk in the bayous here without finding fossils. Our most abundant fossils are white snail shells embedded in loess forming the bayous' almost-vertical walls. Loess is dust deposited by wind at the end of Ice Ages. My trailer sits atop about 30 feet of it, and on certain bluffs along the Mississippi River it may be over 200 feet thick.

Loess-embedded snail shells were used by geologists to figure out when our loess was deposited. Snail shells just like ours were removed from a roadcut through loess at Vicksburg 70 miles north of here and their age was determined using Carbon-14 dating. Shells toward the top of the roadcut were found to be 17,850 years old, give or take 380 years. Shells from the middle of the cut were placed at 19,250 years old, give or take 350 years, and shells at the bottom of the loess registered at 25,300 years old, give or take 1,000 years. Of course it makes sense that the deeper you go in the loess, the older the shells would be, since what's on bottom is what was deposited first.

These dates -- between 17,850 and 25,300 years ago -- mark the end of the last Ice Age. At that time the ice sheet north of the Ohio River was melting, producing enormous quantities of meltwater that passed by our present location on its journey to the Gulf of Mexico. The Mississippi River then was a vast "braided stream" much larger than the present river. Its water gushed over a vast plain bearing unfathomable amounts of gravel, sand and silt.

As now, less water flowed during winters because precipitation north of here was frozen. When water in the Mississippi River of that time was relatively low, large mudflats and many islands appeared between the big river's widely separated shores. It's theorized that mud coating those emergent land masses dried, then strong westerly winds stirred up silt particles from the dried mud and carried them as dust. This dust then dropped on the Mississippi's bluffs and highlands immediately to the east -- where we are now -- and that deposited dust became our loess. It was a slow process, with thousands of years of dust deposition leaving only a few hundred feet of loess.

Life atop the accumulating loess went on as always. And when snails died their shells remained as stonelike fossils. The 25,000-year old shells pried from our local loess today look just like last year's bleached ones atop the soil.

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ON THE BEAUTY OF HUNKERING DOWN

Much of this week has been both cold and wet -- a painful combination in an unheated trailer. Sometimes I had to crawl into my sleeping bag just to keep it together. In times like that, you can't be very creative. You have to hunker down and wait for time to pass. I am glad to have had these days. Let me explain.

First of all, the other day I was discussing this matter via email with my friend Rengyu in Bangladesh. I said that once such a trial is over, it's as if you have acquired a new measure of inner strength. Rengyu could relate to that, especially because at that time he was fasting during Ramadan. By voluntarily enduring hardships and denying one's natural instincts to seek comfort and security, and by stubbornly following a secret star even when to others what's going on looks appallingly dreary, one gains

something of great value internally that can't be explained to someone who doesn't already understand.

Earlier when I described the effect on me of sniffing a Yellow Jessamine blossom, the point was less that Yellow Jessamine really smells good than that by exercising self control most of the time I am priming myself for later forays into a realm of sensuality that no debauched hamburger eater can imagine. When these cold days finally pass and cascades of golden sunlight gush over me, who do you think will *feel* the return of spring more acutely than I? One reason I live the way I do is simply because I love to *feel* alive, strong, hungry, aggressive... I like to feed my senses. There have been times in my life when that meant eating a lot, other times when it meant being with special kinds of women. Right now it means preparing myself so that the odor of Yellow Jessamine just knocks my pants off.

A third reason is this: I am convinced that there is no greater Earthly "sin" than to needlessly abuse and endanger the living system -- the ecosystem -- with which the Creator has graced this good Earth. And I know that when I flip a switch to warm my feet I am ordering electricity to be produced, which increases greenhouse gasses and radioactive wastes. I will not belabor the point. Every human appetite translates into environmental destruction, and it is up to each of us to identify for ourselves how much destruction we wish to be responsible for.

*****

POOR BIRDS
"Poor" in the sense of "unfortunate." "Poor birds" is what I've said more than once this week as I've watched what's happening to them.

For example, all winter during my breakfasts the White-throated Sparrows have peacefully foraged on and along the forest trail between my outside kitchen and the blackberry field, pecking seeds and the occasional bug or spider, the very picture of a contented little community of meek, hard-working citizens. But this week one of them acquired a splendiferous white throat patch, a throat so white and well defined it looked painted-on, actually artificial.

The white throat wasn't the problem, though. It was the attitude that came with it. The same spring-induced hormones causing the dazzling white throat to suddenly, seemingly overnight, pop into existence had bestowed this little male bird with unbounded machismo. He claimed the entire pathway for himself, attacked whomever else wanted to peck seeds in his domain, and sometimes he attacked for no reason at all.

It wasn't just the White-throated Sparrows, either. That tightly knit little family of titmice I told you about a couple of weeks ago now is having family problems. One of them, supposedly an oversexed male, chases the others around like a demon possessed. The chased ones squeal and squawk in indignation like teenage boys being chased from home by a father "finally fed up, finally at his limit." Other birds look on in wide-eyed amazement. It's clear that the congenial bird gatherings I've known this winter are growing dysfunctional and soon will break up, the members in them metamorphosing into territory obsessed, male-female breeding factories.

Hormones. Where there was peace now there is strife and it's just because the Earth tilts in a certain manner causing days to grow longer, sending light and more light flooding into our lives, and this light tickles photosensitive glands in our bodies so that they issue chemicals guaranteed to drive us all crazy and make us do outrageous things.

When I saw that White-throated Sparrow running amuck on my trail I thought of a conversation Plato reports as having taken place with the aged poet Sophocles. Someone had asked Sophocles whether he was still capable of enjoying a woman. Sophocles replied, "Don't talk in that way. I'm only too glad to be free of all that. It's like escaping from bondage to a raging madman."

Poor birds. Poor humans who behave as if it were spring and as if they had the whitest throat pouches of all. Poor all of us living critters to whom the coming of spring means submitting to the bondage of a raging madman.

*****

SPARROW COLORS
It's interesting that sparrows can be divided into two general groups

according to whether their breasts are streaked or unstreaked. Both chest types provide sparrows with good camouflage. You can imagine a bug looking upward, seeing the Swamp Sparrow's dark, gray chest very like the wintry sky behind it, or the Song Sparrow's strongly vertically streaked chest blending with the sky-reaching, winter-brown tussocks of grass or sedge behind it. Chests are generally lighter than back colors, to compensate for shadowing.

The backs, or tops, of sparrows are essays in brown and black splotches and streaks. From the falcon's perspective they look very much like the messy floor of a field or a forest's leaf litter.

Therefore, sparrow colors and patterns make sense. Still, you can't help feeling that something is going on there other than the sparrow species having blindly evolved random camouflage patterns. Sparrow patterns are so elegant and the colors are so sublimely complementary that surely they can't arise from mere Darwinian selection. One senses a hand at work here that creates with a flair. If this Creator were to walk into the room, you'd not be surprised if She were whistling a jaunty little tune.

I think that the question of whether one finds a sparrow's plumage pretty or not is a good measure of how comfortable that person is with reality at large. I am struck by the general "earthiness" and "hominess" of sparrow colors and patterns. Since I regard "earthiness" and "hominess" as hallmarks of a peaceful, happy, sustainable life, it seems that sparrow colors and patterns abstractly express something to which I aspire. It's as if what I regard as the Creator's guiding principles for life on Earth were somehow expressed in terms of sparrows.

I'm not suggesting that Nature teaches us to live exclusively in a subdued manner harmonious with earth-tone sparrow colors. After all, the Creator also produced Cardinals, Blue Jays and Painted Buntings.

But, if in your bird fieldguide you scan the species from cover to cover, you'll see that maybe 80% of the species are, you could say, modest looking but elegant -- like sparrows, sandpipers and thrushes. Maybe 18% are colorful (but not spectacular) or somehow novel in appearance, in the manner of woodpeckers and hummingbirds. And only a handful are outright bodacious, like the Cardinal and Blue Jay.

So I would say that if in nature the Creator provides paradigms upon which we humans should pattern our lives, the bird fieldguide reveals one view of the matter: The enlightened and fulfilled life will be 80% modest and dignified; 18% colorful but not gaudy, and; maybe 2% outright rip-roaring.

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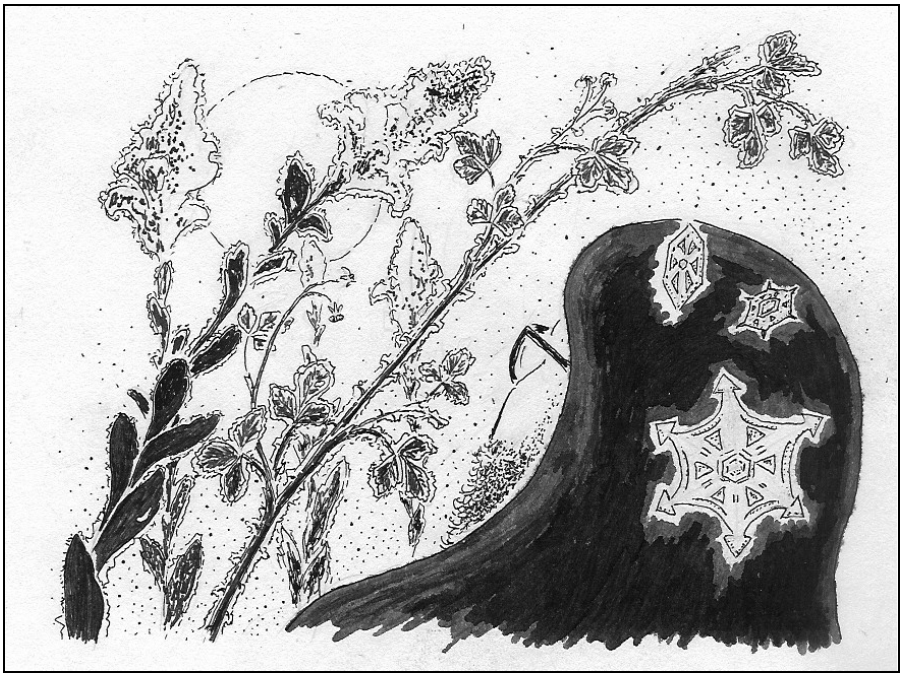


FROST LOOKING

Earlier this week we had mornings when every grassblade and every shrub and sapling was white with frost. At dawn before the sun had fully risen I was jogging by a pasture holding about twenty cattle, including several newborns. The pasture’s grass and trees shimmered silver-white and the cattle were black silhouettes. Slow-billowing steam rose from a pond just behind the pasture and other clouds of steam puffed from the cattle's' nostrils. I ran along pat-pat-pat feeling hot, wet and rosy inside, wondering how those cows felt, wondering what they were thinking about and what their world felt like to them at that very moment.

During breakfast next to the campfire my tunnel-like view down the path through the woods to the overgrown field between here and the hunters' camp showed a field like an essay in hoarfrost and sunlight, and I went there to walk in it. I looked closely at things, with my hand lens saw perfect crystals encrusting brown goldenrod stems, I smelled the frost and listened closely as frost-rimed grassblades brushed my shoes, and I felt what it's like when white crystals sprayed onto the corners of my eyes and meltwater ran down my cheeks. Most beautiful were the leafless Sweetgum saplings, their stiff, sunlight-exploding limbs white-lacy against obsidian-black forest beyond.

*****

VOLUNTARY SIMPLICITY

One of my all-time favorite quotations is one by Friedrich Nietzsche. In general I regard the thrust of Nietzsche's thoughts as being a bit unsavory and small spirited. Still, he did make this point:

> *"Most people don't really see something until it has a name"*
>
> *("Wie die Menschen gewönlich sind, macht ihnen erst der Name ein Ding überhaupt sichtbar")*

With that insight in mind, I just want to place before Newsletter readers the following "name" of a concept I think needs more consideration, and that is, "voluntary simplicity."

If you have some time this week to reflect upon life and the state of the world, I hope you will remember to conjure up that term and spend some time turning it over in your mind as if it were a mantra that could possibly open doors to new levels of happiness and fulfillment.

Several sites on the Web deal with voluntary simplicity. You might Google the term and let destiny lead you forward at your own pace. But be wary of sites trying to sell you things to simplify your life.

Simplicity is free.

*****

PICKLE JUICE

Monday morning I awakened groggy and annoyed because Eastern Woodrats had thumped and bumped all night beneath the trailer. This was unusual because the rats have done this all winter and usually I find their presence good company. Often I have to laugh, imagining what shenanigans must be going on below for such unlikely noises to be produced.

"Pickle juice," I concluded.

The plantation manager periodically cleans out her refrigerator and sometimes I am the beneficiary when she sends my way her sour milk (good in cornbread batter), fungusy cheese, and delicacies such as pickleless pickle juice (also good in cornbread batter). Well, the day before the woodrats, the manager had set next to the garden gate a jar with pickle juice in it and I had used it.

Like so much in the American diet, this pickle juice contained outrageous concentrations of salt. Just a little salt causes me to retain water so that within an hour or two of ingesting some I get blurry-eyed, my ears ring, I can't think or sleep well, and later feel grumpy. One day all's right with the world, then some salt slips into my diet, and the next day the world is wretched and insidious.

This is worth thinking about.

For, is the "real me" the one with or without pickle juice? What are the implications when we discover that we think and feel basically what the chemistry in our bodies at that particular moment determines that we think and feel? And if what we think and feel isn't at the root of what we "are," then just what is the definition of "what we are"?

Actually, I can shrug off that question, but only because a larger one nudges it aside. That is, is "reality" like Chopin's gauzy, dreamy etudes, the way I experienced it on Sunday, or more like Schönberg's angry, disjointed, atonal piano pieces, the way I experienced it on Monday after taking into my body the pickle juice?

Thoughts like these have led me to distrust all my assumptions about life no matter how obviously right or wrong they appear at the moment. I have long noted how huge blocks of my behavior appear to depend exactly on how much testosterone happens to flow in my blood. An acquaintance's tendency to weepiness corresponds precisely to whether he's taken his blood pressure medicine and another's whole personality depends on her remembering to take her lithium pills.

In the end, however, you have to accept certain assumptions just to get through the day, even if you don't quite trust them. I have chosen two insights in particular to serve as bedrock on which all my other assumptions about life and living rest.

One insight arises from meditating upon the grandness, the complexity, the beauty and majesty of nature -- the Universe at large -- and thus I recognize that the Universe has a Creator worth contemplating. (This has absolutely nothing to do with religiosity, by the way, for religions are manmade institutions.)

The other insight is that love in whatever context is worth seeking and sharing.

This latter insight is the one that keeps me hanging around in this quaint biological entity, my body, with or without pickle juice.

CHAPTER 3: MARCH

LISTENING TO SPRING ODORS

Here and there in our woods, especially on moist, shaded banks, bright yellow blossoms adorn slender branches of the Spicebush, *Lindera benzoin*. This is one of our most spectacular harbingers of spring. If with a thumbnail you bruise a Spicebush's slender stem, a spicy, clean-smelling fragrance blossoms into the chilly air. This week the Spicebush's smell got me to thinking about odors.

In traditional Japanese culture there's a ceremony called "Listening to Incense." The idea is to refine one's sense of smell and to exercise the ability to respond to odors of various incenses. I have read of one such ceremony during which the participants not only identified a large number of discreet fragrances and combination of fragrances, but also related the odors to specific events in ancient Japanese history and mythology.

When it's cold, things don't smell much, but heat and humidity nurture odors. During this spring's warmer, moister days, the sleeping bag in which I've slept all through the cold weeks has begun emanating a certain funky odor, as does the sweater and socktop I've worn a long time.

I don't hesitate to speak of this, though I know that in our culture we are programmed to be uncomfortable and unaccepting of nearly all odors that are not sweet or commonly accepted by everyone as "wholesome." I believe that the degree to which most people in our culture are antiseptic, scrubbed and odorless, or even artificially perfumed, amounts to nothing less than an unhealthy obsessive neurosis.

Lately I've awakened several times deep in the night and I've made a point of just lying there cocooning in my sleeping bag, savoring odors blossoming up from the bag and of odors carried on the wet, velvety night air. I've been amazed at the richness of the experience.

There was the odor of mud, woodsmoke, crushed grass, wet feathers, Yellow Jessamine, my own oily skin, moist wool... There were cheesy, moldy, musty, musky, overripe odors -- purple, brownish-green and bruised-blue ones -- odors in minor keys, base-note odors and odors that neither laughed nor sneered but just came curling about like a sulky friend inviting attention.

You might want to try it. Unhitch your preconceptions and prejudices, close your eyes, turn off your ears, lie quietly, and just smell. Give a

name to each odor that comes along, put it in a mental pigeonhole, then go to the next one. Quietly collect odors until you have a rainbow, then let yourself be drawn into your rainbow, experience it like walking in a flower garden, loving the dark blossoms as much as the bright.

*****

17° AT DAWN

Thursday morning at dawn it was 17°F (-8.3°C). I jogged eastward into a kind of sunrise seldom seen at these latitudes. It looked like a slab of inflamed raw flesh lying on the horizon. The dark blue sky lay right next to it, with no pastels between the hard colors to mediate. It looked spooky and I was comforted by the white steam billowing from my mouth, something alive and normal. Wiping my mouth with the back of my hand I felt chunks of ice coagulating in my beard. When sunlight began casting golden halos around the dangling beards of Spanish moss along my path, finally things began seeming normal.

My main task for the plantation this week has been to grub out with a shovel deep-taprooted Honeylocust trees in one of the hay fields. Honeylocusts bear large, hard spines that can puncture a tractor tire or go right through a shoe. So at midday on Thursday in the middle of the field I ate my cornbread and then did something that most of the time is impossible here: In the cold, sunny air I lay in the grass on my back, looking into that curious blue sky. Usually lying in the grass is impossible here without ticks, fireants and chiggers swarming over you.

How seldom we lie on our backs on the solid Earth, yet what a comfort it is! My body tingled from the morning's exertions, and now the dazzling sunlight stung my skin. Red blotches and white starlets animated the blackness behind my closed eyelids. The cold but sunlight-charmed air hummed with silence.

But then a grasshopper flew by, it's crackling sound arcing from one side of my head to the other.

Well, if that grasshopper could make such a lusty crackling after a 17° dawn, probably the ticks, fireants and chiggers were just as capable of doing their thing, so that was the end of my Earth-lying.

*****

CHICKASAW PLUMS FLOWERING
Last Monday, on March 1st, the first blossoms of our Chickasaw Plums, *Prunus angustifolia*, appeared. It was just two little, white blossoms inside an intricate tangle of spiny, dark stems, but what a pleasure it was to walk up to them, stick my nose next to them, and breathe in their perfume. What odor could be more pleasing than that of wild plum blossoms on a spring morning when the air is warm, moist, and redolent of mud and crushed grass?

This species' flowers appear before its leaves. Sometime during the next couple of weeks, probably for just one or two days -- until a stiff breeze comes along -- our thicket of Chickasaw Plums will simply glow with white flowers, and if you go stand among them the perfume will throw you for a loop.

Chickasaw Plums are native throughout most of the southeastern quarter of the US, averaging maybe 10 feet tall, and bearing blossoms a bit smaller than those on cultivated plum trees -- only about 0.3 inch across. On this property they form a thicket about 20 feet long and 10 feet broad, along a fence. I'll bet that the thicket's parent tree was "planted" there by a bird who years ago upchucked a plum pit while perched on the fence's wire. Since I first noticed the blossoms as I was pulling up metal fenceposts from inside the thicket, I can also tell you that their interlocking branches bear slender, sharp-pointed items that are half twig and half spine, but which can puncture and scrape as if they were 100% spine.

Around the end of May these trees will produce bright red or yellow, lustrous, thin-skinned, juicy and a bit tart fruits about half an inch in diameter. Last fall, right after the trees lost their leaves, I dug up several sprouts, making sure to get plenty of their underground runners. Now the buds on those transplants are opening and I hope that this time next year we'll have the beginnings of several more plum thickets.

*****

BROWN THRASHERS SINGING
In last year's October 13 Newsletter I described a "wave" of Brown Thrashers passing through migrating southward. I remarked how secretive they were, hiding themselves in bushes and issuing melancholy smacking sounds. All winter some have hung around, always skulking and staying quiet, sometimes showing a yellow eye glaring at me from

deep in the shadows. Then one day last week and several days this week, the Brown Thrashers have begun singing. It's not half-hearted stuff, either. They fly into the tops of the taller trees and call louder than anyone else except the hawks and owls. Whole mornings they sing.

I've been thinking what it must be like being a Brown Thrasher at this time of year. Naturally these behavioral changes are brought about by alterations in their hormone levels. Yet, surely, for birds as well as with us, hormones express themselves as moods.

So, what must have been the mood like that all winter kept the Brown Thrasher silent and withdrawn? What conflict of urges have these poor birds endured these recent days as their minds lay locked in gloomy hush while their hearts irrepressibly began swelling with the need to fly high and sing? What must it be like now there in the top of the big Water Oaks singing with nothing but the sky above and the broad Earth spread out below, when just a day or two ago it was enough to lurk inside dismal Blackberry thickets?

*****

SONG SPIRIT
Back to those singing Brown Thrashers...

Biologists are trained to avoid being anthropomorphic when interpreting animal behavior -- they don't assume that ducklings follow their mothers because they love them. I believe in that admonition, but I fear that in our culture we have gone too far with it, and this reduces our sensitivity to, and appreciation for, other living things.

The Brown Thrasher at his appointed time overcoming his wintry sulk, then flying to the tallest treetop to sing his loudest and clearest, has this week been what I think of as a local outburst of the Creator's spirit. Each morning when I passed that singing bird I tipped my hat in form of a silent prayer.

For, I believe that the Creator's spirit flows everywhere, and we -- we humans and birds and everything else -- are part of it, the way that notes are part of music. The Creator's spirit wrought something out of nothing, crafted unfathomable beauty and complexity out of chaos, and right now evolves the Universe and all things in it to ever higher levels of sophistication, and ever more exquisite manners of being and conceiving.

So, I think I know that bird's feeling, though I try to avoid anthropomorphism, and I know for sure that the bird's brain is wired much differently from my own. I know the thrasher's feeling because each of us is part of the same general flow of the Creator's spirit flooding through the Universe.

The bird doesn't sing because he's happy in a human way, but I am confident that he is indeed tickled through and through by the Creator's springtime spirit flowing through him, just like me.

*****

BLACKBERRY BRAMBLE GREEN DIFFUSION

In abandoned fields, around old brushpiles and at the edge of woods, often there are blackberry brambles. Stiff, semi-woody, gloriously spiny, close-together canes six feet long and longer arch from the ground forming thickets a human or even a deer can't get through, but which a rabbit can, at least by keeping his ears low. Now those canes are issuing penny-size tufts of green leaves. When seen from a fair distance these tufts give the entire bramble a diffuse, pale green cast. This is a wonderful sign of spring.

If you stand close enough to see individual tufts and there's a low sun beyond the bramble, the tufts glow and seem suspended within a dark mahogany cloud. If you stand farther away and let your eyes drift out of focus, the brambles look like glowing, green fog. Before long this blackberry bramble green diffusion will seep into the trees as buds on tree limbs burst with little leaves.

*****

SOUTHERN TWAYBLADE ORCHID

In the October 28 Newsletter I told you about a dainty little orchid about half a foot tall blossoming here, but so slender and small-flowered that most people never notice it. It was the Nodding Ladies' Tresses. Last Sunday in the woods I found a second similar orchid species that was the same size and just as slender and small-flowered. It was the Southern Twayblade, *Listera australis*. It seemed impossibly delicate to have survived that week's 17° weather, but obviously it had.

The similarities between the two species are only superficial. Getting onto my hands and knees and looking with a handlens, the tiny (3/16 inch long), reddish-purple flowers displayed profoundly different floral anatomies. Well, this is how orchids are: At first glance they're all alike, but up close every blossom type is a wildly imaginative variation on the fundamental orchid theme.

This is a fairly rare wildflower. In fact, though I looked for a long time, I found only one specimen in that part of the forest.

*****

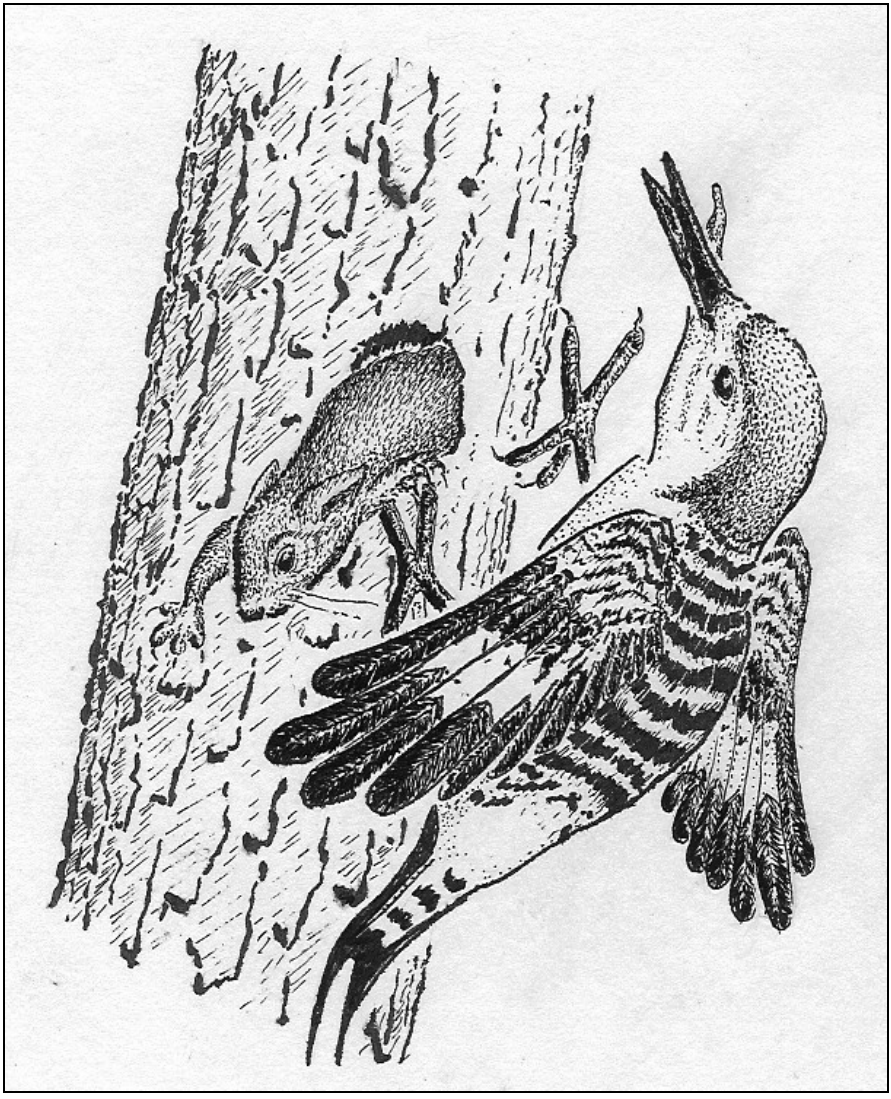
WOODPECKER MEETS FLYING SQUIRREL

Next to a pond where I was sitting, a Red-bellied Woodpecker was pecking at something inside a hole in a dead snag about 30 feet up a Water Oak. I thought he might be cleaning out the hole to make a nest, but he wasn't removing debris so I couldn't figure out what he was doing. And then it became clear.

Suddenly his wings flashed and he jumped back as a Southern Flying Squirrel, *Glaucomys volans,* shot from the hole and scrambled down the trunk with the quickness of a mouse streaking across a floor. He moved so fast that I hardly saw more than his size and color, and a goodly amount of loose skin rippling along his sides.

Within a second or two the squirrel had disappeared. The woodpecker hung around for a minute and then flew off not to return while I was watching. My impression was that getting the squirrel out of the hole had been his whole mission, and I can only guess that he simply didn't want any potential woodpecker nesting hole in his home range claimed by anyone, whether another woodpecker or a rodent.

Because Flying squirrels are nocturnal, I never see them unless one of them has bad luck. In towns, cats often bring them in. At my previous location they lived inside the walls of an old building and at night orchestrated a wonderful noise. The people there occasionally managed to trap one, but always others remained to thump and scrape all through the night. Here on summer nights I often hear sounds in the trees which I suppose to be made by them, especially at acorn-eating time.



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MUD TURTLES IN THE WOODLAND POND

Around here if you see a turtle in a typical farm pond, usually it's the Red-eared Turtle, the kind sold in pet stores, with yellow stripes along its head and neck, and bright red spots where its ears might be. Sometimes it'll be a snapping turtle. In fact, around here, anytime you spot a turtle that's *not* a Red-eared or a snapper, you have something interesting.

Our little woodland pond has Mud Turtles, *Kinosternon subrubrum*, and lately they've been sunning themselves on logs. Mud Turtles are found throughout the Southeast, and if there's anything special about their general appearance it's that their top shells, their carapaces, are higher than most pond turtles, though not as high as a dry-land box turtle's. Mud Turtles are smallish, with their shells seldom more than 4 inches long. Otherwise Mud Turtles are fairly unspectacular, being olive to dark brown, with little ornamentation other than some yellow around the shell's sides, and some vague, yellowish speckles on the head.

Mud Turtles eat crayfish, insects, mollusks, amphibians, aquatic vegetation and other things as they walk along the bottom of a pond, swamp or stream. Their main enemies are raccoons, crows and humans.

Mud Turtles are represented by three subspecies and my fieldguides indicate that here we should have the one known as the Mississippi Mud Turtle, *K. s. hippocrepis*, with yellow stripes along the head. However, ours are clearly the Eastern subspecies, *K. s. subrubrum*, so someone needs to tell the fieldguide writers about that.

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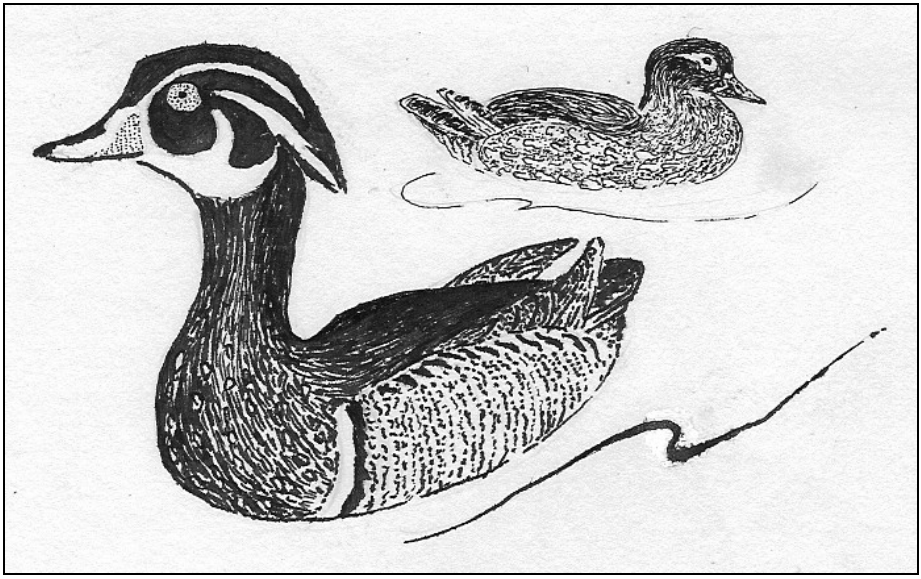


WOOD DUCKS

During Friday's walk one highlight was coming upon a flock of eight Wild Turkey hens in the woods. However, the best moment of all came when I

was resting beside the woodland pond and suddenly male and female Wood Ducks descended through the trees and landed right in the pond's middle not 20 feet from me. Prepared for just such a happening, already I held my binoculars near my face, with my elbows on my knees. Very slowly I brought the binoculars up, and then for about 20 minutes I was able to watch the birds without my arms getting tired holding up the binoculars.

Though I remained perfectly still, an awareness seemed to grow in both birds that something about my presence wasn't right. They stared and stared right at me. After about five minutes the male began preening, though the female never did. The male nervously watched me as he curved his neck, swam through shadows and sunbeams, sloshed water and stretched his wings and legs, displaying his prettiness like a model on a stage.

The greenness of his crown shimmered with iridescence. The satiny blackness on his cheeks was outlined exquisitely by fingers of snowy whiteness, and in the center of this excellent harlequiny sat his blood-red eye, always focused right on me. His warm, deep-chestnut-colored breast when seen in sunlight revealed itself as finely speckled, like a knight's coat of mail. And all this, as well as other colors and designs too numerous to list, were reflected in the pond's black water. What a display!

Though I never moved a hair, gradually in both ducks the conviction seemed to gather that I was more than an inert bump. The male began opening and closing his beak as if quacking. I could hear nothing, but surely the female could. Then the male swam to the pond's bank and climbed upslope a few feet, constantly keeping me in view, and the female followed. This better view unsettled them even more. Maybe you recall how last year I enjoyed a similar experience watching a Pileated Woodpecker, who just never caught on that I was something special. These ducks, I believe, were smarter. Something in their brains was perking, enabling them to interpret images at a higher level than is possible for a simple, grub-gulping woodpecker.

Both birds then positioned their bodies behind different trees, with their heads poked around from behind, looking squarely at me. I didn't move. But finally their concern crystallized, and both rose into the air and flew away.

*****

WOODSIAS EMERGING
On the steep, mossy slopes of gullies eroding into our forested uplands, right now there's a delicate little fern unfurling. It's the Blunt-lobed Woodsia, *Woodsia obtusa*, sometimes called Blunt-lobed Cliff-fern.

It's unfurling in the usual fern way, with "fiddleheads" uncoiling from base to tip, like one of those curled-up paper things kids blow on at parties, and shaped like the knobby head of a fiddle. Christmas Fern fiddleheads are also uncoiling right now, but they're much larger. Deer love to eat Christmas Fern fiddleheads, which can be boiled and eaten like asparagus, but the Woodsia's fiddleheads are far too small to bother with. The mature Woodsia frond stands only about 6 inches high.

The nice thing about these Woodsias is that they look so perfectly at home where they are. Their little yellow-green fronds are among the most fragile-looking and frilly of all ferns, and somehow their delicate appearance matches perfectly the environments in which they grow. They unfurl on slopes encrusted with green tussocks of soft moss and threads and ribbons of scrambling liverworts. Here and there a slug's glistening slime-trail crosses the greenness like a fairy's trail through an enchanted woods. Simply sitting and gazing at this peaceful community fills one with admiration and peace.

*****

DIETER'S GARDEN
Back to those Woodsias. On the day I hiked through the woods after admiring the Woodsias I experienced this train of recollections and thoughts:

The notion that the Woodsias had looked "so perfectly at home where they are" took me back to my early traveling days, to a delicious summer morning in Vienna, Austria in the 1970s, when I was visiting my friend Dieter. We were in the vast gardens of the old Summer Palace of Schönbrunn, where I had never seen so many roses, row after row of them, and so many perfectly trimmed hedges, and acres of geometrically arranged beds of tulips and irises and other bright blossoms.

"I never dreamed a place could be so pretty," I gushed to Dieter.

Dieter, one of the most dignified and refined individuals I've ever met, glanced at me with pity in his eyes. Art history was a passion with him, and the matter of the beauty of Schönbrunn's gardens rightly fell within his domain.

"You can think about it in evolutionary terms," he said, more or less. "Maria Teresa laid out the garden's plans in the early 1700s. Just a few years before that, there'd been a real question as to whether Vienna could survive the starvation brought on by a siege mounted by the Turks. In a real way, then, glittery, ostentatious Schönbrunn with its regimented flowerbeds and eternally clipped hedges can be seen as a reaction to those anarchic earlier times, a statement asserting Western man's newly acquired dominance over his often-hostile environment."

"These gardens are bright and totally controlled like an infant's playroom," Dieter continued. "There's an obsession here with bright color, ignoring more complex possibilities such as the mingling of leaf textures or the interplay of form and shadows. There's a single-minded fixation on simple geometric precision while ignoring harmony with the landscape, for example, and local folk traditions. This garden is an effort by Maria Teresa and the people of her time to convince themselves that with militarism and science they could overcome what they regarded as the chaos of nature. When I walk in these gardens, yes, the bright colors are nice the way children's bright balloons are nice, but, on a higher level, I am oppressed by the garden design's total lack of mature spontaneity, and by its insensitivity to its natural and cultural context. It's almost as bad as your mowed lawns in America where aesthetics among the masses also remains at an immature stage of development... "

The shock of having such a fully formed thought pregnant with so many alien assumptions placed before me left me speechless. Instantly I recognized veins of truth in his argument. All I could do was to sniff a rose and grin.

In later years I learned how plantings could be arranged so that, for instance, gatherings of leaves complemented certain blossoms. There have even been times when I also felt oppressed by naked, straight lines of tulips marching across mowed American lawns, no matter how bright the tulips' reds and yellows were.

But, now in my graybeard days, somehow I feel as if I've wandered through and then out of the whole discussion, and when I see a tulip

wherever it is I just feel like dropping to my knees and poking my nose into its brightness.

Still, I'd like to visit Dieter again, to see how his ideas have evolved. I'm sure that, as always, his insights will have developed beyond mine. I would like to broach with him this idea:

From what I've seen, the most sophisticated gardens are those aspiring to look natural. Therefore, might not the final stage of aesthetic development be when one loves best what is indeed natural -- the wild forest, the marsh, the meadow?

I would like to ask Dieter if any garden he can imagine could equal the loveliness of the embankment I visited this week, where the native Blunt-lobed Woodsias unfurled so graciously among their homey little moss and liverwort companions.

*****

WEEK OF THE BIG CHANGE

During the whole year there will not be a week during which the forest's appearance alters more than during this last one. A week ago the forest was gray and brown but now it is definitely green as leaves burst from buds. Many trees are flowering. Blossoms of Redbuds and Dogwoods explode at woods' edges, and along streams Cottonwoods drop finger-sized, wormlike, red catkins. Plum trees look like large bouquets of white blossoms with black stems, and the oaks issue millions of honey-colored catkins of male flowers. Pawpaw trees bear their curious three-symmetry brown blossoms and in the forest's understory Red Buckeyes surprise the eye with luscious yellow-green leaves and spectacular clusters of red blossoms.

Wisteria vines are heavy with drooping, lavender flower clusters you can smell from a hundred feet away. Saturday at dawn as sunlight-dazzle melted frost from green grass and charmed the icy blue air, imagine how those Wisterias smelled, with a hint of plum-blossom from down the road. Smelling this, with the eye on flaming azaleas along the drive, a hermit on his bicycle laughs and just peddles on through the orchard's steaming wet grass, which has its own odors, textures and meanings.

*****

POKE WEEK
Also this is the week when poke sprouts got big enough to eat. A well prepared dish of poke is as good as any plate of asparagus and in some ways better. Poke-picking time has always been important to my Kentucky family. When my mother was alive every year at this time she, my grandmother and I would pile into the old Chevy and drive miles to certain spots we knew about, where poke grew in profusion. Poke sprouts emerge from large, underground roots, and you pick them when they are up to a foot tall. You can cook them like asparagus or -- even better -- pickle them. What a wonderful thing is pickled poke on a mid-winter fried-egg sandwich!

Poke is known botanically as Pokeweed, *Phytolacca americana*. It's such a strange and peculiar plant that it has it's own family, the Pokeweed Family, or Phytolaccaceae.

The best place to find Pokeweed is where somebody has bulldozed a pile of trees. Pokeweeds like recently disturbed, rich soil, open to the full sun. You locate plants by spotting last year's white stems, now bent to the ground as if they had melted. Stems of Giant Ragweed also are white and in similar places, but those stems are more slender and straight. You pick only green pokeweed sprouts, for when the stem's skin turns purple and tough, it's poisonous.

I seldom pick poke here because it's relatively uncommon around Natchez. I'd rather just let it grow unmolested. However, if this week I had been back in Kentucky in some of my old picking grounds, and if I had had a way to can it, I'd have picked several bushels, and I'd have a pot of it cooked up right now!

*****

BLUEBIRDS ON MY BLUEBIRD BOX
In this year's February 29th Newsletter I told you about my building a bluebird box. The day I nailed that box onto its pole down at the Field Pond, a certain unnerving thought came to mind. That is, of the approximately 392 bird species recorded as occurring in Mississippi, how can I presume that just one of those species, the Eastern Bluebird, will choose this nest box?

Therefore, this week when one dusk I went to sit beside the Field Pond I was astonished to see a male Eastern Bluebird atop my creation, singing

his heart out. He'd fly to the hole and disappear into the box's darkness, then reappear with his face framed by my jaggedly cut hole, then fly back to the top and sing some more, then return into the box, and he did this again and again, as if trying to convince himself that the box really worked. This inspired me to build a second nest box. Within two days it also had a male atop it behaving in the same manner.

The answer to the question of how my box was finally chosen by a bluebird and not another species lies in the fact that each living thing lives its life occupying a narrow ecological niche. In the big tree outside my window Black-and-white Warblers glean the tree's bark, Red-eyed Vireos keep to the higher branches, and Carolina Chickadees prefer the lower branches. Nature is highly ordered, and invisible and inviolable boundaries crisscross everything we see.

I suspect that a chickadee or wren would have loved living in my nest box, but I placed it too far from the forest and too much in open air for them. That box needed a bird loving open fields, but a bird thinking in terms of hollow snags or tree trunks for a nest site, and it needed a bird able to fit through its 1.5-inch hole. Of the 392 Mississippi bird species I know of, only the Eastern Bluebird fits all those criteria. My banged-together nest box is practically a job description for the Eastern Bluebird.

A neighbor built a nest box just like mine, and bluebirds came to check it out, but they rejected it. Probably that happened because, instead of placing the box near a large field, he put it near his house where he could see it. Bluebirds need plenty of field space to forage in, so if you don't have that, don't count on getting bluebirds.

*****

SLEEPING BENEATH THE STARS

This Monday I set up my mosquito net and moved my sleeping bag to the wooden platform in the woods. In years past I'd not slept there this early in the season. During the summer, tree leaves completely blot out the sky but, now, though most forest trees are leafing out, stars still show through the late-leafing Pecans' branches above my platform.

I had forgotten how beautiful it is to lie beneath the stars. With my feet toward the south, Orion stood to my right, the Big Dipper to my left, and right above me Jupiter shined like a coon hunter coming through the woods with a powerful beam.

