The Minimum Wager

place a small bet on your better self

No. 4 July 2021

This bimonthly letter is addressed to those with limits on their funds and their free time who nevertheless want to think. The features below, which will appear regularly, are created and curated by members of the Respondeo Authors' Publishing Co-operative. If you have something to contribute or want to know more about the work of the co-op, please contact us at our website www.respondeobooks.com.

A Legacy Passage: Black Elk Speaks

"My friend, I am going to tell you the story of my life, as you wish; and if it were only the story of my life I think I would not tell it; for what is one man that he should make much of his winters, even when they bend him like a heavy snow? So many other men have lived and shall live that story, to be grass upon the hills.

It is the story of all life that is holy, and is good to tell, and of us two-leggeds sharing it with the four-leggeds and the wings of the air and all green things; for these are children of one mother and their father is one Spirit.

This, then, is not the tale of a great hunter or of a great warrior, or of a great traveler, although I have made much meat in my time and fought for my people both as boy and man, and have gone far and seen strange lands and men. So have many others done, and better than I. These things I shall remember by the way, and often they may seem to be the very tale itself, as when I was living them in happiness and sorrow. But now that I can see it all as from a lonely hilltop, I know it was the story of a mighty vision given to a man too weak to use it; of a holy tree that should have flourished in a people's heart with flowers and singing birds, and now is withered; and of a people's dream that died in bloody snow.

So I know that it is a good thing that I am going to do; and because no good thing can be done by any man alone, I will first make an offering and send a voice to the Spirit of the World, that it may help me to be true." (as told through John G. Neihardt, 1932)

What Were They (the Supreme Court) Thinking? On Endangered Species

The Endangered Species Act (ESA) was introduced into Congress mostly because the bald eagle was on the road to extinction, an embarrassing fact that seemed to many a sign of the decline of America. Congress, filled with idealism and patriotic good purpose, passed the ESA in 1973. The new law forbade people to "take" any animal or plant that had been placed on a list of threatened or endangered species. "Take" was defined as: "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect."

As this law encountered the world there were surprises. I don't think that Congress understood when the law was proposed just how many animal and plant species were in trouble as a result of the industrialization of the earth, how ubiquitous they were, or how affected by a huge number of human activities. Nor was it very real to Congress, I suspect, that a law written with symbolic and attractive animals in mind would apply by its terms to little, unbeautiful, seemingly pointless creatures. In addition, the law was draconian, with little or no room for compromise. Plans to build huge development projects could, under the ESA, be stopped in their tracks in order to save some obscure living thing that no one had ever before thought to value. It is still astonishing in this cynical world that the United States Supreme Court in 1978 found under the ESA that the Tellico Dam project, on which Congress had already lavished a massive amount of resources, had to be halted because of a tiny little fish called the snail darter, which happened to live just there and only there. *Tennessee Valley Authority v. Hiram Hill et al.* (1978). Environmental ideals spectacularly won out over development interests in that case. That is how the law is written. There is almost no provision for balancing the benefits of development against the value of the existence of a species. Protection of the species must be ensured, and under the ESA the costs to the human community for that protection are irrelevant.

People feel very strongly about ESA controversies. Landowners and other development interests complain of losing control over their own property because of it. They argue that their freedom to pursue profitable opportunities is curtailed because of extreme and unreasonable protections given to plants and animals that no one really cares about: the bluntnose shiner on the Pecos River in New Mexico, for example, or the dusky gopher frog in Louisiana, or the small whorled pogoria in Maine—are these genuinely important to anybody? Extinction is a natural event, after all, and if Nature doesn't go out of her way to protect every species, why should we?

For many environmentalists, by contrast, the draconian, uncompromising law as written sets the right moral guideline. The existence of every natural species is inherently and infinitely valuable. No amount of human benefit can equal it. And even if it were ever, in theory, proper to play God and balance protecting Nature against profiting humans, the time for such a balancing act is long past. Human industrialization and development have already tipped the balance so far in favor of human profit that, at present, no protection of any of

Nature's creatures can be too much. With so much already lost, a developer's desire for money weighs nothing against the dangers that threaten our planet.

