## **University of Massachusetts Amherst**

From the SelectedWorks of Charles Kay Smith

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Suncircles: A Prose/Poem 12/18/2014

Charles Kay Smith





Our eyes have seen suncircles, as in the splendid photograph above, many times, yet few of us are aware that images of the sun are always projected through chinks between close-together leaves as circular images of the sun. Why do most of us, even most artists who observe nature closely, perceive "splotches," "dapples," or "patches" of light, but not suncircles, under trees?

## **Suncircles**

I saw suncircles for the first time in middle age, reading in the shade beneath a birch. A sprightly breeze shimmied leaves inviting suncircles to dance across my open book and over the bare level ground around. Nature choreographed a ballet I could not overlook as I had for half my life. What led bright circles to frolic at noon in the shade? Was it the leaves of that particular birch? No! I saw the circles tripping lightly within the shade of pine needles and a blueberry bush. Why had I never noticed suncircles, before now, ever?

When leaves of any shape are bathed in sun, the chinks between act as lenses. Each pin hole is an aperture, reversing an image of the sun and projecting it to ground. At edges of the foliage, gaps between leaves are too wide to be lenses. If foliage is dense, suncircles may undergo diffraction, display interference patterns, and superimpose fuzzily. Suncircles are round on ground with the sun directly over head. At other times, the circles glow as bright ovals rather than as round. In a riffling breeze, circles will prance. Were you to observe suncircles during a solar eclipse, they'd appear

as fat or slim crescents of light, depending on the eclipse's phase of progress. So suncircles were known to science, if not to me and most others.

After reading this, you, too, If you haven't experienced them already, may begin to see suncircles.' The shape of leaves doesn't matter. All light projected through pin holes between leaves projects the form of the sun's image, but brush and ground are seldom level, or the sun is not overhead. so its image is an oval not a circle. You may view circles much more easily on a blank sheet of white paper (or even a white posterboard) held under small trees or bushes at a right angle to the sun. The higher the leaf canopies the larger will be the circles. When you notice suncircles, Ask yourself why you, And so many others in our culture, could not see them earlier. Since they've always been there.

From Renaissance to 18<sup>th</sup> century, aesthetics favored balanced symmetry in art, music, architecture and gardens. Could artists then see suncircles?

More recently, the aesthetic paradigm has shifted. For the last two centuries we've been persuaded by the aesthetics of music, paintings and gardens that nature is not formal and symmetric.

As an obtuse creature of my culture,
I presumed Nature was asymmetric,
that irregular dapples were the only light
filtering through the leaves of trees.
This conventional frame limited my perception.
My eyes wide open could not see
the symmetric splendor in front of me.

But after I saw I realized, that my unconscious mind, prevented me from seeing the circles and made it almost impossible to recognize easily any evidence contrary to my habitual beliefs. I'd considered myself just, until blindness to suncircles taught me that I would not tend to perceive clear evidence counter to what I'd preconceived, even when that bias was more consequential than light and shade. I understood the root of bias the trap of social bigotry: why we don't re-think mistaken stereotypes.

Each culture is a set of frames that compel partial views of what's real. In differing frames are misunderstandings that tend never to be amended. Each mind, too, is organized in frames that focus always on restricted assessments, rendering the common sense distinction between concrete and abstract illusory. Maybe it was adaptive for ancestral survival, for swift reaction free from distraction? I am now more humble in my judgments.

Rare it is that we see beyond our frames. Only two Impressionists,
Of those who strove to see nature clearly in every splendor, have showed suncircles in their paintings:
Renoir, in Dance at the Mill,\*
and Monet in Alice in the Garden.\*\*

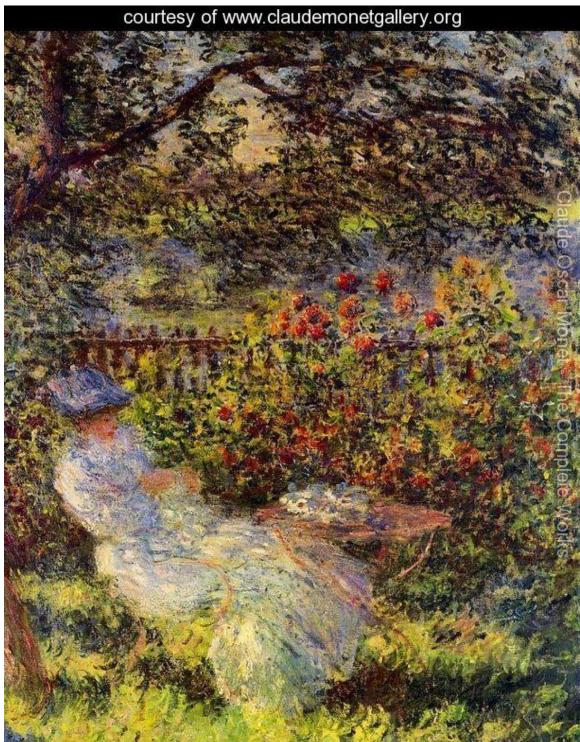
Our eyes are not cameras that record a scene with unerring fidelity. Eyes tend to look for what the brain expects and blinker what we don't already know. Pondering our frame may teach more than looking. Best escape from stereotyped perception is to study the frames of other times and cultures. Seeing is an intellect's adventure?

**Charles Kay Smith** 

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Pierre-Auguste Renoir, Bal du moulin de la Galette, 1876



Claude Monet's Alice Hoschede in the Garden, 1881