It was good breathing the night's cool, fresh air. In the trailer, air pools in the night and it gets stuffy. There in the woods every breath seems to seep deep inside, energizing and cleaning away cold-weather sluggishness. I wondered how much some people would pay to experience what I was feeling -- though just about anyone can sleep outside, anytime they really want to, for free.

But, at 3:30 Wednesday morning I was reminded why some might not pay much to sleep outside. I was awakened when energizing, cleansing rain came pouring through my mosquito net!

*****

BROWN-HEADED COWBIRD MORALITY

Thursday morning as I prepared my campfire breakfast, four blackish, dumpy-looking birds landed in the top of a nearby Pecan tree. They made squeaky, gurgling calls and fluttered in a curious way so that even without binoculars I knew I had four Brown-headed Cowbirds.

I watched as three males orbited around a female displaying. During the "Bill-Tilt Display" a male would lift his head and point his bill skyward. This would often be followed by the "Topple-Over Display," during which the bird would fluff his body feathers, arch his neck, spread his tail and wings, and lurch forward, sometimes issuing the gurgling song. Apparently these displays excite females, and probably females mate with males doing the best job.

Female cowbirds do not lay eggs in their own nests. Being careful to go unobserved, sneaking quietly through undergrowth or among dense leaves, they look for the nests of birds of other species. Often they locate nests still under construction, then watch the nest until egg laying begins. Then one dawn she sneaks in, removes and sometimes eats the nest-owner's egg, and lays her own. If only one "host" egg is present, she does not remove it, apparently because doing so might clue the nest owner that something is amiss, and the nest might be abandoned.

Not only do cowbird eggs usually hatch one day ahead of the host's eggs, but also cowbird nestlings typically are larger, are more aggressive in begging for food, and grow faster than the host's own young. Even when the cowbird fledgling grows much larger than the host mother herself, the mother just doesn't catch on that there's a problem.

Of course this is hard on "host" families. Before humans began cutting up the landscape, cowbird "nest parasitism" wasn't as important as it is now because cowbirds in most places tend to focus their activities in open areas and forest edges. However, now humans have broken vast forests into tiny plots and there are so many access roads that many remaining forests consist of nothing but "ecological edges." Cowbird nest parasitism is a very serious problem contributing to the ongoing collapse of many bird populations. Species hurt particularly hard include the Song Sparrow, Chipping Sparrow, Eastern Phoebe, and Northern Cardinal.

How can Mother Nature tolerate such a free-loading species?

Maybe we just have to recognize that Nature rejoices over diversity but doesn't really care much whether individuals like you and me get exactly what we want. Nature exults in the robust feeling embodied in the music, not in the destinies of us individual notes comprising the score.

CHAPTER 4: APRIL

NESTERS
Nowadays the world is filled with earnest nesters, and if I were the nervous sort I might be getting peeved at the whole thing.

Each morning a Carolina Chickadee comes tugging at loose threads on an old backpack hanging from the ceiling of my outside kitchen. This year the Carolina Wrens want to nest in my biking helmet, also hanging there. The other day I was outside reading with my legs crossed, felt something on my naked toe, and there was a wren with a straw in his beak perched there, apparently oblivious to the fact that he was tickling me.

The worst are the Eastern Woodrats. Each night they cause a huge racket thumping around in my kitchen and below my trailer. Twice this week I've negligently left my new ever-sharp knife on the kitchen table and twice the following morning I've had to crawl beneath my trailer to retrieve it from a foot-high heap of glittery nest-junk a woodrat is building there.

Well, actually I find it encouraging that spring has come and that once again such a homey, generous instinct as nesting is part of it.

*****

GREEN TO MAKE THE HEAD SWIM
All around my little trailer too-close-together Sweetgum saplings flaunt their new leaves right at eye level. Their profound greenness when the sun shines through them makes the head swim. Above me, the big Pecan trees are just beginning to put on leaves, so by looking up one can see blue and gray, but throughout the normal day I feel like a fish in an algae-filled aquarium left in the sun. The fish analogy is fitting because I feel as if I'm breathing this greenness, swimming and dreaming in it, absorbing it and having it flow through my veins.

The other morning I was staring into this three-dimensional super-greenness while listening to the radio about the upcoming Shuttle lift-off, and about the project in store for it upon reaching the orbiting International Space Station. The juxtaposition of this green-staring and radio listening conjured a flash of insight, or maybe even a vision.

The Space Station is a gangling thing bristling with solar panels. Therefore, my fleeting, radio-listening "vision" was this: The Sweetgum saplings around me right now are doing exactly what NASA is doing with the orbiting Space Station. Both the Sweetgums and the Space Station are putting out their solar panels to capture energy needed to function and stay alive. For a split second I saw that both the Sweetgum saplings around me and NASA are confirming and celebrating a fundamental formula around which Life on Earth has crystallized. That formula is this:

the sun --> capture of sunlight energy --> that energy used to grow and evolve

*****

CLOGGED EAR

About once a year my left ear gets infected, and this week has been its time. This has seriously reduced my bird-spotting ability.

That's because most birders develop an uncanny talent for precisely locating the positions of singing birds with their ears before they begin looking with their eyes. I seldom notice this ability until it's gone. This week, with one ear closed down, I have been at a loss to say whether a bird was before me or behind me, to the right or left.

There's a benefit to this loss, however, assuming that the hearing returns as it always has. That is, I am reminded of what an amazing invention the human body is. I am obliged to reflect on all the things that can go wrong with a body to affect not only its hearing, vision and other senses, but also its sense of balance, blood-sugar level, the functioning of the heart and brain...

What an amazing fact that back in 1947 the button on my body-machine was pushed, and I've been going every since with very modest maintenance. In college I studied the chemical pathways involved in metabolism and respiration, how blood pH is buffered... It is all so complex, so majestically ingenious. Really it's amazing that we can ever feel good for a moment, yet I feel good nearly all the time. Every moment of feeling good is a tremendous gift.

*****

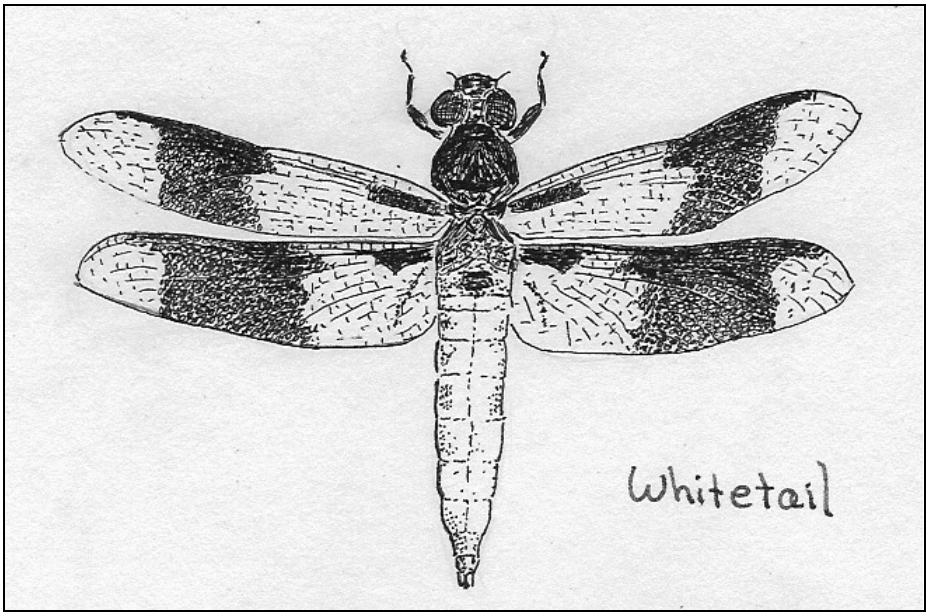
WHITETAILS, CORPORALS & PONDHAWKS

A while back wildlife photographer Jerry Litton from Pelahatchie gave me the *Dragonflies through Binoculars* fieldguide. This was a wonderful gift, for it opened a whole new world to me. Of course I've been watching dragonflies all my life and I thought I knew all about them, but when anyone begins studying anything seriously for the first time, it's quickly apparent just how little really was known.

This week I took the new fieldguide and my binoculars down to the pond and here are the three dragonfly species I identified with certainty after about an hour of watching:

> **Common Whitetail**, *Libellula lydia*, a 1.7-inch long, black-and-white, chunky species abundant from coast-to-coast. When the air is chilly it faces the sun and raises its abdomen to increase its body temperature. Males compete with one another and the one who can fly vertical loops around his opponent wins.
>
> **Blue Corporal**, *Libellula deplanata*, a 1.4-inch long, pale blue, thick-bodied species mostly of the US Southeast. At the base of each wing appear two narrow, brown streaks (corporal stripes). Males patrol along banks, often hovering.
>
> **Eastern Pondhawk**, *Erythemis simplicicollis*, a 1.7- inch long dragonfly with a slender, blue abdomen that turns green at the thorax (chest area), and with a green head. The abdomen ends with two, tiny white points (cerci) -- a good fieldmark. Found in most of the eastern and central US, this is one of our most ferocious species, even attacking members of its own species. Sometimes it lets humans and other large animals flush its game. Males defend territories of about 5 square yards and enter into contests in which one flies under and up in front of the leader, then the new follower does the same to the new leader, and this maneuvering may continue up to a dozen times.

By the way, low-powered binoculars that can focus up close are far better for dragonfly watching than powerful ones.



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THE WORLD OF DRAGONFLIES

Now that I'm sensitized to dragonflies, I look for them every day the way I do birds, and every day I discover new things about them. What an interesting, even surreal, world they live in!

Dragonflies, being a fairly primitive group of insects, undergo simple metamorphosis. Therefore they don't pass through a caterpillar and pupa stage like butterflies and moths. When a dragonfly egg hatches, a small edition of the adult emerges, known as a nymph. This nymph has the basic structure of the adult dragonfly, except that it is wingless, and aquatic -- it lives completely underwater.

Over 300 dragonfly species occur in North America, displaying endless variations in habitat preference, mating rituals and life cycles. Some of the strangest aspects of the dragonfly's life cycle relate to its parasites. Dragonfly eggs are parasitized by very tiny wasps that fly underwater to find the eggs. Other parasitic wasps have been seen riding on dragonflies waiting for eggs to be laid. A certain biting gnat sucks blood from dragonfly wing veins, even while the dragonfly is flying.

Other behavior to watch for is "basking" in sunlight on cold days, "wing-whirring" to warm the wings and keep them at peak efficiency, and "obelisking," or raising the abdomen high to collect less sunlight and keep the body cool. Some dragonflies allow breezes to lift their wings flaglike while others glide on their widened hindwings.

*****

NEATNESS AS ABOMINATION

A fellow in the vicinity has been busy this week bulldozing trees and bushes from a ditch running across his large, flat, grassy field. Someone remarked to me how wonderful it is that "things are getting cleaned up around here, really looking neat now."

Let it be known that when it comes to neatening up the landscape for neatness' sake, what I see is habitat destruction, and there's nothing neat about it. In fact, it's an abomination.

I use the word "abomination" advisedly. I am aware of the word's religious connotations, for many of us never see that term except in the Bible, where many things are classed as "abominations before the Lord." I use the word not in a religious context, but in a spiritual one, and in my opinion the destruction of life-giving habitat purely for the sake of appealing to the local community's concept of "neatness" is abomination before the spirit of the Creator.

For, when you look into the Universe and at the Web of Life on our little Earth, you see plainly that the Creator blossoms diversity out of nothingness, evolves sophistication out of awkwardness, and leaves strands of interdependency among all things. Whatever in spirit goes against this grand and beautiful theme of the Creator is "abomination."

The bushes and trees along that little ditch across the field provided a tiny island of habitat for a gorgeous diversity of living beings. A thriving local ecosystem of mutually dependent living things existed in an ocean of ecologically unstable monoculture grass. It was a polyphonic song sung in a desert.

And its destruction for the sake of neatening up the landscape is an abomination.

*****

BLACK VULTURE AND CONVERGENT EVOLUTION

Monday afternoon as I sat working at the computer suddenly there was a solid bang atop the trailer. I assumed a limb had fallen from the big Pecan tree above me. But then I heard claws scratching the aluminum top and all I could think of was the time a large iguana fell onto my tin roof in Belize.

My trailer is so small that I can stand in the open door and peep over the roof. I did that and came face to face with a Black Vulture with a wingspread of about 54 inches. Naturally he instantly exploded into a huff of whooshing wings, and vanished behind some trees. I suppose I was lucky to get by with whooshing wings, for vultures are known to indulge in projectile vomiting when upset.

Vultures are equipped with powerfully hooked beaks, beautifully designed to tear into flesh, just like a hawk's. However, unlike a hawk, a vulture's feet are weak. This introduces an interesting fact.

My old, tattered and moldy birding fieldguide, copyright 1966, places vultures along with hawks and falcons in a single order. In other words, the authors of that book in 1966 assumed that vultures, hawks and falcons were all very closely related, having shared a common ancestor not far back in evolutionary history. One problem with that idea was the vultures' famously weak feet.

Recent results from genetic sequencing show that our New World vultures are most closely related to storks and ibises, not hawks and falcons. Vultures in Europe and Asia continue to be placed with hawks and falcons, however, since their genes do indeed indicate a common recent ancestor with that group.

This is a beautiful example of convergent evolution. Millions of years ago there was an ecological niche open for birds to fill, that of eating carrion. Since the carrion-eating "job" is done most effectively by birds who look

and behave in a certain way, eventually, as Old World hawky birds evolved to fill that niche and New World storky birds did the same thing, the two unrelated groups of carrion-eating birds -- American vultures and European vultures -- came to look and behave very similarly.

It's the same phenomenon that causes many Australian marsupial species to look like similar mammals here, though they are not at all closely related. Also it accounts for South Africa's succulent Euphorbias being so like our American cactuses.

*****

ON THE BEAUTY OF CONVERGENT EVOLUTION

Back to the vultures' convergent evolution. Again and again in nature you find very unrelated species evolving to look like one another. The reason is always the same: There's an optimum appearance and behavior for a species exploiting any specific ecological niche, so whatever ancestry you have, if you as a species decide to occupy that niche, your appearance and behavior will gradually evolve to the "optimum appearance and behavior" for that niche.

For me, the pretty part of this process is the confirmation that abstract ideals exist in nature and that, existing, they manifest themselves in the "real world." These abstract ideals are like ghosts suspended in eternity, beckoning parts of the changing world around them to come closer, to assume the character of the ideal's essence -- to become a material manifestation of the spiritual ideal.

Thus the *Ghost of Carrion-eating Birds* for millions of years beckoned toward the bird world, and out of the mists stepped Old-World members of the hawk order, and New-World members of the stork order. After millennia of walking toward the *Ghost of Carrion-eating Birds*, the Old-World hawk volunteers and our New-World stork volunteers now look almost the same.

What ghost beckons us humans forward as we evolve? What is the abstract ideal toward which we humans are walking out of the mists? What will be our final appearance and behavior?

For me, the search to an answer to those questions almost defines what it means to be a spiritual (not a religious) person. One's spiritual quest must be to glimpse the thing toward which humankind walks, and to keep consciously approaching that Holy Ghost, metamorphosing appropriately during the process.

My own journey is at an infantile stage, and I see the Ghost only at a very great distance and through profoundly disorienting mists. Yet already I can tell you three things I'm sure this Ghost favors.

1 *She favors vitality over inertness.*

2 *She favors evolution over inaction.*

3 *She favors diversity over monotony.*

These insights at first glance seem pretty general and unsexy. However, at this time when the flow of history is getting stuck in mindless conservatism, when fundamentalists deny the existence of biological evolution, and homogenizing "globalization" is the catchphrase of our times, maybe the human character just can't handle more than these elemental insights.

*****

CALLUSES

This week I've been grubbing Red Buckeye saplings from the hayfields and this has hardened the very slight calluses on my hands. I do just enough hoeing, scything and shoveling to keep respectable hints of calluses on my fingers and palms. These calluses got me remembering and thinking.

For two or three summers during the 1980s I was in Ulm, southern Germany, home to "Europe's tallest cathedral," begun in 1377. During my Ulm days, whenever I visited the cathedral, I went straight to an obscure little carving in an out-of-the-way corner portraying a naked man absolutely shaggy with long fur. Apparently back in 1377 he had been a famously pious hermit, someone who swore off clothing and other of

man's conventions, and in reaction to Germany's habitually cold and rainy weather he had grown long hair all over his body.

So, the body can react to harshness in surprising ways. Corned feet once served our barefooted ancestors well. Long before humans had tools and worried much about clothing, maybe all humans looked like the shaggy hermit in Ulm's cathedral. For, the time since humankind emerged from the Stone Age is just a tiny flash at the end of many millennia of humans evolving in the context of small family or tribal units, on the open savannah and in the forest.

It's logical to think that today our inherited human genetic code continues producing humans meant to function in our ancestors' long-enduring world, not our recently acquired one.

Moreover, our minds, like our bodies, must react to stimuli and the lack of stimuli as if we were still in those distant times. But instead of protective calluses, corns, and shaggy hide, the mind must protect itself with mental armor. Much of my thinking this week has been about what that armor might be.

Today the mind reels before the complexity of the societies we humans have invented. Maybe the main "mental callus" protecting our fragile minds -- keeping us from going crazy -- is the ease with which we can withdraw into and identify with gross simplifications -- inflexible, black-and-white doctrines like racism, nationalism, communism, the trickle-down economic theory, and the world's many religions.

Grubbing up a Red Buckeye sapling in the middle of a sunny, windswept hayfield, I stare dumbly at the muddy, oversized root, and the sunburned, wrinkled hands holding the root. Crows call and I hear myself breathing. More than a little I sense the out-of-whackness of being what I am, being just here, doing this, the way I am in all this greenness and blueness and odor of crushed grass and earth-smell on the wind and the oily smell of my own skin in the sunlight, the cool wetness in my mouth, the feeling of fresh air rushing into my lungs... indulging in the illusion that Red Buckeyes need to be grubbed out...

And what can I do but just laugh and keep grubbing?

*****

MOMENTS OF PERFECTION

This week the world has been profoundly fresh and vibrant. Showers came and went leaving plants sparkling in spring sunlight, birds put on shows, new flowers blossomed every day, it was neither too hot nor too cold, and the mosquitoes weren't bad. The big Pecan trees above my trailer now sprout leaves and dense, dark clusters of catkins of male flowers. Bugs swarm among the catkins eating pollen, and worms attack the succulent new leaves, so birds rush from branch to branch eating bugs and caterpillars. On Saturday morning several Orchard Orioles and Baltimore Orioles, both bright-orange-and-black species freshly arrived from the tropics, along with some warblers and woodpeckers, made a gaudy circus above me.

Some afternoons white-topped thunderheads built up, and sometimes I just have to escape from the computer and go watch how the clouds' towering tops billow into the dark-blue sky. There's power and purpose in those enormous, rumbling, dark-bottomed clouds. Through my binoculars I see how cloud edges boil and seethe, and I stand imagining the howling, cold winds and mighty electrical charges at play inside the clouds, but when I take down the binoculars, the drama vanishes and all I see is pretty white against pretty blue, and perhaps later there will be a pleasant little shower.

Right before dusk there's a fresh spurt of activity among the birds and I walk along the woods' edge looking into the interiors of trees lighted by low-slanting sunlight. What a pleasure just seeing the colors of birds and butterflies in those theaters of glowing green leaves and black limbs gilded with orange sunlight.

If I had a million dollars I could never purchase the pleasure and contentment I have enjoyed for free during this past week.

*****

HONEYSUCKLE STAGGERS

Tuesday morning for the first time this year during my dawn jog I ran through a moist, warm pool of air suffused with the odor of Japanese Honeysuckle. My legs almost buckled as I was swept with a wave of

mingled perfume-inspired nostalgia, memories of distant romances, and a need to be intimate and vulnerable... All very un-hermit sensations.

Well, it's been shown that much mammalian behavior (and therefore human) is linked to the effects of airborne chemicals known as pheromones -- especially pheromones produced by members of the opposite sex. Pheromones may or may not smell, but one thing they can do is to trigger hormone production, and you know how crazy you get when your hormones act up. Thing is, odor-molecules of flowers are often very similar in shape and size to pheromone molecules. In other words, I got the honeysuckle staggers because my body reacted to the molecules creating the honeysuckle aroma as if they were molecules of sex-associated pheromones.

There's been a good bit of research on how certain odors sexually arouse humans. Amazingly, among the most potent of odors is that of lavender combined with pumpkin pie. That fragrance causes a 40% increase in, as the researchers put it, "penile blood flow." The odors of orange, black licorice, cola and Lily-of-the-valley also cause significant excitement.

On a spiritual level, I find the effects of honeysuckle odor to be confirming with regard to my world view that all us living things, from fern to bee to human, are intimately interrelated, all of the same stuff, all dancing to the same Earth-tunes, and all vulnerable to the same Earth-abuses. I don't mind if a honeysuckle tricks my gonads. It's a good joke, a God-joke.

*****

A KETTLE OF HAWKS

Late Wednesday afternoon I noticed some hawks overhead and, as I watched, ever greater numbers of the same species began passing by. They were Broad-winged Hawks, and they were all sailing west-northwest, never beating a wing, just gliding in straight lines. Some were fairly low and others were very high. Sometimes they appeared alone, sometimes in small groups, and one cluster of about a dozen passed by.

"Cluster" isn't the right word, for this kind of hawk migration is so spectacular that there's a special word for it. I was witnessing the passage of a *kettle* of Broad-winged Hawks. Actually, my kettle of about 30 wasn't a particularly notable one. Above Duluth, Minnesota up to

10,000 Broad-winged Hawks have been spotted in one day. A more general name for any group of hawks is "cast."

It was typical that those Broad-wings glided above me without beating a wing. As Broad-winged Hawks migrate they locate rising air currents, or thermals, and circle inside them until they are high in the sky. Then they break away and glide in their chosen direction, not beating a wing if they can manage, until the next thermal.

This fairly common, forest-loving hawk spends winter from southern Mexico south to Peru and Brazil, and in southern Florida. During the spring the species migrates northward along the Gulf Coast. Entering the US they follow the Texas Gulf Coast as it curves around eastward to meet Louisiana. Finally they fan out throughout the forested part of eastern North America and if you look at a map you'll see why a lot of them pass right over us.

What a majestic passage this was. What a pleasure knowing that the Broad-winged Hawk sky-highway passes right above us at Natchez.

*****

GREEN, BLUE & BLACK

Especially at dusk you see it. The Mockingbird and maybe a Mourning Dove or a Cardinal forage in the grass, vividly tiny in all the panoramic greenness. Movie-projector sunlight flames in low from the west onto the earnest little birds earthworming amidst millions and millions of grassblades. On-pouring sunlight stings one's cheeks and squints the eyes, the birds' shadows are black, and each grassblade's slender sliver of shadow is black, else there's just green beneath the blue sky and the birds' black shadows stretch across the green grass and the birds themselves are hardly there at all, hopping silently, alert and something dangerous for earthworms, but nothing more substantial than that, specks in an enormity of blue, green and black.

Those pictures of Earth suspended in empty black space show a sphere that is green and blue, with white clouds and brown deserts. No deserts here, so out with brown. No clouds here, so out with white. It's the blackness in the formulation that leaves one thinking, the blackness that

makes edges, is either all or nothing, depending on which side of green and blue you stand.

How pretty is a bird at dusk in green grass, sunlight from the deep blue sky slanting in from the west, the bird casting long black shadows. Nothing can be more alive than this.

*****

FOCUSING

With so many things in nature going on right now, my mind tends toward diffusion. For example, my thoughts are snared by the fluty song of the Orchard Oriole, and then come reflections on how this bird has just arrived from tropical America, and then I remember all the habitat destruction there and here, and then the question arises as to who will eat the bugs who eat the plants around me now, if not the Orchard Oriole, and what that will mean for these forests and fields... And there are dozens of such birdsongs and other things snaring the mind all the time, hundreds of meditations and questions associated with each, and thousands of potential scenarios.

Something tells me it's not good to let the mind think diffusely all the time, or even most of the time, so regularly I yank my mind out of that mode, and do focusing exercises.

For example, this morning with my binoculars I walked around focusing my lenses on individual things, just looking at them for a long time, as if I were standing before a piece of art on a museum wall, and I kept looking until I was satisfied that I had seen something important there.

I focused on a certain freshly emerged green oak leaf with sunlight rampaging through it. I don't believe there has ever been a design in all of Paris more expressive and perfect than the curl of that leaf just as it was during that particular moment of sunlit perfection. I focused on a feather with dew on it. I can't recall any painted picture in any museum anywhere evoking such pathos as that wrecked, wet feather. For long moments I beheld a yellow oxalis blossom all surrounded by green grass, and I saw -- really saw, saw as well as my mind could see at that time -- the grain in a weathered fence plank, and a cluster of pebbles in the sand at the creek's edge.

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GRINNING COYOTE

Wednesday morning as I worked at the computer I glanced out my screen door and spotted a coyote working through the dense Sweetgum saplings beyond my kitchen. It was a young adult, full sized, stopping to sniff at this and that. He was so at ease that his face muscles let his lips sag into what seemed a self-assured grin. I wasn't surprised to see a coyote, for often I hear their calls and after every rain I see their prints.

At first I thought he was a neighbor's dog so I stepped outside to shoo him away, for these loose dogs terrify the deer and other wildlife here. But then I saw him more clearly and I was amazed that he hadn't heard my door as it scraped open, and never even looked in my direction where he could have plainly seen me and the camp. He passed within twenty feet of me and never noticed anything.

When I saw how oblivious the coyote was to my presence I felt a pang of regret. He was letting his guard down and if he keeps that up someone will shoot him. On the other hand, his mental laziness also made me feel as if he were some kind of brother to my own sometimes-lazy and sometimes-vulnerable self.

*****

DUSK FROM INSIDE A BLACK WILLOW
Several Black Willows about 15 feet tall grow around the Field Pond. Inside one multi-trunk tree I've placed a board so I can sit about half a foot above the water. From among the trunks I have a good view of the whole area and when I'm quiet wildlife doesn't seem to see me at all.

It's especially nice as the sun goes down. If it's been a warm day and the evening sky is clear, in the twilight at dusk the temperature drops very fast and curls of mist rise from the water's surface. Sometimes half the pond's face is animated with knee-high fog-curls all silently drifting in one direction. In a few minutes they all drift the other way. Meanwhile, it grows darker and darker.

It's a paradox of dusk that details of relative distance emerge as fog gathers. The distant line of trees grows pale because of mists rising over the field, while things closer, being seen through less mist, are darker and better defined. In full sunlight, things look flatter.

Then the deer come out with their huge ears twisting in all directions, their black noses and eyes the only hard points in the gauzy scene. As the deer graze nervously in open areas, all around me the pond scintillates with the shrill, measured clicking calls of Northern Cricket Frogs and the sound of continual, random splashing. The splashing is caused by fish and frogs jumping for mosquitolike insects laying eggs on the water's surface.

The mosquitolike insects try hard to avoid their predators, zigzagging and hovering about six inches above the water. Regularly they dip to the water's surface and with the tips of their abdomens lay eggs there, the whole egg-laying process taking only a fraction of a second. Yet this is time enough to attract a jumping fish or frog. Usually the insects escape, but sometimes they simply disappear from view in an instant too fleeting for my mind to register the details.

Then night sets in. I stand wondering how many snakes lie in the shadowy tangle of Japanese Honeysuckle I must wade through to get to my bike, and realize that I'm wet with cold fog. The delicious chill felt as I pick my way through the thicket comes from both the night air and from within.

*****

A PROFOUNDLY ENCOURAGING THOUGHT

The best moment of Friday's birdwalk came toward the end when for the first time during the walk I entered a broad open area. During the whole walk I'd not heard or seen either a Field Sparrow or a Prairie Warbler, but as soon as I was in the field both were heard within seconds of one another.

Anyone familiar with the calls of our birds knows that the songs of the two species are similar in that both calls ascend the musical scale while accelerating in tempo, like a dropped penny circling on a tabletop. Their main difference is that the warbler's call is buzzy, while the sparrow's is crystal clear.

So, of all the birdcalls I heard Friday, why did these two very unrelated species occupying the center of a large field possess such similar, ascending, ethereal calls? And why do these birds' calls approximate

what I myself would compose if I were asked to create a short musical phrase conveying the feeling of being a small thing earthbound, looking into the open sky with its expressive clouds, light-charged blue spaces, and its profound openness?

On Friday as I walked across the big field the notion occurred to me that maybe the field had a message, and that the species known as Field Sparrows and Prairie Warblers were both evolving toward expressing it. Both species were in the process of reaching for the ultimate perfect timbre and phraseology for expressing the field's message, and already they had evolved to the point where their expressions were similar.

In fact, maybe every spot on Earth has a certain mood, or states a certain truth, and if you are a species evolving there, or if you're a human sensitive to what is going on there, what eventually, inevitably results is a glad, simple, songlike expression conveying that feeling or insight, passing it on to others.

Gloomy, shadowy forest brings forth haunting, fluty Wood Thrush calls. The break of dawn on foggy mornings erupts in good-natured Wild Turkey gobbling. The perspective of high perches watching over lower worlds is the Red-tailed Hawk's cry. Absolute freedom of movement inside the open sky itself is Chimney-Swift twitter, and the sound of being earthbound looking into the open sky -- that's the upward sweeping, tempo-increasing call discovered independently by both the Field Sparrow and Prairie Warbler, in an occasion of convergent spiritual evolution.

If such is the case, it can be important, for it suggests that when finally all our forests, fields and marshes are destroyed, if just one sprig of crabgrass remains on an eroded knoll, and there comes to this place just one child to behold what is there, think about it, love it, and hear what it has to say, then wisdom and hope can be reborn again as the child carries the grassblade's message forward.

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PRIMITIVE MAGNOLIAS

This week the Tulip Poplars' wonderful flowers got me thinking about the relationship, if any, between their special beauty and the fact that,

according to the fossil record, analysis of floral structure, and gene sequencing, the Magnolia Family to which the Tulip Poplar belongs is one of the most "primitive" of flowering plants. There were magnolias during dinosaur times 130 million years ago.

Among the "primitive characters" exhibited by Magnolia Family members are their woodiness, their simple and alternate leaves, and their showy flowers with long floral axes, poorly developed styles and stigmas, leaf-like stamens, spiral arrangement of parts, and their pistils being separate from one another. ("Modern" families include the sycamores, walnuts, oaks and dogwoods.)

Is there a connection between the beauty of species in the Magnolia Family, and their primitiveness?

A few years ago a shrub called *Amborella*, found only on the island of New Caledonia in the South Pacific, suddenly became famous. Of all living flowering plants on Earth, it was revealed to be the most closely related to the very first flowering plants. *Amborella* is not in the Magnolia Family, nor are its flowers particularly large and showy. In habit it's a normal shrub.

So, the magnolias are primitive, but apparently their great beauty isn't closely tied to their primitiveness. I have no regrets about learning this, for the unspoken, unwelcome corollary of the "primitive = beautiful" equation is this: That inevitable evolution perpetually nudges us all toward what is more efficient, but gray; toward what is more productive, but mediocre, and; toward what is more promiscuous, but less vital.

Now that I think about, when I look into the skies at night, or ruminate on the matter of subatomic particles, I find no paradigms in those worlds to support the notion that "primitive = beautiful," and I have to wonder wherever I got that idea. On the other hand, the facts that great things can arise from plain beginnings, and that special beauty can appear anyplace unexpectedly, do fit paradigms glimpsed in the cosmos and in the mathematics of the inner world.

Before, the Magnolia Family's beauty was to me like the beauty of Gouguin's Tahiti paintings. Magnolias seemed to support the idea that being unsophisticated, rustic, elemental -- in and of itself -- was reason

enough to explain their beauty. But now I see this: Guaguin's paintings are wonderful not because he captured the essence of primitive Polynesian folk, but because Guaguin was a great artist. Likewise, being primitive doesn't make Earthly things beautiful. What does is the craftsmanship of our Creator.

Step by step old prejudices and assumptions fall away, and new ideas and insights appear and evolve. This week it was the flowering Tulip Poplars who guided me.

CHAPTER 5: MAY

A TERMITE BLIZZARD
At the woods' edge suddenly the air was sparkling. I'd been looking for mushrooms and just hadn't noticed that around me thousands of small insects with fluttering wings glistening in the sunlight were gathering. It was the biggest swarm of this type I'd ever seen.

The first thing to do when coming upon such a swarm is to figure out whether they are termites or winged ants. This was easy because dozens were entangled in the hairs on my arms and naturally I was carrying my handlens. A quick glance at one, which had just left its wings suspended in my arm hairs and was ticklingly climbing toward my hand, confirmed its termiteness. Winged ants have "wasp waists" -- very narrow constrictions in the middle of their bodies -- and bent antennae, while termites are about the same width their entire length, and their antennae are straight.

What a perfect snowstorm of termites! Green Anoles in the trees ran from one meal to the next hardly paying attention to my presence. Carolina Chickadees continually laughed their nasal calls while darting from branch to branch snatching all they could. A Squirrel Treefrog gave the impression of having eaten so much that his stomach hurt. He curled onto his side making a comma-shape, squinted his eyes and gaped, but when a termite landed right before his nose he lunged at it and swallowed it in a flash. Spiders scrambled about carrying termites mummified in silk cocoons, or squirming in their fangs.

When the termites landed, their wings broke off and the insects ran away looking like black ants. No small number took the chance to mate, so it was normal to see couples stuck together by their rear ends, one pulling the other along. In places the ground was silvery with discarded wings.

After the deluge of termites subsided, a breeze came along stirring up brief whirlwinds of silvery, broken-off termite wings. Spiderwebs, so covered with sparkling wings that they drooped, looked like sequined necklaces.

*****

THE MIDDLE PATH
I have grown accustomed to people referring to my views as extreme. They assume that even I accept that I am an extremist. However, I think of myself as a true disciple of the Middle Path.

It is a matter of perspective. I am taking the long view.

Humans have been around for 5-7 million years. Until only about 300 years ago when the Industrial Revolution began, people were *not* spending most of their waking hours doing repetitive, often unfulfilling jobs for businesses and institutions. The manner of life we now accept as normal and inevitable has occupied us during only about 1/500,000ths of our existence. Our society's priorities of attaining mostly unnecessary material wealth, and our obsessions with individual personal liberty and self gratification instead of the maintenance of a healthy and just society, constitute a very recent phenomenon.

Our society's present consumption-oriented manner of living must be and will be replaced by a different system, if only because it is unsustainable. The most obvious reason it is unsustainable is that maintaining the kind of lifestyle we live consumes resources faster than they can be replaced, if they can be replaced at all. Unsustainable behaviors either change or go extinct. To my mind, to persist in indulging in unsustainable living patterns is extreme. It is not extreme to try to live sustainably.

The life I live is hardly an extreme case of "going back to nature." I buy cornmeal and wheat flour milled from grain grown in other states, wear clothing sowed together on the opposite side of the planet, ride a bicycle that is a marvel of engineering, and use very sophisticated technology to learn about the world and keep in touch with others. I take what I need from the outside world and in the process produce more pollution as a consequence of my purchasing than I like. Very much of what enriches and gladdens my life comes from far beyond the gardens, forests and fields around me. If anything, in seeking the Middle Path I err too much toward consumerism myself.

In my view, average US consumers are extremists. As they gather so much needless clutter around them and focus on their own hungers, their own comfort and their own status in an unsustainable social system, they are abandoning sustainable living patterns pioneered by many kinds of living organisms during 3.5 billion years of life on Earth.

In contrast to this extreme behavior, I am truly the most mild-mannered, hard-nosedly conservative, middle-of-the-road person I know. Moreover, for the future, I aspire to orient myself even more directly upon the sustainable Middle Path.

*****

PILEATED WOODPECKER ON A ROTTEN LOG

Sometimes I use my binoculars as a sense-focuser. It's like when you're sitting with your eyes closed and listen to the sounds you normally ignore. You find that you've been ignoring whole rainbows of overlapping sound-textures, playful harmonic interplays, subtle and interesting modulations and resonances, crescendos and decrescendos...

Reality is usually like that: When you focus narrowly on something, instead of finding less, there's more, and it's finer and richer stuff than what you're used to, no matter what you're dealing with.

So, I was sitting beside a forest pool scanning the opposite bank with my binoculars, mostly watching dragonfly-wing sun-glitter slitting the deep shadows across from me, and brown Mosquitofish hovering near the water's surface, their fins fanning calmly like the tails of contented grazing cattle. But then a crow-size Pileated Woodpecker rampaged right into my field of vision, not 20 feet from me, and plopped onto the trunk of a large tree that long ago fell from the bank into the water, and now lay there rotting.

It just happened that at that moment my elbows rested nicely on my knees, so I didn't need to readjust my position to keep my arms from getting tired holding the binoculars. For half an hour I watched that woodpecker, never moving a hair, and he never knew I was there.

In my sense-focused mode I tingled with pleasure when the big bird's bright red crest for a moment traversed a ray of brilliant sunlight. I watched him awkwardly hop backwards as he worked along the fallen trunk, and I laughed at the surprised look on his face when he disturbed a large centipede that ran toward him, causing him to jump upward and flutter his wings like a kid who almost steps on a gartersnake. I laughed again when a chipmunk emerged from beneath his log and he jumped and fluttered the same way. I saw him go to the pond's edge, daintily douse his gangly body with water, then fly onto a nearby trunk and preen himself luxuriously.

He pecked and chiseled back and forth atop the fallen log and along its sides for a long time, finally settling on one spot where he began pecking with obvious concentration. Within five minutes he withdrew from his hole a white grub the size of which made me gasp, one as large as my whole thumb. He set the grub on the trunk and beat it with his bill until it stopped squirming. It was a succulent grub, so its body fluids splattered through rays of sunlight. Then the bird took up the grub, positioned it just right in his beak, and made several attempts before finally gulping it down. I hadn't been sure he could do that, for the grub was longer than his entire beak, and thicker, too.

The woodpecker then flew away, leaving in my field of vision dragonfly-wing sun-glitter and hovering Mosquitofish.

I went to see the hole from which the grub had been be extracted. It was a typical Pileated-Woodpecker hole, rectangular, about two inches long and an inch wide, and some two inches deep. A spot next to the hole was greasy, where the grub had been worked over prior to being swallowed. A dozen or so very small black ants fed in the greasy spot, and I marveled that they had found the spot so quickly, and that they so

meticulously gathered up whatever of the undone grub they could find, even if it was only pulpy wood soaked in the grub's nutrient-rich juices.

A beetle grub, a Pileated Woodpecker, a tribe of ants, and me, all feeding in our various ways on a rotting log next to a seldom visited forest pond...

*****

A WEEK FOR PROCREATION

Weeks ago I told you of the Carolina Wrens building nests in my outside kitchen. Finally they built in my toilet, produced a brood there, and as I type this I hear all kinds of squeaking and peeping from at least *five* Carolina Wrens. This family-making came early in the season. Other species are just getting started.

One morning a couple of White-footed Mice engaged in a prolonged chase around my feet as I sat at the morning campfire. One afternoon I noticed a fuss in a Sweetgum and got to see two Northern Parula warblers enthusiastically going at it. The female lost her grip and fell to the ground with the male hanging on. They fluttered in the grass for a good three seconds before disengaging and getting back into the trees like decent birds.

High in a Pecan tree a female Yellow-billed Cuckoo was flicking her long tail in a strange manner. She'd cock the tail skyward then flip it down again, then repeat the motion, each time the tail going higher. Suddenly a male came out of nowhere, landed atop her, grabbed some feathers atop her head with his beak, and went through an exercise looking like a complete botch of a mating. He didn't seem to know what to do. Finally he just flew off and the female looked after him in a way that could only be described as "complete disgust," then turned to the side and scratched her head. Now I understood that her tail flicking had been a sign to the male that she was ready to mate. She had cocked her tail exactly as she does when she's actually mating, to allow access. I can't imagine a more suggestive come-on for a female Yellow-billed Cuckoo.

You almost have to pity the male cuckoo. Not only are there no traditions among adolescent Yellow-billed Cuckoos during which they can get together and pool their knowledge about this sex matter, but the plain fact is that they don't even have penises. Therefore, cuckoos, like most birds, can't copulate in the manner humans understand it. When a male of most bird species mounts a female, all he can do is to press his cloaca (anal

opening) against that of the female. In delicate company this action is termed a "cloacal kiss." It does get the job done, however, and sperm are transferred, as all the birds outside my door testify. Some swifts do it while flying!

Oddly, a few male birds do have penis-like appendages -- most familiarly, certain ducks, geese, ostriches, and swans.

*****

BELTED KINGFISHER IN THE WILLOWS

About an hour before dusk on Tuesday I was sitting on my plank inside the multi-trunked Black Willow at the Field Pond when I heard the neighborhood Belted Kingfisher flying across the field calling its harsh clatter-rattle.

When the bird arrived at the pond I already had my binoculars in place, for I didn't want movement to reveal my presence. My stillness worked, for the bird landed on a willow branch not 15 feet away and never did discover me. It was a female, easy to know because a broad, blue-gray band ran across the upper chest, plus a second chestnut-colored one ran below the blue-gray one. Males have only the blue-gray band.

This bird was back-lighted by intense, late-afternoon sunlight slanting in low from the west. Every few seconds she'd pump her tail, fan her crest and call, and when her crest went up sunlight caught in her silhouetted feathers like fire in the night. As she eyed the pond's surface, she held her massive, black beak open and I could see her slender, stiff tongue lolling up and down in anticipation. The sharp rims of her beak were so thin that they glowed translucently. Around her the willow's slender leaves fluttered in the late afternoon breeze, translating the crystalline sunlight into animated, mellow, yellow-green twinkle-shimmer. The bird was theater in which light, movement, sound and the struggle for existence interplayed. I'd seldom seen a creature so totally alert and alive. This bird looked and acted hungry not only for fish but also for anything and everything the next moment might provide.

Twice during her 20-minute visit she dove toward the pond's surface but broke away before hitting the water. On the third attempt she kept going, for half a second completely disappearing beneath the surface, her splash like a slow-motion explosion of a crystal chandelier. She emerged with her beak open and empty. Then she flew into the air, gave a shake

that sent sparkling water droplets cascading to the pond's surface, and flew away.