Despite these high stakes, there have been remarkably few Supreme Court cases on the ESA in the last fifty years. Liberal/conservative divides on the Court have rarely cropped out in this context, with one exception. In *Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or.* (1995), a splintered Court exposed a spirited, edgy conversation among themselves in considering a regulation issued by the Secretary of the Interior on the definition of the word "harm" in the ESA. The regulation stated that it was "harm" to an endangered or threatened species to destroy its habitat if the destruction actually killed or injured a member of the species. Razing a nesting place and preventing the breeding of young, for example, would under this regulation constitute a "take" of an endangered species and be unlawful under the ESA, even on private property. Lumbering interests brought suit against the regulation, arguing that their livelihoods would be destroyed if they could not cut down trees on their own land because of the nesting places of the spotted owl. They were not intending to take any animal or cause any harm, they argued, but just going about their lawful business. It was unfair to hold them responsible for unintended, indirect harm to an endangered species.

The majority opinion, written by Justice Stevens for the liberal wing of the Court and joined by the more conservative Justice O'Connor, held that the word "harm" has a wide meaning and the ESA has a broad purpose, so that habitat modification—especially with the qualification that it must result in the actual death or injury to a species—must fall within it. The majority found some legislative history in favor of its ruling that "harm" can be indirect and, in addition, gave deference to the Secretary of the Interior's expertise in defining just how indirect or foreseeable the harm could be to violate the ESA.

Justice O'Connor's concurrence perhaps reflected her hesitation about increasing the already vast reach of the ESA by including habitat modification in the meaning of the word "take." She emphasized that she joined the majority opinion because the regulation explicitly required that there be actual killing or injury to specific members of the species, while still seeming troubled by the possibility that the regulation could be stretched to cover cases where no one had intended or foreseen any harm to any creature. Her concerns about the case were evident when she spoke explicitly to the arguments in Justice Scalia's dissent, which the majority opinion had loftily and politely ignored. Justice O'Connor took Justice Scalia's arguments on directly. Disagreeing with his claim that preventing breeding did no actual harm to individual animals for example, she stated, firmly, that "Breeding, feeding and sheltering is what animals do."

If Justice O'Connor was hesitant, Justice Scalia was scathing. In a minority opinion joined by fellow conservative Justices Thomas and Rhenquist, Justice Scalia argued that the majority opinion imposed unfairness to the point of financial ruin. Under it, people's private property had, in effect, been taken over for "national zoological use." He warned that this regulation could not only hold people responsible for injuries that they hadn't foreseen; it would even put them on the hook for injuries that nobody could have foreseen, even injuries that happened because of things they didn't do.

Justice Scalia wrote derisively about the claim that preventing animals from breeding was any kind of injury to particular animals. Preventing breeding injured only populations, not individuals. The statutory word "take," however, has a perfectly ordinary, traditional meaning that applies only to individuals and cannot be used to mean hypothetical injuries to potential populations. Justice Scalia noted that, of the list of ten verbs defining what it means to "take" under the ESA-- "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect"--nine are words a hunter might use chasing particular animals. Thus the tenth, the wider word "harm," should be read that way too. That reading furthers what Justice Scalia saw as a difference under the ESA between the many duties of the federal government, including to provide habitat, and the single duty of private landowners not to "take." If private land is needed for critical habitat, Justice Scalia argued, the ESA allows the federal government to purchase it and intended for that way of ensuring habitat to be the only way to do so. This regulation instead put the burden of protecting habitat on individual landowners, effectively taking away the value of private property with no compensation.

Justice Scalia's mockery of the majority opinion's reliance on the broad purposes of the ESA reflects a philosophical difference between liberal and conservative approaches that may appear in cases to come. The majority sought to construe the meaning of the words of the ESA in a way that would achieve what the Congress had said it was trying to do by passing the law. Justice Scalia found that simplistic. He insisted that the law must spell out what it does clearly in the text. To add powers to the law in order to serve vague purposes is to adopt "the slogan of the enthusiast" rather than "the analytical tool of the arbiter."

The present Supreme Court leans more conservative than the Court in *Babbitt*, which may mean that future ESA cases will tend more to Justice Scalia's approach. That is, we may get more cases that read the ESA and the regulations under the ESA very narrowly, cutting back on the authority and discretion of the federal government and finding ways to force a balance between the ESA and the claims of private property owners. The drama of the *Tellico* dam case will probably not happen again.

by Martha Franks

A Scientific Note: The Great Pacific Garbage Patch: a Short Lesson in Understanding the Movement of the Oceans' Waters

Situated between Hawaii and California is the Great Pacific Garbage Patch. Its name is misleading on two counts: it is "great" only with respect to its size, not its quality, and "patch" causes us to envision something more harmless and homey than it is. One might imagine it to be a floating island of trash, something like Yann Martel shows us in his book *The Life of Pi*. Yet, were you to sail through the GPGP you might see very little that you

would think of as trash. You certainly couldn't walk across it. The particles of trash are spread both across the surface of the water and extend downward throughout a water column, sometimes all the way down to the ocean floor. Its debris ranges in size from abandoned fishing nets, which cause the unintended deaths of many marine animals entangled in them, to just-barely-visible microplastics, smaller than 5 mm, which some marine life ingest as if they were plankton.

