

ENVIRONMENTALLY SPEAKING Peter Schwartzman

Is the Earth invisible?

Look out your apartment/house window, a car window, or even the window at the top of the Sears Tower and what do you see? You see components of our planet, i.e., clouds, paved streets, buildings, patches of grass, rows of corn or soy beans, and business districts as well as temperate forests. And while what you do see is material and simultaneously simple and complex, it still represents a very limited picture of our planet. Unfortunately, there is strong reason to believe that what we don't see warrants our immediate and concerted attention.

Paradoxically, the planet that we inhabit is largely invisible to us. In fact, some of the most important parts of the Earth — the ones that allow us (and others) to live and breathe on this finite planet — are nearly invisible. Over the past several hundred years, scientific research and technological development has done wonders to enable us to "see" the materials, forces, and patterns that occupy and govern the Earth. Yet, despite all of these new tools (including telescopes, microscopes, and endoscopes), most of us still are not able to see the essential elements that constitute our surroundings. And since it is these components that sustain us, if we don't start "seeing" them soon we are unlikely to consider what may be happening to them as a result of current ways of life. And as long as we are not properly considering the ramifications of what we are doing, the odds are extremely small that we will manage to modify or redirect our paths in time to protect ourselves and life as we know it.

What exactly don't we see? The invisible elements are almost too numerous to mention in a paragraph, but here goes a futile attempt to cover many of them. The gases that make our planet warm enough for habitation are largely invisible. Even water vapor, the main constituent driving the greenhouse effect, is invisible, but whose existence can be inferred when it condenses as one exhales on a wintry day. The chemicals — such as dioxin, PCBs, pesticides, arsenic, DDT, and lead — that we litter our soils, atmosphere, and waterways with are also nearly invisible, especially at the concentrations that we, the users and consumers, are told are "acceptable." Microscopic particles that enter our noses and lungs — such as pollen, mold, paint, benzene, formaldehyde, pesticides, solvents, and asbestos — are also rarely seen. The poverty that consumes the developing world — where nearly half of the world's people live on less than \$2 a day — presents only fleeting shadows on our everyday lives. Similarly, the gargantuan wealth of an extremely small fraction of our species (concentrated amongst the likes of Bill Gates, Warren Buffet and multinational corporations like Exxon and Wal-Mart) may get headlines more often in our consumeristic society but the sheer extremity of their wealth is still not explicitly observed by most of us in terms of its associated opulence and extravagance. (In other words, we can theoretically drive in Beverly Hills, but most of us never see what is behind the gates.) The momentum and consumption of the more than six billion humans that are alive today cannot be understood without the aid of a computer model and graphing software, but a mere graph doesn't let us see the physical abundance of our collective takings or the

waste stream that results. Although, many more invisibles exist, these are the few that draw immediate attention because their impacts are so relevant.

A mere fraction of the Earth's atmosphere provides us warmth necessary for survival. The trace gases — including water vapor, carbon dioxide, methane, and ozone — all together make up less than 1 percent of the atmosphere (exceptional situations aside). However, it is these gases, not the more abundant ones (i.e., oxygen and nitrogen), which produce the greenhouse effect that keeps the bulk of the Earth's radiation from escaping to space. The invisible infrared radiation that leaves the surface of the Earth collides with molecules of these gases and the resulting absorption traps the energy in the Earth's atmosphere, rather than letting it escape to space. On average, this extra heat makes near-surface temperature nearly 60 degrees Fahrenheit warmer. Since we cannot see the gases nor the light being absorbed by them (it is infrared and can be "seen" by rattlesnakes but not humans), we were oblivious to this important characteristic of our atmosphere until the end of the 19th Century. And it wasn't until the latter stages of the 20th Century that we decided to take seriously the ramifications of an enhancement to the natural greenhouse effect via the vast quantities of emissions (from vehicles, factories, and other activities requiring the combustion of fossil fuels). Among a broad set of anticipated impacts, the one most advertised is a continued warming of the planet over the course of this century to levels not observed for thousands, or even hundreds of thousands, of years. Other byproducts of future warming — such as, glacial melting, ocean thermal swelling, sea-level rise, and the spread of tropical diseases — may be more tangible but no more easily measured or observed. The fact that we cannot see these important interactions, except through remote sensors and complex models, makes it difficult for the everyday person to give much consideration to them. One day the "signs" of climate change will likely be so overwhelming that we will not be able to

ignore them, but if and when that day comes (and some say this past summer in Europe represents clear and present danger), we might not be able to steer our ship away from the proverbial iceberg fast enough to avert disaster. As for now, we are told by our last several administrations that to do something now would be too damaging to our economy. But, is it really "the economy (stupid)" that is the deciding factor?