*****

THIS WEEK'S MIGRATING BIRDS
Here's this week's list, my last this season, compiled on Friday, May 7th, on a calm, partly cloudy spring morning:

WINTER RESIDENTS PREPARING TO LEAVE
none

SUMMER RESIDENTS JUST ARRIVED
1 Green-backed Heron
1 Yellow-billed Cuckoo
3 Ruby-throated Hummingbird
8 Acadian Flycatcher
3 Great Crested Flycatcher
3 Brown Thrasher
4 Wood Thrush
10 Red-eyed Vireo
11 White-eyed Vireo
3 Yellow-throated Vireo
2 Black-and-white Warbler
7 Hooded Warbler
1 Kentucky Warbler
2 Prairie Warbler
3 Yellowthroat
3 Northern Parula
8 Yellow-breasted Chat
6 Orchard Oriole
5 Summer Tanager
3 Indigo Bunting
2 Blue Grosbeak

TRANSIENTS (just passing through)
1 Veery

PERMANENT RESIDENTS (individual birds may migrate)
1 Turkey Vulture
1 Red-shouldered Hawk
1 Red-tailed Hawk

2 Mourning Dove
1 Belted Kingfisher
3 Eastern Bluebird
1 Red-winged Blackbird
2 Brown-headed Cowbird
8 Eastern Towhee

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BIRDS MUGGING ONE ANOTHER

The most interesting observation made during Friday's birding walk occurred at the very end, as I approached the barn. The female bluebird who has succeeded in hatching her eggs in the second nest box I put up was on the telephone wire looking hard into the grass. She spotted something, dropped from the wire, and the very moment she began tugging at her prey, presumably an earthworm, a much larger Blue Jay, with a startling flurry of wings, descended almost atop her, driving her off. The jay then began pecking furiously where the bluebird had been pulling on her worm, but got nothing.

This Sunday morning I was watching two Brown Thrashers foraging in the same area, and when one began pecking at something, once again the Blue Jay flew at the couple driving them away, and once again the Blue Jay pecked where the thrashers had been pecking, but to no avail. A few minutes later I noticed a Yellow-breasted Chat uncharacteristically drop onto something in the grass, but before he could wrest it from the ground, this time one of the Brown Thrashers flew at him, driving him away. Neither did the thrasher get what the chat had been tugging on.

Blue Jays have other ways of causing mischief as well. On Friday in the forest I spotted a jay carrying something in its beak. He landed on a tree branch, positioned the object between his feet, and then pounded it with his beak. The binoculars showed the object to be an egg. The jay had just robbed a nest and now was breaking the egg and gulping down what didn't drip to the forest floor. The egg was rather large, and later I heard a crow in the vicinity piteously issuing its distress call, so I'll bet the jay had robbed a crow's nest. The crow's crying was tremendously expressive and heartrending.

*****

WHY DESTRUCTION MIGHT BE SO MUCH FUN
The neighbor continues "neatening up the landscape." Day after day the bulldozer has its way and during each morning jog I see the consequences. One day a line of trees has vanished, the next a big tree. It's especially painful now when so many creatures are nesting. On the other hand, maybe it's best to destroy the nests and kill the young now, for without habitat there will be nothing to sustain them later.

One unsettling thing about jogging by a spot where a hedgerow or large tree stood before, but now there's nothing but flat, bare dirt, is that nothing is left screaming about what is missing. It's not like the empty feeling left by an extracted molar, where you can insert the tip of your tongue and feel the weirdness of the tooth's absence, the unnaturalness of it, the awful loss. You just jog by and wonder if maybe you were wrong about that hedgerow or tree having been there in the first place. In the morning fog, the emptiness looks perfectly natural, totally at ease with itself.

This phenomenon of natural things going missing, and their absence not being a screaming affair, fits neatly with similar situations. How simple it is to walk up to a wildflower that has been developing for months, and stomp it in a second. How easy to drain and fill a wetland that has needed centuries to develop.

It seems that reality is structured so that destruction is quick and easy, while creation is always a painful and difficult thing. The only reason I can figure out that the Creator would fix things this way is that She so much enjoys the process of creation. After all, a glimpse into the Universe shows that everything is evolving, so surely creation is the Creator's main passion. With such an obsession with the process of change, and with eternity and the whole Universe as the context, why should the Creator be especially fond of what we think of as static, stable ecosystems, ephemeral as they are on our relatively evanescent Earth?

Surely with each shove of the bulldozer's blade, the Creator smiles anticipating the fun eventually She'll have starting over, blossoming life and order where the bulldozer today destroys it.

*****

RED MULBERRY
Biking the rough dirt track through the woods at the back of the plantation

and watching the ground closely to avoid thorns and spoke-bending sticks I spotted penny-sized black smudges on the trail. A quick glance upward fulfilled my most optimistic hopes: Here stood a magnificent Red Mulberry tree, *Morus rubra*, with limbs heavy with immature green fruits, half-mature red fruits, and perfectly ripe, purplish-black, glossy, succulent, ready-to-eat mulberries.

We have lots of mulberry trees here but the birds, especially Cedar Waxwings, usually devour them the moment they begin ripening. Maybe fruits on the tree had escaped being eaten because of the tree's isolation deep in the woods, its anonymity among close-packed trees of other species.

This was the first time in my life that I'd been able to eat all the mulberries I wanted. I ate until my belly developed that certain you-better-watch-out cramp and my hands were comically stained dark purple, and probably my lips were, too. As I was pulling down the branches so I could reach the fruit it occurred to me that maybe this was why fibers of the inner bark of mulberry trees are famous for being so strong and stringy -- to keep limbs from snapping when large mammals graze the fruit, pulling down the limbs exactly as I was. I have read that Indians made clothing from fiber of the mulberry's inner bark. The Natchez Indians honored the mulberry by naming their sixth month, between the Month of Fishes and the Month of Great Corn, The Month of Mulberries.

It should be no surprise that mulberries are so delicious, for they belong to an aristocratic family famous for serving up fine food. Mulberries are in the Fig Family, which also provides us with the wondrous tropical Breadfruit, Jackfruit, about 2,000 fig species, hops of beer-brewing fame, and cannabis hemp, the ground seeds of which make a fine, black substance like peanut butter.

*****

THE MEANING OF LIFE

I've always mistrusted that phrase, "The meaning of life." It's because the word "meaning" carries with it an implied context of rationality. Yet, it seems to me that anyone who asks that question should be expecting a reply that is spiritual, if not mystical, not rational.

The Red Mulberry with its sweet, purple-staining fruits got me thinking about this. There I was in cool twilight beneath the tree looking up

through those big, sun-speckled mulberry leaves, seeing the pretty green, red and almost-black fruits, my sunburned, wrinkled, veiny hands among them plucking mulberries and getting purple-stained, and hearing the wind in the tree, and birds singing, seeing the animation of leaves in the wind, experiencing a kaleidoscopic, shimmering, wholly unexpectedly beautiful and perfect moment, and this thought came to me:

This tree's task was simply to create reproductive propagules (seeds) and to get them dispersed into new areas where its offspring might prosper. There were so many ways this goal could have been accomplished, yet the Red Mulberry's approach was to create a strategy involving all this sunlight, wind, birdsong and sweet fruit. How elegant! How original! How generous of the Creator to have settled on things this way!

If someone were to propose that "the meaning of the fruit is that the tree may reproduce itself," then all that was most meaningful to me that day as I myself became the Red Mulberry's dispersal agent would be eliminated from the discussion. The word "meaning" is too narrow to use when considering something as wonderful as ripe mulberries.

In the same way, any statement beginning "The meaning of life is that... " automatically declares itself as an analysis too arid to listen to.

*****

HUNGRY SQUIRREL

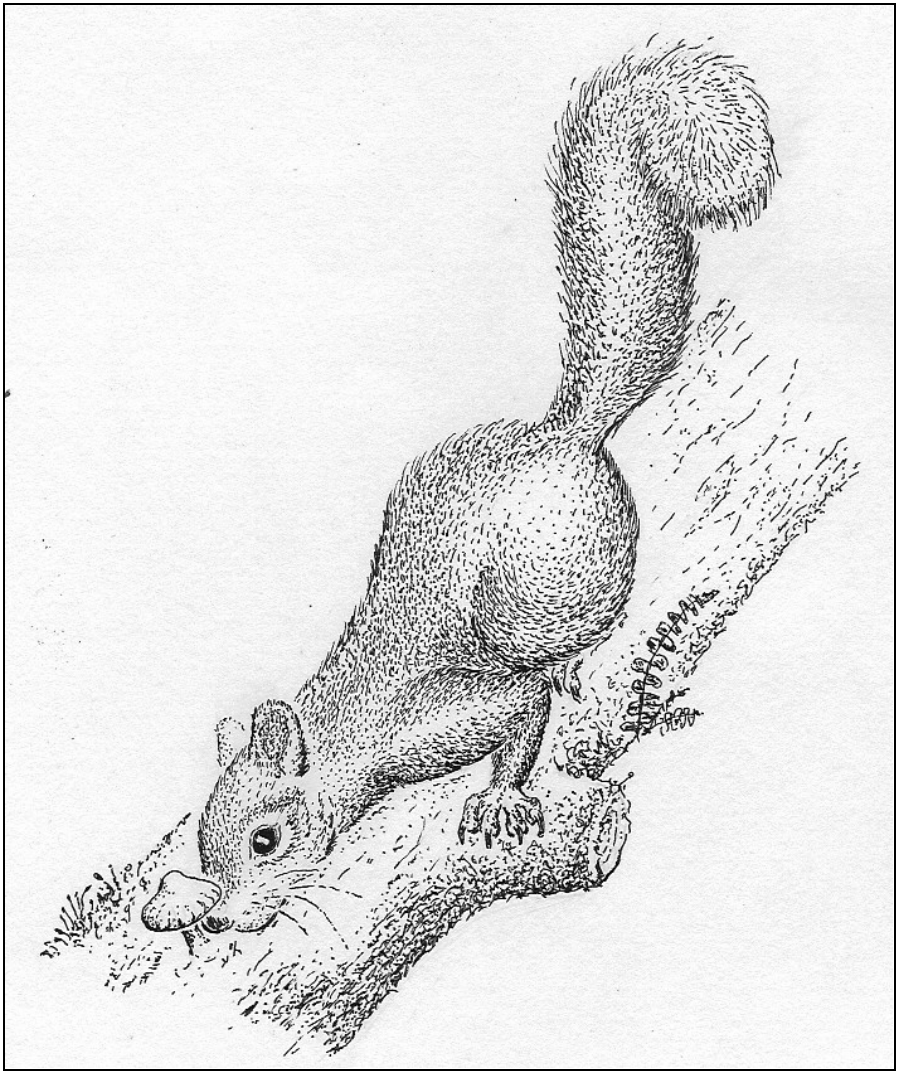
Earlier this week I was sitting invisibly (unmoving) next to a woods pond when a young squirrel came near, quite oblivious to me just 15 feet away. He was sniffing and test-biting all kinds of things, the way young squirrels do when learning how to survive. Don't forget that a first-year squirrel doesn't have pecan caches from last fall to dig up.

This squirrel seemed almost frantic in his efforts to find something. He'd take last year's Honeylocust pod in his mouth, black and crumbly, and appear to be eating it, but then before swallowing he'd let the pod fall from his mouth, and then you knew that there was more hope than food in that pod. Then he found a fallen log that was a little moist on top, and crumbly. He actually bit into the soft wood, seeming to gag sometimes, maybe hoping to expose a fungus or insect larva. But I couldn't see that he got anything. He put all kinds of things into his mouth but eventually everything was dropped again, and nothing swallowed.

Gradually it dawned on me that this can be a hungry season for squirrels. Their nuts, acorns, maple samaras, hornbeam fruits and pine nuts belong to fall, not spring. Now most of those fruits are either sprouted and the sprouts are charged with bitter elements that keep animals from eating them, or else they're decayed. A squirrel can eat caterpillars, cocoons, beetles and even ants, birds' eggs and nestlings in this season, but these can be hard to find.

In a way I was chastened by this insight. I like to think that I am in tune with the animals around me, but somehow I had forgotten that though this season is good for insect-eating warblers and mulberry eaters, if you are a creature specializing in nuts and the like, these are hungry times.

The squirrel found a mushroom, nibbled it, jumped backwards and froze staring at it. Then in aggravation he barked, stamped his feet and turned and ran away violently flicking its tail.



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SILVERY SPIRES IN THE GARDEN

In my gardens nowadays nothing is prettier than the various kinds of onion and garlic. Their slender, arching, green blades are handsome enough but what really sets them off is their silvery, Byzantine-cathedral-tower tops, or caps. The caps in one patch of garlic stand four feet high. Eventually the caps split, revealing enlarging flower clusters and/or small bulbs.

The world of onions and garlics -- the genus *Allium* -- is fascinating even if you don't eat them with relish as I do. Below is a "key" I've fixed up to help fix in mind the differences between the various common kinds of garden Alliums. If you can't make sense of the key, you might want to visit my page explaining identification keys at www.backyardnature.net/keys.htm

KEY TO COMMON, EDIBLE GARDEN ALLIUMS

A. Leaves cylindrical, usually hollow
  B. Flowering stem thick, inflated
    C. Leaves thick, few
      D. Bulb hardly thicker than neck: **SPRING ONION**
      DD. Bulb large, rounded.....: **BULB ONION**
    CC. Leaves slender, many.....:..... **SHALLOT**
  BB. Flowering stem thin, not inflated: .....**CHIVES**
AA. Leaves flat, not hollow
  B. Bulb separating into cloves.....: **GARLIC**
  BB. Bulb not separating into cloves
    C. Flowers pinkish.....: **LEEK**
    C. Flowers not pinkish.....**.RAMP**

The above-mentioned onions and garlics just scratch the surface of the genus *Allium*. There's a world of *Allium* types known and enjoyed by other cultures but seldom seen in our markets -- such as eastern Asia's *Allium tuberosum*, which produces 1-3 brownish bulbs attached to a horizontal rhizome. There's a rainbow of *Alliums* with flowers pretty enough for any garden.

If you wonder how scallions fit into the picture, the term "scallion" is a general one applied to various kinds of young onion that haven't developed a bulb yet, though the base may be somewhat swollen. Scallions are pulled and eaten in salads and as greens. The term is also applied to young shallots and leeks.

*****

COOL ELEPHANT EARS

Between Wednesday of last week and Wednesday of this week we received 11.5 inches (29cm) of rain. This Wednesday finally blue sky broke through, the air above the sodden ground grew hot and steamy, mosquitoes and flies began biting, and sunlight on skin bore down in a manner decidedly Mississippish.

In Wednesday afternoon's glare, with sweat streaming down my face, I was attracted to the dark greenness of my fast-growing Elephant Ear leaves. It occurred to me that if I should touch a sunlit lawn chair constructed of metal of a thickness and dark greenness similar to the Elephant Ear's blade, it would scorch my skin. Yet when I touched the broad, flat Elephant Ear leaf facing squarely into the sunlight, it felt cool. Then I walked into the forest, and it also felt cool.

The main reason plant leaves remain cool despite being dark and sunlit is that they are constantly evaporating water in a process known as transpiration. Water changing from a liquid to a vapor state is an energy-absorbing, or endothermic, process, as anyone knows who has felt the coolness when a fresh breeze evaporates sweat.

In the middle of an average day, each hour an average land plant transpires around half a cup of water per square yard of leaf surface -- an area about the size of a large Elephant Ear. An average corn plant transpires more than two quarts of water each day. Most of this water exits the leaf through microscopic pores in the leaf called stomata. The bottom of an average oak leaf bears about 375,000 stomata per square inch (58,000 per square cm). Consequently, at 95°F the temperature of an average leaf in full sunlight is about 88°F.

When we convert vegetative areas to pavement and buildings, the local ecosystem is shocked by much more than a loss of diversity. We can glimpse how severe that shock is by simply walking from the cool, welcome placidness of the forest into suffocating, mid-afternoon, manmade glare and heat.

*****

LIFE IN A MAGNOLIA BLOSSOM

You pass by a magnolia tree -- Southern Magnolia, *Magnolia grandiflora* -- and the lemony odor and glossy whiteness of its eight-inch wide blossoms, the stateliness of its form, the moist coolness of its shadows... all invite you to step closer.

You draw near a blossom and its perfume makes you dizzy. You choose a young flower with petals just starting to open and a honeybee escapes. "And there's nectar inside as well?" you wonder. You part the petals and stick your face right into everything, probing with your tongue the base of

the column of stamens and stigmas, down to where petals arise, and then, yes, after a first sensation of soapy bitterness, there's a hint of sweet nectar, too.

There's a world of business going on there inside the blossom. Tiny, black, slender insects, maybe 1/8th of an inch long, with strangely flexible abdomens segmented like cars on a kid's toy train, skitter about, clearly upset by your disturbance. They are Rove Beetles of the family *Staphylinidae*, of which around 3,000 species are found just in the US. Under the handlens you see that Rove Beetles have powerful jaws, and this makes sense, for they mostly feed on other insects.

In fact, these tiny creatures turn out to be the giants of this blossom. Your botherings cause a large number of much smaller, cream-colored, winged beings to come skittering from beneath the clutter of used-up and discarded stamens littering the surface of the tilted flower's lowest petal. With the handlens you can barely see that the skitterers bear the same curious shape as the much larger Rove Beetles, and indeed they may be one of the other 3,000 species. However, they are too small and too fast for certain identification.

You go to another blossom, this one not yet completely open, but with a worm hole through the middle of one of its petals. Inside the young blossom you find crumbs of pink caterpillar feces, and there's the caterpillar himself, one beautiful enough to live in a magnolia blossom, over an inch long and translucently, almost glowingly, pink. In this all-pale-cream blossom, what magic chemistry resolved itself into such vivid pinkness?

The next blossom is home to roundish mites, and the next one contains a minuscule pink worm curled into the shape of a **C** inside a droplet of dew. There's also some kind of shield-bug, and blossoms farther along reveal more and more kinds of life, always something new to know and think about.

Like the Earth itself, each magnolia blossom sustains a unique community of self-absorbed beings for whom the blossom amounts to the entire universe.

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YELLOWTHROAT ACROSS THE FIELD
If you walk past a large field with a bushy fencerow or blackberry thicket nearby, you'll hear one of the purest, most appealing sounds of summer, a ringing, uncomplicated *wichity, wichity, wichity*... If you watch closely as you approach the calling you might spot the little bird making the big sound, and you'll see its bright yellow underparts, yellow-brown top, and the very conspicuous, black bandit-mask across its face. It's the Yellowthroat, a common summer resident throughout most of North America. Few sounds are more evocative of heat-stunned, humid, broad-skied summer days than this.

The Yellowthroat's name is descriptive, if not distinctive. For beginning birders, the name is too similar to others -- Yellow-throated Warbler, Yellow-throated Vireo, Yellow-breasted Chat, Yellow Warbler... And it's true that in the bird world, especially the insect-eating part, plenty of species possess yellow throats and chests.

The reason for this is easy to figure out. Imagine being a bug or earthworm in the grass when a bird suddenly appears above you. If the bird's throat is pale -- yellow or white -- the bird's form will show up against the bright sky much less than if it were dark.

The Yellowthroat's yellow throat must help it a good deal because the species is very successful, being distributed not only from coast-to-coast in North America, but through the West Indies and as far south as Colombia and Venezuela. As often happens with species occupying such large distributions, it's evolving several subspecies, which eventually may become full-fledged species. What a pleasure to hear this bird's "regional accents."

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CAESAR'S MUSHROOMS UP
Our recent rains have brought fourth a number of handsome mushrooms, and one of the prettiest and best tasting is the Caesar's Mushroom, probably *Amanita umbonata*, formerly known as *A. caesarea*. It’s a large, red-topped mushroom.

Caesar's Mushrooms are absolutely delicious. They've provided some of the best eating that Julius Caesar and I have ever experienced. However, unless I find a patch large enough to warrant making some test-nibblings before preparing a banquet with them, I leave them alone. That's

because Caesar's Mushrooms are members of the genus *Amanita*, which includes the most deadly of all mushrooms. It doesn't help that the genus's taxonomy is a mess, so it's a challenge to be absolutely sure that you're eating the harmless species.

Eating an Amanita is like marrying into a family of moonshiners: You can hardly enjoy the experience because of thinking about the relations.

*****

ON THE PLEASURES OF LEAVING ANIMALS ALONE

On Wednesday morning while preparing breakfast an adult bluebird arrived with a new fledgling. While the fledgling perched there, the parent flew around catching bugs and bringing them to the big-eyed youngster. Their nest box lies across a wide field so I wondered why the parent would bring the young bird to perch on the solar cooker not ten feet from me.

In a similar vein, earlier I put up a nice box for the resident Carolina Wrens, but instead of using my box, which was at the barn's edge, they chose a little covey-hole not far above the entrance to the room where I do my computering. It was as if they wanted to be near me. Now the wrens' first brood is raised and they've established their second nest in a box of nails in the tool room across from where I work. Sometimes as I work a wren hops into my room and just looks at me.

Even the Green Anoles, skinks and Fence Lizards seem to regard me as perfectly harmless, maybe even as a desirable companion. This means that if I'm not careful I'll step on them, for often they won't get out of my way as I walk toward them. A certain large Fence Lizard likes to sun on a post right at the barn's door and doesn't move when I pass just inches from him. At dusk, rabbits wander around right outside my door, Bobwhites visit my garden, and deer stand in the field gawking at me.

I had the same thing at my previous location. Early readers of this Newsletter will recall the bats and Chimney Swifts in the well beneath my outside-kitchen roof (I have bats here, too), and how Prothonotary Warblers nested in the kitchen's hollow bamboo stems.

It's clear that if we leave animals alone, they are willing, sometimes even eager, to coexist with us. In doing so they enrich our lives. I'd much rather

be part of a community with my wild animals, than to have a dog to bark at them, or a cat that would eat them.

CHAPTER 6: JUNE

BATHING BIRDS AT THE GATE POND

Sometimes I visit the pond near the gate and sit in deep shadows beneath a large Black Willow overhanging the pond's edge. I like this spot because it's a cool place offering a good view of the pond, and because animals in bright sunlight have a hard time seeing me. Near that spot there's a place where another Black Willow has toppled into the water, creating a confusion of shattered, brittle twigs. The birds love this spot for bathing, for there's always a twig here or there poking from the water just right for perching on while building up courage to hop into the shallow water.

One day this week, first came a mousy-gray Tufted Titmouse, its tiny black beak wide open as it panted in the heavy heat. This bird looked right and left, turned its head sideways glancing up and down, then right and left again, around and around, and finally he jumped into the water for half a second, then flitted right back to his twig to make sure nothing had gone wrong. But nothing had gone wrong, so he jumped back in, and this in-and-out cycle continued for a minute or so before he decided that all was safe and then he enjoyed an absolute paroxysm of fluttering and splashing lasting about a minute.

This titmouse flew away and another took his place, going through the entire routine just as the first one had. Even before the second titmouse finished, a female Cardinal arrived. Apparently she'd watched the titmice long enough to know that it was safe, for she hopped right into the pool and splashed with even more abandon. After the Cardinal came a Red-eyed Vireo with its snazzy white eye-stripes and red eyes. He plunged into the water for half a second, then raced to a safe twig and shuttered as if thrilled by the wetness. Then a yellow-and-black Kentucky Warbler came perching, watched awhile, but in the end just flew away. Instantly upon that departure, however, a Prothonotary Warbler with its bright orangish head came to the same twig, hopped into the water and fluttered like the titmice.

On a bright summer day, the deep green of the trees and the water, the heavy shadows, and this little train of birds all sharing in the innocent pleasures of cooling off with a bit of splashing... deep within the willow's shadows I myself felt like a placid pond being splashed in by a rainbow of perfect birds.

*****

FIREANTS AFTER A RAIN

I can live in peace with the ants that swarmed on my ceiling last Tuesday, for they were a native, non-stinging species. I wage a continual battle, however, with fire ants. As explained in last year's September 9 Newsletter, fire ants were introduced into the US in 1918, and since then their distribution has expanded over a huge part of the country, driving out many native species, causing untold suffering to animals with their stings, and causing my ankles and wrists as I write this to be speckled with itching, whitehead-like pustules resulting from their stings.

Thursday afternoon a good storm came up so just as I was hearing the rain's roar coming through the woods I chopped open a fire ant nest next to my trailer, with the hope that the deluge would drown the colony. Soon a little torrent of runoff swept before me as I stood in the outdoor kitchen watching. Thousands of white fire ant pupae and larvae swept before me. When the rain ended and the water soaked into the ground, the high-water mark beside my kitchen was outlined with a rim of white ant-pupae bodies. I do not like hurting living things, but in this camp it's either them or me. During my first year here, they almost won.

At dusk two hours later I noticed that the ground had been cleared of white pupae and larvae. Looking closer in the twilight I saw slow-moving lines of fire ants, each ant carrying a pupa or larva, and the lines converged at the old nest where already fresh excavations were taking place.

Looking down at those ant lines I felt like a chastened god, a god who had wrecked havoc upon a nation with war and pestilence, and now, seeing the grim, heroic, single-minded determination of the trudging victims, felt obliged to grant them respect. I regretted that I had been the cause of their misery, which in the dark, mud-smelling wetness of that dusk was profound.

It is not the character of each ant that I admire, for I remember that an ant hasn't brains enough to possess much character at all. It is the essence of the life-struggle in us all to which I grant my awe and respect.

For, something out there is magnificently in love with life, and that Thing has built us an Earthly theater where the greatest tragedies and most wondrous acts of heroism are played out, where the God-Thing's love is evinced by every ant, in every storm, and in the soul and mind of everyone who sees and feels.

*****

ZINNIAS FLOWERING
During my trip to Kentucky last September you may recall that between buses I wandered around Nashville's parks and streets gathering seeds. Nearly everything I picked germinated and right now Zinnias from seeds collected then are putting on a show.

Zinnias do especially well in our area because they tolerate heat, humidity and droughts very well. One reason I like zinnias is that they're native Mexican, and I have a long history with Mexico. Most of today's many varieties and hybrid zinnia strains are derived from three wild zinnia species, all from Mexico. When the murderous conquistador Hernán Cortés and his Spanish army entered the Aztec capital city of Tenochtitlan, now called Mexico City, on the morning of November 12, 1519, among the amazing things they saw for the first time were elegant, well maintained Aztec gardens occupied with zinnias.

In fact, marigolds were there, too. Both zinnias and marigolds are Mexican, and right now the first thing I see each morning is long rows of intermingled marigold and zinnia blossoms. Nowadays, each of my mornings begins with a grateful "*Buenos días, hermanitas*."

*****

PINE WOODS TREEFROG
Last Sunday at the edge of a soybean field a Chipping Sparrow with its handsome rusty cap and neat white eye stripe landed in a large Loblolly Pine. Bearing a beakful of insects she worked her way to the limb's end, glancing at me constantly, until she stopped at a small nest of straw wedged in a fork in the limb. Three tiny, bobbing heads with yellow-rimmed beaks and skinny necks shot up, the meal was deposited to the highest-reaching mouth, and the mother flew away for another load.

Beneath the old pine stood one of the hunters' blinds. It was a fancy, store-bought thing on shiny aluminum legs about 15 feet high. The blind itself was made of a molded black plastic material. A blind window opened right onto the nest so I climbed up for a better view.

As I cracked the blind's door, something inside jumped onto a wall and clung there. It was a species of treefrog I'd never seen before, one with

smooth, gray-mottled skin and a thin, dark ridge running from its eyes to along its sides. It was the Pine Woods Treefrog, *Hyla femoralis*. I'm sure I've heard it before -- my Audubon fieldguide says it sounds like "the tapping together of wooden dowels" -- but this species is nocturnal and it tends to stay in treetops, so it's rarely seen. It's a Coastal Plain species, in Mississippi hardly making it as far north as Jackson.

This just made my day.

For, every species of living thing is a kind of song. The Pine-Woods-Treefrog-song rhapsodizes on life at night high in a pine tree. Its very skin matches in tone and texture old pine-bark flaked with lichen. The frog-song's voice of tapping wooden dowels bespeaks being inside a pine tree on a rainy night, needing a mate. There are bugs in the old Loblolly, so this frog is there to eat them, and its mouth is wide, its tongue quick, long and sticky, and its brain is all fixed for bug-eating.

Whenever a species is extirpated or extinguished, a song is lost, and the music of life is diminished. What an honor for me to be here where and when I am, with life still lusty with its singing.

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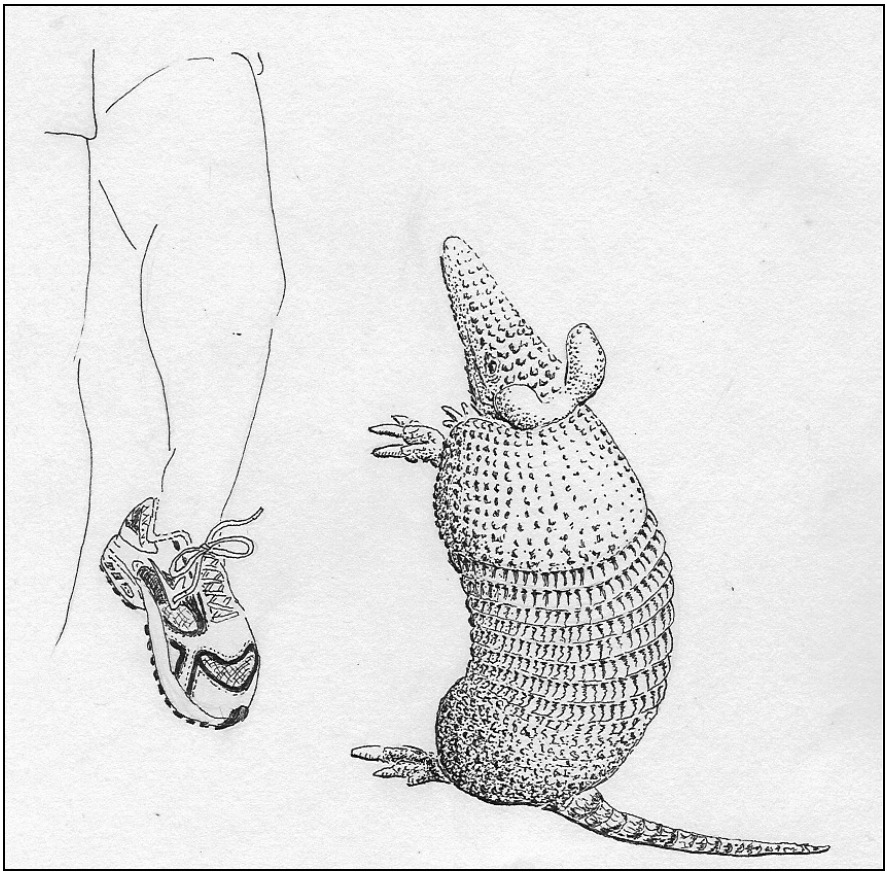


ARMADILLOS
At dawn one day this week I was jogging down a forest path near my trailer when I came upon a family of Armadillos -- a mother with 3 half-grown young. If I hadn't stopped jogging I would have tripped over these critters, but that wouldn't have been extraordinary, since Armadillos behave as if they were practically blind. Often you can walk right up to them and they will be looking exactly at you, but they will behave as if they don't see you.

On the other hand, if you get upwind from them, instantly their nose pokes into the air, they get a horrified look in their face, and they waddle off as if the Hounds of Hell were after them. My impression is that their eyes are OK, but they are attached to the armadillos' brains only very loosely, while their noses have superhighway access directly to their brains.

Armadillos have given me a lot of grief in the gardens. They burrow beneath my deer-fences, then during the night dig up enormous parts of the garden. Mostly they are carnivores, eating insects, grubs, worms and such, though sometimes they also eat a few berries, fruits and bird eggs. In the garden they couldn't care less about a cabbage plant or a tomato vine. In the gardens they look for earthworms and grubs, which in my highly organic soil are huge and juicy. The damage they do to my plants is purely incidental to their quest for earthworms.

You don't need to worry about being bitten by an Armadillo because their teeth are small, knobby things made for crunching bugs and worms, not for tearing flesh. On the other hand, if you pick one up by the tail their powerful digging claws can give nasty scratches.

You often see cartoons of Armadillos rolling themselves into cannonball-like spheres, leaving nothing but their bands of armor exposed to enemies. I've never seen an Armadillo do this. I've certainly yelled at them, jumped all around them and even poked at them with my toes trying to get them to do so, but it seems to me that ball-rolling is a rare thing with them, if they do it at all.

*****

INKY-CAP MUSHROOMS IN THE COMPOST BIN

Nowadays the first thing each morning when I go pee in the compost bin I'm greeted by one to several "inky-cap mushrooms" of the genus *Coprinus* emerging from the hay in the bin. By dawn the mushrooms have already begun to deteriorate, the edges of their caps deliquescing into inky goo that curls, coagulates, and drips off as the entire caps disintegrate, and the mushrooms' slender stems collapse. These are among the most ephemeral of mushrooms.

Most mushrooms reproduce with spores that fall from beneath their caps, to be carried away on the wind. In contrast, the genus *Coprinus* has come up with the smart idea of mixing its spores into a bunch of smelly goo that sticks to the bodies of insects attracted by such stuff, and then the insects can carry the spores to new places.

Inky-caps are too small and insubstantial to think about eating. Still, I just like greeting them each morning, and I like thinking of their mycelium throughout the days and nights working its way through my compost bin,

helping break down the straw, weeds and my own excreta deposited there, into a rich compost that will be recycled into future gardens.

*****

THAT WREN

Just after dawn on Tuesday morning I realized that something was missing. For several days the Carolina Wrens had been carrying bugs to their second-hatched brood of the year. I'd grown accustomed to their perpetual flying in and out of the tool room across from my computer room in the barn. Tuesday morning all was quiet, so I knew that the nestlings had left their nest. In times past I've seen that once the nest is abandoned the whole family avoids me for a week or two.

However, in mid morning I heard a beseeching peep from inside the barn's garbage can. Inside was one of the nestlings barely keeping his head above the water pooled there after recent rains (leaky roof). I could imagine the whole sequence of events: One by one the nestlings had been coaxed to fly from their nest on the high shelf in the tool room and this one had made it out of the room as far as the trashcan's rim, but he'd bungled his first landing, tipping into the can. Once his feathers were wet he couldn't fly out. The family had gone on without him.

I dried him off and set him on the barn's cement floor outside my door where for a long time he just sat looking around. After an hour or so he began peeping and hopping about. Finally, around noon one of the adults returned flying here and there and the classic Haiku by Issa came to mind:

That wren--
Looking here, looking there.
You lose something?

A plaintive peep, a sturdy reply, a flutter of wings upward, and within moments an open beak was plugged with a green grasshopper.

After a few more feedings both birds disappeared the way wrens are supposed to on the first day of fledging.

*****

SYCAMORE TOTEM

I know several people who identify strongly with certain animals -- their "totem" animals. With men usually the animal is an eagle, hawk or wolf. A couple of women friends have designated turtles as their totems, confirming their fondness for curling up at home and just lying low. One of my closest friends from college days assures me that she was a Sea Otter in a former life. When on the northeast coast of Ireland one day I watched otters offshore, I had to admit that their quick, playful mischievousness matched perfectly the nature of my friend.

If I had to choose my own totem, I think it would be the Sycamore. Sycamores are big-bodied and love to be next to water. Their trunks lack the rough, corky ridges that protect the trunks of most trees, so the Sycamore, despite its size, is somewhat vulnerable. Still, Sycamores have a wonderful staying power. Along Sandy Creek it's something to see how recent flooding rode down some of them. However, now most are coming back, reissuing leaves and resprouting twigs as occasional rain washes mud off the old leaf-tatters, step by step -- coming to life again just like me after this or that of my own disasters.

Sycamore flowers are tiny things jammed together into small balls. Over summer the balls grow as the closely packed fruits mature, and then the balls break open in the cold months, releasing the fruits. Once a winter storm caught me walking in a bayou and as the big Sycamores around me heaved and snapped their branches, fruit balls exploded one after another, launching individual parachuted fruits into the storm and skyward.

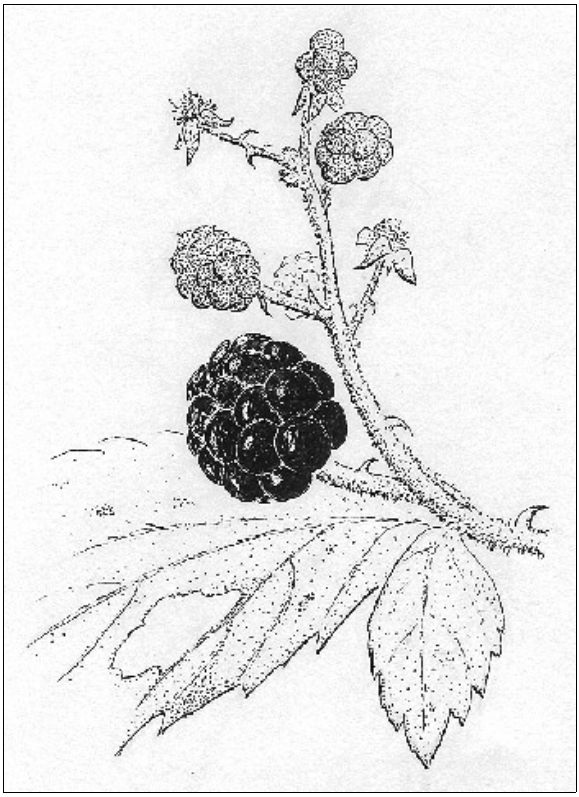
I like that. I identify with the Sycamore's subdued approach, waiting for the right moment, maybe waiting so long, Buddhistically, that the right moment never comes, but, if it does come, willingly and with panache launching blindly into a perfect storm of hope.

My interest in the totem concept is more than casual or literary. Sometimes I toy with the notion that an unknown number of "themes" (for want of a better word) flow through space and time. I visualize these "themes" as being like long, colored, streaming ribbons in a perpetual wind. There's the "conservative theme," the "liberal theme," the themes of femininity and masculinity, and themes of aggression and peace, themes of parsimony and generosity, simplicity and ostentation... These themes sometimes "snap" the way a flag snaps in the wind and when there's a snap something is born, maybe a flower, maybe a song, maybe a

romance or maybe a personality trait in a human. The newborn thing always sings the song, in its own way, of its parent theme.

*****

BLACKBERRY WEEK



A few ripe blackberries have been appearing here and there for a couple of weeks and they'll be turning up for another month or so, but I'd say that this week will prove to have been the best blackberry picking time of the whole year. In my April 21 Newsletter I said that the blackberry brambles with their "white blossoms surge from the woods' edge into the broomsedge field like a tide of warm, green water with white froth." Now the white froth has crystallized into red and black berries -- red being the color of unripe fruits.

If you pick in the morning when it's cool, the dew wets your feet and legs, and mosquitoes can be pretty bad. If you wait until later, the humid heat pushes down on you the way Mississippi heat does. Nonetheless, I prefer picking in the afternoon, sweat streaming down my legs, and feeling the powerful sunlight slow-baking my bones.

When you're out there you know you're alive because all your senses are being tested. The canes' stickers catch your britches legs. When you get scratched, a straight line of crimson beads of blood forsm on your wet skin. In the vacuum of the heat-stymied afternoon you hear the light thumps of berries dropping into your bucket, and the rustlings of the Cardinals upset in the briers, for the bramble is their home and they love those berries as much as you. Your hands grow purple-stained and so do

your lips. Sometimes a spider or a stinkbug gets into your bucket, but you just pick it out.

Something funny always happens at the end of a good picking session. When the bucket is nearly filled, though you've been watching the harvest grow one berry at a time, suddenly you're surprised by what a mess of them you've picked, and how handsome and substantial they look all glossy and plump, and so black that they're almost blue.

You almost feel as if in that field you've rediscovered a subtle but powerful wisdom: That one berry at a time, if you keep at it, leads to a beautiful heap of berries.

*****

KATYDIDS GALORE

When night falls there comes into the forest a magnificent roar consisting of the calls of thousands of Katydids, *Pterophylla camellifolia*. The songs are loud and raucous, similar in quality to the buzz-saw drummings of the periodical cicada, except that they come in short bursts, something like "rik-rik, rik-rik, rik-rik." The wonderful thing is that usually the calls are synchronized so that the roar pulsates with a mighty rhythm. Lying beneath the mosquito net on my sleeping platform in the woods, I often discover my foot keeping beat. The pulsating roar is almost hypnotic, and I can see how certain nervous-type individuals could be driven mad by it. Fortunately, I find it restful and I am glad to experience it.

Well, I am only about 99% sure that these are Katydids. I have tried dozens of times, flashlight in hand, to spot one as it calls, but to no avail. These are tree-top singers and call only at night.

One source of my slight doubt about their identify is that what I hear now is not the same katydid call I knew during my childhood in Kentucky. Kentucky's katydids call in the same loud, buzzy manner, but up there it makes sense when people claim that katydids say their name when they call -- "Katy-did, Katy-didn't. Katy-did, Katy-didn't..." Our Mississippi katydids' "rik-rik" call just isn't like that.

However, I found a page on the Internet where a researcher says that "Southwestern populations call with a slow pulse rate and only one or two pulses per phrase." Natchez is considered to be in the Southwestern part of the katydid's distribution and "two pulses per phrase" is exactly right for

what I hear. This specialist claims that there are at least three distinct Katydid populations, each having its own characteristic call. There are Northern, Southeastern and Southwestern populations.

Our Katydids, like those in Kentucky, call all night, beginning exactly at dusk, and ending exactly as dawn, though they tend to trail off right before dawn. There's an exquisite period of several minutes when a few katydids are calling while the Cardinals and Summer Tanagers are just awakening, mingling their peaceful mornings songs with the thinning Katydid drones.

*****

STORM PLUMS

So often the most vivid moments of one's life are compounded of two or more events taking place at the same time. That's the way it was Wednesday when I went plum picking as a storm came up.

The storm was one of those dramatic ones that rolls in from the west with plenty of thundering, and during the calmness proceeding the storm leaves on trees go limp and flip over looking silvery. On the horizon there's a solid dark sheet of blue-gray rain but, above, the rounded clouds have upward-swooping sides, like the ones Michelangelo painted with cherubs sitting on them looking down at us, their legs dangling over the clouds' edges.