The Great Pacific Garbage Patch is "great" in comparison to the others – yes, unfortunately there are others, four others, in fact. The five ocean garbage patches are located in the five large ocean gyres. This can make sense if we think about how ocean waters move. To understand ocean garbage patch formation and perpetuation, one needs to consider the motion of all the water in the oceans.

Each ocean, the North Atlantic, the South Atlantic, the North Pacific, the South Pacific, and the Indian Ocean, has a gyre. Gyres are large systems of circulating ocean currents. They are huge, deeply rooted, very slow moving whirlpools. Oceanic gyres are formed by global wind patterns and the Coriolis effect (which in turn is caused by the planet's rotation and the fact that different parts of the Earth move at different linear speeds). These gyres draw into the centers of their respective oceans the pollution that humans have released in coastal areas. In addition to this, these five largest gyres help drive the important circum-global oceanic conveyor belt, a very deep current driven by a combination of temperature and salinity that helps circulate all ocean waters around the globe, and also enables nutrient flow. The water near the surface is moved by wind, while the deep currents are driven by differentials in water densities, a process called "thermohaline circulation" (thermo = temperature, haline = salinity). This ocean conveyor belt moves heat and nutrients around the world, but in quite a slow cycle – it takes about 1,000 years to complete one circuit.

A closer look at thermohaline circulation will advance our understanding of the interconnectedness of all the oceans' waters. Oceans are mostly composed of warm, salty water near the surface over cold, less salty water in the ocean's depths. These two regions don't mix except in certain special (and important) areas: near the poles, where the water sinks, and near the equator where it rises.

Starting at the poles, where cold ocean water becomes saltier and denser (due to a combination of ice formation and evaporation), the cold, salty, dense water sinks and slowly spreads. At the South Pole, because there are no continents blocking its path, the current can flow freely around Antarctica (the Antarctic Circumpolar Current, or ACC). At about latitude 60° S, both surface and deep waters flow from west to east, around Antarctica.

This circumpolar motion of ocean currents links all the world's oceans: it allows the deep water circulation from the Atlantic to rise up in the Indian and Pacific Oceans.

There are three forces which cause gyre formation. First, global wind patterns – the wind drags on the ocean surface water causing the water to move in the direction the wind is blowing. Second, the Earth's rotation – it changes (or "deflects") the direction of these wind driven currents and is part of the Coriolis effect. In the northern hemisphere, the Coriolis effect shifts surface current angles by about 45°, deflected in a clockwise direction. It is opposite, or counter-clockwise, in the southern hemisphere. Third, the Earth's landmasses – both continents as well as islands-- influence the properties of ocean gyres.

It is important to realize that a gyre is not solely a surface phenomenon. Beneath the surface currents of the gyre, the Coriolis effect's deflection decreases steadily from 45° as one descends in the water column. This results in a spiral pattern, descending to about 100 meters (the Ekman spiral). Picture a huge, broad, stationary tornado but made of ocean water. The strength of the spiraling gyre pulls coastal and marine waste and pollution into it, sucked in by the whirlpool.

The massive North Pacific Gyre, home of the Great Pacific Garbage Patch (you wondered if we'd ever get back to it) includes hundreds of thousands of square kilometers of open ocean bounded by the Americas to the east and Asia and Australia to the west, and by the equator to the south (where the Coriolis effect is "ineffective"). This is the largest ocean gyre, and accordingly, it has become home to the largest of the oceanic garbage patches, pulling in all the trash and marine waste from the coasts of the land masses bordering it. It is actually made up of two distinct patches of garbage–one off the California coast and the other off the coast of Japan. These two patches within the giant gyre are connected by a convergence zone, where warm water from the south Pacific meets cold, Arctic water, allowing the trash and debris to travel from one to the other.

Within the GPGP there is heterogeneity regarding the concentration of plastics. The plastics are concentrated in eastern and western patches and the convergence zone. Outside of these areas the plastic particles are less dense.

So how large is it? Estimates of its surface area range from "the size of Texas" (700,000 sq km) to "the size of Russia" (15,000,000 sq km). This huge disparity between estimates is due to difficulties in sampling (comparing samples from the GPGP to other ocean areas) and to ambiguity in definitions (what concentration of plastics in a water sample constitutes an *elevated* level). The mean depth of the Pacific Ocean is over 4,000 meters, and water samples within the GPGP have been taken as deep as 2,000 meters – that is more than five times the

height of the Empire State Building. Using the most conservative of these estimates, let us envision the state of Texas completely surrounded by a wall the height of five Empire State Buildings stacked one on top of the other, and fill this space with water. This represents the smallest estimate of the GPGP.