Look at a peach or a strawberry, and what do you see? Probably you see a



delectable fruit whose sweetness and flavor produce good thoughts and feelings. Yet, for generations starting with my parents, one must look under a microscope to see something also revealing about these fruits. They are among the most heavily pesticide-laden fruits in the world. Why is this so? In the 1940s the chemical industry began to realize that it could synthesize and mass produce chemicals to promote and accelerate agricultural and industrial production on a global scale — perhaps driven by profits as well as a sense of obligation to humanity. Since many of the chemicals first produced during this era were developed within a wartime atmosphere, they were not properly or adequately tested — a tradition that continues to this day to a great extent. Once the war ended in the battlefields, according to Rachel Carson, author of *Silent Spring*, a new war commenced with the deliberate "seek, strike, and destroy" mindset that called on hordes of synthetic chemicals to attack the "pests" of our world. Currently more than 1,000,000,000 pounds (yep, that is 1 billion, folks) of pesticides are applied to U.S. crops each year (that is over three pounds per citizen) and four times as

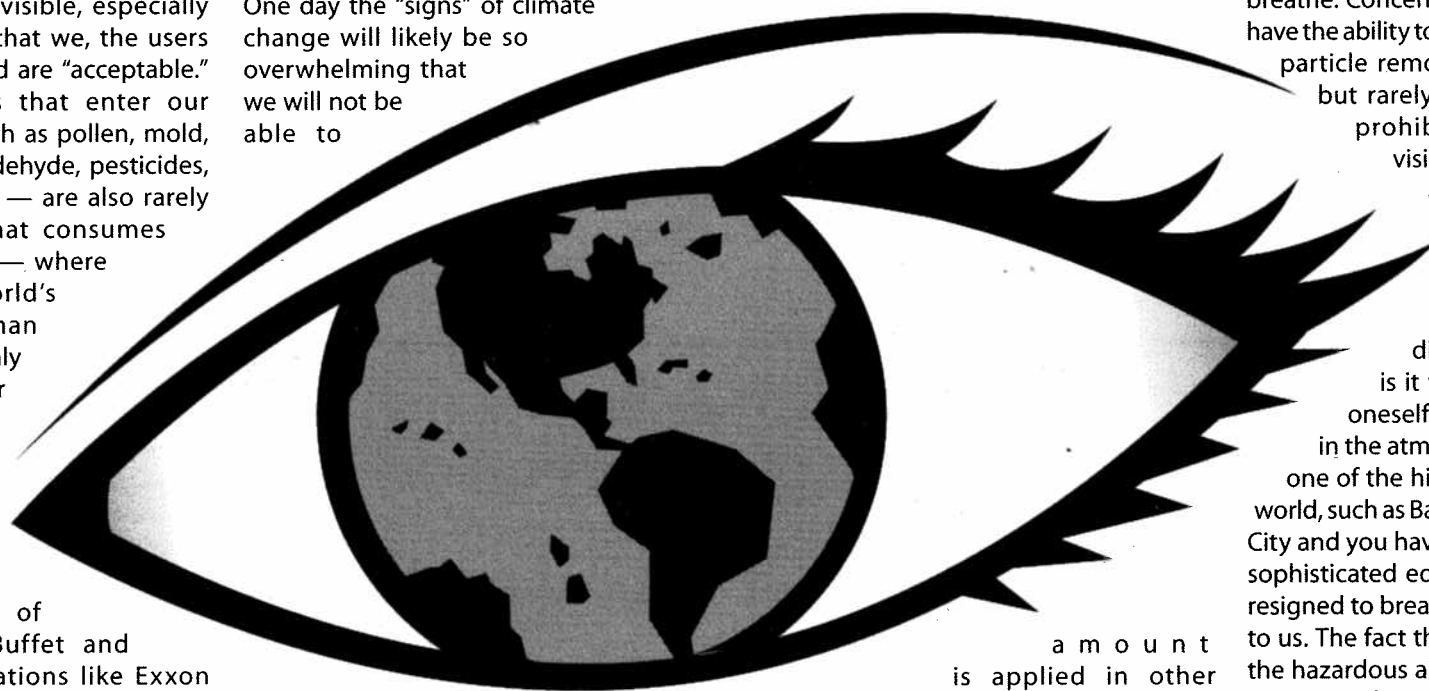
amount is applied in other countries (Chiras). Things have obviously changed dramatically in the past sixty years. One wonders how people produced food in sufficient quantities in earlier times.

