

## LOST IN A WORLD OF RED AND GREEN: COLORBLIND MALES AS A NEGLECTED MINORITY

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As I read about the fires raging across the Western States, I'm reminded of my three years on "hot shot" crews in the late 1960s. One June day on Oregon's Rogue River National Forest our crew was digging a practice fire line. I was the sawyer and my job was to cut down trees that had been marked with red ribbons.

As the top male on the crew I could not admit that I could not see the ribbons, blending in with green trees through my colorblind eyes, so I merrily sawed my own path through the forest. The crew boss tapped me on the shoulder and shouted "What in Hell are you doing?" I had to admit to my visual handicap, and we agreed that he would mark trees with yellow ribbons from then on.

I had been aware of my colorblindness since the fourth grade, when my teacher held me after class for coloring the oceans purple during a geography lesson. My teacher called my mother and complained about my insubordination, and the next day my condition, along with my brother's, was confirmed by an optometrist. My maternal uncle is also colorblind, the condition being carried as a recessive gene on the mother's side.

In August of 1966, I was hitchhiking from Denmark to Norway and a trucker picked me up on the Swedish West Coast. Because of my unique color vision, I was able to point out something he had never seen before: camouflaged gun emplacements on regular intervals all along the coast.

I have a colorblind friend who was thrilled to be made a signalman in the Navy. For some odd reason, his vision was never tested even though many of the signals are color coded. One day on maneuvers, he was given an order to run up some colored pennants. He just chose the colors he liked, and the result was that he saw the ships behind him falling out left and right as if under attack. He was quickly reassigned to another post.

My disability is mostly a harmless one. Wearing green socks instead of the brown ones I thought I put on is a great conservation starter. More seriously, I can't tell the difference between the red and amber traffic light, and I simply guess when driving alone faced with the choice between flashing red and amber. Furthermore, the green traffic light is the same color to me as any street lamp. Knowing the position of these lights certainly helps, but not in foreign countries where the order is different.

Why can't all greens be like the grass green that I desperately use as the perceptual match for that confusing color? I've also come to the conclusion that all these shades

color with fancy names are nothing but a conspiracy against us poor colorblind souls. Sometimes I like to be ornery and identify something as chartreuse, even though I have only a vague idea what that color looks like.

In addition to being unsafe with flashing red and amber, the red used as a warning light on appliances and equipment does not stand out to us who are missing the red receptors in our retinas. I'm constantly leaving on stove burners, and I wish there were a yellow rather than a red warning light.

Scientists at Johns Hopkins have genetically modified mice, which, along with many other species, naturally have only the blue and green receptors that colorblind humans do. They have successfully inserted the red receptor gene into their subjects and they are now able to perceive red and green in the "normal" way.

Biologists believe that tri-pigment color vision evolved in primates in order for them to choose ripe fruit, and for males to perceive the red rumps of their females in heat. In a culture where the genitals are covered, colorblind males may also miss the flush of red in the face of females who are attracted to them. Finally, recognizing the red, angry face of an approaching stranger would also have given early humans a sign that they should protect themselves from attack.

I always tell people not to feel sorry for me, and I assure them that I still see a colored world. I'm much more concerned about correcting my severe myopia rather than my colorblindness. My highest priority, however, is for industrial engineers to think twice before they, once again, choose red as a warning light. It sends no special message to five percent of the male population.