The ocean gyres have existed in these locations since the continental plates have been in their current locations. Animals, whether fish, fowl, or marine, have incorporated the gyres into their life history patterns. Baby sea turtles use the North Atlantic gyre as a nursery; sea birds feed in the gyres, since historically the currents have provided regular and consistent foraging opportunities. But, whereas once the nutrients for foraging within the gyres were organic and carbon based, now, through our 20th century use of non-biodegradable materials like plastics, the gyres have an accumulation of persistent plastic debris. This skews the distribution of living species within and around the gyre. Some species find the conditions favorable, for example sea anemones which are increasing in the Eastern Garbage Patch in the North Pacific subtropical gyre. Others, such as the albatross, find the conditions detrimental to the point of deadly: one study showed that the most common ingested plastic of the Laysan albatross was bottle caps — this was determined by cutting open the stomachs of dead albatrosses in order to find what was killing them.

Plastics don't biodegrade, but they do break into tiny micro-pieces. They accumulate in the gyres, and then subsequently accumulate in the lifeforms that ingest them as food. Microplastics floating within the water column appear (and even smell) like plankton, so get eaten by baleen whales, filter feeding birds, fish like anchovies, and, most importantly, zooplankton. Zooplankton are the cornerstone of marine life. When they feed on the microplastics *everything* that feeds on the zooplankton ends up ingesting concentrations of microplastics that are then intensified as they move on up the food chain. The plastics don't go away. Microplastics absorb harmful chemicals in the water, and like toxic sponges, absorb and concentrate these harmful chemicals and heavy metals. They continually accumulate until they fill the belly of a sea bird or cross the blood-brain barrier of a fish, causing neurological problems or even death. At present, microplastics outnumber plankton by 26:1 in some parts of the ocean, leading to these indigestible particles being eaten more frequently than plankton. In other words, all the toxins we put into the environment will eventually come back to us, because the fish that we eat have themselves consumed concentrations of these bits of plastic.

There IS hope. There are three actions that must be taken to resolve this problem. 1) The plastic waste caught in the gyres must be collected and extracted – a herculean task! 2) Plastic waste coming down rivers and being spewed from their mouths into our coastal waters must be captured as soon as possible, before the incessant wave motion breaks it into micro-plastic

particles, and before they get sucked into the gyres.

Let us take a closer look at these first two actions before we proceed to the third.
A number of organizations have formed for cleaning up the plastic once it has reached the oceans. Two that illustrate tackling the problem in the different locations of the water's cycle are the Ocean Cleanup, predominantly a gyre-centered technological approach, and 4Ocean, involving the labor of people in boats or in the water along coastlines or in rivers.

The Ocean Cleanup was founded in 2013 by Boyan Slat, at that time an 18 year-old aerospace engineering student in Delft. As an engineer, Slat recognized that the quickest, most efficient way of removing the huge amount of marine plastic waste was to passively utilize the ocean's own forces on a huge scale to capture it. Slat's floating net system moves along with the gyre's currents to capture and contain the plastics. The netting has a tallish above-surface rim called a "floater" that prevents the plastic from escaping over its lip, and it has a netted "skirt" which extends a certain distance below the water's surface, but is open at the bottom to allow for marine wildlife to escape entrapment. A sea anchor is also used to create drag, so the whole construct moves more slowly than the currents (otherwise it would all be part of the same "patch" and move as one with all the garbage). It captures debris and guides it into the "cod end" where it is retained for subsequent pickup. Once the system's nets are full, a vessel acting as a sea-going garbage truck arrives and extracts the collected plastic. Ocean Cleanup uses similar equipment at the mouths of rivers to capture river plastic waste before it goes out to sea. What would otherwise have taken millennia to accomplish with vessels and nets, Slat's organization plans to accomplish by 2040. Its stated goal is to remove 90% of ocean plastic and ultimately put itself out of business.