Despite all the pesticides that are found on our fruits and vegetables (consider that even washed peaches and strawberries have been found to contain residues of over thirty pesticides), these chemicals are largely invisible to the naked eye (EWG). Thus, we buy and consume fruits and vegetables from the grocers visibly unaware of such contamination. And even

those aware of such things aren't going to benefit greatly from washing their produce because many pesticides are made to resist water (such chemicals are described as hydrophobic) because otherwise they would be ineffective every time a storm were to pass over a farm. Even those that choose to pay more for organic foods also must accept on faith that such produce is better and worth the extra expense because they cannot "see" the difference. Further, even if one wanted to be informed about the impacts of consuming the chemicals that are found on one's food, it would be very difficult to do so for many reasons. First, very few of the chemicals being used have been adequately tested for human health effects. Second, of the tests that are done, nearly all consider chemicals in isolation of one another; it is very difficult for scientists to do studies on mixtures and their multiplicative effects. Third, toxicological tests focus on end products (such as cancer) rather than on intermediate results (such as immune suppression) which can also be very disruptive to health and well-being. In the end, we are left to conclude that the peach and the strawberry in the grocery are much more than they seem.

Each one of us breathes a few times a minute. It isn't something we have to think about doing because, fortunately, our bodies are wired to maintain a steady pace of breathing through the course of our lives. Yet in every breathe we inhale we take in all that there is to be found in the gaseous ocean we call the atmosphere. Most people will not drink water from our lakes and streams any more. Why? Well, they know that these waterways are severely polluted because they have been used as dumping grounds and waste repositories for the industrial sector over the past few centuries. However, the same logic doesn't follow when it comes to our atmosphere. We don't need to drink surface water anymore because we have the ability to cleanse our waters prior to consumption. Unfortunately, we don't have the same luxury when it comes to the air that we breathe. Concerning indoor air, people do have the ability to spend funds on advanced particle removing devices and filters, but rarely is this done because of prohibitive costs and limited visibility of the issue of indoor air pollution. Concerning outdoor air, we live in a giant soup that contains emissions from local as well as distant sources. At this point it is very uncommon to guard oneself against noxious materials in the atmosphere, unless you live in one of the highly polluted cities of the world, such as Bangkok, Thailand or Mexico City and you have access to expensive and sophisticated equipment. Thus, we all are resigned to breathe the air that is available to us. The fact that we cannot see most of the hazardous airborne materials, the vast majority of us maintain our daily rituals without hesitation or complaint.

Very few of us have witnessed the abject poverty that consumes much of our species. It is nearly impossible to understand what it must feel like to live day to day, not knowing if or when your next meal will come, or when your malnourished bodies will succumb to opportunistic microbes. Certainly, poverty can be observed in the United States, but it rarely takes the extreme form that is found in many developing countries of the world. Given how difficult it is to fathom the severity of the world's poverty



TUNE TIME

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Ken Orth/Wycked Synn

problem, it is nearly impossible for most of us to use it as a motivating force in our own lives. If we lived next door to a starving or severely malnourished person, we would undoubtedly share our food with them. We would understand their plight and we would try to help them; it is human instinct to reach out and help others. But since the mouths overseas are outside of our bubble, we summarily dismiss their existence and go on our merry way. Unfortunately, even the technological gadgets that have come to our disposal recently — such as the cell phone, the pager, the Internet — still do not provide a means to communicate with the desperately poor, at least not yet. As long as we don't talk to or see these impoverished people as part of our species, equal in every way to us, we will continue to look past them.

In a similar vein, the extreme wealth that exists among our top corporate executives, entertainers, and athletes is similarly beyond our sight and comprehension. In order to understand this fact, consider what you could do with 10 million dollars. How big a house could you buy? How expensive a watch could you purchase? How big a diamond could you obtain? How big a college could you own? These questions are difficult for us to answer precisely because most of us have never had handle such sums of money. Further, while \$10,000,000 seems like a lot of moola, this large sum has the same relative value to someone who makes \$20,000,000,000 a year (such as Bill Gates did a few years ago) as does a \$20 bill has to most of us. Hence, unimaginable, a few people in our world (there are about 200 billionaires in the world today) could blow \$10 million on a house, car, watch, and college, as we might do on a dinner and a movie next Saturday night. Since we don't see these levels of wealth, we are not prepared to say "enough is enough." (Speaking of enough, five members of the Wal-Mart Walton family are each worth over 20 billion dollars.) Since enough isn't enough, we allow disparities of wealth to increase without hesitation.