I've had lots of modems get zapped so as soon as the thunder started I pulled all the plugs. Usually during storms I do odd jobs around the barn, but this storm was so spectacular that I wanted to be in the open where I could experience it like a symphonic concert. I wanted to feel the thunder rumbling through my guts, and I wanted to feel every molecule of the first chilly breezes on my overheated skin. Therefore I decided to go check on the Chickasaw Plums, *Prunus angustifolia*, I reported on as flowering in this year's March 7th Newsletter.

Back then I was tickled to discover "just two little, white blossoms inside an intricate tangle of spiny, dark stems." Now the thicket was lushly green with leaves, and some of the trees bore heavy crops of cherry-red, cherry-size fruits. A big rattlesnake has been hanging out around there, so very gingerly I insinuated myself among the spiny stems, as alive as I could be to the snake danger, the scratching of the spines on my bare

back, shoulders and chest, and to the approaching storm, the falling rain of which now could be heard moving across the Loblolly Field.

Those glossy, red fruits hung among green leaves were as pleasing to look at as a healthy child with a smile. The very instant I picked the first plum, a big raindrop splattered on the bald spot atop my head and a kinky puff of wind dragged a spiny stem across my back and arm leaving little beads of plum-red blood.

Before long I had all the plums I could carry in my hands, and spiny plum branches lashing in the wind were flailing me. Lightening was hitting awfully close and the rain was so cold it didn't feel good. My glasses were wet and foggy so I worried about not seeing the rattler as I worked myself out of the thicket. For a while all my thoughts were rattlesnake, too-close lightening and too-cold rain.

But, I made it. I dried off and got warm again. And then I ate those plums.

*****

PLUMS OR CHERRIES?
Ripe Chickasaw Plums are so similar to average cherries that the question arises: What's the technical difference between a plum and a cherry?

One distinction is that plums have a single, shallow "furrow," a sort of crease, running from the base to the top, while cherries don't. Also, plum skin sometimes but not always possesses a whitish "bloom," while cherries don't. A few plum types have tiny hairs on them, but cherries never do.

*****

SUMMER SOLSTICE
On Friday I celebrated this year's Summer Solstice. Walking in the fields I reflected on the fact that half of the current solar cycle, the "natural year," is now completed.

Part of my celebration consisted of summoning up memories of this spring's most pleasant moments -- of spotting the year's first flowering trilliums and violets in the bayou, and of watching the first leaves come into the trees. I recollected the fun I had chronicling bird migration, and I

tried to remember what the mulberry tree looked like that day I saw so many Cedar Waxwings in it. I tried to recall the exact warble the Painted Bunting made that morning I found him in the orchard. I remembered the morning I walked into the garden and saw the first beans coming up, and in my mind I replayed the view of the blackberry field white with blossoms. I even tried to reconstitute on my tongue the taste of the year's first ripe tomato, and that wasn't so long ago.

Now our days will begin growing shorter and before the month is out probably I'll be feeling "fallish" again.

In fact, it seems that I have come to recognize only two real seasons, spring and fall, plus I admit that there are brief periods in between these seasons when "Nature holds her breath." Nature "exhales" spring with all its blossomings, hatchings, openings-up, avalanchings-forth and lightings- and warmings-up, then "inhales" fall with its fruitings, fallings, crystallizations, wrappings-up, buryings, darkenings and coolings-off.

Another part of this week's Solstice celebration was a kind of prayer formulated as I walked across a sunny field. The prayer consisted of consciously recognizing that I was glad for being able to walk as I was, and to think the thoughts I am reporting here. I never ask anything in prayers, just give thanks, but if I had been the kind to ask for something I think I would have appealed to the Creator for things to keep on happening as they may, and I would have asked to remain alert beneath the sky, and to be able to see and feel as much of everything as I can.

After the walk I passed by the garden. I carried a big piece of cornbread in my pocket so I sliced that open, picked some ripe cherry tomatoes, sliced them and spread them atop the cornbread, plucked a handful of basil leaves, shred them and strewed them atop the tomatoes, then I dug up a garlic bulb, sliced it, and spread the slices atop the basil, and that garlic was so juicy that it sparkled in the sunlight. Then I ate it all, and it was good, and looking up into the blue sky as I chewed I felt something like a deep sob coming on, but then somehow it ended with a chuckle, and I still can't say exactly what that was all about.

Maybe it meant that I'd had a good celebration.

*****

JUST HOLDING

Between Nature's exhaled spring and inhaled fall there's a brief moment of "just holding," which is neither spring nor fall. That's the time we're experiencing right now. Besides being graced with the Solstice, the "just holding" time has its own character worth noticing and thinking about.

Mainly, this is exactly the time to feel nature humming along at top efficiency. When we're not distracted by the rush of either spring or fall, with our internal ear we can sometimes hear the majestic humming, the "*ommmmmmmmmmmmm*...." Nature makes when she is just busy being herself. You hear this best in mid-afternoon when the field is quiet and the sunlight and heat stun you with their power. "*Ommmmmmmmmmmmm*..." maybe with a solitary meadow grasshopper stridulating its *bzzzzzz-zip-zip-zip-zip-bzzzzzzz* in attendance.

One way to sense the efficiency of nature's work at this in-between season is to step from the forest into a sunlit field in the afternoon. The forest is cool but the sunlight in the field beats down with unexpected harshness. The temperature difference you feel as you pass from the forest into the field represents the energy the forest is using but, in the field, is being lost to the ecosystem when it hits your skin. This is energy that could have fueled photosynthesis, and thus could have been stored among the atomic bonds of the trees' carbohydrate molecules, and, later, when the trees die and decay, might have been shared with the rest of the ecosystem, thus fueling untold corners and levels of life.

When I returned to the garden I wanted to sit in the remains of an old, metal lawn chair I'd retrieved from a junk heap. The chair was painted the same green hue as the leaves of the bean vine twining on the giant-bamboo trellis next to me. When I sat on the chair, because it had been in the sunlight, it was so hot that I had to jump back up. Then standing there I reached over and touched the bean leaves. They were cool and pleasant to the touch, despite being in the same sunlight as the chair.

I stood there a long time thinking about this difference between a forest and a manmade open area, and a green plant and a green chair, and in my Solstice mood you can imagine the conclusions I drew.

*****

SHOWERING AT THE COMPUTER
Being a hermit in a tiny, hangdog trailer in the woods has its compensations. I benefited from one as I typed the above entry.

I've told you about the perpetual pool of water atop my trailer where the roof sags. In the center of this roof there's a small, square, screened window that can be screwed open from below. During the summer the window stays open most of the time, to let out the heat. In the hottest part of each afternoon birds come to bathe in the pool. As they flutter they send an occasional cool, refreshing spray through the window onto my sweating shoulders below.

It's a system no one could have dreamed up intentionally, yet it works pretty well.

*****

DAYLILIES AND FRIED CHICKEN
I have a vivid recollection from around 1952 of being a kid on a hot summer day in rural western Kentucky, in the back of our old, black, running-boarded Chevrolet rumbling down a one-lane, weed-choked gravel road, hot air pouring through the windows, my parents up front, us going to visit my Aunt Hazel who lived at the end of the road. Already I imagined I could smell her fried chicken, greasy fried potatoes, green beans dripping with pig grease, crusty biscuits, and all the peeled, thick-sliced, white-salted red tomatoes we wanted. Right before arriving at her house the roadside weeds stepped back a little to give way to a spectacular colony of Common Orange Daylilies, *Hemerocallis fulva*.

I remember thinking that those flowers were nearly as pretty as a Redcedar decked out for Christmas. Half a century later I can't see the orange-yellow hue in any context without associating it with daylilies and Aunt Hazel's fried chicken and fried potatoes.

Daylilies are flowering now along area ditches. There's a colony at the bend in the highway, then several individuals scattered here and there farther along the road. I imagine that one day a house stood at the bend and those daylilies were treasured ornaments, but now the county graders come along digging into the original colony and spreading tubers up and down the right-of-way. I suppose the daylily is happy to have its tubers dispersed, but this seems harsh treatment for such a dignified species, an exotic one with origins in the Orient.

The daylilies along our road are double-flowered, and I find that a little disappointing. I prefer the classic blossom in which the flower parts are all distinct, as they evolved in nature. In these double flowers the extra corolla lobes are derived from stamens (the male parts). Looking closely at the blossom you can find instances of half-formed petals with anthers fused into their faces.

These are monstrosities that wouldn't be tolerated in wild nature. Double-flowered varieties exist strictly because of man's taste for gaudy color, without regard for the beauties associated with simplicity of form, functionality of parts, and naturalness of aspect. But mindless splashiness is the taste of the times.

I know I'm in the minority on this. I've seen the fuss made on the US National Arboretum's "Award Winning Daylilies" Web page featuring 19 award-winning, double-flowered daylily cultivars with names like Pojo, Prester John and Peach Souffle.

When I see the extravagant blossoms featured at that site I feel like a fat kid surrounded by too much sweet stuff. I think how glad I'd be to just sit awhile among the old-time Common Orange Daylilies along Aunt Hazel's weedy gravel road.

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ADOLESCENT BIRDS
This week several bird families around my trailer have been experiencing the "teenager" phase of life. Sometimes it's been funny, sometimes it's been hard to watch.

A family of White-eyed Vireos in the blackberry field was the Ozzie & Harriet of the neighborhood. The neat-looking little parent quietly flitted from stem to stem gathering bugs among the berries while three well-mannered fledglings orbited about gawking and, when the parent found something, quivering their wings to look pitiful so they might be fed.

The Pileated Woodpecker family was more like real life. Flying into the top of the big Pecan tree, it looked like a single mom with a clumsy, big-boned brat in tow. The young bird's body language spoke an ongoing monologue:

"*There she goes again, all she can think about is banging her head against trees, boring, boring, boring, how disgusting... but, LOOK, what a big grub! Gimme gimme gimme GULP! Wellllll... I deserved that. So there she goes again, another tree, another banging, just can't enjoy life, same old thing, well, guess I have to tag along, what a drag*!"

I witnessed a heart-wrenching crises among the family of Cardinals whose territory centers around my trailer. There were three almost-grown kids, two females and a male, and one late afternoon the father apparently decided that the male kid had to go. The father attacked the young male and the kid was obviously shattered. When adult males fight over territories they position themselves on opposite sides of the imaginary territorial line, they glare at one another and skirmish until one flies off.

But here the young male was inside his family's territory and he didn't know where to go. When the father chased him, he flew in circles or figure 8s round and round inside the only home area he had ever known. Finally in exhaustion he landed on a Hophornbeam's lower branch, but the father went right at him, nabbed the top of his head in his beak and rode the kid to the ground where they both flapped and the kid screamed. Even with my human ears I could hear in the young bird's call a profound sense of feeling betrayed. It was much more than a "Stop, you're hurting me!" tone, there was a clear "I thought I was your son!" sound, and it was heartbreaking to hear.

As dusk closed in and the two young females huddled wide-eyed in shadows watching the conflict escalate to another confrontation at last the young bird stopped flying in circles and figure 8s, suddenly rose higher into the air and in a straight line flew across the blackberry field into unknown territory, not to return.

*****

IGNORANCE BEGATS VIOLENCE

In the shadows beneath Black Willows at the edge of a pond dug for the deer deep in the forest I came upon a poisonous Western Cottonmouth, or Water Moccasin snake, *Agkistrodon piscivorus leucostoma*. It lay with its head resting atop a coil of its own thick, black body.

Usually I wouldn't have paid much attention but I could see that this particular snake was extremely dangerous. That's because he was about to molt. When a snake's molting time draws near, its outer skin starts separating from its new, inner one. The skin over the eyes also is molted, and there's a brief period when air gets between the old eye covering and the new one, causing the space to turn white.

My cottonmouth's eyes were completely white because of this problem. He was practically blind.

The snake tensed, turning his head all around, but obviously he was unable to see where I was. Then suddenly like a spring being released, his coiled body shot into the air and there was a flash of whiteness as he stabbed where he thought I might be. Again and again he sprang, the white discharge of his open mouth for half a second vivid in the gloomy light.

I moved away thinking the snake might be overdoing it a bit. I'd never seen a serpent attack with such ferocity. But then I'd never seen a snake whose lenses were so completely opaque just before shedding.

Maybe it's a law of nature that the less information you have, the more vulnerable you are, and therefore the more aggressive and violent you must be to stay alive. It's almost as if the snake were telling us that if we wish to reduce violence in our human society, we would do best to invest our monies in schools.

CHAPTER 7: JULY

BIRDSONG SEQUENCE AT DAWN
Most of the year I sleep in the forest on a wooden platform built high enough to keep ticks from climbing the legs, and covered with mosquito netting. Nowadays at dusk the loudness of the high whine the mosquitoes make trying to get at me is almost intimidating. Yet, it's rather cozy inside the net, completely mosquito free. The trick is to sleep there all night without poking the butt against the netting.

Awakening there in the cool of the morning is wonderful. With just a hint of light toward the east, the Cardinals begin singing. Several call from scattered locations all around, proclaiming their nesting territories. After they've called awhile and the darkness has lifted more, then the Summer Tanagers join. Then the Indigo Buntings, then the Yellow-breasted Chats, and by the time the Towhees are calling I know it's light enough to get up and go jogging. During my stretching exercises, the next species to sing is the White-eyed Vireo, then the Crow, and when the Carolina Wrens join in I know that if I'm not on the road jogging I'm behind schedule. Sometimes the sequence of species is different, but this is the usual one. Especially if it's cloudy the sequence can change a little.

One omission in the above list is the American Robin, which in most American suburbs may be the most common bird. For several weeks this spring I did a birdcount of migratory species for the Gulf Coast Bird Observatory and during all of spring until now I have not seen a single American Robin. I don't know why this is so. This is one of those little mysteries I'm working on. .

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ME AND THE RUSSIAN REVOLUTION
I love this kind of weather. For weeks it's been so humid that morning haze and afternoon cloudiness have kept it cooler than if the sun had shined all the time, and if it does get very hot then you can bet that a storm will soon come up cooling things off. On the Internet, if you watch the regional radar in the afternoons you'll see storms popping up all over like mushrooms. They're quick and violent, and then they're gone, and mostly they miss you. Hearing the thunder through the afternoons as the storms come and go is very satisfying. I'm getting deaf. Birdcalls and cricket sounds are drifting away from me, but I can hear that thunder all through my body.

Sometimes I take up my hoe or scythe and go work in mid afternoon heat, exactly when, because of the heat, it's hardest to breathe and keep going. But I like feeling all that weather-power around me, experiencing my body sweating and tingling with edgy just-surviving. When a little breeze comes along, the coolness rippling across my back and legs is one of the purist, most uncomplicated pleasures a human can enjoy. The other day I heard a Johnny Cash ballad in which he sang something like "*I hurt myself just to see if I could still feel*." That's not me, but Johnny and I are exploring similar corners of the human condition.

When I'm working and there's a storm brewing nearby, and from the corner of my eye I'm watching flashes in the slaty darkness to my side, sometimes I feel like I'm on a powerfully dramatic stage. Maybe I'm just a tall, balding hermit dressed less elegantly than some would like, but when I'm out there with the looming storm it's like being in the old classic movie *Dr. Zhivago*. For, maybe my dedication to sustainable living in a small way can be compared to the sacrifices of those nearly a century ago who worked and died for the Russian Revolution. The great storm rearing next to me is the Revolution itself with its flashing cannons and mindless destruction, and the heat and humidity in which the scene is cast accomplish the same poetic resonance as the cold and snow did for Dr. Zhivago.

How beautiful to work beneath a sky that's so heavy, dense and potentially dangerous, while silently within I'm harboring this unshakable dedication to something grander, as the great revolution comes, comes, comes...

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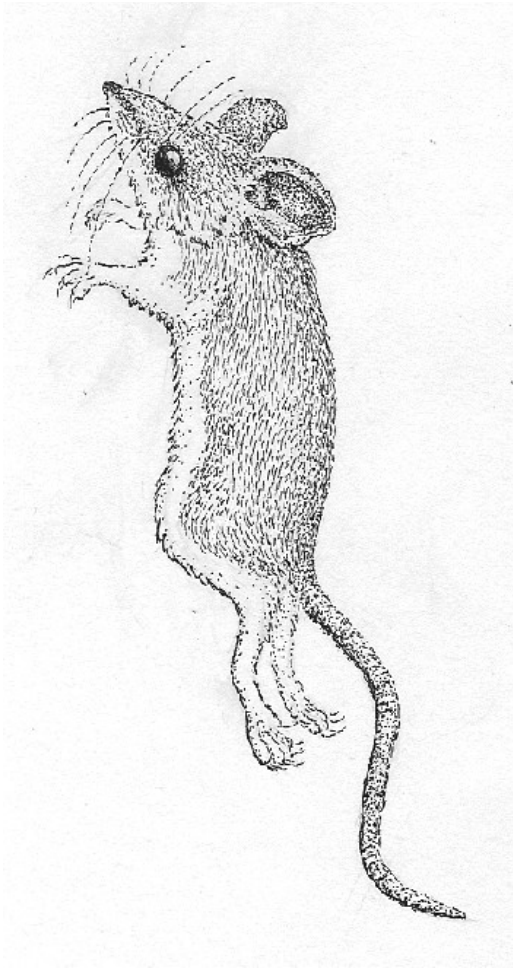
WHITE-FOOTED MOUSE

It's too bad that when most people think of mice they visualize a House Mouse. The House Mouse is just one mouse species among many, plus it's an introduced species from Europe. Really, it is a "weed species" among a rainbow of wonderful native rodents.



I'm thinking about mice now because for the last couple of weeks my trailer has hosted the most recent of a long series of White-footed Mice, and this one I have not been able to trap. Of course I didn't want to hurt him or her so I tried all my usual live-trapping methods. But this was a smart mouse and simply refused to enter the various one-way doors and snares I contrived. *Twice* I cornered the critter and both times as I was driving him toward the open door in a flash he turned toward me and either ran between my legs or jumped onto me, then onto the floor behind me.

Finally this week as I worked at the computer I heard the little intruder inside the toolbox beneath my sleeping platform. I sneaked over, closed the box, took the box outside, opened it, and there was my guest looking with its enormous eyes right into my eyes -- for about half a second, before it turned, leaped a good four feet onto my elevated fireplace, and disappeared.

White-footed Mice are amazing jumpers -- can jump right out of a large bucket. Also they are handsomely rusty-gray above and white below, with huge eyes and ears -- very unlike the squinty-eyed, gray House Mouse.

White-footed Mice are abundant here, in every brushpile, every outhouse, all through the woods and fields. The species is native over a vast region of the eastern and central US, deep into Mexico. It eats mainly seeds, nuts and insects, and each individual has a home range of from a half to 1.5 acres, with 4-12 individuals occurring per acre.

The unfortunate thing is that they also carry ticks infected with Lyme Disease, and we live in a hot-spot for that. Both the plantation manager and myself contracted Lyme Disease a couple of springs ago when ticks were especially bad.

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FIG PICKING
This week figs began ripening at full speed. There were a few last week, but this week each morning when I crossed the bayou the first hour or so was spent just picking figs.

It's not a bad way to start a day's work. I see a plump, purplish fig, place its stem between two of my fingers, give a tug of a certain strength, and if the fig is properly ripe it breaks off. That "tug of a certain strength" is something you have to learn; no book can teach it. I am always tickled to know something a book can't teach.

It's too hot to wear more than a pair of shorts and a sweatband so the trees' rough leaves scratch against my body and the brittle limbs poke at me. After a while I get good and sweaty and itchy, and my hands are all gummy from the figs' latex. This is "deep immersion" and in a strange way it feels good. When I'm inside the trees with morning sunlight slanting in from the east, I feel like a goldfish in a brightly lit little aquarium thick with seaweed. And the sweat and itching make the stretched-for fig a little sweeter.

*****

BLUEGILL NESTING
In the woods I sat quietly next to a deer pond about the size of a house. It was a shallow pond with fallen limbs emerging all across it and its waters were murky brown in the center, turning rusty red at the edges. With all the frogs and dragonflies there was plenty to watch, but my attention was focused on some shallow depressions at the pond's edge.

The depression rims were about six inches below the water's surface and the bottoms of the depressions were about twice as deep. The holes themselves were about 20 inches across and some five feet from one another. Each depression was clearly a nest, for it was being attended very conscientiously by an adult Bluegill fish, *Lepomis macrochirus*, about six inches long.

Male Bluegills excavate nests by undulating their rear ends from side to side while remaining in a vertical position. The males then wait in their nests making grunting sounds to attract females. Once a female enters a nest and after the pair swim in circles awhile the female releases a few eggs and the male releases his milt. Then it's all done again. The female doesn't deposit all of her eggs during one visit, nor is only one nest used by a female. Once spawning is completed, the female leaves the nest and the male remains caring for the eggs. What I was seeing in this pond was males tending their nests.

I think they must have been under a lot of stress that day. It was around 90° and in that shallow water the oxygen level must have been low. In fact, the males would vigorously swim in circles for about 15 seconds, then come to the water's surface over their depressions' centers and seem to gasp for air for up to a minute before swimming in circles again. The circle-swimming was surely to aerate the eggs.

The pond also was thick with Mosquitofish and every few minutes a school of these would slowly approach a nest. As soon as the father Bluegill spotted them he'd chase them away. In the mid-day heat these Bluegill fathers seemed pretty fagged out, but they just kept at it.

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MELLOW MODULATION

Walking in the fields and woods now feels completely different from just two or three weeks ago. Earlier there was a sense of outward-rushing blossoming wherever I looked, but now the feeling is more introspective, more mellow. Of course the catalyst is that now instead of the days getting longer, they're getting shorter.

The same kind of mood-shifting happens in music. The term "modulation" refers to the changing of musical keys, especially without breaking the melody. One moment the music sounds bright and simple, the next suddenly it's dark and foreboding, yet the tempo may remain the same, and the music may be neither louder nor softer -- just that the key has changed. The Key of C usually sounds cheerful and uncomplicated but the Key of E-flat Minor typically sounds dark, serious and pensive. Andrew Lloyd Webber really jerks our emotions around with his in-your-face modulations in "The Phantom of the Opera."

Maybe we humans are so vulnerable to musical modulations because we evolved to intensely feel modulations in the seasons around us. Our ancestors' nervous systems must have developed exquisite sensitivities to variations in sunrises and sunsets, to how the earth's odor changed depending on its content of moisture and organic matter, etc.

If the Earth and all of Creation is the Creator's music, and the Universe's discrete things are analogous to tones in human music, then why shouldn't the profoundly significant modulations of the Earth's seasons delight and fulfill us in ways mere music never can?

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HOMOSEXUALITY IN NATURE

The other day one of my favorite local folks dropped by to share some of his delicious blueberries, and to chat for a bit. This time his remark that got me going was that I knew how progressive he was on matters, but when it came to gay marriages, he just couldn't take it, and surely nature doesn't put up with things such as that.

I couldn't ignore my friend's assertion that nature doesn't put up with such things as homosexuality.

For, nothing is more experimental and broad-minded than Mother Nature. When you look at the Creation you clearly see that the Creator's plan is to create diversity at all levels of reality, and to evolve that diversity to ever higher levels of sophistication -- whether it's forming galaxies from hydrogen gas, or evolving life on Earth. Moreover, just about any strategy furthering those blossomings is acceptable.

Among plants, sometimes a species' flowers possess both male and female sex organs. In other species, individual plants may bear only one gender of unisexual flowers, while in other species individual bear both all male and and all female flowers. Sometimes flowers are designed so they can't self-pollinate, other times they have to pollinate themselves, and some plants skip the sex scene altogether by reproducing vegetatively.

Among animals we find everything from the male seahorse who carries the eggs, hatches them and takes care of the young, to the "polyandrous" Spotted Sandpiper whose females may lay up to four nests in a season, each equipped with a different male incubating the eggs. Of course the

common earthworm is both male and female, and some snails sometimes mate with themselves, producing offspring. On the Internet you can find academic papers detailing homosexual behaviors in a wide variety of primates, from langurs to orangutans to pit-tailed macaques.

The higher up the evolutionary scale you go, the kinkier it all gets. Among communities of mice and other mammals, when population density reaches a certain high level where diseases and famine threaten, not only does homosexual behavior appear but also parents begin killing their own offspring. It's always the case that the Creator chooses the welfare of the species or community over that of the individual.

Among human populations, homosexuality occurs at a certain rate in all populations.

Thus, homosexuality is natural and inevitable. Data suggest that homosexuality may be at least partly genetically determined.

In short, it's simply wrong to say that homosexual behavior is never natural.

Why would the Creator create this state of affairs among humans? I don't know, but my own experience with human gays is that, on the average, they are more sensitive, insightful, creative, caring and smarter than the rest of us, so maybe that's enough of an answer right there.

With regard to the morality of it all, I would say that at this time when so many young people desperately need love and care, and so many gay couples want to provide stable family structures by providing that love and care, institutionalizing laws to prevent gay couples from enjoying the kind of legal and social support non-gay families already have, is immoral.

Moreover, since the Creator has made it so that among higher mammals homosexual behavior increases in populations under stress, and humanity right now, because of overpopulation and inequitable distribution of resources, is under enormous stress, the phenomenon of gays suddenly stepping forth to demand their right to establish stable family units while not themselves contributing to even greater overpopulation, can be seen not only as natural but also, literally, a godsend.

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WASPS CARRYING SPIDERS
These days it's not unusual to see a wasp lugging through the air something nearly as large as its own body. Sometimes the wasp even drags its burden over the ground, half flying and half walking, and other times the wasp seems to give up and just leave the bulk lying on the ground. Typically the carried thing is a stunned spider or caterpillar, but it can be other things, too. Organ-pipe Mud-daubers and Spider Wasps specialize in spiders. Potter wasps and Paper Wasps usually go with caterpillars, while Thread-waisted Wasps choose grasshoppers.

At this time of year many wasps are provisioning their nests with food supplies for their future offspring. Here is the average scenario:

A wasp stings its chosen prey, paralyzing it but not killing it. The wasp carries the victim to its nest, which may be a hole in the ground, a mud-dauber nest, a paper nest, or whatever. The victim is then placed in a cell of the nest along with the wasp's egg, and the cell is sealed. The victim continues to live in a paralyzed state, possibly for a long time, even until the following season. When the wasp's egg hatches, the larva consumes its paralyzed, still-alive food supply. The reason the prey is paralyzed and not killed is simple: If it were dead, it would decay. The wasp thus utilizes the prey's own immune system to keep it fresh for its eventual eating.

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BARN SWALLOWS & BEETHOVEN
One day this week I sat in my rocking chair in the barn door while the usual late-afternoon storm darkened the sky and growled. As I watched swallows cavorting over the Loblolly field, on the radio Beethoven's wonderful Eighth Symphony was playing.

The symphony's first movement is often dark with wrathful emotions, yet every now and then there are bursts among the bassoons and drums that have always struck me as very like laughter. The whole piece is on the one hand deadly serious, yet, throughout, there are unmistakable explosions of horse-laughing glee. It's very like swallows playing in a stormy summer sky.

History tells us that when Beethoven wrote the good-natured Eighth he was ill and profoundly disturbed by the political events and wars of his

time. In the same vein, whenever I hear the Dalai Lama speak, he seems to laugh a lot, despite the plight of his people under Chinese domination. When I was in India I met several holy people and their faces always glowed with cheerfulness, despite the poverty and degradation in which they lived. In this world of collapsing ecosystems and ongoing mass extinctions of species, The Creator populates the darkening sky with playful swallows.

As the storm broke and the Loblolly field heaved beneath wind and rain, those swallows took their time getting to safety. And I could only look on dumbly and feel ashamed that in my own life maybe I have been too slow at catching most of the jokes around me, and too clumsy ever to dance.

*****

MISSISSIPPI KITES

On Tuesday afternoon while I worked at the computer I heard a big wind coming through the forest in advance of a storm. Here you can hear those winds long before they hit, sounding like a big waterfall. Quickly I turned off the computer to avoid voltage spikes from falling tree limbs hitting the wires, and stepped outside to enjoy the spectacle.

A Mississippi Kite, *Ictinia misisippiensis*, hovered directly above me facing into the wind and when the gusts began knocking him about and bending the biggest trees, he just drew in his wings, screamed louder, and I am sure that he was doing exactly as I was, just enjoying the storm. I must tell you my kite story.

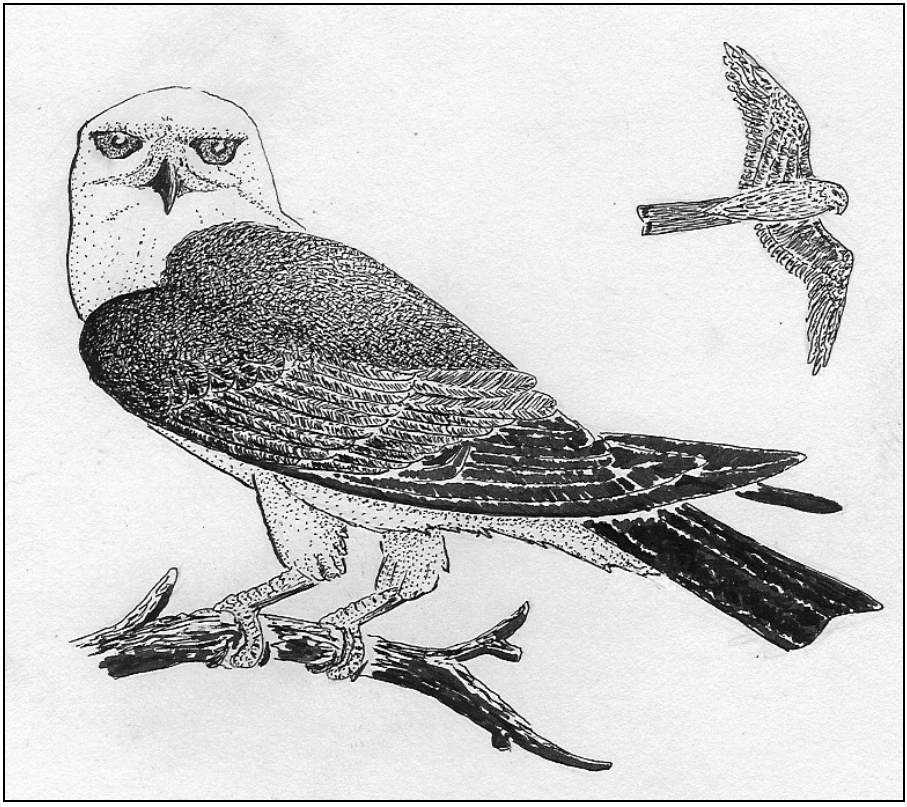
Early this spring a pair of Mississippi Kites arrived from their wintering grounds in South America (as far south at Paraguay) and for several days hung around a big pecan tree not far from my trailer. Then one bird disappeared from the scene but, for a long time afterwards, the remaining bird had come and gone on a daily basis. During most of most days he or she could be spotted sailing in tight circles on thermals above our fields. When both birds disappeared, my impression was that the pair had nested in the big pecan, had produced at least one offspring that had been fledged, and somehow they had managed to pull the whole thing off without my being able to watch the details.

Before they'd gone, one dusk right as a violent storm was beginning to let up, while it still rained, the wind was gusty and lightening was striking nearby, I heard one of the kites calling with a very urgent tone in its voice.

Then there was a different call, obviously also a kite, but higher pitched and sounding nervous. I rushed outside only to see the silhouettes of two kites merging with the forest's shadows. I think that this was the moment of nest-leaving for the young, and I am amazed that such an unlikely moment was chosen. Yet, if you're a kite wanting to hide your kid's nest-leaving, what better time?

What a secretive bird this kite is! How I admire its sharpness and wisdom!

Kites are hawk-like birds. All birds are divided into about 36 bird "orders." There's the "duck order," the "penguin order," and the "hawk-and-falcon order," for instance, with kites being members of the latter. That order is divided into 3 families. One family is the falcons, another the ospreys, and the third, the really big one, holds the hawks, eagles and kites.



Kites are especially graceful on the wing. They hover while hunting and when prey is spotted instead of diving headfirst they descend feet-first, seize their victim, then swoop skyward again. Mississippi Kites are fairly

small, only 12.5 inches long, as opposed to, say, Turkey Vultures, which are exactly twice as long. Therefore kite food is small, mainly grasshoppers and dragonflies, plus a few mice, toads and small snakes.

*****

752 BATS (SOUTHEASTERN MYOTIS)
One reason I find myself at this precise spot in the forest is that there's an old cistern here. It's like a 20-foot-deep, 10-foot-wide Grecian urn buried in the ground, with its 4-foot-wide and 3-foot-high neck sticking above the ground's surface. I would not be surprised to learn that the cistern was placed here during slave days, to provide for a cluster of slave homes.

This cistern was supposed to provide me with water. I built my outside kitchen so that water from its tin roof would drain into the cistern. However, just days after I arrived and cleared the thicket of honeysuckle overgrowing the cistern's neck, both bats and Chimney Swifts moved into the cistern. They are still there. At first light each morning the bats flutter into the cistern after their night of feeding, then a while later Chimney Swifts streak out of it. Then at dusk the operation is reversed.
Of course this situation presented me with three choices: 1) drink water filled with bat and bird poop; 2) cover the cistern and keep the critters out, or: 3) turn the cistern over to the critters and get my water elsewhere.

Naturally I chose the last alternative, and I consider it an honor to share my space with these interesting and beautiful beings.

I've learned a good deal from the bats, which the books name Southeastern Myotis (sometimes Mississippi Myotis), and whose Latin name is *Myotis austroriparius*.

First of all, I've learned to not leave buckets next to the cistern, because twice I've found dead bats in the buckets' bottoms. Bats use a sophisticated form of echolocation -- bouncing high-frequency sounds off objects to figure out where things are -- and clearly to bat SONAR an empty bucket looks a lot like a cistern's entry hole.

I've also learned that bats can do mysterious things. Last fall I was sleeping outside beneath the mosquito net on my four-foot-high sleeping platform when I was awakened by a bat inside my net, fluttering back and

forth the net's length. The bat must have pushed its way beneath the netting, which was draped onto the plywood surface heavily enough to keep all mosquitoes out. That night with a flashlight I was able to take a long look at my captive from six inches away as it hung on the inside of my netting. It's an amazing looking thing. Of course as soon as I lifted one side of the netting the bat nonchalantly flew out and immediately began darting among flying bugs.

I'm thinking about bats nowadays because for the last week each dawn I have seen more bats fluttering inside my outside kitchen than ever before. Their many wings cause a considerable whir in the morning air and though several may dart between my legs as I'm conducting my stretching exercises before jogging, they never touch my skin. They do often touch my beard, however, but that's because bat SONAR doesn't register a hermit's beard-hairs.

This Sunday Morning, the moment the first Cardinal sang and I couldn't even see that the western horizon was lighting up yet, I slipped from beneath the mosquito net and took a seat next to my cistern's neck, with my face about two feet away. It wasn't five minutes before the first bat entered. Ultimately I counted 752.

Two different forms were clearly present, a small, black one and a larger, paler one. However, I don't know whether this means that I have two different species, or whether there are just larger older ones and smaller young ones. I suspect that it's the latter. That's because several bats missed the basketball-size hole in the metal plate covering my cistern, and fluttered around on the cover for a second or two before regaining enough composure to dive through the hole, and all of the hole-missers were the small, black kind. According to a Web site, at this time of year juvenile Southeastern Myotises should be for the first time joining their elders on foraging expeditions, so those small black ones may be inexperienced young.

In nature there's a general rule that the more sophisticated an animal species is, the fewer offspring it produces. Couples of most Myotis species produce only one young per year, but Southeastern Myotises typically give birth to twins. I suppose this means that my bats are among the less sophisticated species in the large, smart family of Myotis bats. Still, the general low bat reproduction rate hints at the truth: That all bats are extremely complicated, highly evolved, marvelous beings. Also, that

bats are very vulnerable to man's predations, because after any disaster affecting their numbers bats need a long time to recoup their numbers.

Yes, I am very proud of my 752 bat neighbors.

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ON THE CHARM OF PREDACEOUS DIVING BEETLES

I think most of us are wired to be "charmed" by certain things, at least when we're children and our minds are still open. The term "charmed" is too weak for the state of mind I'm describing, but I don't think English has any better word. I'm referring to a feeling akin to "love at first sight," except that it's a fixation on something besides another person. It amounts to an inexplicable, perfectly irrational, passionate fascination for something.

I've always thought that "being charmed" by something was the Creator's manner of nudging our lives toward certain paths leading to fulfillment. For example, as a child I was charmed by many things, especially trees and turtles, so here I am still talking about trees and turtles. One of my lesser charmings focused on Predaceous Diving Beetles.

On the farm in Kentucky we kept large, wooden barrels beneath the eaves of one of our sheds for collecting water for laundry and bathing. Predaceous Diving Beetles took up residence in the barrels and I spent hundreds if not thousands of hours with my head over the barrels' rims looking down at them. They were about 3/16-inch long, oval shaped and brownish with a black band at the rear end (the brownishness revealed itself as golden flecks in bright sunlight).

About all my beetles did was to paddle about within the barrels' water looking for tiny critters to eat, often coming to the water's surface to take air into their rear ends, thus spending a lot of time upside down at the water's surface. What transfixed me was the beetles' ability to explore at will their three-dimensional, sunlight-charged world, alternately spiraling like vultures in the air, then diving deeply through clear water charged with sunlight that exploded inside tiny, free-floating algal cells. The beetles were like spaceships wandering among stars. Their liberty and scintillating milieu contrasted exquisitely with the life of farm-kid me stuck in a very fat body anchored in an obscure corner of rural Kentucky.

I've been thinking about those days lately because the barn-eave bathtub here in which I soak for a moment during the hottest part of each day has a nice population of Predaceous Diving Beetles. If you change the tub's water, the beetles will be back the next day. Mainly they feed on flying ants that descend in the wrong place.

By "Predaceous Diving Beetle" I mean one of many species belonging to the Predaceous Diving Beetle Family, the Dytiscidae. There's actually a second species in my tub, a larger, black one who bites my skin as I soak, but I've never been "charmed" by that one.

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FIRE ANTS & WANDERING GLIDERS

Speaking of insects capturing my imagination, this week at the edge of a field I came upon a gathering of dragonflies -- between 50 and 70 medium-size (body length 1.9 inch), yellowish individuals all of the same species, forming a very animated, diffuse cloud about the size of a normal bedroom. The cloud's epicenter lay over a fire-ant mound from which hundreds of fire ants were emerging, about a third of them being winged. As the winged ants fluttered into the air they were snatched by the dragonflies. I doubt that a single fire ant survived its flight and for that I am grateful to the dragonflies.

For about 15 minutes I stood there trying to identify the dragonflies with the *Dragonflies through Binoculars* book Jerry Litton gave me, but the creatures simply flew so fast back and forth above the fire ant mound that I couldn't see the details needed. I concentrated so hard on the darting insects that I got motion sick and had to go sit down.

In about an hour I returned and this time a couple of dragonflies were resting on bluestem stems and now I could see that they were Wandering Gliders, *Pantala flavescens*. And what a surprise when I read that "It is the only dragonfly found around the world, breeding on every continent except Europe." The book also considers it "The world's most evolved dragonfly" because of its exceptional ability to travel long distances, including over oceans, where they may fly day and night for thousands of miles. The species is known to feed in swarms, just as I was seeing, but the more normal fare is small insects stirred up by large animals.

The part about this species that sets me daydreaming is the book's remark that the species "drifts with the wind as it feeds on aerial plankton

until an air mass of different temperature produces the rain pools in which it breeds."

Imagine -- floating for days high in the air, feeding on plankton suspended there, so attuned to air pressure and humidity that you know when temporary pools are forming below you. And it's true that I found this swarm about an hour after a nice shower. These dragonflies seem to dance through the sky like my Predaceous Diving Beetles dance through clear water.

One of my favorite books is a German one, *Die unendliche Geschichte*, or "The Unending Story" by Michael Ende. In the book, the hero Atréju rides about the world on a *Glücksdrache*, a "lucky-dragon," which is "a creature of air and warmth, a creature of unbounded happiness, and despite its enormous size, as light as a summer cloud."

These Wandering Gliders sailing in clouds of wing-glisten, so sensitive to currents of air, and tending to visit Earth mainly at that magical moment right as the sun comes out after a summer rain, are the closest thing I've ever seen to a real *Glücksdrache*.

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HONEYBEE STING

After I jog each morning I hose myself off but I keep sweating as I prepare breakfast at my campfire, as indicated by the honeybees who settle on my back, arms and legs as I work. I just ignore them and try to avoid annoying them. But Wednesday one got between my legs and when I took a step she thought she was under attack and I got stung.

When a honeybee stings you the first thing you should do is to see if the stinger has come off, for, if it has, the poison sac will remain atop the stinger pumping poison into your skin long after the bee has gone. Remove the stinger as fast as possible.

A sad thing about the bee losing its stinger is that the bee then dies within a few hours. By stinging you, the bee is committing suicide. Therefore, from the bee's point of view, the question of whether the stinging must take place is a critical one. Stinging is not done lightly.

A lot of thinking has been done about how bees could have evolved so that individuals are programmed to give up their lives for the community's

sake. To understand the answer you have to think in terms of the bee community's genetic heritage being carried by the queen, not the workers. In this light, we are almost struck with a sense of injustice when we see how expendable the workers' lives are. There's nothing democratic or even-handed here. The workers are created simply to work for the community, to sting when there's a need, and then to die.

Some serious thinkers have proposed that among such socialized insects as bees, the "individual" should be better thought of as the diffuse community of bees, not the single bees we see at our flowers. In this concept the queen is seen as like a gland secreting hormones and the workers are like corpuscles in the human circulatory system roaming about doing whatever the queen's hormones dictate. Is there really a rule in nature that a body has to be in one place -- that hormones must be transported in veins instead of on wings and six legs? We have examples of distinct species merging to form completely new life forms (fungi and algae merging to form lichens), so why can't the opposite be true, one thing manifesting itself as a community?

For me these insights are important because part of the bedrock of my belief system is that I regard human beings as being no more than highly specialized mammals. In believing this I'm not at all belittling humans, but rather regarding other animals as much more complex, self-aware and beautiful than most people admit. Therefore, if what's spiritually important in me is my "sense of identity," my "consciousness," or my "soul," then in the diffuse bee-individual to whom I with great pride claim biological relationship, just where is the "sense of identity," the "consciousness," or "the soul?"

