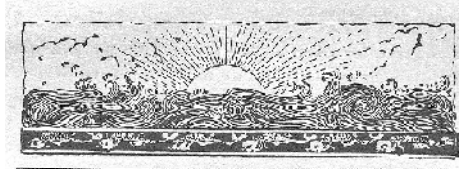


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LENSES

Annie Dillard

You get used to looking through lenses; it is an acquired skill. When you first look through binoculars, for instance, you can't see a thing. You look at the inside of the barrel; you blink and watch your eyelashes; you play with the focus knob till one eye is **purblind**.

The microscope is even worse. You are supposed to keep both eyes open as you look through its single eyepiece. I spent my childhood in Pittsburgh trying to master this trick: seeing through one eye, with both eyes open. The microscope also teaches you to move your hands wrong, to shove the glass slide to the right if you are following a creature who is swimming off to the left as if you were operating a tiller, or backing a trailer, or performing any other of those **paradoxical** maneuvers which require either sure instincts or a grasp of elementary physics, neither of which I possess.

A child's microscope set comes with a little five-watt lamp. You place this dim light in front of the microscope's mirror; the mirror bounces the light up through the slide, through the magnifying lenses; and into your eye. The only reason you do not see everything in silhouette is that microscopic things are so small they are **translucent**. The animals and plants in a drop of pond water pass light like pale stained glass; they seem so soaked in water and light that their **opacity** has leached away.

The translucent strands of algae, you see under a microscope-- Spirogyra, Oscillatoria, Cladophora--move of their own accord, no one knows how or why. You watch these swaying yellow, green, and brown strands of algae half **mesmerized**; you sink into the microscope's field forgetful, **oblivious**, as if it were all a dream of your deepest brain. Occasionally a zippy rotifer comes barreling through, black and white, and in a tremendous hurry.

My rotifers and daphniae and amoebae were in an especially tremendous hurry because they were drying up. I burnt out or broke my little five-watt bulb right away. To replace it, I rigged an old table lamp laid on its side; the table lamp carried a seventy-five-watt bulb. I was about twelve, immortal and invulnerable, and did not know what I was doing; neither did anyone else. My parents let me set up my laboratory in the basement, where they wouldn't have to smell the urine I collected in test tubes and kept in the vain hope it would grow something horrible. So in full, solitary ignorance I spent evenings in the basement staring into a seventy-five-watt bulb magnified three hundred times and focused into my eye. It is a wonder I can see at all. My eyeball itself would start drying up; I blinked and blinked.

But the pond water creatures fared worse. I dropped them on a slide, floated a cover slip over them, and laid the slide on the microscope's stage, which the seventy-five-watt bulb had heated like a grill. At once the drop of pond water started to evaporate. Its edges shrank. The creatures swam among algae in a diminishing pool. I liked this part. The heat worked for me as a **centrifuge**, to concentrate the **biomass**. I had about five minutes to watch the members of a very dense population, excited by the heat, go about their business until-as I fancied sadly-they all caught on to their situation and started making out wills.

I was, then, not only watching the much-**vaunted** wonders in a drop of pond water; I was also, with mingled **sadism** and sympathy, setting up a limitless series of **apocalypses**. I set up and staged hundreds of ends-of-the-world and watched, enthralled, as they played themselves out. Over and over again, the last **trump** sounded, the final scroll unrolled, and the known world drained, dried, and vanished. When all the creatures lay motionless, boiled and fried in the positions they had when the last of their water dried completely, I washed the slide in the sink and started over with a fresh drop. How I loved that deep, wet world where the colored algae waved in the water and the rotifers swam!

But oddly, this is a story about swans. It is not even a story; it is a description of swans. This description of swans includes the sky over a pond, a pair of binoculars, and a mortal adult who had long since moved out of the Pittsburgh basement.

In the Roanoke valley of Virginia, rimmed by the Blue Ridge Mountains to the east and the Allegheny Mountains to the west, is a little semi-agricultural area called Daleville. In Daleville, set among fallow fields and wooded ridges, is Daleville Pond. It is a big pond, maybe ten acres; it holds a lot of sky. I used to haunt the place because I loved it; I still do. In winter it had that airy scruffiness of **deciduous** lands; you greet the daylight. and the open space, and spend the evening picking burrs out of your pants.

One Valentine's Day, in the afternoon, I was crouched among dried reeds at the edge of Daleville Pond. Across the pond from where I crouched was a low forested mountain ridge. In every other direction I saw only sky, sky crossed by the reeds which blew before my face whichever way I turned.

I was looking through binoculars at a pair of whistling swans. Whistling swans! It is impossible to say how excited I was to see whistling swans in Daleville, Virginia. The two were a pair, mated for life, migrating north and west from the Atlantic coast to the high arctic. They had paused to feed at Daleville Pond. I had flushed them, and now they were flying and circling the pond. I crouched in the reeds so they would not be afraid to come back to the water.

Through binoculars I followed the swans, swinging where they flew. All their feathers were white; their eyes were black. Their wingspan was six feet; they were bigger than I was. They flew in unison, one behind the other; they made pass after pass at the pond. I watched them change from white swans in front of the mountain to black swans in front of the sky. In clockwise **ellipses** they flew, necks long and relaxed, alternately beating their wide wings and gliding.

As I rotated on my heels to keep the black frame of the lenses around them, I lost all sense of space. If I lowered the binoculars I was always amazed to learn in which direction I faced-dazed, the way you emerge awed from a movie and try to reconstruct, bit by bit, a real world, in order to discover where in it you might have parked the car.

I lived in that circle of light, in great speed and utter silence. When the swans passed before the sun they were distant—two black threads, two live stitches. But they kept coming, smoothly, and the sky deepened to blue behind them and they took on light. They gathered dimension as they neared, and I could see their **ardent**, straining eyes. Then I could hear the brittle blur of their wings, the blur which faded as they circled on, and the sky brightened to yellow behind them and the swans flattened and darkened and diminished as they flew. Once I lost them behind the mountain ridge; when they emerged they were flying suddenly very high, and it was like music changing key.

I was lost. The reeds in front of me, swaying and out of focus in the binoculars' circular field, were translucent. The reeds were strands of color passing light like cells in water. They were those yellow and green and brown strands of pond algae I had watched so long in a light soaked field. My eyes burned; I was watching algae wave in a shrinking drop; they crossed each other and parted wetly. And suddenly into the field swam two whistling swans, two tiny whistling swans. They swam as fast as rotifers: two whistling swans, **infinitesimal**, beating their tiny wet wings, perfectly formed.