4Ocean is another global clean-up operation. It was started in 2017 and focuses on the coastlines, shores, and river mouths. 4Ocean has people and vessels working along the coastlines of Indonesia, Haiti, Guatemala, and south Florida, cleaning up plastic waste "one pound at a time." At the time of writing this, 4Ocean has removed 15,565,158 pounds of plastic ocean trash. 4Ocean started out by having people with hand-held fishing nets scoop up the visible plastic and trash while walking along beaches or on the water in small boats. People sort through the collected debris by hand, classifying each bit by type to dispose of it accordingly. It is obviously labor intensive: it takes many people to do this kind of work, to make the sorts of deliberations and decisions necessary. Recently 4Ocean has forayed into the technological realm, like Ocean Cleanup, and designed and built a mobile skimmer vessel. This vessel has a pair of hydraulic arms which are lowered into the water to funnel the floating plastic and trash onto conveyor belts, which subsequently deposit the trash into "super-sacks." From the plastic pieces 4Oceans makes plastic beaded bracelets that each symbolize one pound of plastic trash removed from the ocean.

A third technological innovation, the Bubble Barrier, operates at the level of rivers and canals, capturing polluting plastics before they flow into larger bodies of waters. The Great Bubble Barrier was first installed in Amsterdam, in 2019. Its design is elegantly simple. Ambient air from an electric compressor is pumped through a perforated rubber tube lying diagonally along the bottom of the river; this creates a bubble curtain with an upward current that directs plastics in the water towards the surface. The natural current of the river combined with the diagonal orientation of the tube directs the particles downstream and to the side towards a catchment system, where they are contained until a local organization removes the waste. This system operates every hour of every day. It is beneficial to the local aquatic life by increasing oxygen levels (thereby preventing algal blooms) and absorbs sounds and waves so fish and shorelines experience less damage from ship traffic. Additionally, the Bubble Barrier does not obstruct the movement of ships or wildlife. It has one drawback, though: plastic particles smaller than 1 mm do not, at this stage of implementation, get captured by the bubble curtain. Research is underway with microplastics of 0.02 mm to 0.5 mm to find ways of overcoming this drawback.

The combined efforts of organizations like these are impressive, both with regards to the number of people employed and the change in mindset needed to tackle the problems innovatively. As of 2019, Ocean Cleanup employed 90 engineers and researchers, and 4Ocean employs around 200 people. But these two actions are not sufficient on their own to deal with the ocean plastic problem.

The third action, which must happen at the source, is to end the use of single-use plastics first, and to limit the use of other plastics. This requires a massive change. Large corporations, which benefit from plastic production and use, have framed the campaign against plastic use as the responsibility of the consumer, obfuscating their own roles and responsibilities. But it must be through the large corporations that plastic use is limited and, where it can be stopped, ended. We have lived without plastics before, and we must finally do it again. Humans have disposed of over 6 billion metric tons of plastic since the 1950s: only 600 million metric tons have been recycled—one-tenth of the total. The 5 billion+ tons that were disposed of but *not* recycled are found in our landfills and in the oceans. We are now seeing the cost of our plastic-dependent convenience in the garbage patches found in the ocean gyres.

Potential innovations are not limited to cleaning up the plastic mess. Most "compostable" plastics are designed to avoid the visual clutter of trash, but they actually degrade into microplastic particles. At the Lawrence Berkeley National Laboratory, a research team led by Ting Xu has found a way to make plastics that are biodegradable—not merely in name, but real plastics that break down *completely* into harmless molecular components. These scientists

focused on a plastic – a polyester called polylactic acid, or PLA – already used in many "compostable" plastics. Inspired by organic decomposition processes, they incorporated into the manufacture of the polyester an enzyme that breaks it down, having first wrapped the enzyme in a simple polymer layer to prevent it from immediately acting on the plastic. The right combination of heat and moisture releases the enzyme from its wrapping (which itself then decomposes), and in a matter of weeks reduces the polymer into its components. PLA reduces to lactic acid, which subsequently feeds the microbes in the compost. In experiments, as much as 98 percent of the modified plastics broke down into small, compostable molecules, and left no microplastics behind.

When plastics like this are commercially available, they can replace their non-biodegradable predecessors. The more corporations willing to invest in developing plastics of this sort, the sooner we can have single-use convenience without pumping tons of permanently harmful material into the ocean gyres and the food chain.

by Janette Fischer

Announcement of Addition to Respondeo's free Library of Lectures and Essays (these may be downloaded from www.respondeobooks.com):

Michael Wolfe's lecture, *Cide Hamete Benengeli, Author of Don Quixote* (2016) presents an understanding of Cervantes' wonderful novel that changes everything. Since its first publication in 1605, *Don Quixote* has most often been read as an encounter between imagination (giants) and reality (windmills). This lecture, by exploring the issues which surround the elaborate creation of the fictional author Cide Hamete Benengeli, and then the creation of a fictional Renegade (a convert from Christianity to Islam) character by the narrator of the 'Tale of the Morisca Zoraida,' builds a case step by step that the book is actually about the encounter between imagination and imagination—i.e. between the religious narratives of Christianity, Judaism, and Islam. The question arises: "What if there is no homogeneous, integrated foundation of reality at all?" We are brought with Cervantes' gentleness and humanity into the world of pluralism.

