Undetectable wonders passing us by

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We humans live in a strange paradox ? the majority of reality is hidden from us.Astronomers estimate that about 95% of the universe is made up of mysterious dark matter and dark energy, invisible to the naked eye and detectable only through advanced science.But the unseen isn't just ?out there? in space ? it's all around us.Our senses are tuned to a very small slice of reality: a narrow spectrum of light and a limited range of sounds. Beyond our limits exist ultraviolet rays, radio waves, infrasound, and countless other signals shaping the world in ways we can't detect or notice.We can only see a small portion of radiation ??the portion we call visible light. Cone-shaped cells in our eyes act as receivers tuned to the wavelengths in this narrow band of the spectrum.Visible wavelengths range from 740 nm for red light and through orange, yellow, green and blue to 380 nm for violet light. But given our limitations, there are countless more combinations of colours, making the typical ?rainbow??pale in comparison.For many creatures, the world is filled with a whole range of colors that we are completely unaware of. One has to wonder why we ?supreme beings? have been shortchanged in this area. We're flying blind atop the food chain.Sure I can use a keyboard and drive a car, but I'd also love to see a dozen more colours ??the big, beautiful, panoramic picture. I feel cheated.It all leaves us with an incomplete understanding of the true beauty of the world around us.I admire some of my fellow creatures, big and small, who can enjoy the world as it is.The small but mighty mantis shrimp boasts extraordinary vision. Its eyes contain 16 types of photoreceptors, compared to our three. This allows the mantis shrimp to see ultraviolet light and detect polarized light. Imagine a world where colors are not just more vivid, but entirely different from our perception. This small marine creature perceives the ocean in a way we can't fathom.Butterflies are beautiful pollinators and they, too, boast amazing vision. Their compound eyes encompass a wide field of view, and they can see ultraviolet patterns on flowers, invisible to humans. These patterns guide them to nectar, ensuring their survival. The ability to perceive ultraviolet light also aids in identifying mates and avoiding predators.Unlike human eyes, butterfly eyes can detect polarized light, which enhances their navigational skills during migration. This multi-faceted vision is an adaptation honed over millions of years, making butterflies adept at thriving in their vibrant environment.Pit vipers have a deadly advantage with their thermal vision. Equipped with specialized organs between their eyes and nostrils, they detect infrared radiation from warm-blooded prey. This adaptation allows them to hunt effectively, even in complete darkness. The pit organs function like a thermal imaging camera, enabling these snakes to strike with precision.Talk about the ultimate predator! That's a distinct advantage.Horses possess panoramic vision that allows them to see almost everything around them without turning their heads. With eyes positioned on the sides of their heads, they have a nearly 360-degree field of view. This gives them excellent night vision and also helps detect predators.Sharks are the oceans' apex predators, due in part to their keen vision. Their eyes are adapted to the deep, murky, dark waters. With a high concentration of rod cells, sharks excel in low-light conditions. Their eyes reflects light, enhancing their night vision. Sharks can also detect electromagnetic fields, another advantage in the deep.There are many examples of seemingly advanced powers in nature:Geckos can discern colors even in moonlight. Pigeons can also detect magnetic fields, a skill that complements their visual navigation. Goldfish can see infrared light, a trait that's surprisingly rare among fish. In murky waters, this vision helps them navigate and find food.It's like having an underwater night vision.With nearly 30,000 lenses in their compound

eyes, dragonflies have an incredible field of view and can detect even the slightest movements.So I get why some creatures, perhaps the most vulnerable, have such an edge. But it seems wasted on these tiny beings.When compared to humans, the only evolutionary traits we've been granted are a opposable thumbs, bigger brain and language skills.I don't see that as a huge advantage, particularly in the wild. How our early ancestors survived is beyond me.We can hug a tree, even climb it, but we can't blend into it. The octopus can change the colour and texture of its skin to camouflage itself.We can use our noggins to build a lean-to or cabin, but can't see our food sources at night.We can spin tales, laugh and tell lies, but I don't see how those help in our survival.We can sing, some of us quite well in fact. And animals seem to love it when you sing to them. But as an advantage?Of course, we get around our deficiencies by building devices and contraptions so we can see, navigate and identify everything around us. We can even predict future weather events.I wonder if opening up the spectrum of light would improve our species.In the very least, it would give much more to write and sing about!It would really make my colourful Hawaiian shirts pop a little more in the summer.If I could, I would love to see through a butterfly's eyes.