Already it's known that in our own brains consciousness or sense-of-identity doesn't reside in any particular cell or group of cells, or nerve or organ. Even people who lose half their brain continue thinking and functioning as regular humans, perhaps showing only a certain "flatness" in their personalities. This thing we think of as our consciousness -- ourselves -- appears to just happen, maybe as a natural consequence of being embedded inside a lot of complex electrochemical circuitry. If that's the case with bees, then how pretty it is to think of the bee soul as being focused in the hive, but diffusing outwardly into communities of flowers in the fields.
Of course once you start thinking in this direction, then you come face to face with Gaia -- the Earth-Ecosystem-self-awareness-complex. In other words, maybe the Earth does feel, and react, like a single living

organism. Certainly a lot of what happens in Nature appears to support that idea. For example, ecosystem-destroying humans on an overpopulated Earth are analogous to germs infecting a human body. As the human body reacts to disease by producing antibodies to control the germ population, Gaia's body does the same thing as diseases, famines and wars appear among us humans.

And, beyond Gaia, the Universal self-aware complex...

So, this was the train of thought blossoming from my bee-sting. How wonderful to be a thinking human animal.

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ROBBERS & CHEATERS

The high deer-fences around our organic gardens are beautiful now, heavily draped with the vine my kinfolk in Kentucky call Hummingbird Vine, and people around here often call Cypress Vine, since its leaves look like feathery green Baldcypress leaves. I planted these vines because they produce many, many scarlet blossoms which our Ruby-throated Hummingbirds and some moths and butterflies go crazy for. The vine is *Ipomoea quamoclit*.

Friday I was resting after doing some hoeing, just feasting my eyes on a big green and scarlet fence-wall with its circus of pugnacious hummingbirds and my eye was drawn to a Large Carpenter Bee (genus *Xylocopa*) visiting one red blossom after another. Thing is, this bee was not pollinating the flowers. It paid no attention to the blossoms' openings. Instead, it went to the outside base of each flower, thrust its "tongue" down between the corolla and the calyx, and robbed the flowers of their nectar.

"Rob" is the right word because flowers are designed so that their pollinators "pay" for the nectar they collect by pollinating the flowers -- bringing other flowers' male pollen to their female parts, then carrying the flower's own pollen to other flowers. But this bee was actually slitting each blossom's corolla so it could get at the nectar inside, completely bypassing the flower's sexual parts. I examined the corollas after the bee visited them and I could clearly see the slit. It was violent robbery pure and simple.

All this is worth thinking about. It shows that Mother Nature condones robbery, at least on occasion.

As I was biking back from the gardens musing on the philosophical implications of this, I saw a striking mantle of white blossoms produced by the vine called Virgin's Bower (*Clematis virginiana*) completely smothering the top of a small tree in the forest. Well, vines are rather sneaky, too, for they climb into the forest canopy without taking the trouble to build their own sturdy trunks, like any decent tree or bush would. Vines "cheat" by gaining their support from others, and then they may well spread atop their hosts and shade them out, as the one I saw was certainly doing.

For one to whom "Nature is Bible," a bit of thinking "outside the box" (the box of conventional human thought) must be done to see that in the end all this is exactly as it should be.

CHAPTER 8: AUGUST

ANOLES FIGHTING ON THE FENCEPOST

Thursday as I passed by my garden I noticed two male Green Anoles, *Anolis carolinensis* ("chameleon" lizards), circling one another on a fencepost. Clearly they were contesting territory. One was a little larger than the other, and the small one had about a quarter of his tail missing. The larger was slower but kept the high ground while the smaller was more aggressive and willing to attack. Both were bright green.

Finally they lunged at one another, their open mouths ending up crosswise to one another, each with a good bit of the other's upper or lower jaw in its own mouth. At first it appeared as if each was in an equally bad situation but then the larger one, in a matter of less than 30 seconds, turned dark brown-gray. During most or maybe all of the matings I've seen, the male remained bright green while the female turned a dark, leaden hue, so the thought occurred to me that maybe the big male sensed that he was at a disadvantage in the fight, and his darkening signaled his desperation or submission. Closer up I saw that the big one not only had one of his eyes inside the other's mouth, but also several of his head scales were dislodged, and he was breathing much faster than his smaller opponent. I think he considered himself to be losing the fight.

They remained locked together like this for ten minutes, the smaller one constantly shifting his body to get a better grip, the larger one just holding on. Finally they disengaged and the circling continued, the big one walking stiffly and seemingly dazed. Soon they attacked again and the same situation developed, except that this time no eye was covered by a jaw. After about ten more minutes the big one began turning green again and the small one started looking nervous, shifting his position more frequently but never improving his situation.

Somehow they came undone, circled one another some more, the big one always maintaining the highest position despite his swollen, wounded tongue hanging from his mouth's corner, and then they attacked again. The big one continued regaining his earlier bright green color and now the small one had as many loose scales and raw-looking spots as the big one. As they chewed at one another, sometimes one would lose his grip and the other would hold him in mid air while clinging to the side of the fencepost. Then the loose one would gain a grip, give a mighty twist and flip the other into the air. It was a tremendous fight.

After about 40 minutes from the beginning they disengaged, circled one another for a while, and then I saw it: The big one had returned to his former brilliant bright greenness but the small one now for the first time was darkening. And now the small one, for every five steps he'd take forward or sideways, would take six backwards. He still looked aggressive but unmistakably he was withdrawing from the fight as he grew darker and darker.

Finally just the bright green big one remained on the fencepost as the dark small one slinked away through the daylilies.

*****

COMPOSTING THE DOMINANT PARADIGM

My dictionary's first definition of "poor" is, "Wanting in material riches or goods." I wonder if the dictionary's editors meant to be as profound with their definition as it seems to me they were? For, in their choice of words they reflected this society's dominant consumerist paradigm by employing the term "wanting," when, in my mind, they should have written "needing... " A person is poor, I believe, when someone is "needing" of material riches or goods, not just "wanting" them...

I became especially sensitive to these opposing concepts of being poor this week while draining water into the bathtub prior to washing my Kentucky quilts for the first time in a long, long time. That morning as the water poured, I made my rounds seeing what new plants were blossoming or producing fruit, how high my Moonflower vine had grown in the night, whether new mushrooms had sprung up, how my anoles and fence lizards were doing, and I was feeling prosperous and fortunate beyond description.

Yet, I could probably qualify for welfare because my yearly income is so low. Despite my sense of affluence and despite my having much more than I really *need*, and certainly not *wanting* more "material riches or goods," the world around me often classifies me as "poor." Moreover, many would be annoyed that on a weekday morning I myself was not in a car hurrying someplace to a paying job.

The crystalline, soul-pleasing water gushed from the ground joyously gurgling and splashing after long confinement in the aquifer. The sun sparkled in the water and I drank deeply and bathed in it, and watered my plants and compost heap with it. What enormous potential I envisioned

for us -- me and this water -- and how many degrees of fulfillment I experienced at that moment!

I wish I had a way to compost this culture's dominant motivating paradigm that assigns one to poverty simply if little money is at hand, and declares that one is wasting his or her time if not perpetually employed with earning a weekly salary. I should like to shred that paradigm and ceremoniously dump it into the straw and dried pig manure of history, then stand yodeling and lustily pee on it.

What pleasure it would be one morning to see it black and spongy, steamy in the morning air and smelling wholesome and well intentioned. If I could do that, I believe I should enrich the whole world many-fold, and happiness would emerge everywhere like well-formed mushrooms from perfect compost.

*****

DEW-BATHING TOWHEE

Early Tuesday morning before the dew had begun burning off I noticed a commotion at the forest's edge. That particular spot was very densely vegetated with Chinese Privet up through which grew blackberry canes and honeysuckle, and the whole thicket was topped with a canopy of grapevine.

My binoculars revealed a young Eastern Towhee still wearing his brown, streak-breasted juvenile plumage, and he was taking a dew bath. Systematically he'd pull himself up to the thicket's grapevine roof and then body-surf one or two feet down a downward-arching cascade of wet leaves or else he'd position himself atop the vegetation's surface and simply flutter his wings, twist his body, throw his head back, and let himself sink through the dew-slick herbage. After about ten minutes his feathers were dark with wetness and then he flew to a perch to preen exactly as if he'd taken a puddle-bath.

The young towhee's body language clearly indicated that he regarded his bath as a pleasure, not a task. It was the bird's first August and he was just learning how an August fog can coalesce into a blissfully cool, wet dew. What a revelation it would be if I could just see the world for a moment through the eyes and mind of that young bird rejoicing so prettily in his wet leaves.

*****

GHOST-HAWK
Another powerful cold front barreled through here Thursday afternoon bringing a second shot of coolish air in two weeks. The storm announcing the front was impressive, a really dark one with a well-defined boundary between the rainfall below and the roiling clouds above.

Right during the windiest, darkest moments preceding the white curtain of rain's arrival here, a white-looking hawk came into view. The binoculars showed it to be a Red-tailed Hawk and really I can't say whether he was any paler than normal, or whether he just looked white because of the very dark background.

Whatever the case, that hawk presented a majestic, ghostly appearance. The wind must have been terrible where he was, for he was being blown before the storm like a sheet of newspaper high in the sky experiencing violent downdrafts, updrafts, and vortexes. Not quite like a newspaper, though, because he had some control and -- this is the thing -- as with the young towhee, his body language told me that he was having a lot of fun.

On the ground other birds were frantically seeking shelter, flying hard and low, the sense of emergency clearly indicated in their demeanors. But that white specter in the fearful-looking sky for the few seconds he remained in view was like a teenager catching his first good wave with a surfboard. He had enough control to descend if he wanted, but this is the season when hawks get the wandering urge, so maybe he just didn't want to. Maybe this storm just struck some kind of chord in him that said "Instead of scrambling for shelter like a mouse, just latch onto this mightiness, go with it, and exult in being a free-sky hawk!"

It'd been one of those super-sultry afternoons when you have to fight to keep focused and busy, so that storm with its sudden gushes of coolness and powerful animations all around me, and that ghost-hawk performing one broad laugh all the way across the sky, was just what I needed.

*****

PEARS, SCYTHING & YELLOWJACKETS
Exactly as the fig harvest petered out, the pears began dropping, so this

week each morning my first job has been to collect pears. Last year we had almost no pears because in spring a late frost nipped nearly all the flowers, but this year every tree is heavy with fruit, some branches simply overwhelmed with them. Some pears are big as cantaloupes, and when I bite into them the juice mats my beard, but I don't care. Before I began gathering the pears, tall grass and blackberry brambles had grown up beneath the trees so I'd had to do some scything.

Now, scything is something beautiful to me. You probably know that a scythe consists of a long, curved blade at the end of a handle about five feet long, and that the handle is curved in a special way. It's the implement carried by Grandfather Time. I feel very fortunate to have been taught the basics of the art of scything when I lived in Belgium, by a fellow who, when he had been a shepherd in Normandy, had learned from an old scything master.

Scything across a field of tall grass, having your rhythm going, seeing the tall grass collapsing evenly where it should, and leaving a clean swath behind you is a form of mediation, a sort of communion with the Earth and the seasons. Few people experience it nowadays, though at one time scything was a basic agricultural task in many of the world's economies. Unfortunately here I don't have a blade meant for tall grass, nor do I need to cut much tall grass. Still, with my shorter-bladed "briar-scythe" I can recall my earlier classical scything in Belgian meadows.

So, I was scything short passageways through tall grass between trees and I felt my blade slice into a hill of dirt. I figured it was just a fireant hill and continued. But then something bulletlike zapped my right ear, I felt little legs tangling in my hair and beard, and I knew instantly that I'd scythed into a yellowjacket hill.

I was lucky that most of the yellowjackets tangled in my hair and stung the bandana sweat-band around my head, for I managed to get away with only that one sting on the ear. I got away fast without thinking too hard on it, leaving the scythe where it fell. The next morning I returned to retrieve the scythe and to my astonishment a decent cloud of yellowjackets was still active above the decapitated nest. Four days later, however, the cloud had disappeared, though a few individual wasps were still buzzing about. The ear was puffy for a couple of days and it hurt like the dickens.

As summer ends and cool weather comes, yellowjackets become even more aggressive than they are now. One reason for that may be that the individual wasps don't have much to loose by getting into a fight, for when cold weather really arrives they will all die, except for the queen. Only the queen will survive winter, and then next spring she will find a new place and begin the colony all over again in a new nest.

*****

BIKING ADVENTURE
On Friday morning I was biking to the organic gardens, thinking only of my morning chores. Right before reaching the upper garden the dirt road passed through a narrow space between the tool shed and the giant bamboo patch. Because of recent rains water had pooled in the road's ruts, so I had to be careful to keep the bike from slipping into deep rut-water.

And then I realized that my bike's front tire had just run over the tail of an *Agkistrodon piscivorus leucostoma* - a Western Cottonmouth, also known as Water Moccasin. This is a very dangerous venomous snake.

My reflex was to slam on the brakes in order to keep the back tire from discomfiting the critter even more, but the moment I found myself balancing on a stationary bicycle with both legs spread out, and the snake below me stabbing at my tires, I wondered if stopping had been the wise thing to do. Even under those circumstances I realized that eventually my bike would tilt one way or another, and that my legs would have to come down.

Fortunately it was a small snake, only about 30 inches long, so when I finally had to bring my legs down I could spraddle them so that my feet didn't distract the snake's attention from my tires. I managed to inch my bike forward as the snake slipped into another rut's water, sending frogs jumping like popcorn.

I returned with a bucket, coaxed the snake into it, put a lid on it, and carried it to a lake across the hill.

*****

SOWING TURNIP SEEDS
A week ago I sowed a big bed of turnips. Now at least ten times every

day I visit the turnip bed, though I know there won't be much new to see since the last time. It's clear that I go there for purposes other than to garden. I think it's purely for the magic of it all.

The seeds I sowed had been two years old. They'd resided in a brown paper bag during the frosts and drizzly days of two winters, they'd sat inside a junked refrigerator in a dusty shed at my former residence through any number of spring storms, they'd smoldered through long dog-days of summer, they'd heard evening crickets and katydids on at least a hundred fall nights, and during nearly all that time I was forgetting that they were there.

But then one morning early last week I walked over freshly broken ground broadcasting those seeds, moving my arm back and forth like a magician over a hat. The seeds were so small I couldn't see them as they fell, or hear them hit the ground, only feel them leaving my hand. I strewed mulch over them and watered the area, and then for a few nights and days I waited as each seed sought and found within its own private darkness the life inside it.

Eventually, being born, each plant struggled up through Earth's mineral clottings and debris, resulting in a bed of thousands of dark green little plants, each with its two first notched leaves (its cotyledons) being perfect solar panels elegantly aligned for gathering star-energy for the synthesis of carbohydrate -- which someday I shall take into my own body as good-tasting, soul-pleasing fuel.

It's all magic, all mystery, all perfection. How curious that reality should be constructed in such a manner that a mere hermit working in a barn should be able to delight in such majestic goings-on.

*****

ON REALLY SEEING A SEED

Back to those turnip seeds. Or any seeds, for that matter...

A seed is something Mother Nature thought up as an appropriate vessel for transferring information from one generation to the next. The transferal of this information is especially dramatic and artful because typically it involves a being at the end of one season handing off the information to an unknown being living at the beginning of a completely

different season. Moreover, usually the two seasons are separated from one another by a deadly winter or dry season.

To really see a seed, your mind must penetrate the seedcase and bypass the endosperm, radicle and plumule, and focus on the coded abstraction set within the chromosomes. I mean the DNA code, the code spelled out in terms of nucleotide sequences, the code that gives instructions within cells on how to make living things and keep them alive. As far as life on Earth is concerned, there's no more important information than this.

Deep inside those seeds, how tiny and fragile are the slender, spiraling molecules on which the code is written. You can scramble or destroy the information coded there simply by exposing the seed to X-rays, alpha, beta or gamma rays, to war's mustard gas, great heat or cold, or a host of other environmental factors or pollutants.

One of the most interesting features about genetic material has been explored in Richard Dawkins's book, "The Selfish Gene." In that book Dawkins claims that "We animals exist for their {the genes'} preservation and are nothing more than their throwaway survival machines."

Among other things, it turns out that much genetic material consists of abundant repetitions of the same information. It's as if the coded information is aware of itself and rejoices in reproducing itself, even if the replicated information is of no value to us, the biological organisms carrying it.

To really see a seed, you have to make yourself vulnerable to the notion that maybe we biological entities are only notes on a sheet of music, and what's really important is the music, not the notes -- that the Creator rejoices less in us carriers of information, than in the information itself. After all, the Creator worked on us for only a few years, but the information held in any seed represents the crystallized results of experiments in life conducted during more eons than we can know.

To really see a seed, you must close your eyes and imagine a music in which the whole Earth is a single note in a vast melody that goes on and on.

Then, you get up and go look at your turnip patch and see all those little green plants with their solar panels directed toward the Sun, and what can you do but laugh with delight?

*****

IF THERE WERE AN EINSTEIN TADPOLE

Tadpoles appearing one day this week in my dishpan got me thinking about one of the essays in a book I'm reading by Albert Einstein.

In his essay "Religion and Science," Einstein considers man's religions from an evolutionary perspective. He notes that primitive religions concern themselves with gods who manifest themselves in more or less understandable forms (as plants, animals, rocks, symbols, humans), and their main job is to grant favors and protection. A later-emerging type of religion conceived of there being a single "God of Providence" ("providing god") rather like a celestially based, stern but loving patriarch in a large family. Our current major religions, including Christianity, are of this kind. Finally, there's what Einstein calls the "cosmic religious feeling," which conceives of a universality (which I would think of "the Creator") to which it is pointless to pray for favors, but which is so majestic and awe-inspiring that by reflecting upon it one is "filled with the highest kind of religious feeling," as Einstein writes.

If my dishpan tadpoles were somehow to begin feeling a need for religion, I wonder what gods they would come up with? I suppose that some might begin worshiping certain algae cells some one of them had espied glowing a certain way suspended in the water in a beam of sunlight, or maybe they would worship their own reflections in the dishpan's shiny aluminum. The more sophisticated tadpoles might sometimes catch a glimpse of me with my magnifying glass looking down at them -- this huge eye-in-the-sky, the God of Providence who thumps them cornbread -- and they would produce tadpole priests and tadpole mullahs and tadpole rabbis who would assiduously and interminably interpret and reinterpret the meanings of every little thing I did.

And if there were an Einstein among them, I suppose he would just keep quiet and write in obscure forums, suggesting that it is hardly to be expected that the God of the Cosmos would be at the beck and call of every wiggly little tadpole in a dishpan, though, admittedly, it's quite wonderful for this brief moment in eternity to be granted the perspective of a tadpole in sparkling water temporarily pooled on a random, laughing hermit's warped and moldy, falling-apart, outside table.

*****

A PLEASURE OF INSECT SOUNDS

The constant background sound of calling insects has been growing week by week. This was the week, however, when the stridulating, ticking, clicking and general tintinnabulating mounted in such a crescendo that no longer was it mere background, but rather something substantial in itself. At first reckoning you could say that the landscape shimmered with these diffuse, insistent sounds, but the fact is that sometimes the din was the landscape itself, with everything else mere staging.

There's one particular cricket each night on a Persimmon limb right next to where my head lies on the sleeping platform. Concentrating closely on each chirp I think I hear ebbs and flows of cricket feelings. This, despite knowing that if you cut off a grasshopper's head the grasshopper will still hop and wander around, so it's doubtful that insects have much feelings at all. Maybe crickets channel the night-spirit itself, chirps being pulsations in the veins of a brooding Earth-consciousness, of Gaia. Well, these are thoughts you have nodding off as a cricket calls next to you.

I became most vividly aware of this new level of insect calling one day this week when I went to the mailbox. The mailbox lies across the road, beside the property I've told you about where the owner has spent most of the summer having men "clean up" his newly purchased farm -- bulldozing hedgerow habitat and bush-hogging and lawn-mowing everything else, except what he converted to broad, brown, strips of naked soil with powerful herbicides.

At the mailbox I experienced that sensation you get when you walk out of a woods and realize you've grown accustomed to the continual rustle of tree leaves, and now you miss them. Or when you emerge from the ocean and regret leaving behind the sound of the surf. Beyond the mailbox, habitats of crickets, grasshoppers, katydids and everything else has been so single-mindedly obliterated that there the music simply ends.

In that German children's book I told you about a while back, where the hero Atréju flies over the land on his lucky-dragon, the enemy was a vast grayness inexorably spreading everywhere robbing all color and life from the landscape. Though the damage done by the enemy was all too clear, the enemy's exact nature and purposes never were quite understood.

I think I grasp at least a part of what real-life's grayness-spreading enemy is: It is that region of the human character that prefers short-cut lawn-

grass to life-giving habitat. It is that part of the human character content to ally itself with bulldozers and herbicides, and not the gentle magic of cricket chimes.

*****

THREE TOM TURKEYS AT WANDER TIME

Late Wednesday afternoon I'd gone into my trailer to check something in a book when I looked out my back window and saw three tom turkeys sauntering down the grassy road to the entrance, not ten feet away. Surely the turkeys' minds registered the strangeness of the barn with its open door, and my trailer with Beethoven playing on the radio, and the danger of being in an open area so close to the highway, but there they were.

I hadn't realized what large, otherworldly birds Wild Turkeys really are. Surely when they stood erect their heads were three feet high! Being hot, they walked with their beaks open and held their dark feathers so close to their bodies that the feathers looked like scales. In fact, the first thought I had seeing them was that it was true what a paleontologist recently said -- that the dinosaurs never went extinct. It was just that the scales of some dinosaur species elaborated into feathers, and those dinosaurs are now known as birds.

From the breasts of two of the birds arose slender, black, horsetail-like "beards" so long that they nearly touched the ground when the birds walked bent low, searching for grass seeds. The third had the beginning of a beard, about two inches long, which weirdly stuck straight out from his chest like a stiff, black finger. I read that "On the approach of the first winter the young males show a rudiment of the beard or fascicle of hairs on the breast, consisting of a mere tubercle, and attempt to strut and gobble; the second year the hairy tuft is about three inches long; in the third the turkey attains its full stature, although it certainly increases in size and beauty for several years longer."

This suggests that I was seeing three male toms, two in their third year and another in his second. However, it isn't clear from what part of the country the author wrote the above, and maybe our birds grow beards on a different schedule. Another source says that females rarely grow beards, so maybe the short-bearded one was a female?

*****

BLACK RACER EATS FROG

Walking down a bayou's dry, sandy bed, a flicker of movement caught my attention at the corner of my vision. I looked up just in time to see a tangle of frog legs and loopy, black snake-coils rolling down the creek bank like a rubbery tumbleweed. I'm only half sure the victim was a Southern Leopard Frog, for most of its body already was inside the snake's mouth and throat, with just its flailing front legs and head showing. The snake's identity was clear, however: It was a Southern Black Racer, *Coluber constrictor priapus*.

On the streambed's sandy floor there was still some fighting to do. The frog's four powerful legs scratched, pounded, pushed, and held on in every conceivable manner to slow the body's slide down the snake's gullet. The snake, in turn, with no limbs at all, could only try to hold on. Racers possess only regular teeth in both jaws, with no enlarged fangs with which to stab into their prey, so sometimes it looked as if the frog might succeed.

However, after about five minutes the frog tired and blood issued from its nostrils. Sensing victory, the snake made a series of forward lunges, each advance taking the frog deeper inside. In the end only one arm -- unnervingly like a small human arm bent at the elbow and with fingers spread wide in alarm -- poked from the snake's mouth corner. Then even that vanished.

The racer hardly missed a beat. As soon as the meal was definitely inside, instantly the search for the next victim began as the snake moved back to the overgrown slope and disappeared inside it.

Something special about a racer is that, when hunting, the back three-quarters of its body moves across the ground while the front quarter rises vertically, with the snake's head at the top hooked forward and held horizontally. Thus, when we see them, usually the snake's back part is hidden in the grass while the front, high-held part with the hooked head seems to progress forward by no visible means of propulsion. Such a snake with its unblinking eyes' fixed forward makes a majestic, spine-tingling passage through tall grass.

*****

ON THE PLEASURES OF PAYING ATTENTION

These days are like the minimalist, modern music of Philip Glass. At first that music seems monotonously repetitive. But if you stick with it you begin noticing that the piece is forever changing. The same melody may be repeated again and again, but now it's in a different key, now it's accompanied by counterpoint, etc. Once you get the hang of it, Glass's music can be a pleasure.

In the same way, these days seem all alike, yet every day there are delightful changes if you pay attention.

The process of learning to pay attention is itself a pleasure. Years ago when I began studying yoga and for the first time in my life focused on the joy of breathing, of stretching and relaxing muscles one by one, of merging with my own heartbeat -- it was like being born again. A similar awakening took place in college when I discovered a book on Japanese flower arranging. Day after day I would look at a certain few arrangements, constantly discovering new patterns, new color combinations, new tensions in the interplay of symmetry and asymmetry.

You can train yourself to pay attention. This Tuesday morning, for instance, I consciously made the effort to absorb what I could of the essence of a certain mushroom. For a good while I hunkered next to the mushroom smelling it, admiring its rich colors and unusual shagginess. I visualized its network of hidden hyphae gradually migrating throughout the leaf litter below us, then one recent day budding and sending up this mushroom. I visualized spores dropping from beneath its dusky cap at that very moment, riding air currents I couldn't feel, heading for unknown forests perhaps far away. I spoke to the mushroom, called it by its name, and this worked certain connections in my own head.

Yesterday I spent a good amount of time standing beneath an umbrella-size, star-shaped leaf of a 15-foot high Castor Bean (known locally as Mole Plant), admiring how the sun caused the plant's leaf tissue to glow a certain bright yellow-green the mere seeing of which evoked the sparkling hum of sunlight during photosynthesis, of leaf cells dividing, and of sweet sap surging through the leaves' phloem. I imagined myself inside the leaf, sunlight-glowing, and sweet-wet myself. Like the plant I felt myself sky-reaching, issuing strange flowers with primitive-looking bunches of stamens on repeatedly branching filaments, and with those crazy-looking, purple-feathery styles.

Whenever something touches you the way my mushroom and Castor Bean plants did me, it's an invitation by that thing to commune. Maybe there's no more beautiful thing a person can do than to consciously and whole-heartedly experience the Creator's works, to rejoice in the mere act of doing so, and to be grateful for having had the opportunity.

*****

WRENS & DOODLEBUGS

The Carolina Wrens with whom I share my outside kitchen spend at least half an hour each day, mostly in the late afternoons, dust bathing beneath my kitchen's tin roof. Sometimes with my binoculars I watch them simply because it's a pleasure seeing them enjoy themselves so much.

They do every kind of fluttering and flopping, creating round-bottomed pits in their favorite spots, but their most spectacular movement is when they fluff their feathers and with their feet hidden beneath them scoot across the dust like mechanical mice with frantically wagging tails. They rub their cheeks in the dust and sometimes lie on their sides with their bottom wings held so that plenty of dust reaches the tender spots beneath the wings. They usually bathe together and often after particularly long bouts of bathing one suddenly stops, and then the other stops, and they look at one another (I see them both panting from their exertions) and I wonder what they are thinking as each gazes at the other absurdly fluffed-out, exhausted and dusty creature.

All this has been hard on my doodlebugs. Before the wrens discovered my dust, the dust was the sole domain of about 30 of these little creatures, which the books prefer to call antlions. Doodlebugs, or antlions, are the larvae, or immature stages, of an insect something like damselflies or lacewings, which are slender flying insects with delicate wings. Doodlebugs dig conical pits in the dust and hide themselves beneath their pits so that their jaws are open, inside the dust, exactly at the pits' bottoms. When an ant or other small insect stumbles into a pit, the doodlebug clamps its jaws upon a meal.

I know why I've always had a special fondness for doodlebugs. It's because my father taught me something about them, and usually my father was not a good one for teaching. Still, my father taught me that if you get onto your hands and knees and put your face up close to the

doodlebug pit and say "Doodlebug, doodlebug, your house is on fire," the doodlebug will knock dust in your face.

It really does this. It's because your breath dislodges particles into the pit, and the doodlebug automatically knocks the debris back out.

I'm amazed that I take such pleasure in having a doodlebug knock dust in my face. Doodlebugs have caused me to reflect on how easy it is for a father to please his son with such modest investments of time and energy. Parents in the human species have enormous powers, and responsibilities.

*****

DEW DROPS

Each morning as I'm awakening on my sleeping platform in the woods I hear water dropping all around me. Dew has condensed on the trees' leaves above and when there's enough dew, drops fall. This has begun only recently. I don't know why it didn't happen in June and July. Sometimes a drop hits the mosquito net above my head and shatters into a fine spray. It is not unpleasant to awaken with a fine, cold mist showering your face. If there were several drops it might be messy, but, just one is more like the intellectual distillation of a kiss from a friend, and usually there is only one.

*****

THE BIRDS OF AUGUST

Most of the bird world is very quiet now. On muggy Tuesday morning I took a walk paying special attention to the matter, and it was clear that many birds who were here all summer now are absent and nearly all the rest have fallen silent.

That's not the case with everyone, of course. With thousands of Cypress Vine blossoms and other morning glory flowers gracing my garden fences, the hummingbirds make a continual circus -- not only taking nectar but also chasing one another. The other day I saw one performing a classic flight display, flying broad Us in the air, just the way males do to impress females in the spring. But this time there were no females to be courted, just a silly male feeling his oats before heading south for the cold months.

Crows call all year, especially at dawn. Every day a certain Red-headed Woodpecker makes his rounds flying from tree-top to tree-top, harshly *kwrrrrk*ing and accompanied by his kid, one with a brown head, not the Red-headed's splendid red. Occasionally a Blue Jay screams deep in the woods, and every day I see Mourning Doves streaking low overhead as if rushing in a straight line to work, their wings whistling sharply through the air.

Still, during my Tuesday walk, mainly I was impressed with how quiet and secretive the birds were. Sometimes I heard a Carolina Wren briefly complain about something, but not nearly as vociferously as usual. Deep inside a shadowy thicket of Winged Sumac a mere silhouette of a Catbird silently shifted from branch to branch. Here and there in the broomsedge a sparrow's solitary peep arose, and I heard single notes from Bobwhites running through the grass, but, really, there wasn't much more than that.

For one thing, a lot of birds are molting now. They don't look so good, plus they can't fly as well as they usually can, and they won't be able to fly well until strong new primaries stiffen in their wings. The lower the profile molting birds can keep, the better. Also there's the matter that breeding and nesting is simply finished for the year, so what's there really to do other than quietly eat and store up fat for the winter, and draw as little attention to yourself as possible?

Many species at this time of year get the flocking urge and my impression is that those flocks have chosen somewhere to be other than here.

So, the forests and fields are eerily quiet in terms of birdsong. However, insects are doing their best to fill the void.

*****

LATE SUMMER DAYS

This week we've seen quintessential late summer days. More than once I've found myself gazing across the Loblolly Field into the cloudy sky savoring while I can the feelings associated with skin-stinging sunlight and hot humidity.

These days most mornings begin with fog beading among my beard and hair legs as I jog. Toward the run's end the sun rises over the neighbor's pasture with a crimson glare. The smoke of my morning breakfast fire curls and recurls, not knowing how to mingle with fog. But soon the fog

burns off, and then there's a brief chorus of hesitant birdcalls, the Towhee, the Cardinal, the Blue Jay, the White-eyed Vireo, the Hooded Warbler. Sometimes I glimpse these birds gorging on caterpillars, muscadines and Black Oak acorns, but after mid-morning usually they're not much seen or heard for the rest of the day.

In fact, the rest of the day would be almost silent but for the insects. Insects calling monotonously hour after hour almost define the feeling of these late summer days. Cicadas buzz-sawing from shadowy trees and, in tall grass, meadow grasshoppers *bzzzzzz-zip-zip-zip-zip-bzzzzzzzz*ing...

By 10 AM cumulus clouds already mount into a sky that's more milky than blue. You see by the clouds' jaggedness that by afternoon they'll coalesce into thunderheads, and the only question is whether the thundering will begin early or late.

Afternoons are too hot to move through. Once the computer work is done, it's just enough to sit waiting for the storms. Sometimes it's hard to know whether the slate blue regions spreading across great regions of sky are blue sky or rain-filled storms. It's nearly always storms, and usually the storms miss, but sometimes they hit. How cool and fresh those storm breezes are, and how welcome the rain, pouring off the barn's tin roof, the odor of mud and wet grass, the feeling of wet grass beneath my feet, the treefrogs calling.

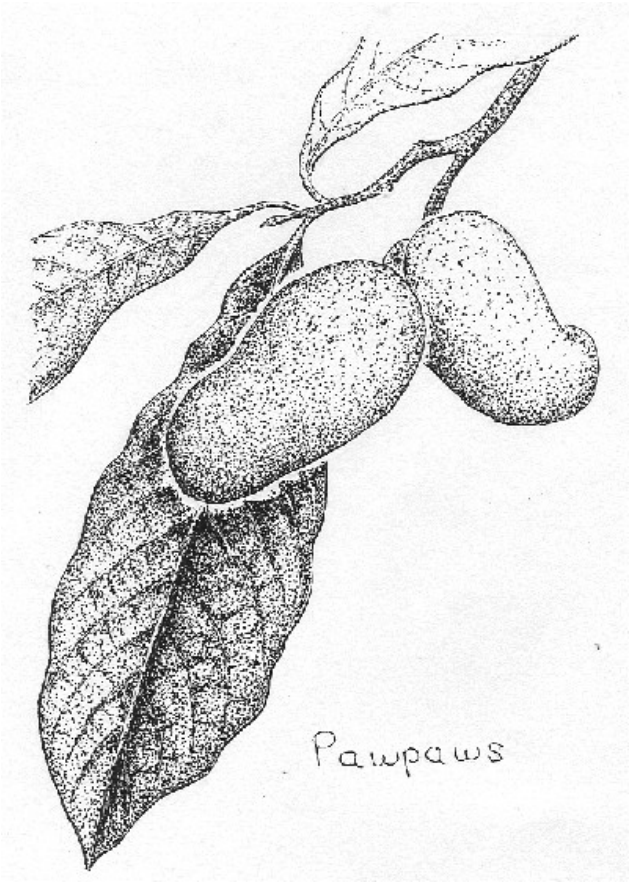
At dusk I sit in my rocking chair reading, almost forgetting whether this day is today or some other rocking-chair dusk of long ago or tomorrow. It's all the same, endlessly the same, each day being a perfect example of exactly what it is.

Then at night what dreams a hermit has, awaking now and then to sounds matching dreams. The Screech Owl and Coyote, and hisses and thumpings and whoopings completely uninterpretable, hardly fitting into any sane world.

CHAPTER 9: SEPTEMBER

MUSCADINES & PAWPAWS

Suddenly the air has dried a bit. The eternal heavy humidity has let up and sleeping beneath the mosquito net in the woods is even more pleasant as, at least toward dawn, it grows coolish.



The early-fall feeling diffuses through the daytime woods, too. You can't walk far without turning up a few dark purple, luscious muscadine grapes lying on the ground, or some musky, yellowish-green pawpaws. This year our muscadines are as abundant as ever, but the crop of pawpaws is only normal, not the bounteous amount of the last couple of summers.

We have several species of wild grape in the forest here. Muscadine Grape, *Vitis rotundifolia,* is easy to distinguish with its small leaves only about three inches across, and its large, thick-skinned, purple grapes. The leaves are glossy on both sides and crisp like the paper of a high-quality ad in a glossy magazine. The muscadines' thick, high-climbing stems sprout long-dangling, reddish aerial roots. If you're still unsure whether you have a muscadine, then here's one final secret:

Break a small stem off the big grapevine and with your knife cut down the middle of the stem lengthwise. Inside the stem you'll see that the wood is white but there's a brownish pith. Well, in species other than the Muscadine, at those "nodes" in the stem where buds and leaves arise,

the pith is interrupted with a kind of diaphragm. In the Muscadine, the pith continues right through the node.

Sometimes the muscadines are so acid and sharp that as you saunter through the woods nibbling you want to swallow them whole, seeds and all. But then comes a pawpaw tasting just the opposite, darkly musky and sweet. One moment in a beam of dazzling sunlight, the next in a moody shadow, now a grape, now a pawpaw...

*****

TADPOLES OVER THE EDGE

During a late-afternoon rain on July 31, frogs left eggs in the dishpan in which I wash next to my trailer door, and each week since then I've reported on the developing tadpoles. About an hour after I issued last Sunday's Newsletter a storm came up and simplified the dishpan's overpopulation problem. The dishpan lies beneath an awning from which water dribbles into it. During last Sunday's rain the dishpan overflowed. I stood there in the downpour watching tadpoles flow over the edge to certain death on the ground below. I let this happen because of my realization that there were just too many tadpoles there. Even if all the tadpoles somehow made it to adult frogdom, the local ecology could never support so many frogs. I watched as about half my tadpoles went over the edge.

Standing in the rain with all my conflicting feelings, this question occurred to me: Am I not to my tadpoles in their dishpan approximately what the Creator is to us humans on Planet Earth?

Having that insight so vividly placed before me, and remembering some times in my own past when I could have used a bit of divine intervention, I thought: "Obviously the Creator has made us tadpoles and humans this way, but why wouldn't it have been just as easy to formulate us so that neither tadpoles nor humans were predisposed to commit the excesses and errors that get us into these awful situations? Why build a frog whose vast majority of offspring must die before reaching adulthood, and why build humans programmed for the arrogance and aggression that's screwing up our world right now?"

I cannot recall the path my mind took from the moment of that thought, but I can say that leading directly from it suddenly there arose a flash of insight. For perhaps a thousandth of a memorial second I understood that

the moment the Creator cleaved matter from primordial energy, the die was cast for things to be the way they are, frogs and people. I understood clearly that in any Universe in which matter existed apart from nothingness or pure energy -- where there was stuff of touch and movement, stuff that interacts and evolves -- then tadpoles over the edge become inevitable, and so do hermits with hard memories and hemorrhoids.

During that micro-moment in the pouring rain I understood profoundly that without pain there cannot be pleasure, without darkness, light.

An hour after the rain, walking around still stunned by the intensity of my insight but already gradually losing the thread of thought leading to my discovery, I noticed that ants were tearing at the drying-out tadpoles on the ground below my dishpan table. Up close I even smelled the fishy odor of tadpoles coming undone.

Yet, it all seemed right. If during this last month my emotional currency had been invested in ants instead of tadpoles, I should now be as close to the ants as I am with the amphibians. And I would be rejoicing with them that during this recent rain these gelatinous packets of dark, speckled protein plopped onto the ground from above, a kind of manna from heaven, just what the Queen and her colony needed.

And I stepped into the trailer laughing at the world, laughing at myself, just laughing.

*****

RIPE MAYPOPS

Each morning a bit before sunrise I go jog. During recent days I've kept my eye on a Passion Flower vine, *Passiflora incarnata*, growing luxuriously on a roadside fence along my jogging route. This amazing plant, a native species also known as Maypops, is fairly common around here. Even though the vine often grows as a weed, its big blossoms (1.5-2.5 inches wide) are among the most gorgeous of our native plants.

It's not the blossoms I've been interested in seeing, however. They've been around since June through August. What catches my attention now is the fruits, which look like large, green hen-eggs affixed with a little stem. The thing is, you can eat those fruits.

If you collect the fruits when they're too green, inside they are white and pithy, and the taste is bitter. However, if you wait until the fruit's skin begins showing a few spots and a slight yellowness, and the flesh is a little yielding, then the insides are filled with small, soft seeds contained in wet, translucent, packets of sweet-tasting goo.

This gooey stuff is very fragrant and sweet. It's hard to believe that you can walk up to something lying on the ground -- for the fruits usually fall off once they're ripe -- break open the leathery shell, and scoop out something edible that tastes so good.

The main problem most people have with passion-fruit goo is that it's filled with many seeds a bit smaller than grape seeds. I just chew the seeds and swallow them. They're soft and don't taste bad, and if you eat the goo from only a few fruits it won't hurt anything.

Passion Flowers are members of the Passion-flower Family, a family whose approximately 400 species are nearly entirely limited to the world's tropics. We have two species here, which are thus remarkable in that they thrive in the Temperate Zone. In traditional Mexican markets I love to buy *Granadillas*, which are baseball-size fruits of the Brazilian *Passiflora edulis*. They provide more edible material per fruit than ours, but ours may taste even better.

*****

COMPUTER, COMPOST, BULLFROG & ART

This week I've had awful computer problems and I'm still not back to normal. For most of four solid days I've struggled to patch together parts from three old computers to make something that works. This Sunday morning I'm still having problems, needing to pound the table to get an image onto my screen.

Thursday I took a break from my computer woes by going to say hello to the compost heap. I found it happily cooking along at an interior temperature of 138° . For a while I just stood there reflecting on how my activities could be so disrupted by a few electrons inappropriately digitally distributed, yet, simply by lying there, all along this compost heap had been accomplishing exactly what it wanted.

My first thought was that, by keeping things simple, that heap had managed to reach a kind of Buddhist perfection. Its high cooking

temperature resulting from the breakdown of complex organic materials into basic soil-building nutrients and particles seemed to me a kind of biological equivalent to the path to nonexistence and Nirvana. But then I remembered that, actually, a compost heap is quite complex. Its proper function depends on the well-timed interaction of trillions of living individuals and thousands of kinds of individuals, from bacteria to millipedes.

In fact, it occurred to me that nothing is really completely simple. For example, This week Larry Butts up near Vicksburg sent me a picture of a bouquet he'd created for his wife. It was wonderful, containing thistles, honeysuckles, and lots of other "weeds" and wildflowers from along his gravel road. One might say, "Oh, it's so pretty because he's simply stuck a bunch of pretty things together," but a closer look reveals that the arrangement was successful largely because it adhered to certain laws of proportion based on complex geometry, and color aesthetics that were actually quite subtle.

Likewise, some would say that in terms of maturity and sophistication no human society has ever surpassed that of China's ancient T'ang Dynasty. Among the most treasured relics of that society are haiku by the great T'ang poets. And what, at first glance, is more simple than a haiku? Here is one I recently wrote while sitting next to our pond:

A silent bullfrog...
Of what good is such a thing
Just watching me sit... ?