Poem: *Messenger from Another Way*

Early morning.

Racing traffic on Carlos Rey
unnoticed coyote moves along
an unmarked diagonal across the park.

He could be in pictures.

Lithe body, rippling gray-beige hair.
Likely spiky feeling under my hand.
Narrow head, sharp ears alert, nose flared.

His body lines are one with his lope.

A wrecked pick-up hauls two-by-fours.
Coyote crosses safely on a slant,
veers around a shopping cart
tilting on a rock, one wheel in air.

He's a moving center passing through a motley crowd of new-comers.

I stand here with my car, my trash, my fence,
I watch all of us decaying, making things decay.

We new-comers hardly have a care

for the land that sustains and is sustained by
the simple and integrated lives
of coyotes and native peoples.

by Basia Miller

More Poems:

It Too

After our big hay field had just been mown
a slender shoot poked up into the sun.
It too grows well
though not from being sown by us.

A tiny black seed, only one
placed there by the breeze
is two, now four
small leaves.

The hours gently urge toward birth
its hidden form. Some leaves, a stem
explore the air.
Fresh roots push into the earth.

A blood-red poppy sleepily unfolds
in early morning light. Perhaps it dreams
its holy dream, a vision unforetold

of poppies everywhere along the streams,
across the fields brilliant red unfurled
reverberating wildness in the world.

Bird Watch

It is its eyes that I cannot escape.
I was unnerved when finally
I found a spotted owl
inside its small landscape,
a minor canyon far from any sound of man.

Most of its world has been stripped away.
A remnant stands for now—
it too is vanishing.

The purpose of my trip out there
had been to see, not be

one who is seen.

In dark iridescent pools
of consciousness
I was taken in
where I could feel the working of the rule
of silent perishing
like sunset into night.

No dawn awaited its owl-mind.
No dawn awaits me or awaits my kind.

by Abe Shieldman

Film Reviews: *Birdman of Alcatraz (1962)* and *Winged Migration (2001)*

These two films, which in almost every aspect stand in contrast to each other, both cultivate support for the same proposition: life is fragile, precious, and in Albert Schweitzer's phrase, deserving of our reverence.

Birdman, directed by John Frankenheimer. and starring Burt Lancaster, Karl Malden and Thelma Ritter, was shot in black and white more as a sequence of photographic poses than as a moving picture. The cinematographer Burnett Guffey is credited as the film's 'photographer.' There are many silences, and they are more memorable than the dialogue. The film's narrative is based on the biography of Robert Stroud, a man imprisoned in solitary confinement (1916 to 1970) until his death. He had committed two murders. Through caring for a nestling sparrow he found in the exercise yard after a storm, and then other birds given him, Stroud came to realize that all life, including human life in extreme confinement, matters to him. He became a 'bird doctor,' studying the diseases of canaries and finding life-saving treatments. When his birds are taken away and he is transferred to Alcatraz, Stroud is able to take his hard-won scientific benevolence with him and extend it to the plight of his fellow prisoners and prisoners everywhere. He goes to his final destination in a prison clinic without bitterness. Through his direct contact with birds, he himself is cured of violence and provides an example for curing others. All opportunities for sentimentality are discarded along the way, and the film ends with a muted sense of earned affirmation.

Winged Migration, directed by Jacques Perrin, Jacques Cluzard, and Michel Debats, has no narrative. It is a film about birds, geese and cranes and storks, in non-stop motion flying thousands of miles in spring to landscapes where they feed and reproduce and rear their young, and then fly back toward the equator to survive winter. Aside from a couple of bookend-like vignettes, there are no human actors on-screen. Filming of the birds is up-close and personal—technically astonishing. How this was done is explained by the director in an interview that accompanies the film. 15,000 hours of film shot on all seven continents over a span of four years is edited down to 89 minutes. The birds are quietly inspiring. The landscapes in full color are stunning. Cities (Paris and New York) seem without great importance. Jacques Perrin states that the intention of the film is not to tell a story, but to be honestly 'touched by nature.' In one sequence the unaware violence of sport hunting is exposed in such a way that the viewer winces.

Winged Migration is sustained throughout by a musical score, written by Bruno Coulais, that at times uses human voices sounding strange and almost monastic, and at other times passes unobtrusively into the sounds of the birds themselves. This soundtrack is essential to our sense of rapport with the birds as they fly on.