In the end, the cliché, "out of sight out of mind," holds important insights as it relates to the critical elements in our environment. Since we cannot perceive the role that greenhouse play, we continue to add them to the atmosphere. Since we cannot see the vast majority of dangerous chemicals that are released daily into our soils, atmospheres, rivers and oceans, we continue to tolerate them and the majority of the polluters that expose them to us. Since we cannot see indoor pollution, we continue to construct buildings with ever increasing synthetic chemicals and reduced air circulation. Since we cannot see extreme poverty or extreme wealth, we ignore both, despite their negative consequences. The funny thing is: we can see all of these things if we made the effort to do so, but do we really want to?

Works Cited:

Chiras. (2001) *Environmental Science: Creating a Sustainable Future*. (6th ed.) Sudbury, MA: Jones and Bartlett.

EWG. Environmental Working Group. (www.ewg.org) Pesticides in Produce. (www.foodnews.org/reportcard.php).

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It's always a pleasure to receive new CD's in the mail to listen to and review. After all you're not paying for them. But it seems with greater frequency these CD's, whether it be AOR or heavy metal, do not have any longevity. You spin them once or twice, review them and put the CD aside with no desire to listen again, the X factor missing, that key ingredient that keeps you coming back for more time and again. It causes you to lose faith in the musicians and if they can create anything with durability, something that deep down you know many eighties artists had no problem with. Arizona's Wycked Synn were poised for that same response on my behalf. For several months the promise of dealing with the four piece metal outfit had me wondering if they would elicit the same response as many previous such power metal type acts encountered in past reviews

— all the heaviness, speed and bluster in the world, but little to distinguish them from the pack and convince you it that it's for real.

For once I have been proven wrong. Finally. Wycked Synn's Chavis Records debut 'The Vision' is fifty minutes of heavy metal which never lets go, keeps pounding away at you until you're satiated. All the time you might sit there thinking 'where are the ballads', after all isn't that the token gesture? A few rockers then a cop out, lighters in the air crowd pleaser, when all anyone wants is to bang their heads? That's where Ken Orth and Wycked Synn excel. They've played it straight down the line and conjured an album which revisits the sound of 80's favourites like Queensryche, Dokken, Iron Maiden and Leatherwolf, with results that end up giving them their own identifiable sound instead of being labeled copyists. Bearing all this in mind I had the chance to talk with Wycked Synn guitarist, keyboard and all round mastermind Ken Orth and discuss everything Wycked Synn, and get the lowdown on a band putting true heavy metal back on the map.

When thoughts turn to Arizona, heat and humidity are two of the first things. Growing up as a metal fan Ken Orth could probably appreciate a classic track like 'Desert Plains' by Judas Priest and adopt it as a personal anthem. But this is where Ken Orth has made his home, a place beloved in the mans heart. Not originally from the area my first question for Ken is what prompted him to move to East Arizona? "My parents moved out to Phoenix back in 1988" he explains "and I loved it so much I decided this is where I really want to be" comes Ken's simple answer. Considering Ken's amazing performance slinging his six string on 'The Vision' thoughts turn next as to how Ken developed such a passion for metal and pursuing a career in it, a brave move in a depressed marketplace for the genre. "When I first heard Randy Rhoads on 'Diary Of A Madman' that kind of hooked me on the guitar" says Ken, certainly a familiar story from many guitarists who were influenced by the late, great axe hero. But once Rhoads was lost Ken's thoughts then turned to his proper successor. "When 'Bark At the Moon' came out I then turned into a Jake E. Lee freak" he remarks pointedly, "Ozzy always had the ultimate guitar players." Ken then turned his attention to other major 80's guitar players. "I then discovered many influential players like Lynch, Malmsteen, De Martini, Impellitteri, Aldrich and a slew



of other great guitar players, just like everybody else. So in theory a piece of each has influenced me in some way. I am a metal freak so it was a natural progression for me to create my own metal" he explains forthrightly.