At first glance, it's childishly simple, saying almost nothing. Yet, if you reflect on it awhile, maybe you can see that this poem invites questioning of the definition of "good," and one's own expectations. Maybe even it reveals something about me as I question these particular things in this particular manner... all in 17 syllables!

It's as if in life at first everything is simple, but then you see how complex it is, but if you live long enough and if you mature enough, eventually you find simplicity in that complexity, but expressing that simplicity is not simple at all, for that, maybe, is the domain of art.

Anyway, if during upcoming weeks I miss putting out a Newsletter or two, it's because my old homebrew computer has finally bitten the dust, and I'll

be back online eventually -- unless I lose track of time while keeping my compost heap company.

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BIG, YELLOW PEARS

As pawpaws disappear from the woods, the pears in our little orchard ripen. I don't know what variety these pears are but I suspect they are an old one. They're yellowish green, mottled with green and golden blotches. They can be larger than a softball and often the bigger ones are more spherical than pear-shaped. They are very hard, crisp, fairly grainy, and tart. In fact, I prefer them cooked, since that mellows the tartness and makes them sweeter.

Each morning during pear season I prepare a skillet-size hunk of "bread" consisting of about 4/5ths sliced pears, and 1/5th batter made of half flour and half cornmeal, plus a couple of sliced jalapeño peppers. I like the hot-sweet taste embedded in a basic offering of cornmeal. I bake the "bread" over a wood fire until it's leathery on both sides, and golden, speckled with black burn marks. I thump the bread to see if it's ready, and the thump sound reflects the tough exterior, and moist, gooey interior. When the thump sounds just right, I salivate like Pavlov's dogs. I don't know if this recipe would taste good prepared in a regular kitchen. Often I've tried to prepare my hermit meals in civilization, but usually such concoctions don't travel well. Maybe it's the different energy-wavelength radiated by a campfire, or maybe it's the woodsmoke's flavoring.

When I first visited this plantation in the early 80s we had a sizable orchard with many varieties of apple, peach, plum, cherry and pear, but now nearly all the trees have died from diseases and neglect. Only this variety of pear survives, and its trees remain handsomely robust. Each year -- unless a late frost nips the flowers -- they produce a bounty. You walk up to a limb almost at the breaking point with so many pears, give it one little shake, and a dozen or more big fruits tumble to the ground.

If I'm ever dying and have the time to think back on the more wonderful moments of my life, I think I'll try to remember a few of my best pear-storms -- of when my tug on certain overladen branches released avalanches of a bushel or more of huge, profoundly tart, yellowish-green fruits that bounced in the tall green grass below sounding like galloping horses, and of course a few landing on me, as if the tree were a playful friend.

*****

MOON DREAMS
We had a full moon last Sunday, September 2, but the rains hid that fact. By Wednesday I could start sleeping outside again, and then the remnants of that moon very much became a part of each of my nights. At dusk there would be no moon and the forest would be uncannily dark, but then I would sleep a few hours and when I awakened deep inside the night I could look through the trees to the broomsedge field beyond and see that every clump of grass, every bramble and bush was chiseled perfectly in silver, and that the moon shone painfully bright above. During full moons my dreams are much more vivid, colorful and memorable than other times, and I astonish myself with what images and ideas emerge from inside me. Well, studies show that it's the same with many people. Both crimes and suicides increase during full-moon times.

I used to hypnotize people so on full-moon nights when I awaken throughout the night and see the moon at several of its positions, it feels as if someone or something out there were probing and manipulating my psychology. I feel the moon drawing me outward, through the tree-branch silhouettes, though into what beyond that I cannot imagine. At these times the calls of the Barred Owl seem very significant.

But then dawn comes and the Cardinals sing, and I know that I have only experienced the moon crossing overhead during the night.

*****

HYPOGLYCEMIA & SPIDERS
I've been watching a Garden Spider lately. This has got me thinking about an experiment I read about long ago. Different chemicals were given a spider to see how each chemical would affect the spider's web. Most striking was how the spider given marijuana's active ingredient produced a sloppy web with many incorrect connections and holes. On the other hand, when the spider was given the active ingredient in LSD, the web produced was perfect, as if the chemical had increased the spider's power of concentration.

It makes one wonder how much our own realities are affected by whatever chemicals or hormones happen to be flowing in our veins at the

moment. Could just the right knock to my head or a change in my diet convert me from a happy hermit to a nervous land-developer overnight?

I wonder about these things a lot, especially because I am hypoglycemic. If I happen to stoop for a while and then stand up quickly, things go black and I'm lucky if I can keep standing. Then as blood sugar slowly returns to my brain I become able to take a few steps, though I seem to see things through a tunnel. Finally I return to full consciousness. I think that this happens to everyone, but with me it is a daily, sometimes hourly event.

Thing is, during those few seconds when I'm able to walk but see things as if through a tunnel, I think I'm fully recovered, and actually feel happy that once again I can concentrate so clearly on the ground before me and walk with such self assurance. It's only moments later when I'm really normal that I remember back to my tunnel-walking moments just a second or two earlier and realize that as I'd tunnel-walked my thoughts and insights had been profoundly limited.

In other words, several times a day I remind myself that the very dumb can never know just how dumb they are. I am also struck that during the first few moments of "being myself," I can still recall exactly how it was to be "tunnel walking," and I am appalled at how self-centered and narrow the tunnel-walking headset was.

Moreover, how can I know that when I'm "normal" there isn't an even more lucid state beyond that, one in which I could "be myself" if I only had the brain to go there?

In fact, because of very brief moments of insight accomplished during moments of meditation, I am sure that those higher levels of enlightenment do exist.

Recollections of insights understood during those brief moments of enlightenment have a little to do with why I am now a hermit in the woods. However, now in my "normal" state, I am really too dumb to explain to you clearly how my reasoning works.

*****

RED-BELLIED WOODPECKERS

Now that the mosquitoes have calmed down I've returned to my old habit

of late each afternoon biking over to the hunters' camp, sitting on their porch, and reading. One day this week while absorbed in *To Kill a Mockingbird* I heard a racket in the Pecan tree above me and looked up just in time to see two Red-bellied Woodpeckers all in a wad, each with a bit of the other in its beak, clawing and beating wings against one another. They tumbled 20 feet, thudded onto the ground next to me, and I thought that surely they'd both be crippled.

But they just fought a little longer, then one flew off horizontally and the other vertically. I guess the one who went vertically was the winner.

Both in my home area in Kentucky and here, in upland situations Red-bellied Woodpeckers are the most common woodpecker species, and for that reason alone usually I don't get too excited about seeing one. However, over the years I've experienced a sort of creeping admiration for the species.

First of all, when I began traveling in the American tropics I came to realize that our Red-bellied species was just the local expression of a complex of very similar species distributed all the way into South America. In northern Mexico's mesquite plains the Golden-fronted Woodpecker is everyplace, and looks and sounds almost like our Red-bellied, just a little rangier. In pine forests farther south the Golden-cheeked Woodpecker looks almost the same, but with black spectacles. The Yucatan Woodpecker also looks almost the same, but it's a pygmy version. And on it goes. What a pleasure to behold variations on a theme you grew up with, thinking that that theme could be sung only one way.

Once this spring as I lay atop my trailer one Saturday morning listening to the radio a Red-bellied was excavating his nest in a Pecan tree's nearly horizontal limb about 30 feet above me. His hole entered from the limb's bottom surface so as he dug inside the limb sawdust tumbled through the hole in his floor behind him and rained onto my camp. About every minute he'd poke his head from this hole with his beak so wide open that you could see his long tongue as he gasped for breath. Well, if you're inside a limb chipping at wood, there are no windows, your body is blocking air coming into the hole behind you, so it must get awfully stuffy.

He looked funny the way his head poked from the bottom of that limb, with his beak wide open and his tongue lolling all around. But instead of laughing I was struck with the realization that here was just another regular good schnook doing his best at a rough job. He was like all of us

facing tasks that leave us a bit washed-out and silly feeling. Nowadays when I'm almost feeling sorry for myself after computering all day, my back muscles burning, and I'm a bit groggy, I just remember that fellow with his tongue hanging out.

*****

SNEEZE WEED ALONG US 61

Wednesday night a limb fell from a large Pecan tree near where I sleep in the forest. It knocked out my electricity and sent a voltage surge right through my surge protector, and knocked out my computer's modem, even though I had turned off the computer. Consequently on Thursday I had to make one of my infrequent runs into town, for a modem at WalMart.

Right next to the pavement along US 61 there dwells a thin line of yellow-flowered weeds about a foot tall, and they accompany the pavement's edge for miles and miles. The same plant has been blooming for a couple of months in the middles of the more seldom-used gravel roads on the plantation. It's a tough little organism producing surprisingly pretty blossoms and fragile-looking threadlike leaves. This is Sneeze Weed, or Bitterweed (*Helenium amarum*) in the Sunflower family. I doubt that it makes anyone sneeze since it doesn't produce powdery pollen like ragweed or grasses, but if you taste its leaves you'll understand why it's also called Bitterweed. The plants contain a narcotic poison and when cows eat them their milk tastes bitter.

It's worth thinking about how Sneeze Weeds form their thin line next to the pavement. Their zone of occupation is only about a foot wide in most places. Clearly they cannot live right next to the pavement, yet neither do they survive farther away, where roadside grass appears. They have evolved for a very specific sandy, dry habitat and do not range far beyond it. Their long taproot helps them survive droughts in the sand, and frequent mowing and grazing. They are native to the US Southeast, Texas and Mexico, but in recent years have spread to northern states along gravelly highways and into sandy pastures.

*****

TWO-STRIPED WALKINGSTICKS

At this time of year around my trailer, especially under it, there appear Two-striped Walkingsticks, *Anisomorpha buprestoides*. I never saw this

species before I came here. The species often shows up with the much smaller male riding the big female's back as they mate

Once I identified the species and learned that it wouldn't bite or sting me, I picked it up, wondering how such a seemingly defenseless critter could survive, for I see them all over the place, in plain view. Then the big female squirted a drop of milky stuff on my finger. I smelled it. It didn't have much of an odor at all, but I instantly began sneezing, and I sneezed for about five minutes.

Therefore, I figured out something my books hadn't told me: This species defends itself by squirting a powerful chemical at its enemies. It must be awful to get the milk in one's eyes.

*****

GOLDENSEAL

I cut my finger a few days ago and this started me thinking about Goldenseal, *Hydrastis canadensis*. Goldlenseal is a native American wildflower growing to our north, in deep rich woods from Vermont, Michigan and Minnesota south to Virginia, Tennessee and Arkansas. Their knotty yellow roots, or rhizomes, are ground into Goldenseal powder, and over much of the species' distribution medicinal-plant collectors have collected them nearly to extinction.

One day a couple of years ago I was coasting on my bike down the very steep grade of our gravel road as it enters the bayou between the plantation center and my place, something happened I still can't explain, and when I was again fully conscious I found myself on the ground with blood spurting from a sizable gash across my forehead. Judging from the cuts and the remains of my glasses, I had slid a good distance down the hill on my face. It's one of the qualities of a good naturalist that he or she seldom pays much attention to the path ahead, but rather gawks constantly into bushes and trees along the way. For this reason I have a long history of running into and falling over things and thus I have plenty of experience with cuts and scratches.

When I saw how the deep cuts in my face were filled with gravel and sand I knew I was in for some infections. Even if you wash such wounds, bubble out the debris with hydrogen peroxide and douse them with iodine, swelling and festering is bound to occur. I couldn't see well enough to remove all the matter from my cuts so I went to the plantation

manager across the bayou. She's into alternative medicines and all she had that day was a jar of powdered Goldenseal. She packed my wounds with that golden powder, my bleeding instantly stopped, the next day my face was covered with black scabs, and when the scabs came off about a week later I was amazed at how quickly and completely I had healed.

There had been no infection, no swelling, and the scarring was not nearly what I anticipated. Never in my life has any medicine worked so effectively for me. This week Goldenseal powder did a good job on my cut finger, too.

*****

BOWL-AND-DOILY WEATHER

For about three weeks most nights have been almost chilly, making perfect sleeping weather. This week even the days were relatively cool. On Tuesday morning my thermometer read 57°, which was so cool that I wore a shirt during breakfast and heated my breakfast water for the first time in months. The morning dew numbed my toes as I walked through it. The days, with temperatures seldom breaking 85° , and a deep blue sky with abundant sunlight making crisp, black shadows, were perfect.

The dews these mornings are spectacular, and you know how pretty spiderwebs can be on dewy mornings. Especially next to the barn where dense Loblolly saplings form a green wall 20 feet high, a vast community of webs among the pine boughs shows up brightly against the dark green background.

Most of the webs there, as well as among the goldenrods in the field where the pines thin out, are spherical, grapefruit-size constructions consisting of seemingly randomly arrayed silks, inside which are built horizontal sheetwebs shaped like shallow bowls. These special kinds of webs are made by the Bowl and Doily Spider, *Frontinella communis*.

As this spider's Latin name suggests, this is a very common species throughout eastern and central North America. In bowl-and-doily webs, the male and female often hang upside down beneath the horizontal sheet inside the construction. If an insect gets entangled in the sheet, the spider bites it from below the sheet, pulls the prey through the sheet, and wraps it up. Sometimes a second sheetweb is built below the main one, which apparently helps shield the spiders from predators attacking from below.

The main prey I'm finding snared in these webs nowadays is winged aphids. I'm glad the spiders are helping keep these aphids out of my turnips and mustard greens.

Bowl-and-doily Spiders are mostly black, with conspicuous white or yellowish-white markings on their abdomens. From the side, the markings look like a scrawled **mc**. The "c" opens toward the spider's front. I can't find a good picture of this species, but if you find a web with a spider in it with an "mc" on its abdomen, you have a Bowl-and-doily Spider.

*****

SCREECH OWL WHINNYING

These cool nights are invigorating not only to me but also for an Eastern Screech Owl who most nights can be heard calling. Especially with the moon bright and the fog moving in, as has been the case most nights this week, this owl's call is eerie and evocative. I often hear the owl "whinnying," but the main call it's making now is a one-tone, pulsating sound. I'm not sure what the different calls are communicating. I read that Screech Owls are poorly studied, so maybe no one knows.

Their mating habits are interesting. Males tend to be monogamous, but some take on more than one female, and thus are "polygynous." The degree of polygyny in a population depends on food availability and population density. Bonds are lifelong, but individuals take on a new mate if the other dies. Nests are typically found in natural cavities, abandoned woodpecker holes, and hollow stumps and limbs. Screech owls don't migrate, and they usually stay alone except during the breeding season.

That explains why I'm just hearing this one owl, and occasionally see it at dawn silently winging alone from among the Loblollies near my trailer.

*****

IVY-LEAVED MORNING-GLORY

Suddenly the fence along my jogging road is pretty enough to stop and look at. That's because sections of it are overgrown with a morning-glory vine in full blossom. The thousands of flowers are 1.5 inch across, mostly pinkish violet but in some places pure white, with other hues ranging toward blue, the hues mingling with one another along the fence. Flowers are funnel-shaped, flaring widely at the mouth, and leaves are deeply 3-

lobed, like little fig leaves. In some places the much-branching, slender, twining vines climb seven or more feet up telephone poles and guy wires, and in such places the bright flowers against a background of dark green leaves and blue sky beyond is spectacular.

The vine causing this show is called the Ivy-leaved Morning-glory, *Ipomoea hederacea*. Its flower color ranges from bright blue to the pinkish-violet of most of our flowers, to white. Flower color in most flowering plants is pretty stable, so having a species whose flower color varies so much is special. The species' leaf-shape also is variable, for occasionally you find plants with nothing but heart-shaped leaves. This is just a free-spirited vine.

Ivy-leaved Morning-glory has been a close acquaintance of mine ever since I was a kid on the farm in Kentucky. I didn't much like it then, because every year it was an abundant weed in our tobacco patches. The plants tended to emerge from the soil so close to a tobacco plant's stem that you couldn't just chop it with a hoe, but, rather, hundreds of times each day you had to bend over and pull it out individually. Moreover, if you just yanked at the vine's stem, you were bound to shred a big tobacco leaf, and then you could just feel a nickel disappearing from your pocket.

I was a very fat, rather lazy kid, so many hours of this life I have spent fuming over Ivy-leaved Morning Glories. Who'd ever have thought that as a white-beard, I'd be singing their praises?

*****

THE TROLL

This spring and summer we've experienced frequent showers, but our years-long, overall drought has continued. Brief showers have kept plants green but when in the gardens I dig four inches down I encounter pure dust.

Thus Tuesday when I spotted a freshly constructed 1.5-inch high little tower of wet mud along my bike trail across the very dry blackberry field, I knew I'd come upon a mystery. In such a parched, dusty field at the top of a rise with the water table many feet below the surface, where would fresh mud come from? And what could build such a mud tower?

On my knees and elbows I gingerly nudged the little mud turret and was surprised to find that it simply rested atop the hard-packed dust, unattached to anything. I lifted it. Below was a round tunnel entrance about 3/4-inch across. As my eyes adjusted to the tunnel's darkness I saw that the tunnel bifurcated right below the entrance, and that at least one of the resulting arms quickly forked again. And from the blackness of one of those tunnel branches someone sat looking squarely back at me.

The little being had wide-set eyes placed at the upper corners of a triangular face. On crabby legs it stepped forward and began scooping dirt as I watched, as if its ceiling hadn't disappeared. Its body was thick, white, and it glistened with wetness. Working with a certain sense of urgency, it struck me as being like a troll in a Hobbit novel. If I had been exploring Mars and come upon a new form of life in a crater at the edge of a field of frozen carbon dioxide, I could not have been more filled with a sense of observing something otherworldly.

Gradually I realized that this was a cicada nymph -- the immature stage of the cicada that lives underground, often for years, before emerging to become the "Jar Fly" that so noisily makes buzz-saw sounds in the trees these days.

But, how did the nymph produce mud from such dry ground? Also, I have seen diagrams of cicada-nymph tunnels, and they have always been simple affairs, with no forks in them. I have combed the Internet looking for explanations, but without success.

My guess is that the nymph made its mud by mingling tree-root juice with dust, for what other explanation is possible?

*****

RATTLESNAKE ALIVE

Friday morning I was working in one of the gardens when I heard my friend Master whooping and cussing. I'd never heard Master cuss so I figured he'd had a close call with a snake, and I was right. He'd been picking up limbs recently fallen from the pecan trees onto the plantation manager's lawn, and a four-foot-long Timber Rattlesnake had been coiled beneath a limb. Master had been reaching toward it when he realized what he was seeing. The snake's disruptive camouflage serves it well these days when dried-up, brown, yellow and green Pecan leaflets litter the ground.

I put the snake in a bucket with a top on it and in a pickup truck we carried it to the back of the plantation, where it was nudged over the steep loess bluff. During the whole trip, coming and going, Master never stopped telling the story of how he'd almost picked it up.

Interestingly, Timber Rattlers usually don't rattle. I heard only a couple of clicks while getting ours into the bucket. Of all the rattlers I've encountered here, only one rattled, and that one was so loud that I thought it was a cicada fallen to the ground. I was gathering twigs to burn in my campfire and, like Master, didn't see the snake until I was reaching right for it, looking around for the flustered cicada.

Anyway, when we returned to the lawn Master had to tell his story to the manager again. After he'd finished, as he was opening the truck's door a dry leaf stuck to the frame by a spider web made a crackling sound. Poor Master jumped a good yard backwards, his eyes popping and his face frozen in terror.

Here was a big man nearly as tall as I, his ebony skin instantly shiny with the sweat of fear, and his muscles taut as a mule's. How I admired his focus on that leaf, the manner by which his entire body and soul in an instant had been transformed from a rambling story-telling mode to total attention to the source of that simple crackle.

I laughed uproariously but I knew it was pointless to say that I wasn't laughing at Master's fear. I was laughing with delight, wishing that somehow I could manage such intensity of concentration while looking at the sky, the grass, the trees, the sunlight, my own hands.

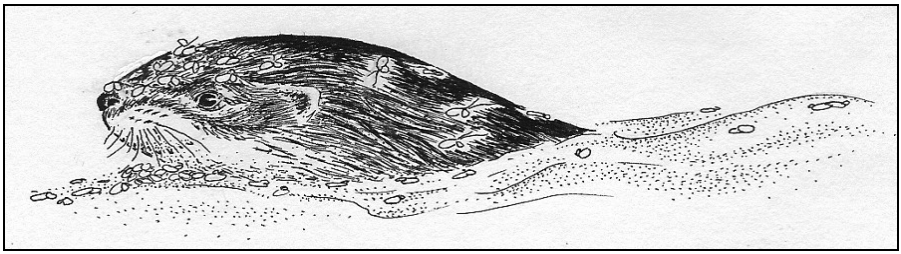
How wonderful it would be to be rattlesnake alive to all things the way Master was at that moment contemplating a dried-up leaf.

*****

OTTERS IN THE DUCKWEED

Last Sunday as my Newsletters were being distributed via the modem and these miles of corroded copper wire strung through the woods and along highways, it began to rain. Before the rain had ended I went walking, not only because the forest is beautiful when it's raining, but because sometimes you can see things you don't notice otherwise.

I came to a small deer-pond completely covered over with a carpet of duckweed, the little flowering plants that float atop water looking like green confetti. Working along the pond's banks were two River Otters, *Lutra canadenis*. The otters were so engrossed in their work that I approached to within 15 feet of them and for 20 minutes they never saw me. With my binoculars I could make out every hair on them, the quivering of their nostrils, the glistens in their eyes.



River Otters from nose to tail-tip are about 3.7 feet long and are native to nearly all of North America, except for the most deserty and frozen parts. I've seen them several times here so they must be fairly common. During winter I find them only in the swamps, but at this time of year they seem to wander across the uplands. You might recall that I reported another otter sighting in last year's September 2 Newsletter. Otters eat fish, crayfish, frogs, reptiles -- just about whatever small animal they find.

For me the most striking feature of their behavior is their playfulness. As these two otters worked along the pond's bank whenever they met they'd briefly curl into one another, each slithering around or beneath the partner with graceful twists and turns, perpetually half-playing peek-a-boo among tussocks of Water Pepper at the water's edge and among the coagulations of duckweed on the water's surface. In the muscular animals' body language you could read a kind of quick-witted laughter and it was clear that here was a level of intelligence a whole dimension beyond that of a dog or a pig, nearly the kind of wit you'd expect in a monkey or a porpoise. I was glad to be sharing the forest with this delightful and intelligent animal.

After 20 minutes the wind got up, apparently swirling my odor into the pond, for suddenly both otters stopped their cavorting and up through a thick carpet of duckweed poked their noses into the air. I moved not at all, so they did not see me. But they believed their noses and dove deeply and stayed below as I moved away.

CHAPTER 10: OCTOBER

HURRICANE LILI

At 2:30 on Thursday morning Hurricane Lili announced her arrival much earlier than I had expected by sending rain through my mosquito net as I slept on the wooden platform. At 9 AM an FM station in Baton Rouge issued the current update. Winds had dropped to 100 mph as the eye crossed the Louisiana coastline. Lili's projected path was right up the Mississippi River, and Natchez and Vicksburg were specifically mentioned as in her path. She would reach here in mid-afternoon. The forecast ended by saying that winds were expected to be maintained 100 miles inland.

To me that said that in mid-afternoon we'd be seeing 100 mph winds here, and I knew that that would be disastrous. I stuffed my pockets with cornbread and pears and went rain-walking, for I wanted to view the proceedings.

To my astonishment, as the morning wore on, both rain and wind diminished. By mid-afternoon when the cataclysm was due it had stopped raining entirely and the winds were like simple spring breezes. I turned on the computer to work.

The moment the computer came to life I heard the sharp pops a big tree makes as it begins to fall. The pops came from the direction of the big Pecan overarching the trailer so I figured I'd better make a dash out the door. However, before I could undo myself from the rocking chair the poppings avalanched into a rampage of splitting and snapping. I bent over, hoping that if the trailer roof came down the bookshelves and table might slow it. I heard a growing whooshing sound and, most terrible, through the window I saw things getting dark fast, like the Hand of Doom descending over me. A tremendous bang rocked the trailer and I was amazed how long an instant could last as I ruminated on the fact that the next second in my life could easily determine how I lived the rest of my life, if I lived at all.

But that was it. I looked up and through the door's window I saw a general torrent of tattered leaves gracefully falling all around. It hadn't been the Pecan next to the trailer but rather the next one over, the one in which Mississippi Kites nested this summer, and only its topmost branches had hit the trailer.

The big tree absolutely flattened the dense thicket of 30-foot-high Sweetgums on the trailer's eastern side. Now each morning as I prepare

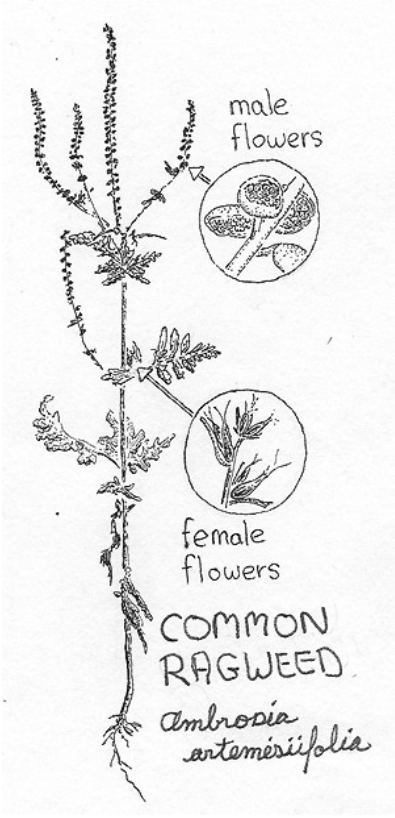
breakfast, instead of gazing into a green, shadowy Sweetgum wall, I'll have a clear view to the next Pecan tree some 100 yards away. My closed-in, living-in-a-dense-forest feeling is gone. Now it's like occupying a recently logged forest, one in which some of the old trees still stand, now scarred and with waist-high splintered debris covering the ground all around. The balsamy odor of smashed Sweetgum still hangs strong in the air.

Last week I spoke of the living-in-an-opening-blossom feeling. Now that blossom is younger than before, is set back so that it has longer to go before reaching full bloom. There's nothing wrong with that, but I do mourn for the old tree, the home of the Mississippi Kites, of grand gardens of fern and Spanish moss on its massive, horizontal branches, of the thousands of insects and lizards and spiders that knew it as their entire universe.

*****

THE BEAUTY OF RAGWEED

On Tuesday I had to bike to town to buy supplies. Seeing a favorite woodlot bulldozed into a gully, I focused on the beautifully symmetrical forms of ragweeds along the road, their exquisite flower structure (male flowers in pagodalike spires), and I thought about the role ragweeds play in plant succession, nursing the soil back to enough stability and integrity to support the community of living things that will succeed them.



Beautiful, beautiful, beautiful I whispered to myself eyeing the ragweed as I peddled past recently sawed-down trees, scalped and eroding soil, new gravel parking lots and newly junked cars, and more and more roadside trash as I approached town.

Two ragweed species are abundant and conspicuous along Lower Woodville Road:

- Common Ragweed, *Ambrosia artemisiifolia*, bears dissected leaves a little like those of a garden carrot, and grows to about 7 feet tall.

- Giant Ragweed, *Ambrosia trifida*, possesses broad, 3-lobed leaves and can get twice as large as the Common, though along the road usually it's not over 8 feet tall.

There are four or five ragweed species in our area, but these two are the common ones, and they are both native American species.

*****

SNORING OTTER

I emerged from a thicket of giant bamboo (an imported species) and took a seat as a River Otter noodled along the pond bank opposite me. In a minute or so he spotted me, but I didn't move so he wasn't sure what he was seeing. Surprisingly, now this otter began swimming toward me. In mid-pond he made a sharp blowing sound with his mouth, and that *pfft!* was instantly followed by a sound not unlike that of the sonorous snoring of a very fat man at peace, lasting for three seconds. As he swam toward me, two or three times he *pfft!*ed and snored, but when he got to within about 15 feet he suddenly dove. I followed his trail of bubbles with my binoculars so I was focused on him when he emerged in a different corner of the pond to repeat the behavior. He did this maybe eight times, always *pfft!*ing and snoring.

Then he swam into a dense thicket of overhanging Black Willow limbs where he snuggled next to his mate, who issued a high-pitched barking sound. They hid there about half an hour, then the first one returned to the pond and swam toward me *pfft!*ing and snoring again four times. Seeing that I was disturbing the couple, I melted back into the bamboo, thinking about what I'd seen.

I suspect that this was threatening behavior. Maybe he wanted to scare me away.

I have to admit that as he was coming toward me the first time the thought crossed my mind that he just might continue to the water's edge, slog up to my leg and begin chewing on it.

*****

FISH-EATING COTTONMOUTH
During my Thursday morning rain-walk waiting for Lili I returned to the pond where I'd seen this week's otters. This time no otters were observed but a large Cottonmouth swam about ten feet from shore. I see many Cottonmouths here but this one was doing something I've never seen before, and I'll bet that it was because it was raining. Maybe it's a behavior usually practiced only at night.

The snake would swim awhile, its head stiffly held from the water about eight inches high and at about a 75° angle, flicking its tongue in and out, sniffing the air. Then it would thrust its head below the water's surface to about the same depth it had held it into the air, and sway the submerged head back and forth as it swam forward. He gave every impression of looking for fish.

The Cottonmouth's Latin name is *Agkistrodon piscivorus*. That "piscivorus" means "fish-eater." My Audubon Reptile Field Guide says that Cottonmouths eat "sirens, frogs, fishes, snakes, and birds." I'm not sure about the sirens, but now it's easier to believe the fish part.

*****

EVENING GROSBEAK IN A TREETOP
On foggy, chilly Tuesday morning, just moments before a drenching rain began, a chunky songbird dropped from the sky and landed at the tiptop of the tallest tree in the area, a Black Oak between the forest and the Loblolly Field. I was walking there looking for fall migrants so when the visitor materialized from the mists exactly from the north, I felt sure I was seeing one. At the top of the tree the bird's spread-legged, jerky, looking-around body language indicated that he was really juiced up, on full alert, a true transient. In fact, just seconds after his landing the rain began and he took wing again, flying hard exactly southward, quickly vanishing into the morning's mist. It had been an Evening Grosbeak, easy to identify because of its very thick, white beak, yellow body and black wings, each wing with a large white spot.

I was surprised by this sighting because my field guides clearly show that Natchez lies far south of the species' southernmost winter distribution. Of course as soon as I got onto the Internet I Googled up a more up-to-date winter distribution map for the Evening Grosbeak. In contrast to my books, that map showed that in places this bird winters as far south as the Gulf Coast. My dog-eared field guides are decades old, and apparently the Evening Grosbeak's distribution has changed radically during recent years, probably because so many people put out feeders.

*****

ON THE GENTEEL ART OF PEEING SUSTAINABLY

During my recent bus trip to Kentucky the most vivid reminder that I had stepped from my usual life came when I had to pee. In the men's room of the Memphis Greyhound Station watching my pee drain through the hole at the bottom of the urinal, I was swept with a sense of squandering a profoundly important resource.

For, in my usual life I recycle the nutrients that pass through my body. For a long time I have known the value of human urine. For instance, on the Web I've read that each person's waste fluids can provide enough nitrogen, phosphorous and potassium to grow a year's supply of wheat and maize for that person. Urine can be applied to field crops without treatment because it is generally sterile. Fresh urine contains no bacteria unless the person has a urinary tract infection.

Despite my being a urine disciple, for a long time I've hesitated to discuss this in the Newsletter, for I know how squeamish people in our culture are about these things. However, now the time has come, for these reasons:

- I have developed and tested a workable system for dealing with my own urine
- our society must face its refuse-disposal problem
- recycling our personal wastes is a beautiful, life-confirming process that should be celebrated, not shunned

I have set up two simple and effective peeing systems, one for myself and another for visitors. Visitors pee in a five-gallon bucket, the bottom of which is covered with sawdust, and the top of which is equipped with a regular commode seat. When sawdust in the bucket is peed into, fresh

sawdust from a companion bucket is spread over it. When the pee bucket fills, the contents are dumped onto the compost heap and a layer of organic material, usually straw, is strewn over that. As long as fresh sawdust and fresh straw are used effectively, little odor results in either the bucket or the compost heap.

The second system, which I use, is this: I pee directly onto the compost heap. I start out with a layer of straw, or whatever organic material may be at hand, and when the layer darkens and begins to smell, I cover it with a fresh layer of organic material. Pee-saturated straw composts wonderfully. When straw that has composted two or three months is dug out, it is black, crumbly, and pleasantly earthy-smelling.

I don't mean to imply that these systems stay sweet-smelling all the time. Sometimes when the top is lifted from the five-gallon bucket the odor is powerful. This is a sign that more sawdust should have been added the last time, or that the bucket needs to be emptied. Similarly, in the middle of a calm, hot day when sun shines on the compost heap, if you put your face right over it and breathe deeply, it might curl your toes.

However, I judge these mild affronts to our senses as appropriate trade-offs for being able to avoid the waste and pollution typical of our society's approach. Also, this occasional smell of ammonia reminds us of our real position in the ever-recycling, self-sustaining Web of Life, which has value in itself. Finally, I end up with some really great compost.

The logical next question is, "Where does my manure go?" I'll address that in next week's Newsletter.

*****

BROWN THRASHERS IN A WAVE

Fall migration of birds is going on right now, and it's very different from spring migration. This spring, migrants wore bright spring plumage and they sang with abandon. Now they are mostly somber-colored, usually quiet or silent, and mostly make an effort to pass unseen. It would be easy not to notice the passage, but each day there are certain hints of what's going on. Hoeing in the garden I hear a single chip-sound from a Rose-breasted Grosbeak. Deep in the night from high in the black sky I hear a single lonely *skronk* from some kind of crane or large heron. A brief cheep in the bushes pinpoints an American Redstart snapping gnats among the shadows.

Often waves of migrants arrive on weather fronts. This Tuesday, I think it was, a cold front (into the 60s) just reached us and stalled out, and it brought with it a hilarious number of Brown Thrashers. We have Brown Thrashers year round, so these new ones hailed from farther north. During the winter in the Mississippi Valley Brown Thrashers are found no farther north than southern Kentucky, approximately.

I took a walk on the day the big wave of Brown Thrashers came in. With the cold front stalled atop us, it was drizzly and chilly -- somber. But there were so many Brown Thrashers I had to laugh. It seemed every big tree, every fencerow, every brushpile, every blackberry bramble had its Brown Thrasher, and they weren't silent, either. Brown Thrashers, being in the same family as Mockingbirds and Catbirds, are brilliant singers, but now in this broody chill they issued a growly *churrr* call, the warning many birds make to announce a snake in the vicinity. Sometimes they also issued a liquid smacking sound. Nothing of music here, just these strange, almost unsettling calls emanating from every shadow and every form on the landscape.

Because Brown Thrashers prefer semi-open areas instead of thick forest, I've seldom seen them around my camp. However, now that Hurricane Lili brought down the big Pecan that flattened all those 30-ft-tall Sweetgums next to my trailer, the heap of snapped twigs, splintered limbs and tattered leaves seems to be of the birds' liking, and some have been hanging around my camp.

Making up for that day's melancholy churrrrs and liquid smackings, on Thursday afternoon the sun came out brilliantly and as I sat working at my computer a Brown Thrasher hopped past just outside my door. How vibrant and warm his rusty-colored back was in the sunshine, and how striking were his piercing, yellow-orange eyes. He was a proud-looking, self-assured bird, and for a moment I think he paused and cocked his head to listen to the Bach fugues filtering through my screen door.

Who would have thought that such a pleasing moment might blossom from the hurricane-inspired demise of an old Pecan tree?

*****

GEESE JUST BEFORE DAWN

Friday morning, about an hour before the first hint of dawn, I heard a

large number of Canada Geese flying overhead. The wild members of this species spend their summers in Canada and the US Northwest, and overwinter in the southern US and farther north along the coasts. Their overwintering habits have changed during recent history because so many manmade lakes have been built, and people feed them through the winter. All winter I'll hear and see them here, for St. Catherine Creek National Wildlife Refuge, on ground once belonging to this plantation, now occupies the land between the plantation and the Mississippi River, and that refuge is a wonderland of swamps, streams and flooded fields -- prime habitat for Canada Geese.

Lying snugly within my Kentucky quilts, Friday just before dawn I tried to detect what emotional state the geese were expressing in their calls, though I'm not sure at all that a human can do that. I could certainly imagine how beautiful it must be to be a goose flying high inside a great **V** in the black sky, the fellow members of my family/flock/tribe sailing with me, the silvery Mississippi slowly gliding by below on my right, the air around me slowly growing balmy and friendly after flying for so long in the biting chill behind the cold front that at that time lay just to the north of us.

However, it seemed to me that what I heard in their voices was anxiety, a certain nervousness. It was very dark, with clouds masking the moon and, really, it's hard to imagine that they could even see the Mississippi. Being so high and needing to land, but not being able to see much of what lay below...

*****

HOT WATER & CHINESE

The next morning, Saturday, at the same time as on Friday morning, I was awakened by a nearby flash of lightening and subsequent bone-jarring thunder. Maybe the arrival of the geese a day before the cold-front was no coincidence. All day Saturday it stormed and rained here, dumping over three inches of rain on us, atop the inch of rain the day before. Once I'd managed to prepare my campfire breakfast during the deluge, I found the storm much to my liking. For, it provided an unexpected quiet period for me.

Most people seem to think that here in my little camp I must spend a lot of time "hanging loose," just goofing off. In reality, each day I spend mornings working in the gardens and nearly all the rest of the time

developing my Internet projects. I suspect that my days are at least as structured and intense as are the days of those of you with regular jobs.

So, Saturday morning I couldn't garden and there was too much lightening to have my computer on. Therefore I did what I often do in such enforced rest periods: I fixed a big mug of hot water, and studied Chinese.

People in our culture underestimate the pleasure in drinking simple hot water, especially steamy, pure rainwater. During my recent travels I as struck by how often people around me habitually sipped liquids -- coffee, sodas, Strawberry-Kiwi herbal tea, beer, whatever. To my mind, these people focused so exclusively on titillating their taste buds that they overlooked the more fundamental pleasure of simply refreshing the body with pure water.

Tickling taste buds and gratifying the body with exactly what it needs are unequal pleasures. The one, though certainly having its place, is superficial, fleeting, and often damaging to the body or even addictive. The other is a natural and necessary maintenance, and when the water is hot on a chilly, stormy day its drinking satisfies in a deeply, perhaps atavistic, manner. Drinking hot water on such days has calmed the spirits of a million generations of our ancestors in their caves and dark lodges. Drinking hot water can be a kind of communion with them, and with the spirit of simple survival in a hostile world.

I also find studying Chinese to be a deeply satisfying experience. I am afraid that people nowadays have forgotten that learning, by itself, can be gratifying.

As rain tapped on my roof and I drank steaming hot water from my mug in this drenched little corner of the forest I wandered into the psychology of Chinese people as manifested in their written language. The Chinese character for "good" consists of the symbol for "woman" next to the symbol for "child." How can you but be impressed by a culture that expresses itself in such a simple but profound manner? And what pleasure it is for the mind to be reminded on such a morning as Saturday's that the Chinese character for "fragrant" is nothing less than the symbol for "grain," such as wheat, set with the symbol for "sun."

Thus -- the sun warming a field of wheat produces a fragrance. The glow caused by these insights harmonizes beautifully with the glow brought by steaming water on a rainy morning.

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DAYS OF PERFECTION

Let it be known that I am not one to become so absorbed in nature's intricacies and minutia that I ignore the broad, simple glories of perfect days arriving unannounced and unexpected. If I'm engrossed in the wing venation of a wasp or the exact nature of a leaf's margin, and it's an afternoon golden and balmy served up like a sweet apple on a silver platter, I will reach for that apple.

The nights this week have been glorious. A bright, waning moon and temperatures at dawn as low as 48° made for cozy, profound sleeping. Awakening as the first light glowed in the east, sharp coldness sent me springing from the sleeping platform right into my jogging shoes, and within moments I was running through ghostly fog, water droplets coalescing in my beard. Every day this week friendly breakfast fires provided mugs of steaming mint tea, and my skillet-size cucumber "omelets" made with fresh dill and jalapeños always baked to a handsome brownness. I'd work in the garden as the sun burned off the fog, and then on the Internet I'd find my tasks pleasing and fulfilling. Sometimes I'd just wander around checking on seedlings, seeing whether the cuttings were taking root, and making sure the potted plants were healthy. Balmy, late afternoons were occupied with odd jobs and listening to *All Things Considered* on Public Radio, and then as the chill grew moment by moment I'd read into the night as the crickets grew ever more silent.

I am grateful for it all, grateful to be at a peak of sensitivity, grateful to be healthy, and to have discovered how hard manual labor mingled with creative thinking and freely given service to the broader community produce in me something like happiness. I am so grateful for everything that when I pray I never pray asking for favors, only to give thanks to the Great Unknown.

Golden days, golden days...

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MEADOW MUSHROOM IN A GRASSY ROAD
It being fall and a few showers having come our way, mushrooms are popping up everywhere. I can't identify a lot of them, but this week a cluster of one species materialized between the tracks of the grassy road leading to the barn, and I recognized that species at first glance. When I lived just outside the little Waloonian town of Nivelles south of Brussels, Belgium, during two summers, I frequently visited a certain nearby pasture where sometimes I could gather half a bushel of this species, or more. Here we call it the Meadow Mushroom, *Agaricus campestris*. In French it was *Rosé des Prés*.

It has a bland taste and is thus perfect for slicing raw into salads, and for soaking up herbal flavors in sautéed dishes. Another good thing about it is that it's easy to identify. It's a white mushroom with pink gills that turn brown as the mushroom matures. The stem has a ring around it. The mushroom's white cap and stem ring cause it to be similar to some of the deadly Amanitas. However, Amanitas produce white spores while this Agaricus has dark brown ones, and not many mushrooms have dark brown spores.

Spore color is one of the most important field characteristics to pay attention to when identifying mushrooms. Mushroom spore colors range from white to black, through yellowish and gray and a host of brown hues, from cinnamon-brown and purple-brown to dark chocolate brown.