Both films, using completely opposite strategies, succeed in dissolving the numbness that isolates us from nature and from each other. What happens in *Birdman* is driven by individual decisions and responses to those decisions—it is in that sense an ethical film. *Winged Migration* is a presentation of earth's perennial cycles as experienced by birds. Its appeal to us is aesthetic—the sheer beauty of the patterns and the birds that move in them. I want to see them both again.

by Phil LeCuyer

Book Review: Small Gems Recent and Remembered

from "Truth and Landscape," by Robert Adams,
an essay in *Beauty in Photography* (Aperture 1996)

When travelers reach the foothills west of Denver, they often stop to be photographed against the Great Plains or the Continental Divide. They remind us, as they smile and look into the distance, of the fondness Americans traditionally have shown for their geography.

There is evidence, however, that the affection may be ending. Along the Front Range, for example, buildings are now often being designed to allow few views of the outdoors. We are told that this protects office furnishings from the sun, adds retail display space, and makes possible uniform lighting; customer and worker morale is, it is reported, unharmed. Apparently business has discovered the dark side of ecological awareness, managing, as Camus said of those who built the city of Oran, to "exorcise the landscape."

Admittedly scenic grandeur is today sometimes painful. The beautiful places to which we journey for inspiration surprise us by the melancholy they can induce. On northern Long Island recently, for instance, at the end of a promontory where I was living—an overlook from which one could see ducks and wild swans and miles of gleaming bay—were scattered hundreds of empty liquor bottles, a common record of sorrow in places worthy of postcards.

Our discouragement in the presence of beauty results, surely, from the way we have damaged the country, from what appears to be our inability now to stop, and from the fact that few of us can any longer hope to own a piece of undisturbed land. Which is to say that what bothers us about primordial beauty is that it is no longer characteristic. Unspoiled places sadden us because they are, in an important sense, no longer true. Thomas Gray's consolation—"many a flower is born to blush unseen, and waste its sweetness on the desert air"—has become an irony; we have the flowers counted and fenced.

Part of the anodyne offered by Denver builders has been to disallow windows, but another part has frequently been to substitute paintings of uniformly attractive, often foreign, landscapes. The views are unconvincing, but they address a need that is human, and as a landscape photographer I find myself asking whether pictures based on other principles could do better. Given our geography—the actual, mixed one of great trees and of fields littered with Styrofoam, of still-awesome mountains and of valleys dense with tract houses—is it possible for art to be more than lies?

Landscape pictures can offer us, I think, three verities—geography, autobiography, and metaphor. Geography is, if taken alone, sometimes boring, autobiography is frequently trivial , and metaphor can be dubious. But taken together, as in the best work of people like Alfred Stieglitz and Edward Weston, the three kinds of information strengthen each other and reinforce what we all work to keep intact—an affection for life.

We expect first from landscape art, as the name implies, a record of place. With the help of the camera we can recognize and enjoy an unnamed New Mexican mesa or the Delaware Water Gap. Although we are not as naïve as we once were about the accuracy of the pictures, we continue to value them initially as reminders of what is out there, of what is distinct from us. There is a certainty in geography that is a relief from the shadow world of romantic egoism.

If landscape art were only reportage, however, it would amount to an ingredient for science, which it is not. There is always a subjective aspect in landscape art, something in the picture that tells us as much about who is behind the camera as about what is in front of it. Pictures are never so cleanly tautological as, say, Gertrude Stein's description of a rose. For one thing the subject is too big; a normal lens, though it can cover a rose, can never cover a whole landscape, just as when without a camera we stand in the middle of a field and after turning full circle must decide what part of the horizon to face.

That a photograph is unlikely to be a laboratory record is evident when we think about how it is made. Most photographers are people of intense enthusiasms whose work involves many choices—to brake the car, grab the yellow instead of the green filter, wait out the cloud, and, at the second everything looks inexplicitly right, to release the shutter. Behind these decisions stands the photographer's individual framework of recollections and meditations about the way he perceived that place or places like it before. Without such a background there would be no knowing whether the scene on the ground glass was characteristic of the geography and of his experience of it and intuition about it—in short, whether it was true.

Making photographs has to be, then, a personal matter; when it is not, the results are not persuasive. Only the artist's presence in the work can convince us that its affirmation resulted from and has been tested by human experience. Without the photographer in the photograph the view is no more compelling than the product of some anonymous record camera, a machine perhaps capable of happy accident but not of response to form.