The next logical step was to get a band together, one that shared Ken's desire to replicate the metal of his idols. Before he assembled any personnel Ken set about creating the music that would become the bulk of 'The Vision'. How long had Ken been working on this material that formed the basis of the debut? "The Vision was recorded between March and August of 2001, the music basically being completed in that timeframe" comes his surprising answer, the music then having existed for some time. "The vocals and lyrics happened quite a bit later" he continues "I had a difficult time finding the right vocalist with a powerful voice that could pull off what I was writing for and equally performing live."

Ken found the voice finally in Gary Grant. Grant's classic high ranged metal vocals are an essential part of the debut, giving the band a voice that provides an identity, just like Bruce Dickinson does for Iron Maiden or the reuniting Rob Halford once did for Priest. In Wycked Synn's biography however it states Ken and Gary met by 'chance' after Ken had unsuccessfully auditioned other singers. I have to ask Ken what kind of chance meeting was this? "I went through approximately twenty five vocalists before I found Gary" recalls Ken, almost painstakingly at the recollection of the process. "A friend of mine was auditioning a guitar player for his band and mentioned my problem to him" he goes on "and this guitar player gave my buddy Gary's phone number and told him I should check him out." I called Gary and gave him some lyrics to work on. When the audition came Gary sang one verse and I knew he was the one." Grant's considerable talent is not lost on Ken, who is quick to praise his frontman. "Gary 'Screamin G' Grant is an incredible vocalist and a superb musician. As I said right away he was the one. Throughout the creation process certain things happen and gel. A magical thing happened with Gary and as a musician I felt it."

Considering the musical excellence of 'The Vision' it appears the band personnel have a high degree of experience. What were some of their experiences in the metal scene prior to Wycked Synn? "Myself it was local East Coast tours and stints with other bands" replies Ken, regarding his history.

"It was pretty much the same for the others as well. All of us in one form or another played with local or regional bands that had some type of minimal success or hype to them." Then comes the question over the bands moniker. Wycked Synn on the surface appears to be a throwback to a typical eighties metal name, evoking memories of long forgotten acts like First Strike or Princess Pang. This is a notion Ken disagrees with however. "I don't know if I would call it a throwback, because to me this genre hasn't gone anywhere except underground. So the name is as real and current as anything out there right now. We make no excuses about what we do, it's heavy metal" he declares proudly, and with just cause. That said then, how did you think of the name? Had you thought of it before setting up the band? "Not really. It came to me one day while I was doing an interview over the phone. I scibbled it down and it looked cool so I kept it. It has a dark feel to it."

As a live unit one senses that Wycked Synn has the potential to reach explosive heights. I say 'one senses' because Wycked Synn has yet to perform in a live setting, something Ken is keen to explain. "We've had no live performances at all, other than bringing in a bunch of friends to critique the band. We have been in the studio the whole time working on the record. And now that it is completed we are rehearsing several days a week. Our live show has tons of energy and we guarantee to rock everybody's asses off and snap a few necks on tour." Are Wycked Synn going to tour outside Arizona however? You bet according to Ken. "We will certainly be touring outside Arizona and the band can't wait. Throughout the summer and fall the band will be on the road" he confirms with restraint, although you can be sure he and the others will be chomping at the bit to get out there and prove themselves to new audiences.

Wycked Synn have benefited greatly from their alliance with Chavis Records, an independant metal label run by Bill Chavis, a metal fan trying to introduce the world to a new breed of US metal. Thus far Wycked Synn have been the recipient of Chavis' biggest marketing campaign, as the label has been everywhere trying to promote 'The Vision'. It is an ideal partnership. A metal loving label president firmly behind his acts. For Ken was it a case of him looking to Chavis Records for a deal, or Chavis coming to them? "I had been targeting the Chavis label for a while because of the bands they were signing" says Ken, confirming the former. "We had passed on a few deals from other labels because the bands they were producing weren't impressive and I didn't want Wycked Synn lumped in with them." Regarding the signing process, how smooth was it? "The signing process was very smooth" says a grateful Ken, knowing full well how disastrous such routines can become. "Chavis Records took the time to find out what we wanted and built the contract process around that. Bill Chavis is an awesome guy and a pleasure to work with. He understands the music and has the same drive and passion as the band. The great thing has been Bill keeping the band fully in the loop with decision processes. He cares what we think and the eventual outcome. It is an equal sharing process. We work together as a team and that is the way it should be."

Originally scheduled for a June release 'The Vision' was pushed back to late