If you've never made a spore print, you should, just for the fun of it. Place the cap of a mushroom in its early stages of maturity on a piece of paper and after a few hours you'll get a pretty star-burst pattern on the paper, consisting of spores released from the cap's gills. Just hope the spores don't turn out to be the same color as your paper.

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RECYCLING MY OWN HUMANURE
At some point, the person wanting to reduce his or her own impact on the environment, and to live in a manner respecting the true value of things, has to confront this fact: Our own feces creates a real mess if handled wrongly, but has great value if handled rightly.

Our society's usual manner of handling it completely ignores its value, and flirts with its dangerousness. How many beaches are closed, how many miles of rivers are off limits to fishing, and how many tons of

chlorine are dumped into our drinking water because of "fecal coliform bacteria" -- bacteria originating in the intestines of warm-blooded animals?

Last week I made the point that unless a person has a urinary tract disease, human urine is so sterile that it can be used to wash out wounds. In fact, Newsletter subscriber Leona Heitsch in Missouri wrote recalling that her mother once told her that "...when she was a kid, they used the contents of the chamber pot to balm their hands after picking up potatoes in the raw Michigan cold... it neutralized the effect of the cold earth on their hands and relieved dryness and cracking."

In contrast to urine's sterility, average human feces consists of about 25% bacteria, sometimes much more. If that bacteria contaminates human food, serious illness, sometimes even death, can occur.

Therefore, I've long felt ambivalent about what to do with my own manure. On the one hand I have read how important the use of human manure is in Asian agriculture, and I have seen some of these practices myself in India. On the other hand, my mother was as neat and clean as they come, and she passed on her concepts to me the way any good mother does. My default attitude toward my own feces has been until now "flush and forget."

But, here, now, I don't allow myself the luxury of not examining the consequences -- the ethics -- of everything I do, and everything I think.

One catalyst for my deciding to confront the question of what to do with my own feces came when I read ***The Humanure Handbook, A Guide to Composting Human Manure*** by J.C. Jenkins.

In this book we read that human manure, or humanure, by wet weight is 5-7% nitrogen, 3.5-4% phosphorus, 1- 2.5% potassium and 4-5% calcium. These are nutrients that living things need and they should not be flushed from local ecosystems.

For me the most striking part of the humanure book is a chart showing how much heat and time are needed to kill disease-causing bacteria. If you heat something at 113°F for one week, not only disease-causing bacteria but also dangerous viruses, roundworms, amoebas and other such organisms will die. The same can be accomplished if you heat it at 145°F for one *hour*. For my situation, these were the most important

figures: You'll kill disease-causing organisms if your compost heap maintains a temperature of 122° F for just one day.

I have seen that my own heaps, when I do a good job building them and pay attention especially to the carbon/nitrogen ratio, cook along at about 140°F for several days before starting to cool off slowly. In other words, if I should compost my own manure, the resulting compost should be free of disease-causing organisms.

A "Porta Potti Continental," a kind of portable toilet, came with my little trailer. Basically it's a regular commode seat fixed atop a large, plastic container. When the container is full, the seat easily detaches and the container can be carried by its handle to where its contents can be poured out. I pour the contents onto my compost heap.

Immediately upon dumping the Porta Potti's contents onto my heap, I scatter some already-prepared compost atop it, to "seed" it with composting bacteria. Then I spread about six inches of fresh straw or other organic material over that, effectively sealing the odor inside. During following days I pee atop the fresh straw, as described last week. In a couple of weeks the straw becomes saturated and it becomes time to dump the Porta Potti contents again. The Humanure book advises to *not* occasionally stir up the straw to aerate it. Just let it sit there and cook as long as it wants, and when the bin gets full (after about a year at my rate), then start another bin. A few weeks after finishing the first bin, you can begin gardening with the compost.

This systems works beautifully for me, but I'm not sure if it's transferable to other people. For one thing, I know that what comes out of vegetarian me has much less smell than that from others who eat animal flesh. Similarly, my diet is high in fiber, so what comes from me is much looser than what comes from people eating processed food. Each person needs to experiment with his or her local conditions.

It's all quite simple. And, when you think about it -- about taking control of this aspect of your life and making something good out of a waste -- it's even quite beautiful. No chemicals, no pollutants, no taxes, no costs at all, in fact ending up for free with a fine compost that makes flowers blossom, and vegetables grow like crazy.

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ASTERS

It's fall, so asters are blossoming. One nice thing about asters is that at first glance they all look the same, but once you start examining them systematically you realize that there's a whole aster world worth knowing. On my recent backpacking trip on the Appalachian Trail I counted over a dozen species before I lost track, and most species were fairly restricted to a certain elevation, a certain geology, or a certain spot on the dry/sunny to wet/shaded scale.

Arthur Cronquist's *Vascular Flora of the Southeastern United States* lists 66 aster species for the region covered, and many of those species are further subdivided into varieties. An aster species has even managed to invade my garden. It's the White Heath Aster, *Aster pilosus*, possibly the most common aster of all, since it lives along roadsides and other disturbed sites. In other words, it's a "weed." Nonetheless it's a "classic aster" bearing a large spray of small blossoms composed of white rays and yellow centers. Like most weeds, it's found over a large area -- from Maine and Wisconsin to Florida and Louisiana.

Next to a post of my outdoor kitchen there's a less-weedy species whose rays are pale lilac and whose lower leaves are heart-shaped, on a long petiole. This is the Drummond's Aster, *Aster drummondii*, usually occurring in clearings and open woods, and distributed from southern Ohio and Minnesota south to Mississippi and Texas.

I've always enjoyed "variations on a theme." I love Bach fugues, which take a melody, then repeat it with minor variations, and finally transform that melody into statements almost sounding like something completely new. That's the way asters are.

There's a "classic aster" concept, but then there are many variations on this classic-aster theme. In the musical genre we know as "flowering plants" there once long ago appeared a melody known as "the first aster." Then through the beautiful process of evolution all these "variations on the aster theme" came to populate our lives today.

Because evolution is such an all-pervasive phenomenon throughout all of nature, again and again, at all levels of perception and understanding, the naturalist discovers occasions of "variations on a theme" being robustly generated, and perhaps nothing is quite as life-affirming as this.

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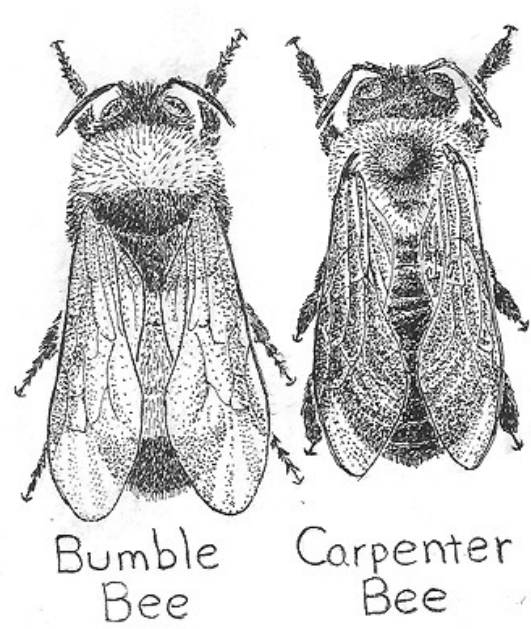
CARPENTER BEES



Earlier I told you how Carpenter Bees were tearing open the sides of certain blossoms in order to "rob" the flowers of their pollen without pollinating them the usual way. Thanks to some recent cold mornings I've learned more about this bee.

My little trailer is unheated so during winters I build a box around my computer and on cold nights keep a small light burning in the box to keep the computer warm. Wednesday morning's 38° surprised me so when I turned on my computer I got a blank screen -- something inside the computer was too cold to work. So I set about constructing this winter's box. For my frame I found some discarded two-by-fours that were riddled with holes excavated by Carpenter Bees. The holes were barely large enough to admit the tip of my smallest fingers. While sawing these boards I happened to cut through a Carpenter-Bee hole.

The hole went down about an inch deep and then formed a kind of T, with each arm of the T traveling in opposite directions inside the board. At the end of each tunnel there were two Carpenter Bees, four in total, all buzzing their discontent with my sawing. I was sorry to mess up such a cozy overwintering nest; I'd thought the holes were abandoned.

Anyway, one of the T's arms was five inches long and the other was seven. Certainly a bee capable of gnawing away so much wood can with ease rip open the side of a tubular flower!

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AUNT BELLE

I dedicate this Newsletter to my Aunt Belle, who this week died of

Parkinson's Disease in my home community of Semiway, a tiny place with undefined borders in rural western Kentucky. Aunt Belle died in her own home, surrounded by family, and she died with dignity.

Old country people like Aunt Belle are the guardians of a powerful insight into life. That insight is that when you live simply, nature (insert "God" if you wish) provides. Now there is one less human on Earth sharing that wisdom with us, and we are the poorer for it.

Aunt Belle lived from one year's gardening to the next. Winter for her was a hopeful time for scanning seed catalogs and for pointing out to visitors how nicely her Christmas Cactus's crimson blossoms glowed in the sunlight filtering through her little trailer's windows. Those of you who know me personally probably recognize a certain resonance between her life and the life to which I aspire. This is no coincidence.

As a child I saw around me many manners of being. Some people delighted in big cars and houses, others just did their work-a-day jobs and left it at that, some liked booze, some dreamed of Las Vegas and hitting it rich, and some were never pleased with anything. Aunt Belle delighted in how well her potatoes came up and how pretty her geraniums were even if they grew in rusty old lard cans. And she always had fresh cornbread fixed when I went to visit.

Today I am looking for a lard can, and a geranium to plant in it. For, the lives of Aunt Belle and other good folk like her have suggested to me a path toward contentment, and a higher level of spirituality, that nowadays I follow and do not intend to abandon.

Thanks, Aunt Belle.

*****

DANCING MUSHROOM ON A FROSTY MORNING

After a week of sunny days with afternoon temperatures usually in the 80s this Sunday morning at dawn the temperature inside my camp's Waxmyrtle tree was 32° and the fields and pastures were spotted with the season's first frost. The big Pecan trees above my trailer are 95% leafless now, though the young Sweetgums surrounding me remain as green as in July. During these days everything presents itself in high contrast, like black shadows that pool wherever the dazzling sunlight can't directly hit.

Breakfast this morning was particularly vivid, everything about it scintillating, cutting, brilliant, immediate – not only the feeling of the scorching, orange campfire-blazes flickering next to me as the air tingled and numbed me with coldness, but also the food itself. Today's breakfast became approximately the fifth-most-tasty meal of my life.

Breakfast was so good mainly because nowadays there's a certain wonderful mushroom appearing at the bases of occasional old oak trees around here. This fungus has many, many names because it is distributed over much of the world (mushroom spores can take transcontinental trips on the wind). I think local people here may call it Hen of the Woods, but its most common name internationally is Maitake, a Japanese name, I think. In German it's *Klapperschwamm*, but the name I like most is one I found on the Internet, and that's Dancing Mushroom, a name perfect for a steam-and-smoke-swirling-in-sunlight morning like this one. In Latin the mushroom's name is *Grifola frondosa*.

The fungus body, the size of a basketball and larger, consists of many densely clustered, smaller, ear-shaped mushrooms, sort of looking like a giant pine cone. I don't think its taste is particularly exciting but it has the texture of soft chicken breast, and when I sauté it in olive oil with garlic, green onion, and jalapeño and bell peppers, scramble in a couple of eggs and sprinkle on fresh basil and a bit of fresh rosemary (everything except the olive oil and eggs from my gardens or the woods), the taste is as explosive as steam from my breath this morning after a big swig of hot water, breathing into the frigid air. I will never forget this morning's perfect breakfast with the Dancing Mushroom.

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NODDING LADIES'-TRESSES

Uncommon but not rare throughout the forest around my trailer nowadays there's a wild orchid flowering, called Nodding Ladies'-tresses, *Spiranthes cernua*. It's such a small plant with such an inconspicuous, slender spike of tiny white flowers that most people would overlook it and few who notice it would dream that it could be an orchid. However, if you look at the 3/8-inch-long blossoms under magnification you'll see that structurally they are unmistakably similar to any gaudy corsage-orchid. In Mississippi, Nodding Ladies'-tresses blossoms from July through November.

You might be surprised to learn that of all the families of flowering plants --such as the Oak Family, the Rose Family, the Bean Family -- the Orchid family has the greatest number of species of all -- some 25,000-35,000! The vast majority of them are tropical, however.

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WHAT THE ORCHIDS TEACH

My Ladies'-tresses got me to thinking about how the Orchid Family's fabulous success in producing so many species provides insights into nature's general tendencies. For me, recognizing "nature's general tendencies" is a bit like someone else in our culture searching in the Bible or some other holy book in the hope of understanding "what God's plan is." Here is at least part of what the Orchid Family teaches me:

First of all I recognize that the evolution of living things proceeds more or less like a tree that starts as a single sprout, branches, and then the branches rebranch, and so forth, with the branches growing and rebranching at different speeds and with different degrees of vigor. Earth's first large, land-based plants reproduced with spores, and they appeared over 400 million years ago. Flowering plants did not come onto the scene until much less than a hundred million years ago, thus they are situated about 4/5 of the way up the evolutionary tree. And then orchids did not appear among the flowering plants until relatively recently, geologically speaking, so they occupy only an outermost twig of the vast evolutionary tree. Thus one thing orchids teach is that newcomers sometimes have ideas exactly right for their time; you shouldn't always depend on "the establishment" to get things right.

What are some of the new-fangled ideas orchids display? For one thing, orchid flowers fuse "traditional" flower parts (calyx, corolla, stamens, etc.) into very specialized structures favoring an efficient pollination system no longer relying on powdery pollen. Also, despite the impression given by flower-shop orchids, most orchid flowers, such as my Ladies'-tresses, are much smaller than flowers of "more primitive" species. Another thing is that orchid species generally occupy very narrow ecological niches -- they are much more fussy about where they live than the average plant. Finally, orchid seeds are so small that a single pod may contain thousands of seeds, yet if just one of those seeds manages to germinate and grow into a mature plant the orchid is lucky.

If you think about it, the recent evolution of computers has followed the same path as that taken by orchids:

- Both computers and orchids have evolved toward ever higher efficiency, miniaturization, and specialization.

- As computer networks expand, and orchid ecology becomes more intricate, the value of the individual computer/orchid diminishes as the computer-network/ecosystem consolidates, expands, and grows more sophisticated

A good topic for a long night's discussion would be how human history and today's evolving human societies manifest these very same trends, and what that means to us today.

The orchids also show that nature doesn't put all Her eggs into one basket. In the forest around us the Magnolia Family is considered to be one of the most primitive among flowering-plant families, yet here the magnolias appear to be thriving quite as well as orchids.

I personally find this last observation tremendously encouraging, for it reminds us that Nature loves diversity. In a world where orchids and Silicon-Valley yuppies appear to be poised to inherit the Earth, plodding magnolias still can offer their perfume, and simple hermits smelling of woodsmoke can live in dignity.

CHAPTER 11: NOVEMBER

SUMAC TEA

Those chilly mornings earlier this week got me in the mood for sumac tea, so I visited a thicket of sumac near the barn and snipped off a few clusters of fruits. Back at the camp I dropped the clusters into a pot of boiling water and after a while had some tea. It's sour stuff, made eminently better with the addition of sugar or honey, and milk or cream.

The acid taste comes from the bursting of tiny glands at the tips of very small, stiff hairs covering the fruits. When the hot water causes these glands to burst they release acid into the water. When you collect the fruits you can clearly see the glands with a good handlens, and just barely see them with your naked eye. So many acid-filled, hair-top glands cover each fruit that the fruits look and feel sticky.

I've been noticing these fruiting sumacs for a few weeks. Among the very first harbingers of fall, the bushes show up as random splashes of scarlet in the landscape. Now they are a little past their color peak and are losing leaves. Many of the remaining leaves are black, and the fruiting clusters are brown and drooping at the ends of branches.

The sumac we have here is the Winged Sumac, *Rhus copallina*. Sometimes it's called Flameleaf Sumac, and many books refer to it as Shining Sumac. In fact, the English naming of this plant has always been a bit shaky. The dictionary accepts an alternative spelling of "sumac" as "sumach," plus they say it can be pronounced either "SHOO-mak" or "SOO-mak." The word "sumac" appears to have come into English from the Arabic *summaq* by way of Middle Latin and Old French, so there's no wonder its pronunciation is squishy by now.

Some people worry about making sumac tea because they've heard of Poison Sumac, *Toxicodendron vernix*. Poison Sumac does occur in southern Mississippi, but I've not seen it around here. It lives only in very moist spots such as bogs, pocosins, wet pine barrens and stream borders. Certainly it wouldn't be growing in our weedy, upland fields.

When gathering fruits for making tea it's easy to be sure you're not getting Poison Sumac fruits. Winged Sumac fruits are red while Poison Sumac fruits are white.

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MARSH HAWKS HAVE ARRIVED

On a particularly cold, windy morning early this week one of our most welcome bird winter residents made its first appearance of the season. It was the Marsh Hawk. You recognize this hawk as much by its manner of flying low over flat fields, its steady gaze directed onto the ground just below, as by its physical features.

Another striking field mark is its conspicuously white rump -- the rump of a bird being the lower part of the back connecting with the base of the tail feathers.

Sometimes Marsh Hawks are called Northern Harriers, which is the name preferred by those wishing to preserve names used in Europe. Other authors continue to call it Marsh Hawk, the name early American settlers gave it. I use the name Marsh Hawk because that's what I learned from my old Peterson Field Guide back in the 60s.

Marsh Hawks must be very successful at what they do because they enjoy one of the most extensive bird distributions I know of. They're found not only throughout nearly all of North America, to the southernmost tip of South America, but also throughout much of Europe and Asia. During my travels I've enjoyed learning its names in the various languages of its native countries. In England it was the Hen Harrier. In Spain the *Aguilucho Pálido*. In France the *Busard Saint-Martin*. In Germany the *Kornweihe*. In Italy the *Albanella Reale*, and in Portugal the *Tartaranhão*.

One reason I have a special feeling for Marsh Hawks is because of a certain memory. One very blustery, cold, windy winter day when I was a farmboy in Kentucky I was walking along our gravel road when I spotted a black cat silently slinking across a wide, flat, rain-soaked, brown field of soybean stubble. It was as forlorn a sight as you can imagine, the cat looking starved and emaciated, and the cold wind just howling beneath a brooding, stormy sky. Suddenly the cat crouched as a Marsh Hawk came sailing low toward it. The hawk circled, rose to get altitude, then dove. But the cat arched its back and raised a paw and the hawk broke off its dive just before striking. For fifteen minutes the hawk circled and dove, again and again, and the cat kept hissing, spitting, arching its back and pawing at the air.

Two great hungers and two great fears in conflict in so much cutting cold, such wind-thunder, such achingly broad horizons with fearfully curdled dark sky...

In such a conflict, which side do you support? Why is nature stuck together in such a way that there are predators and prey? Why is life possible only when others keep dying?

*****

PICKING UP PECANS

This beautiful Sunday morning I biked a few miles to a certain spot I know along Second Creek west of here, where Pecan trees grow next to a small country road. Here I can pick up pecan nuts without trespassing on private property. We have many Pecan trees on this plantation but I like these bottomland nuts better and I enjoy the ride through the countryside. The ride there was a pleasure. Farmers have picked their cotton recently and now white fluff blown from wagons and trucks lies along the road looking like patches of snow.

Pecan nuts are big business around here. Lots of people have groves of them and sell them commercially. In town several stores have cardboard signs in their windows reading "We buy pecans." In the countryside sometimes you see whole Black families out picking them up to sell.

Last year the crop was poor because of the drought and I didn't get to send any to my grandmother in Kentucky until after Thanksgiving. This year the crop is bounteous. In this morning's fresh air and dazzling sunlight it was a pure pleasure to rummage among the dry brown leaves finding all the shiny nuts I wanted.

Around my trailer the squirrels are keeping busy eating and burying pecans. Yesterday I heard a squirrel making a funny noise next to my cistern head. He was trying to bury a pecan in the very thin soil atop the cistern's flaring underground concrete shoulder. With a pecan in his mouth this squirrel just kept scratching at the concrete until I felt sorry for him. Finally it gave a violent flick of its tail, issued what was surely a squirrel-cuss, and rushed away.

This morning during breakfast an Eastern Chipmunk scampered from beneath my trailer, put on his brakes just a couple of feet from me and for a couple of surprised seconds looked at me goggle-eyed with his cheek-pouches hilariously bulging with what surely was pecans.

Pecan trees are native to this area and I can hardly imagine how they must have been appreciated by the Natchez Indians. For, pecans can be kept for many months. If a family has a cache of them, there never needs to be any worry about going hungry.

*****

FERNS AROUND MY TRAILER

With a few trees losing some of their leaves, the forest floor is a bit better lighted now and maybe that's why this week I've been paying special attention to ferns. Ferns are abundant here, especially on the near-vertical walls where roads and gullies cut through thick loess.

In the woods around me, these are the most common ferns, listed approximately from the most common to the least:

Christmas Fern, *Polystichum acrostichoides*
Southern Shield-fern, *Thelypteris kunthii*
Ebony Spleenwort, *Asplenium platyneuron*
Resurrection Fern, *Polypodium polypodioides*
Lowland Fragile-fern, *Cystopteris protrusa*
Torres' Fern, *Thelypteris torresiana*
Japanese Climbing-fern, *Lygodium japonicum*
Japanese Holly-fern, *Cyrtomium falcatum*
Oblique Grapefern, *Botrychium dissectum*
Sensitive Fern, *Onoclea sensibilis*
Broad Beech-fern, *Phegopteris hexagonoptera*
Northern Maidenhair-fern, *Adiantum pedatum*

There are other species on the plantation but these are those near my trailer.

The Christmas Fern and the Ebony Spleenwort would appear at the top of a similar list for my home area of western Kentucky. In other words, these two species are extremely common throughout much of eastern North America. The Southern Shield-fern is tropical and semi-tropical, however, not making it to Kentucky, but ranging south all the way to Venezuela and Brazil.

Resurrection Ferns form dense mats on the spreading lower branches of large oaks, the ones usually heavily festooned with Spanish Moss. Most of the time this fern looks like dried-up, crinkled leaves, but when it rains

the fronds quickly fill out and turn from brown and green, thus "resurrecting."

In the old days, plantation owners vied with one another to see who could import the most exotic and interesting plants. The Japanese Climbing-fern and Japanese Holly-fern are from those days, having escaped cultivation. Now they reproduce with spores just like our native species, and compete with them. The Climbing-fern is a vine.

*****

ON THE PLEASURES OF SIMPLE TASTES

During the recent yearly visit with my family in Kentucky I was regaled with several sumptuous meals which included such dishes as an apple salad with walnuts and honey, gooey pimiento cheese, and sweet banana bread. After a full year of hermit fare based on cornmeal, flour, oatmeal, vegetable oil, vinegar, and what I gather from the forest and gardens, the tastes of these aunt-made and grandmother-made foods were nothing less than explosive. Also I drank store-bought herbal teas with industrial-strength flavors.

The curious thing is that after three days these tastes did not please me. In fact, the constant presence of rich food began to bother me. My eating and drinking became like an addictive experience with gross superficiality, like being at the circus too long.

In regular life I delight in the taste of a freshly pulled raw carrot, a hot piece of cornbread smelling of simple baked, slightly scorched cornmeal and hot oil, the mysterious astringency of an omelet based on a certain mushroom. When a meal consists of simple elements you have put together yourself, every swallow has a meaning. It's not hard to make the connections between what you are eating, and Nature and human society in general.

There was corn growing, people harvested it and ground, packed and sold the grain, and now you eat it. There was a carrot, you pulled it from the ground and now you eat it. The sun radiated energy that flowed through space, bathed the Earth, the corn and carrot used that sunlight energy to convert air, water and nutrients into substance, and now you eat that substance. One eats with feet flat on the ground, in a knowing communion with the Universe's broad patterns.

*****

MEXICAN TEA
Because of that rich food, this week I began feeling the need for some kind of inner cleansing. I know that it's silly, but somehow my insides felt gummy with too much sweet, salty and greasy stuff. Wednesday I realized what I needed: I needed a good hot mugful of Mexican Tea.

The plant known as Mexican Tea, *Chenopodium ambrosioides*, appeared without invitation in one of my gardens, and I let it grow, as often I do with interesting visitors -- "weeds." By summer's end it stood four feet high and was a handsome plant. Many times this summer when passing by it I'd crush a leaf between my fingers and sniff the powerful odor, then chew on the extraordinarily bitter pulp. The plant is native to tropical America but now it grows throughout much of North America, as far northward as Wisconsin.

Despite having worked a lot in Mexico (I've published five books based there) I've never heard of any Mexican making tea with this plant. However, known in Spanish as *Epazote*, its leaves are indeed one of the best-loved seasonings for bean soup and Mexican stews.

Mexicans also know its medicinal value, as US country people also once did. The wonderful book "*Las Plantas Medicinales de México*" by Maximino Martínez claims that the herb cleans out the lungs, helps digestion, soothes toothaches, and ameliorates nervous conditions in general. The main medicinal use, however, is against intestinal roundworms. The plants contain an alkaloid called Chenopodine, which induces roundworms to release their hold on intestinal walls and pass from the body.

Actually there are different varieties of Mexican Tea and among the varieties exist various "chemotypes." Two chemotypes may look exactly the same but because they contain different chemicals they may smell or taste different. A variety of Mexican Tea with larger leaves is preferred for use as seasoning, while another with reduced leaves is mainly medicinal. Among the various chemotypes is one with a citrus odor -- something hard to believe if you've ever smelled what's in my garden! The one in my garden is the kind used medicinally, sometimes named "variety *anthelminticum*," "*anthelminticum*" meaning "against worms."

Anyway, I was feeling syrupy inside so on Wednesday I picked some sprigs of Mexican Tea, put them in a pot of water and brought it to boiling over my campfire, drank a steamy mugful and -- though surely it was purely psychological -- felt better immediately!

*****

ARRIVAL OF FALL MIGRANT BIRDS

It's clear that fall migration has caused a major revolution here among the birds. You may not even notice it unless you look with binoculars and discover that what you assume to be the usual summery titmice, chickadees and wrens are instead species found here only during the winter.

Eastern Phoebes are absent here during the summer but now throughout the day I hear one calling from the Pecan Trees its comically hoarse "*FEE-be, FEE-be*," and sometimes I spot this plain-looking gray bird wagging its tail -- something it does and no one knows why. Phoebes are insect eaters and often they dart from their perch to snap up a winged creature, then fly back to the same perch to eat their catch.

Hermit Thrushes likewise are winter birds here and all week one has been flying around making it's winter call, a single-note, very monotonous sort of nasal "*meep*." However, for about 15 seconds on Friday morning it inexplicably broke into its spring call, one of the prettiest of our birdcalls, a single high flute-like note followed by a rapid series of rising and falling notes, a sort of fluty gurgling.

All of our woodpeckers are permanent residents except one: The Yellow-bellied Sapsucker migrates like the above birds, living mostly in Canada and the northern US during the summer, down here in the winter. A pair has been chasing one another through my Pecan trees as if it were spring and their hormones were getting the best of them.

Most of our warbler species spend summer here, then go to Latin America for their winter. However, one species, the Yellow-rumped Warbler (called Myrtle Warbler in older fieldguides) spends its summers in Canada and New England, and winters here. Now it's wearing its drab, gray winter plumage but sometimes when it flits away it unexpectedly flashes its yellow rump.

Even the Dark-eyed Juncos, once called Slate-colored Juncos and

sometimes known as Snowbirds, have arrived. This species hops about on the ground and when they fly away flash conspicuously white outer tail-feathers. If you're a hawk attacking them, maybe the white tail-feathers will distract you and your talons will end up grasping tail-feathers while the drabber, business part of the bird escapes.

A small flock of Brown-headed Cowbirds has discovered the pleasure of watching the sun rise from the top of the big Pecan I look into as I prepare my campfire breakfast each morning. Cowbirds remain in Mississippi year round, but they only come in flocks around my camp in the winter. On the one hand they are a bit disagreeable because they are nest parasites -- they lay eggs in the nests of other bird species, and then the parents of those species raise young cowbirds, often to the detriment of the parents' actual offspring. Cowbird nest-parasitism is very damaging to local small songbird populations. On the other hand, since Brown-headed Cowbirds make no nests of their own and so have plenty of time to do other things they are extremely social beings. In these morning gatherings above me I watch them gesturing and displaying to one another in many subtle and not-subtle ways, almost as expressively as flocks of parrots in the rainforest.

It is good to see these species who have been away all summer, but I regret that their main message is that "it's going to get colder... "

*****

EVENING ARMADILLO

Animals seem to fall into routines that last for varying lengths of time. Sometimes every morning for maybe a couple of weeks I'll see a certain deer, a rabbit, some Wild Turkey or something else, and then abruptly they'll disappear completely, apparently establishing a similar routine someplace else. Right now immediately after each dusk a certain armadillo comes rustling through the dry leaves around my trailer, noisily scrapes between some corrugated tin sheets on one side of tahe trailer, and in the dust beneath ghe trailer grunts and digs around for a few minutes before moving on. He's like clockwork and we'll see how long this goes on. Before him a certain Opossum was exploring my woodpile at a certain time each night, but he's gone now.

*****

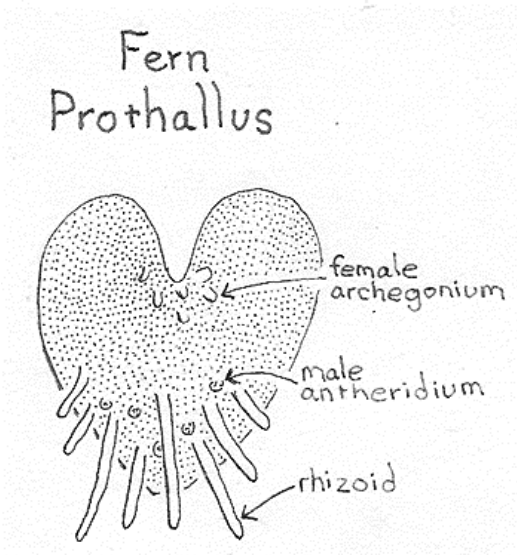
THE FERN PROTHALLUS

This week I've added a picture I scanned of a fern prothallus to my nature-study page dealing with ferns. I consider that a coup, since finding fern prothalli in the wild is hard. Here's what a prothallus is all about:

Ferns reproduce by spores, not seeds. When a fern spore germinates, a fern does *not* result. Instead, you get a prothallus, which is like a tiny, green, flattened heart lying on the ground. Tiny means maybe 1/8 of an inch across. This prothallus has male and female parts. Sperm from the male part swim through water to fertilize an egg in the female part, the resulting zygote then develops into an embryo, and that embryo develops into a fern frond, which bears spores, and the life cycle begins all over again. Ideally sperm from one prothallus fertilizes an egg on another prothallus.

Let that sink in: In a fern's life cycle, there are actually two independent, self-supporting plant-forms alternating with one another. One plant-form is the tiny prothallus, and the other is the thing we think of as the fern itself. Moreover, the prothallus is actually the most complex member, since it is responsible for sex -- the mingling of genetic material for the next generation.

If this reproductive strategy were adopted by humans, human females would give birth not to human babies but rather to something completely different, perhaps something like a tadpole. Then this tadpole would live its own independent life and upon its maturity it would participate in a sexual encounter. Then a human baby would sprout from the tadpole, the baby would grow up and at maturity give birth to another tadpole-thing, thus starting the cycle over...



The reason for this amazing "alteration of generations," as botanists call it, is that ferns are very primitive beings.

They were among the first land plants to evolve and as such they share a problem with amphibians, which were the first vertebrate animals to evolve on dry land.

The problem these two very different but very primitive organism-types have in common is that the male sperm must travel through water, the way it did for the ferns' and amphibians' immediate ancestors, who lived in the sea. In other words, both ferns and amphibians evolved so early in the history of life on earth that when they appeared nature hadn't "figured out" a way for them to have sexual reproduction outside of water. Consequently, even today frogs and other amphibians must return to water to mate, and similarly fern prothalli must be wet for fertilization to take place. A tiny prothallus growing flush with the ground in a shaded place is more likely to have a film of moisture on its underside, where the sexual organs are located, than is a regular fern frond, which must reach into dry air during its search for sunlight.

Finding these prothalli has set my mind to reflecting all week on nature's general blossoming toward ever greater sophistication, ever greater diversity, and ever greater beauty.

At least on Earth, our human ability to reflect on these beauties and to be struck with awe as we behold what is around us is, in my opinion, the crowning achievement of life-on-Earth's irrepressible evolution toward ever greater sophistication.

*****

FIRST FROST OF THE SEASON

At dawn this Sunday morning the thermometer in my Waxmyrtle tree read 31° and here and there in the blackberry field patches of white frost showed up in the green grass. I am sitting here now visualizing ice-crystal splinters materializing inside the cells of many of my smaller neighbors, in the tissue of untold numbers of insects, spiders, ferns, wildflowers and other beings, crystals puncturing delicate cell membranes and shattering complex molecules needed for the most critical and persnickety of life's chemical reactions.

This morning I am celebrating these dying organisms' vigorous and beautiful summer blossomings and breedings. I feel no sadness about their passing but rather reflect on the fact that life includes such moments

as these, and that the dignified beauty of the landscape this mornings proves that there's nothing bad about this kind of death.

During this next week I'll be looking closely at the changes this cold has wrought and I shall admire the cold-neutralizing adaptations of the beings who have survived.

In my own case my trailer is so small that I have placed over it a tarpaulin covering three sides and the top, so that this morning the temperature inside is 48°, and I am content. The afternoon sunlight will be gorgeous and much appreciated as I sit reading surrounded by glowing tussocks of broomsedge in the blackberry field.

*****

STUMP PUFFBALLS
Recent rains have brought forth a rainbow of mushrooms and I've been adding several species to my morning omelets. Bushels of tan-colored, tightly clustered-together Stump Puffballs, *Lycoperdon pyriforme*, about the size of very large grapes, grow on an old oak log rotting near my camp and nowadays most mornings I go pick a hatful.

Stump Puffballs are common, often abundant. They should be picked when small, when they are pure white inside -- before the white flesh differentiates into spores. I break each puffball in two, then drop the sections into a bowl where I mix in two eggs and, from the garden, sliced garlic and peppers. Then I fry this in an oiled skillet over my campfire, and the results are painfully good. The puffballs themselves don't have much of a taste, but somehow they perform magic with garlic and other things in a skillet.

There's a story about the genus name for this puffball, *Lycoperdon*. "*Lyco*" in Greek means "wolf." "*Perdon*" in Greek means "to break wind." Sometimes book publishers provide English names based on direct translation of the Latin name, but in this case they have chosen the innocuous name "Stump Puffball." I'll bet Shakespeare would have stuck with the direct translation and gleefully referred to them as Wolf-farts.

*****

DAY OF THE BUOYANT CRYSTAL CROW
The big storm front that moved across Mississippi Monday and Tuesday

wasn't nearly as violent here as elsewhere. The four to six inches of rain we received was welcome after so many weeks of drought. I'm not sure how much it rained because the tin cup used to measure it overflowed long before the rain ended.

Wednesday morning dawned with an exquisite, washed-clean, freshened-up feeling. The air was cuttingly clear with sharp yellow sunlight avalanching in from the east. Though wind had shaken only a few tree leaves off, the forest surprised me with its new relative openness, its sparkling airiness. Somehow the morning's glaring, puckery light made tree leaves look smaller and harder. Summer's warm, soft greens had clotted to hard, glossy greens splattered with stark black shadows, all overlaid with random speckles of yellow and red. Now clear air and light steamed where just a few days ago suffocatingly humid and hot shadows hung in trees spewing mosquitoes and bats.

So here was a kind of day worth celebrating. It seems strange to me that in our culture we don't formally recognize such special days. Certainly we seem to crave celebrations. People hang cardboard skeletons from trees and place huge plastic pumpkins in their lawns a month before Halloween, and by Halloween already Christmas decorations are up.

Nietzsche once said that most people don't see something until it has a name, and I think that that's right. So Wednesday morning as I sipped steaming mint tea from a mug, I sat thinking up a name appropriate for a season's first day of the kind we had Wednesday, a name that would help people actually see such a day and appreciate it the next time one rolled around. Gradually my idea for a name built toward "Day of Wind-chill, Washed-blue Sky and Open Forest."

But, then a crow flew overhead, white feather-gloss rimming his wind-buffeted, black body, and when that crow looked down at me and laughed, I understood his opinion of my name, and I knew what name he was offering himself:

Henceforward I shall celebrate such days as "Day of the Buoyant Crystal Crow."

*****

WIND-DISPERSED SEEDS EVERYWHERE

My breakfast campfires are on the trailer's eastern side so the sun comes up right there in front of me. Sunlight fractures while passing through tree

limbs, then shows up as slender, straight sunrays stabbing through campfire's smoke. From my perspective the rays radiate from the sun like spokes of a wheel, exactly as in those pictures on funeral-home calendars showing Jesus walking on water beneath a stormy sky with the sun just breaking through.

With the morning sun in my face, whatever stands between the sun and me is backlighted. If the object is solid like a crow, it makes a black silhouette encased in a close halo. If the backlighted thing is fuzzy, the fuzz explodes in the light like sparks in the wind.

Wednesday, wind coming from the west, from behind me, bore untold numbers of tiny parachuted fruits of goldenrod and Little Bluestem, from the Loblolly Field. As the fruits sailed past me sitting in the trailer's wind-shadow and facing the sun, the closer they drew to the sun, the more light they gathered, until finally I had to avert my eyes.

After breakfast I went to see if my newly sowed mustard green seeds were sprouting. When I got my face down next to the ground I was amazed to see the numbers of goldenrod and Little Bluestem fruits that had parachuted there, along with a few fruits of aster and eupatorium.

All summer these plants had grown green leaves and stems, then in the fall they'd adorned themselves with flowers that painted the landscape with bright colors, especially the goldenrod, and then for weeks the flowers had matured into shaggy fruiting heads, and finally the plants waited for such a day as this, a very windy day with dry air.

If the Day of the Buoyant Crystal Crow was worth my celebrating, then how much more were the goldenrods, Little Bluestems, asters and eupatoriums rejoicing as they accomplished their last task of life in such a beautiful manner as I witnessed Wednesday?

*****

THE SIX MIRACLES OF NATURE

While reading Bill Broder's *The Sacred Hoop* I was surprised to see his reference to Earth's "three miracles." Those miracles were:

1) that things exist at all
2) that life came out of things
3) that life became conscious of itself

My surprise is that I have always believed that I had thought up "The *Six* Miracles of Nature" all by myself, yet his three miracles were included in my six. Well, more than once in my life what I thought were original ideas (even original tunes) turned out to be old hat.

Here are "my" Six Miracles of Nature:

1) that things exist at all
2) that things began evolving as soon as they existed
3) that life came out of the evolving stuff
4) that life evolved into many forms
5) that life became conscious of itself
6) that mere consciousness evolved into an ability to reflect and be inspired

When something came out of nothing, the Universe could have remained an infinite volume of hydrogen atoms equidistantly suspended in space, but it didn't. Miraculously, matter began coagulating, changing its nature in many ways, engendering stars and planets, antimatter, black holes and all the rest.

Similarly, when life arose it could have simply replicated itself unchangingly for eternity. Instead, something charged the spirit of life with the capacity to evolve, so that now we have amphibians, birds, mammals, and whatever may emerge later.

And when life became conscious of itself, it could have remained concerned merely with the pleasures and pains of the body, and it could have restricted its thoughts to the brain's genetically fixed patterns. Instead, now, at least briefly, some of us can sometimes rejoice in the abstract patterns of music and art, we can laugh at the good joke that we are ourselves spiritual beings stuck in animal bodies, and on occasion we can even glimpse the unity of all things.

Maybe the Creator's crowning achievement on Earth so far is that some of us sometimes reflect back on the Creative Force out of which everything has sprung so rambunctiously and elegantly, recognize the beauty in it all, and feel awe and honor to be part of it.

Astronomers, geologists and biologists can tell us approximately how long ago each of the first five miracles occurred – when the Earth formed, when life appeared, when hominids first walked the Earth.

I think that The Sixth Miracle is occurring just now -- "now" including the last few millennia. This blossoming is taking place as a greater and greater percentage of us *Homo sapiens* at least sometimes, at least briefly, project our minds beyond matters dealing with the daily maintenance and navigation of our bodies -- the hurting feet, the mechanics of acquiring mates, power and status, etc. The Sixth Miracle flashes into being whenever any one of us reflects on the Cosmos, the selfless and beautiful abstract patterns in music and art, the pale-orange broomsedge field lightly touched with frost at dawn as the White-throated Sparrow sings its "I'm here" song... and we are moved to emotion.

*****

CRICKET CHIMES
During recent weeks night-time summer's unyielding, almost raucous roar of katydids and other grasshopper relatives has gradually metamorphosed into a peaceful chiming of crickets. I am reminded of a few lines in the ancient collection of Chinese verses known as *The Book of Songs*:

> *In the sixth month the grasshopper vibrates its wings.*
> *In the seventh month, out in the fields,*
> *In the eighth month, under the eaves;*
> *In the ninth month, about the doors.*
> *In the tenth month the crickets*
> *Get under our beds*

This verse may be as old as 3,000 years. Just how many generations of country people all over the Earth have noticed -- even cherished -- this seasonal shift, and felt snug and content with the chirping of fall crickets? I now sleep inside my trailer, with my nose at the open window, and what a pleasure to awaken in the middle of the night to breathe in the chilly, moist air, while crickets chime right below me.

*****

FIRST ICE
Wednesday morning the thermometer in my Waxmyrtle showed 27° F.

The water in my teapot was encrusted with a thin layer of ice, and the pastures along my dawn jogging route were white with frost. It was a dry cold, however, so it didn't feel bad. Later at breakfast as I drank hot water my exhalations created impressive steam clouds that lifted into the Pecan trees, where early sunlight cast a pink glow into them.

Frost damage in the gardens was spotty. All the basil in one garden was destroyed but that in another mostly survived. None of my peppers was hurt, but the gourd vines were devastated, and the cannas were half killed back. Unfortunately the cold didn't seem to faze the aphids which right now are wrecking havoc in the turnip beds and among the cabbage.