Art asserts that nothing is banal, which is to say that a serious landscape picture is metaphor. If a view of geography does not imply something more enduring than a specific piece of terrain, then the picture will hold us only briefly; we will probably prefer the place itself, which we can smell and hear and feel as well as see—though we are also likely to come away from the actual scene hoping somewhere to find it in art. This is because geography by itself is difficult to value accurately—what we hope for from the artist is help in discovering the significance of a place. In this sense we would in most respects choose thirty minutes with Edward Hopper's painting *Sunday Morning* to thirty minutes on the street that was his subject; with Hopper's vision we see more. Precisely what it is that he helps us to see must be carefully talked around, but the painter Robert Henri came close to it in his description of the discovery to be made with the help of all successful paintings; in such pictures, he observed: "There seem to be moments of revelation when we see the transition of one part to another, the unification of the whole. There is a sense of comprehension."

We rely, I think, on landscape photography to make intelligible to us what we already know. It is the fitness of a landscape to one's experience of life's condition and possibilities that finally makes a scene important or not. Weston's photograph from 1945, for example, of a pelican floating dead in kelp and lumber (*Tidepool 1945*) is to me, as it is to many, unforgettable because it is true. It records accurately a mystery at the end of every terror—the survival of Form.

Not surprisingly, many photographers have loved gardens, those places that Leonard Woolf once described as "the last refuge of disillusion." Gardens are in fact strikingly like landscape pictures, sanctuaries not from but of truth. An etymological detail that Kenneth Clark raises in his discussion of landscape—*paradise* is the Persian word meaning "a walled enclosure"—stands I think as perhaps the best possible synopsis of what a photographer sees through the finder of his camera just before he releases the shutter. His view is of a safe wayside for travelers, built from the local geography, but still and clarifying.

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Light Touches: On Humor—The Flight Home

"Guests, like fish, begin to smell after three days." Several decades ago, when I was a road warrior, I spent a lot of time running to catch planes, or waiting out delays in airports. It was more stressful then – no noise-cancelling headphones, no tablets, no way to shut out the world. Back then you might be lucky enough to stumble upon an interesting conversation with the guy in the next seat, or have a great story to tell. One had to be polite, a good conversationalist, and treat everyone more or less like a guest in your house.

This trip was on a wintery evening flight from Columbus, Ohio back to LA through Chicago. It was dark by the time my meetings ended. A mad dash to the airport in Columbus, then the flight to Chicago before dinner. Not enough time at O'Hare to eat. I boarded the final leg with other business people in suits and ties and the rumpled look of business travel. We wearily filed into our seats. I was happy to be in the window seat of an exit row with a tad extra leg room. After getting settled, two big, burly men sat down in the aisle and middle seats next to me. Jammed shoulder to shoulder, I was crammed up against the window. I fell fast asleep before the plane even taxied to the runway.

I woke up hungry, just as the beverage and meal carts were past my row. My seatmates had eight one-shot bottles of vodka between them. As the bottles clattered together, they had an odd way of talking to each other; instead of turning towards each other and speaking in a way to politely minimize the disruption to others, each one looked straight ahead and shouted so that the one next to him could hear. They were speaking – that is, shouting – Russian. As they drank and stared straight ahead and yelled, the one next to me reached down and pulled out a package wrapped in newspaper. He laid it on his folding tray and unwrapped a large, whole, dried fish. I watched in disbelief as they started gnawing at the smelly, falling-apart fish. The two Russians stared, and shouted and drank and gnawed chunks of dried fish off the bones, oblivious to all of us around them.

`I could see the powerful odor almost visibly make its way from row to row, as one after another of my fellow passengers tried to identify and locate the offending smell. The plane was packed, so it was difficult to turn around and complain. The few who did were clearly intimated by the burly, vodka-drinking, dried-fish gnawing, shouting Russians. Finally, I could see the reeking odor make its way to the galley where the purser was working. She looked very much in command and official. Puzzled by the eye-watering smell, she held a kerchief to her nose and followed the scent down the aisle looking left and right for the offending source that was disrupting her flight. Examining each row, she looked for anything that might be untoward. She came to a halt at our exit row, looking outraged at the scene in front of her; the fish head - eyes popping – fish bones and a greasy mess of newspaper. She demanded the Russians hand over the mess, even as the Russians tried to order more vodka, which she refused. They shrugged it off and were soon asleep. If they hadn't been Russians, it would not have been amusing; just a couple of inconsiderate, loud-mouthed drunks. But they *were* Russians—men from a different world. We all survived this clash of cultures and lived to tell the tale.

by Robert Bienenfeld