The gardens remain beautiful nonetheless, particularly because this year I made substantial plantings of various marigold varieties here and there and now those plants could not show up more brightly with their orange and yellow blossoms. These xanthic eruptions among green beds of kale, mustard greens, turnips, green onions and collards, and many rows of cabbage and cauliflower, is a wonderful thing to see. On outsider holidays I try to keep a low profile, but on Thanksgiving morning I couldn't avoid going for a peep at the gardens, just to see how pretty everything was.

*****

MIST TORNADOES & FROST SPARKLES

Last Sunday around noon my thermometer read 80°, then that night a strong front moved through leaving an inch of rain, and by Tuesday morning we had our first freeze of the season, at 25°. In Mississippi I have never seen such a heavy frost, making the neighbor's pastures at dawn silvery white with Black-Angus silhouettes. In the Loblolly Field, hoary-headed goldenrods rose hunchbacked from an infinity of arching, crystal-margined leafblades of Little Bluestem. The Loblollies themselves were almost black in contrast, and their green-needled outer branches were frosted as prettily as any plastic Wal-Mart Christmas trim.

When the sun's first rays flooded in from the east, I stood next to the pond facing the sun, glad to feel warmth on my legs and face. No ice had formed on the pond, but mist rose from the dark water in dense billows. The pond lay between the sun and me so the backlighted mists glowed with uncanny energy.

An erratic breeze caused the mists to curl and scoot across the pond's surface with a swift nervousness almost out of place on such a placid morning. Sometimes the mists would build into nebulous statues and igloos, then suddenly they'd all be swept away, and the mist-theater would reformulate.

Black Willows with yellow, frost-laced leaves stood along the pond's banks. When a breeze stirred, a few leaves would fall -- yellow flutterings onto black water -- and powdery frost crystals would spray through the sunlight, sparkling white, red, green and blue.

Most amazingly, ever few minutes the mist-causing tension between warm pond water and freezing air would cause the mists to spontaneously curl into fast-moving, arm-thick, yard high, silently spinning mist-tornadoes. At one time five mist tornadoes spun across the black water. Simultaneously a certain breeze spread a spray of backlighted yellow willow leaves and glistening frost crystals across the five-tornado scene.

These phenomena coexisted for only three or four seconds. Then the tornadoes vanished, the yellow leaves and frost sparklings were extinguished in black water, and all mists cleared from the pond's surface.

Then long I stood, unwilling to break with the charmed moment. But the new mists that formed atop the pond were of a common type. Now when willow leaves fell, no frost crystals accompanied them.

I think that only once in a lifetime can such a conjunction of magical events occur, and I was honored to have been a witness.

*****

FREEZE DAMAGE

On no single day in the year does the garden change more profoundly than on the day of the first heavy frost. What a sight my gardens were Tuesday morning as the frost melted.

The Elephant Ears and cannas, which for so long have pleased with their robustly broad, glossy-green leaves, now lay crumpled in pitiful, darkened heaps. Basil leaves dangled limp, dark and greasy looking. The tomato

vines were blackened, the cucumber vines looked as if they had been scorched, and the okra leaves were warped and twisted.

Some plants survived without visible damage. The horseradish, radishes, turnips, turnip greens, mustard greens, cabbage, broccoli and kohlrabi all looked good, as did the garlic and green onions.

Having gardened for many years, I had known which plants would die and which would live. Still, I was again impressed by how well the green onions survived. At dawn I had pulled a big one to snip into my cornbread batter. The onion's hollow, cylindrical blades had been so packed with white ice crystals that the blades were stiff. Yet, once the onions remaining in the garden had warmed, their blades returned to being as green, pliable and healthy as ever.

Back in the 70s when I studied plant physiology, freeze damage to plants was regarded mainly as a consequence of sharp ice crystals lacerating sensitive cell membranes, and expanding crystals bursting fragile xylem and phloem tubes. Since then, ideas on freeze damage have shifted in new directions.

In a 2001 paper called "Plant Freezing and Damage," in the eminent technical journal *Annals of Botany*, I read that "The single most important cause of freezing-damage is when ... dehydration exceeds what cells can tolerate." In other words, instead of physical damage done by ice crystals, now it is known that freezing mainly affects plants by depriving their tissue of water.

The paper also focuses on the fact that for an ice crystal to begin growing it must first have an appropriate very tiny item to serve as a nucleus, something called a nucleator. It's now known that often certain bacteria produce a protein that can serve as a nucleator.

*****

FROST AND GREEN TOMATOES

On Monday, knowing that the freeze that night would kill the tomato vines, I went around collecting green tomatoes, to store until they ripened. It seemed easiest to pull up each plant by the roots, then hold the vine before me as I plucked the tomatoes, so this I did. However, it felt funny.

I felt queasy because all summer I'd babied those vines, and the vines had been good to me. I'd eaten from them, watched Green Anoles and Fence Lizards stalk quarry among them, I'd savored the architecture of their blossom anatomy and watched individual flowers gradually develop into perfect fruits. Yet now I broke roots and stems, plundered half-grown fruits, and tossed the mangled plants onto the ground to be forgotten.

The uneasy feeling haunted me all day, and I wondered why. Something here touched a deep chord within me. Something toyed with my subconsciousness.

After a couple of days I understood. The act of uprooting treasured tomato vines before the first big frost was nothing less than a metaphor for how I have conducted my own life at many critical junctures. Again and again in this life I have come to understand something that had been hidden to me before, and then I have quickly and irretrievably uprooted treasured, even sacred and certainly society-encouraged notions and beliefs, I have abandoned comfortable and safe routines, and at those times I have left much in my wake to molder as it would.

When I had those pitiful tomato vines in my hands, prematurely ripping off their long-nurtured fruits, it was exactly like the day in the mid 60s when I became a vegetarian, like the day in the mid 70s when I stopped being a botanist at the Missouri Botanical Garden, never again to lead a standard life. It was like so many times I have behaved absolutely rationally, and perfectly within the letter of the unspoken contract between the world and myself, and accomplished a change that all too often was accompanied by pain on many levels.

These words you are reading right now, and my being where I am and what I am, are part of the most recently planted, modest little tomato plant just poking from the soil, the latest seedling of many that vines and fruits. We'll just see what happens to this one as my own Big Frost draws nearer and nearer.

CHAPTER 12: DECEMBER

GOLDEN DAYS

This week was long hours of bone-chilling drizzle, afternoons of cottony puff-clouds in vultury skies, warmish nights with questioning cricket chirps, and colder nights silent as dead crystal. One sensed a thousand summery traditions drawing to their ends as the annual cycle returns to its Winter Solstice.

Thursday morning after jogging I sat next to my campfire heating a pot of water with a wad of garden spearmint in it, watching what the sunlight did out in the blackberry field. That morning we had the season's fourth or fifth spotty frost, and for the second or third time a crust of thin ice glimmered in my rainwater buckets. Out in the field what little frost we had was melting and every blackberry leaf was wet, every clump of broomsedge was steaming, and the yellow-leafed Sweetgums and Hophornbeams all glowed golden in the low-slanting sunlight. The field reminded me of a child's ornate cardboard theater in which every feature was gilt, the stage, the hall, everything golden and filigreed, every random form fixed in a frozen golden glow, and all the shadows were perfectly black, black with absolutely sharp edges, a whole world of pure gold highlighted with satiny black curlicues and classic Chinese brushstrokes.

As the campfire popped and hissed and steam and smoke wafted into the naked branches of the big Pecan tree overhead, I recalled that that day the outside world was celebrating its Thanksgiving. However, I couldn't see that the day was more special than any other, so I made a point of being no more thankful than usual.

The next morning, Friday, it was even colder, the thermometer in the Waxmyrtle read 27°F, and the ice in my buckets was almost too thick to shatter with a knuckle. That morning the blackberry field was pure white and after an hour of in-slanting golden sunlight still white frost-patches lay here and there.

Toward the end of breakfast the forest and field were wet and glistening, and though no wind at all stirred, about every three seconds a leaf would simply break off a tree and float gracefully to the ground. Frost on the big Pecan tree above was melting, so for a time it sounded like a spring rain coming onto the kitchen's corrugated tin roof.

The leaves and the melt-rain cascading through dazzling sunlight, steam and woodsmoke rising up through it all, and the birds beginning to stir,

and I sat there trying to keep track of every event, every change, but things simply happened too fast to keep up with.

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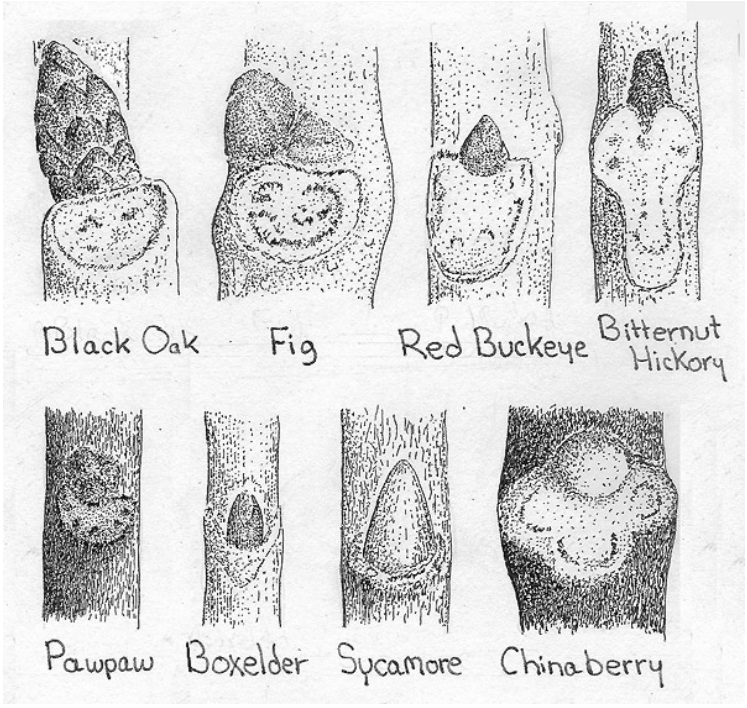
LEAFSCARS ON TWIGS



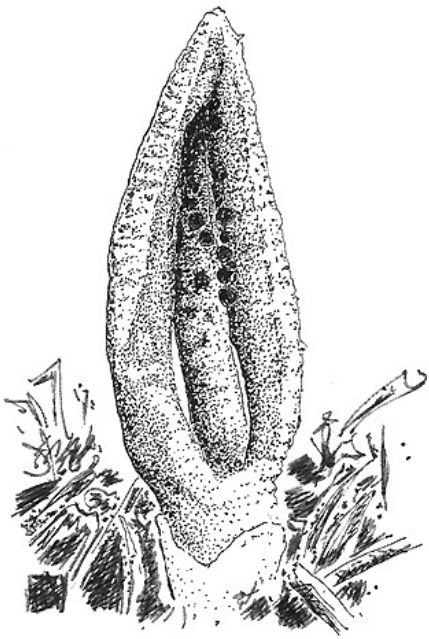
The afternoon blossoming out of that morning was splendid so I left my computer and embarked on a project I'd been saving for just such a day. I went looking for woody twigs showing a variety of leafscar patterns. Leafscars are the scars left on twigs when leaves fall off. The leafscar of each species is different from those of every other species, so you can use them to identify woody plants during their leafless winter condition. I needed these twigs to scan for my Twig Page on the Internet.

Needless to say, wandering the fields working along woods edges looking for perfect twigs was a happy time. I ate a piece of cornbread next to a pond where three large Red-eared Turtles basked in mid-day sunlight.

*****

STINKY SQUID

Monday I was pulling bamboo rhizomes from the garden when in a shaded, moist spot I came upon a mushroom similar to the Stinkhorn (Dog-pecker Mushroom) I told you about in this year's January 27th Newsletter. Monday's find was about the same size and color as the January Stinkhorn but instead of having a single, dog-pecker-looking head, the head was composed of three arms arising from a common base, spreading from one another, then reuniting at their tips, and right below where the three arms connected there was a greenish blob of very stinky spore mass called gleba.



This was the Stinky Squid, *Pseudocolus fusiformis*. Usually it's considered to be a tropical species rarely found in the US, so this was a pretty good find.

As was the case with the fairly common January Stinkhorn, Stinky Squids arise from white, egglike structures about the size of guinea eggs. Also like the Stinkhorns, these fungi produce stinky gleba to encourage flies and other carrion-lovers to land, walk around in the stuff, then fly elsewhere, spreading spores as they go.

If I were exploring on the Moon and found this weird little beauty behind a rock, it would seem no less exotic and mysterious than it did in my garden. One looks at it marveling, just wondering at the Creator's kinky, joking streak.

*****

EASTERN HOGNOSE SNAKE

Monday morning next to our coldframe I was surprised by an Eastern Hognose Snake, *Heterodon platyrhinos*, sunning himself next to a bale of hay. "Surprised" is putting it mildly, since this species makes a living from looking mean. Though its coloration is extremely variable and some individuals are completely black, this one was boldly patterned like a Timber Rattler and thick like a Cottonmouth. My heart fluttered a bit before my brain took over and made a proper identification.

Making a proper identification was important because hognose snakes are among Nature's most spectacular bluffers. They are perfectly harmless critters but they look and behave as if they could chew your leg off. And the bold patterns and bright coloration of my Monday snake are only part of that bluffing.

The first thing my hognose did to increase my terror was to flatten himself. Basically hognoses are medium-size snakes, but when they spread themselves they look much more powerful than they are. When Monday's hognose saw that I wasn't running away he increased his apparent size even more by taking in an enormous amount of air and thus ballooning his body, and spreading his head into a dangerous-looking triangle, exactly like an Indian cobra. He even hissed!

This show did not prevent me from nudging my little friend with a finger, for I knew he would not bite. I have had hognoses strike at me, but they don't open their mouths. It's all pure bluff. I nudged Monday's hognose for a reason, for I wanted to see the last part of his performance.

Sure enough, after the nudge the poor snake flipped onto his back, held his mouth agape, let his tongue hang out, and just laid there, as dead-looking as a snake could possibly look. Of course, when I flipped him onto his stomach he promptly went onto his back again, and with that his repertory of responses was exhausted.

The body-flattening, air-imbibing, hood-flaring, hissing and final death scene are as inevitable with this species as its habit of eating toads and frogs -- except that tamed individuals stop going through the routines once they realize they do no good. As a kid in Kentucky when I saw my first Eastern Hognose I was sure I'd discovered a circus escapee, a real death-dealing cobra. However, when I got out my books, I learned that hognoses are a fairly common species in nearly all of the eastern US,

except in the far north.

It's a wonderful snake but I fear that many have been slaughtered by humans impressed in the wrong way by their bluffing.

*****

FRESH AIR
Sometimes deep in the night I awaken to find that the air has grown stale, maybe because my nose has worked up into a corner, or the sleeping bag's hood covers my face. At the back of the trailer, my sleeping platform stands level with the windows, so when I need fresh air I can just press my nose against the window's cold screen-wire, and breathe deeply. While the rest of my body luxuriates, glowing toastily inside the bag, frigid, well oxygenated air pours into my lungs. During the seconds of that first deep breath I do believe that I feel more alive, alert, and rejuvenated than at any other moment of any day or night.

Later as I prepare breakfast, my campfire again reminds me of the power of oxygen and fresh air. The blaze may be dying out, the flames withering to a lazy smoke, but all I have to do is to blow or fan the embers, bringing more oxygen into contact with them, and then bright orange flames instantly flare up with wonderful brightness and vitality. I wonder just how many people nowadays don't even know about the magical effects of blowing or fanning a blaze?

In fact, I worry about the world being taken over by young people who have not personally experienced the stab of pleasure and flash of being vividly alive that a perfectly timed jolt of unpolluted, well oxygenated air can provide.

*****

GRAY FOX
Monday afternoon while working at the computer something caught my attention at the corner of my vision. Outside, about ten feet beyond my kitchen, there stood a Gray Fox, *Urocyon cinereoargentes*, sniffing at something on the forest floor. He raised his head, looked right at my door, I saw something click in his mind, and he silently and quickly slipped away and disappeared before I poked my head from the door. Gray Foxes are mostly nocturnal and very secretive, so it was something

to see one so near my trailer at 3 PM. In this area they breed from December into March, so maybe romantic goings-on were afoot.

I've seen Red Foxes here before but this was my first good look at a Gray one. Actually during the last week I've been on the lookout for foxes because I've been seeing fox scats along the road -- black droppings with long tapered ends consisting of hairs of prey passing through the digestive system.

The coat of my Monday fox was thick and glossy and he gave every impression of being in full control of things, and in a good mood. His coat was strikingly two-toned -- dark gray above and dark red below.

Though Gray and Red Foxes are in entirely different genera (Reds are members of the genus *Vulpes*), they can look a good bit alike. The most dependable fieldmark separating them is that Red Foxes have white tail tips while Gray Fox tail-tips are dark. Red Foxes have color phases and there's a "cross phase" between the "red" and the "black" that can look like a Gray Fox's coat, but the tail tips are always the giveaway. Red Foxes also have black feet, while a Gray Fox's feet are grayish or reddish.

Gray Foxes are famous for being able to climb trees, and I'd love to see that. I've read that they shinny up tree trunks to a limb, then jump from branch to branch as they go after squirrels and birds. Their toenails are longer, sharper, and more curved than the Red Fox's, which seldom goes into trees.

The winter diets of Gray Foxes in Texas have been shown to consist of:

- 56% small mammals (cottontails, rats, mice)
- 23% insects, largely grasshoppers
- 21% birds (doves, sparrows, blackbirds, towhees)

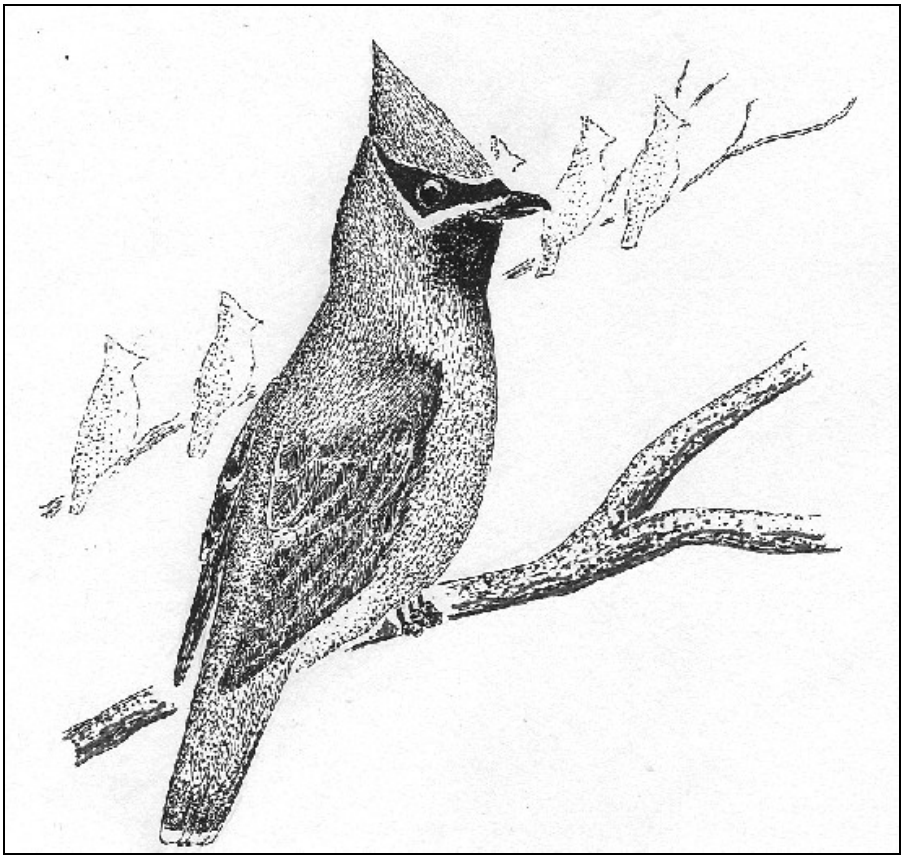
After glimpsing this beautiful animal I felt good the whole day.

*****

CEDAR WAXWINGS AT DAWN

Tuesday morning as I prepared my campfire breakfast the season's first flock of Cedar Waxwings glided into the top of the big Pecan tree above

my camp. Even without binoculars I knew they were waxwings because their flock was so compact and the flight of each bird was so perfectly synchronized with all the others. Flocks of American Robins and Starlings are much looser -- informal you could say. But these little Cedar Waxwings were like petite soldiers positioning themselves in the Pecan with a focused, almost mechanical seriousness.



"Mechanical" is also a word coming to mind when viewing the birds with binoculars. Each buff-colored, jauntily crested adult bird wears a narrow, black mask with a neat, white border. There's a dainty dab of red at each wingtip and a dapper yellow band across each tail's tip. The prim little bird looks as if it's been concocted by a skilled German craftsman -- almost too composed, contrived, sleek and elegant to be real.

Tuesday morning about 120 waxwings adorned my big Pecan's topmost branches. At first they perched silently and unmoving about a foot apart,

each bird positioned so that dawn's low-slanting sunlight struck its broad chest. Waxwings, while small, possess rounded chests, and now in the morning sunlight 120 little chests made soft, oval glowings within the big Pecan's black reticulation of naked branches.

I admired by guests a while, then returned to tending my fire. In twenty minutes I scanned them again with my binoculars and now it was a different scene, for every bird had broken into a frenzy of feather-preening and stretching. I was glad to see that they had made themselves at home.

During summers Cedar Waxwings are found in Canada and much of the northern US, as far south as the higher elevations of the southern Appalachians. In the winter they shift southward, as far south as Panama, but their northern distribution still includes part of New England and Montana.

*****

OYSTER MUSHROOMS

The other day I collected an Oyster Mushroom, *Pleurotus ostreatus*, from the trunk of a dead Water Oak, and it was like meeting an old friend. The first wild mushroom I ever picked and ate was an Oyster Mushroom.

This species supplied my first wild mushroom meal because of three good reasons:

- It was easy to identify
- No deadly poisonous, similar-looking species existed with which it could be confused
- It was known to offer good eating

Similar mushroom species that should be avoided do exist, but they are described as tasting so bad that no one would eat them and, while unpleasant-tasting, they are not known to be poisonous. If you collect a white to cream-colored, soft-textured mushroom up to a foot across, growing on a tree trunk and, when you nibble it, it doesn't taste bad, you're OK. To be absolutely sure, Oyster Mushroom spores are white and produced so copiously that usually you can find a white "dust" of spores below the mushroom's gills -- maybe on the caps of mushrooms below them, for often this species grows in colonies.

Oyster Mushrooms derive their name from their body shape, like oyster shells, not from their taste. I find their taste to be fairly bland, but they do acquire and often improve the flavors of the good things you cook with them. The simplest and possibly the best preparation is to fry them in butter, seasoning only with salt and pepper. The one I ate the other day, however, went into the dish I usually reserve for those campfire breakfasts prepared in below-freezing weather.

That breakfast consisted of a handful of oatmeal boiled in water, with some chopped nuts added, and with two eggs dribbled into the watery mixture when it's hot enough to bubble, so that the eggs' protein forms lumps. All this is seasoned with mixed herbs, especially oregano. That morning when I snipped in an entire large Oyster Mushroom the bits of mushroom in the resulting porridge carried the mellower overtone-flavors of oregano and cooked egg yolk.

In our area Oyster Mushrooms can be found every month of the year, and sometimes you find enough growing together to pick a bushel or so. If you want to choose just one common, easy-to-identify, good-tasting mushroom to know and to eat, this is the species I'd suggest.

*****

CAMBIUM GHOSTS

If you were to cut down a tree, place a yard-long section of the trunk onto a table, and then by some magical process cause everything on the table to vanish except the trunk's cambium layer, you'd end up looking at a pale, translucent, yard-long cylinder composed of tissue-paper walls only one cell thick. The cylinder would have a diameter nearly as large as that of the vanished trunk section, for the cambium layer lies just below a tree's bark, between the bark and the wood.

If you've ever knocked a chunk of bark off a living tree and seen the smooth, slippery surface coating the inside wood, that coating was the cambium layer. The position of the cambium layer makes sense because this filmy zone comprises the only living part of the tree trunk and, as such, from it originates both bark and wood. Those cells produced by the cambium layer facing outward from the tree's center make bark, while those produced by the cambium layer facing inside make wood.

Sometimes I sit imagining what the winter woods around me might look like if only the trees' living cells were visible. Since the resulting forms

would be only one cell thick, they'd be semi-transparent and probably they'd softly glow in the sunlight, ghost-like. It would be a forest of slender, pale, upward-branching cylinders rising skyward, swaying in wind so gracefully that I think that music surely would form spontaneously in the mind. This mind-music would be of a traditional Chinese kind, with tones bending, melodies flowing, all interweaving like tall stems of swaying, frost-yellowed, sunlight-glowing bamboo, accompanied by random-seeming, wood-toned percussion.

I think, to this kind of music, even I might be able to dance.

Yet, these beautiful, ghostly forms are always there, doing exactly as I describe -- just that they can only be seen with the mind, or spiritually, not with human eyes. I suppose that it's just human that I am not dancing all the time.

*****

MORNINGS ALIVE

Mornings like this one, beginning clear and frosty, then warming up fast with brilliant sunlight, are a delight. After breakfast I walk through the blackberry field as curls of dense fog rise off the broomsedge and brambles. Sunlight flooding in from the east causes the fog to glow like neon in a florescent tube. White-throated Sparrows, Towhees and Cardinals friskily flit about as if they know they inhabit a wonderland, and they mean to explore every corner.

By about 10 AM the fog is gone, the sky is deep blue and the air is perfectly fresh and pure. Now the world is young and hopeful and I stand peering into brambles and bushes as the sunlight warms my back and legs.

Though the Winter Solstice hasn't arrived yet, often bird pairs cavort in chases as if it were spring courtship time. Occasionally a White-throated Sparrow erupts with his springy *Old Sam Peabody Peabody Peabody* call. What a pleasure to be next to a sunny blackberry bramble when that sweet, liquid call cuts through the morning air.

*****

CROWS EATING PECANS

A few pecans remain on my trees and lately Crows have been coming to

eat them. Since a crow is too heavy to light next to a pecan at the tip of a branch, it flies up to a branch-tip pecan and, for an instant suspended in mid-air, nabs its nut on the wing. Then the crow lands nearby, secures the meal between its feet, and with its pointed beak chisels it open.

The manner in which the crow positions its pecan between its feet as it chisels is interesting. This is exactly as a Blue Jay might grasp an acorn, or a Carolina Chickadee or a Tufted Titmouse might restrain a sunflower seed from a feeder. I don't think you'll see nuthatches, finches, cardinals or mockingbirds handling their food exactly like this.

That's because this food-holding technique is not at all something thought up by each bird as the occasion arises. It's an instinctual pattern of behavior shared by all members of several closely related bird families, two of which are the crow family and the chickadee/titmouse family.

Millions of years ago a now-extinct bird species, a common ancestor to both the crow and chickadee/titmouse families, was the first to use this holding-between-feet feeding strategy, and the predisposition to hold food between the feet was genetically passed on to later generations -- in the same way that today we see offspring of Sheepdogs just as predisposed to herd sheep as their parents, and descendants of toy poodles to be just as nervous and barky as their parents.

As the eons passed, our crow/chickadee ancestor's descendants dispersed over a large geographical area and its population fractured into subspecies, as the Song Sparrow is currently doing. Eventually those subspecies crystallized into many distinct species. Early during this process the family tree developed a major split down the center, just like many natural trees. On one side of the tree arose branches bearing species we now refer to as members of the Crow Family, and on the other side stood members of the family of chickadees, titmice and some others, and despite the outward dissimilarities of crows and chickadees, the unseen genes of these hundreds of species continue to register the single ancient, holding-between-the-feet evolutionary event .

So today as the crows chisel and caw and look around as crows are wont to do, I witness an evolutionary event echoing since deepest antiquity. This echo is a pure tone struck mid-course in a perfect musical score realizing itself among my Pecan trees.

*****

YELLOW MULBERRY WOOD
I'm expanding one of the gardens, a process involving digging trenches where chicken wire will be sunk into the ground so that later regular fence wire can be placed above. This may slow down the armadillos as they dig their way into the garden.

One trench passes a mulberry tree, and I've been struck by how pretty the mulberry's roots are. Their smooth bark is a pretty reddish purple, and the wood itself, at least when freshly cut, is a rich golden hue wonderful to look at.

M. Le Page Du Pratz, whom I introduced in the August 19 Newsletter, reported how the Natchez Indians used mulberry wood as a source for yellow dye. He mentioned how different dyeing techniques resulted in cloth with varying hues of yellow and gold. I can just imagine how handsome the Natchezes' garments must have been, how their golden robes must have shone as they stood in the light of their sacred sun, on the loess bluff overlooking the Mississippi.

Really I think the mulberries of this area must be something special, possibly as a result of centuries of careful culturing by the Indians. The Natchez also wove fine garments from mulberry bark, something easy to believe if you try to break a twig from a mulberry without cleanly cutting it. Very strong fibers hold the snapped twig in place and if you keep tugging at it, it's so stringy that it tears a long gash down the limb.

*****

SIGNS OF SPRING
Wednesday morning was a frosty one, with ice in the water bucket thick enough to sting my knuckles when I broke through it for breakfast water. However, the sky was clear so, as soon as the sun came out, warm currents of moist, mellow air smelling of water melted from frosted grass began suffusing the air. But these currents of warmer air were slow to blend with lingering pools of cold night air. Even in my lungs it felt as if pockets of crystalline cold air coexisted with other pockets of balmy warm air. I had no name for a moment charmed with such frost-melt contrasts. And then I heard it:

Peter, peter, peter...

It was the Tufted Titmouse calling. The little bird recognized the feeling for which I sought a name, saying plainly that it was "spring." For, this was the titmouse's spring song. In a couple of months the woods will smile with untold numbers of clear-toned, friendly sounding *peter, peter, peters*.

I myself whistled *peter, peter, peter* and before long two other titmice replied from different parts of the woods with their own petering.

At that very instant, on that brightly sunny, crystal-clear, good-smelling Wednesday morning, with no fanfare or existential ponderings to speak of, a certain gear in my brain switched from the fall mode to the spring mode. These words I write now are typed under the influence of a springy state of mind.

Those recent fallish days of dry leaf-curls, maturing goldenrod fields, and color in tree leaves were part of a different mental landscape from the one I am inhabiting now. Now this land and I are concerned with springy, not fallish, things. We recognize the presence of the former season's residual paraphernalia but what most transfixes us now is what's sprouting and opening up, what's singing, and what's new on the face of this rejuvenating Earth.

Of course, it takes more than a single birdcall to establish a season. On Wednesday morning I looked around and saw other signs as well. Up in a Water Oak one Eastern Bluebird chased another who seemed to enjoy being chased as much as the chaser enjoyed chasing. An American Robin gulped down a white Chinaberry fruit, then emitted a nasal peep good enough for any spring morning.

If you get down on your knees and look at the ground in your garden or maybe beneath the grass in your lawn, you'll see lots of green sprouting things -- the first ramblings of chickweed, and little rosettes of Bitter Cress, and innumerable other sproutings and germinations not yet so well developed that they can be identified. In the Loblolly Field, blackberry canes are ornamented with leaf- and flower-buds so plump they look like they could burst at any moment. In places down beneath last season's brown goldenrod stems new blades of grass grow so thickly and are so green that if the goldenrod stems were gone the field in some places could pass for a suburban lawn on Easter morning.

What a surprise! I'd been so busy making stem cuttings, stratifying seeds, and fiddling with HTML code for the Internet, that I'd almost forgotten how at this time of year spring comes tiptoeing. What a pleasure that this year I know the exact moment when its presence was realized, and exactly who brought the message to me:

Peter, peter, peter...

*****

THOUGHTS FOR THE WINTER SOLSTICE

In my opinion, tomorrow, the Winter Solstice, is the official first day of spring. Winter and summer just don't exist in my manner of reckoning. In past Newsletters I've described how I conceive of Nature at this latitude as "breathing out" the blossomings and new beginnings of spring, and "breathing in" the fruitings and dying backs of fall. Today is the last day of the current annual cycle's "breathing in."

A beautiful historical symmetry is manifesting itself at this very moment in the evolution of the human spirit, and the Solstice is the appropriate time to celebrate that. Right now, in our generation, just as the anachronisms and war-inciting tendencies of our religions are becoming so troubling, there is being revealed to us through science enough to inspire humanity to a whole new level of spirituality.

Our generation is the first in human history to recognize that we inhabit a fragile dewdrop of a planet orbiting a mediocre star in an average position in a run-of-the-mill galaxy among many billions of other galaxies, in a Universe that is not only expanding, but expanding at an increasing rate. Only in 1995 did we learn for sure that other stars beside our own sun have planets orbiting them. There must be many billions of planets harboring billions of forms of life, and life-like states throughout the Universe. Before our time, no human ever had an inkling that the Creator's works could be as enormous, complex, mysterious and *beautiful* as now we see they really are.

Nowadays, to be "a believer," it is no longer necessary to claim to believe an ancient mythology. Now, for the first time in human history, anyone can confirm for himself or herself that humankind is enmeshed in such unending intricacy managed with such awful precision that "That which created everything is the Creator, and the Creator is good... "

*****

WARM BREEZES
Most of this week has been breezy and unseasonably warm. It was good hearing crickets chirping in the full-moon nights and Spring Peepers peeping throughout the days. Before a cold front passed through on Thursday, deep in the nights I'd awaken and just lie listening to the whoosh of wind in the trees, and a small twig tapping against the trailer.

Usually as I work at the computer I listen to classical music on Public Radio. This week they've sprinkled fairly tired Christmas carols throughout their daily offerings so I've just kept the radio off. That resulting quietness reminded me of how nice it is to hear only the wind. It was a comfort, a "Joy to the World" in wind.

Maybe a hundred years from now sociologists and psychologists will shake their heads when they recall how today we tolerate in our lives such material, social and psychological clutter -- so many inelegant distractions. They will view us as we do London slum dwellers during the time of Dickens.

In my opinion, barking dogs, traffic noise, perpetually yammering radios and TVs, jets roaring overhead... they are more than inelegant: They are actually destructive to the healthy human spirit. Clutter, whatever the kind, fogs the vision, confuses the insight, mutes the music. Interminable distractions nibble at one's senses until mental fog, emotional numbness and spiritual torpor take over.

But, nature's sounds... the sound of breezes, the trickling of water, surf at the beach, the heartbeat of a loved one... are actually therapeutic to a bruised soul. Maybe it's because these natural sounds remind us subliminally that a few solid realities do indeed exist, despite the evidence of the ever-shifting, choking clutter around us. Beyond the radio's inane noises, never-ending, majestically simple and powerful melodies stream throughout the Universe, and one sound of such a melody is that of wind deep in a warm night.

And just think: You can also walk in the fields and see the wind swirling through the broomsedge, and walk in the forests and behold that wind swaying tree limbs and sending down occasional sprays of bright leaves...

*****

LONG MOON, LOW CLOUDS
The moon has been full this week, and the path it takes across the sky nowadays has kept it visible for a long time each night. Because of the way the Earth revolves around the Sun, when the Sun's daily path keeps it low in the wintry sky, as it is now, the Moon's path keeps it especially high. Six months from now it'll be just the opposite. I've heard these full moons near the Winter Solstice called "long moons."

Earlier this week when warm breezes from the south made sitting outside at dusk especially delicious, I watched the full moon rise exactly as the sun set. Later in the night the moon lit up low, fast-moving clouds scudding northward seemingly right above the treetops. The sky was black but the clouds were pale with luminous edges. As wind streamed through the trees, the clouds were silent and ghostly, and the moon shone through the silhouetted branches of the old Pecan tree just to the east. Those warm breezes caused long strands of Spanish Moss in the Pecan Trees to sway and undulate.

What a view that was! Just compose the picture in your own head: The scraggly tree silhouette with its gesticulating moss as black as satin, the rushing, silent clouds with glowing edges, and that solid moon so bright it almost hurt the eyes to look at it, so silver, silver, with those mysterious dark blotches, and the unending sounds of wind high in the sky...

*****

THE SKY IS BLUE
Yesterday, the Winter Solstice, I took my Solstice Walk. It was sunny and breezy, and the old fields here on the plantation with broomsedge and blackberry brambles encroaching from the woods' edges were brilliant in their thousand shades of rusty-brown and gray. Framed by such muted hues, the blue sky was simply overpowering with its dark blue.

The Solstice is a time to reflect, and after a while of hiking I found myself meditating on that blue sky. Is it not significant that the sky is blue?

Imagine all the colors the sky could be, yet it is blue, a color that sets the troubled mind at peace, that implies profundity and constancy. If you feel like lying on your back in the middle of a large field and letting the mind float, what color would you want the sky to be other than blue?

It's more than that we are simply accustomed to the sky being blue. I think the sky's blueness satisfies so profoundly because we humans have evolved beneath blue skies. Not only our simian ancestors on the African plains but also the little lemur-like first mammals and the first amphibian ancestors to pull themselves onto muddy shores -- first raised their heads to see a blue sky.

So what does it say that today the blue sky pleases us so? To me it implies that the Creator was not satisfied to just make a universe that worked well and looked good. It was important that those parts of creation evolved enough to have feelings -- we birds, coyotes and humans, for example -- could potentially feel content and be at peace where we are. Could indeed feel exultant just when walking around with the eyes open.

Having the sky blue, then, is a blessing and a confirmation, and I am using those terms in a spiritual context, certainly not a religious one.

Having a blue sky on the very day I celebrate the Solstice by taking a long walk in the fields is almost too wonderful to express.

*****

THE BIRDS OF CHRISTMAS DAY

Taking a birding walk on Christmas Day is a long-established tradition with me, so this Thursday I compiled the list presented below. It was a fair, not really good, day for birding. At dawn the temperature beneath a curdled, overcast sky was 30°, but by noon it had brightened a little and the temperature had risen to 52°. Birds in the following list appear in the order in which I saw them, so you can visualize the music of the walk as it evolved. Of course I always hope that someone will take his or her own fieldguide and look up the birds as they appear in the list, just glorying in their colors, patterns, shapes, and unique features the way I do while spotting them in the field. I especially like the sparrows' browns, russets, and grays.

***** Seen during breakfast *****

1) AMERICAN CROW - ±30, raucous in pecan trees
2) BLUE JAY - ±10, gorging a Water Oak's small acorns
3) CAROLINA WREN - calling from hedgerow
4) CARDINAL - calling from hedgerow

5) MOURNING DOVE - 1 flying fast overhead
6) TUFTED TITMOUSE - 2 fussing at me from a Persimmon
7) EASTERN BOBWHITE - "chucking" in Loblolly Field
8) YELLOW-RUMPED WARBLER - 2 watching from a Sweetgum

***** Seen during walk between woods & field *****

9) TOWHEE - calling from beneath blackberry thicket
10) EASTERN BLUEBIRD - quavering song from high in sky
11) BROWN THRASHER - warning churrrr call from pines
12) WHITE-THROATED SPARROW - ± 5 eating privet fruits
13) SWAMP SPARROW - nervously chipping in Broomsedge
14) PILEATED WOODPECKER - pounding tree trunk
15) RUBY-CROWNED KINGLET - comes close to look at me
16) SONG SPARROW - several in blackberry thicket
17) RED-BELLIED WOODPECKER - high in Water Oak
18) FIELD SPARROW - preening in sun, in Broomsedge
19) MOCKINGBIRD - silently watching me from atop pine
20) AMERICAN ROBIN - ±20 in fruiting Chinese Privet
21) BLACK VULTURE - 2 flying low, down Sandy Creek
22) TURKEY VULTURE - 1 circling low over woods
23) BELTED KINGFISHER - working along Sandy Creek
24) YELLOW-BELLIED SAPSUCKER - high on Water Oak limbs
25) DOWNY WOODPECKER - high on Water Oak limbs
26) AMERICAN GOLDFINCH - eating Sweetgum-ball seeds
27) CAROLINA CHICKADEE - complaining inside hedgerow
28) AMERICAN WOODCOCK - explodes from blackberry thicket

The star of the above list is the very last one, the American Woodcock. At walk's end I was approaching camp, a bit tired and woolgathering, when suddenly this bird exploded from inside a blackberry thicket right beside me. Woodcocks are medium-sized, heavy-bodied, long-billed, and short-legged, and their furiously beating, rounded wings create a whistling, twittering sound as they fly. It's always heart-stopping when these birds explode from almost beneath you. They are mostly nocturnal, so during the day they usually sit on the ground dozing, relying on their wonderful camouflage for safety.

Woodcocks have long bills mostly used for probing the ground for earthworms. They are found around here only during the winter.

*****

CORNBREAD & TANGERINE

Seeing the woodcock was great, but I have to admit that the highlight of my Christmas Day was purely gustatory.

Earlier, friend Karen Wise had dropped by, leaving a tangerine specifically to be eaten on Christmas Day. Therefore, when I packed my bird-walk knapsack with fieldguide, notebook and cornbread, that tangerine went along.

After several hours of hiking I deposited my pleasantly weary body next to the black-watered Forest Pond. The air was still chilly but the sky was lighting up and I was downright hungry. The cornbread was as good as ever, its wholesome, baked-odor goodness intensified by the crisp, fresh air, and my hunger. While eating the cornbread I noticed that I'd forgotten the tangerine, so absent-mindedly I peeled the fruit and began eating tangerine sections along with the cornbread.

The cornbread's homey, earthy mellowness perfectly complemented the tangerine's sweet, juicy, exotic, celestialness. The simple meal struck me as perfect for that time and place. In a quiet, uncomplicated manner, the pleasure of that moment was transcendent. Imagining what the animals around me must have thought when my odor of tangerine floated to them on the morning's sun-calmed air, I just had to laugh, and finding laughter mingling with sunlight and cool, fresh air, I had to laugh some more.

Unwilling to let go of the moment, once the cornbread and tangerine were gone, I retrieved the tangerine's peelings and ate them, too, their perfumy bitterness expressing haiku-like what it was like being a hermit in chilly sunlight, hunkered next to black pond-water speckled with green duckweed, on Christmas Day.

*** END ***