

## Environment

# Balancing the environment with energy needs

by Andy Lau

*I was inspired to write a regular column in Voices because I believe there is much misunderstanding and misinformation about energy-related issues and technologies. My hope was that readers would ask questions and I could help shed some light either through my own knowledge or through my connections in the energy field. So far, very few readers have responded, so I repeat my challenge this month. If you have questions, concerns or an important opinion about energy to share with me or Voices readers, please send me an e-mail at [lau@sevengroup.com](mailto:lau@sevengroup.com) or mail a letter to 1007 Bayberry Drive, State College, PA 16801.*

Several books and articles have been published within the past year about running out of oil. Surprise! We in the energy field, at least those of us in the renewable energy field, have been saying that for a long time. Now authors like James Howard Kunstler, in *The Long Emergency: Surviving the Converging Catastrophes of the 21st Century*, are predicting dire circumstances indeed as oil runs out. In

Kunstler's pessimistic view, we are in store for a future of suffering, leading to a labor-intensive, locally based agrarian culture by the end of the century. The author examines proposed substitutes for oil such as hydrogen, solar, wind, coal and natural gas and shows that they cannot replace cheap and plentiful oil. Kunstler's point is well taken—there is no way to replace oil while also maintaining a clean environment.

Kunstler makes some valid points, but his vision of a predominantly agrarian society seems a bit overblown. Agriculture must become less energy-intensive and more local, but technological innovation built upon natural principles can provide for many other occupations and sectors of the economy. As Amory Lovins writes in *Winning the Oil End Game*, "U.S. oil dependence can be eliminated by proven and attractive technologies that create wealth, enhance choice, and strengthen common security." While Lovins' optimism is encouraging, we must combine technological innovation with a more foundational shift in our worldview and our understanding of our place in the world.



And it bears noting that the post-oil world is expected to become reality by mid-century. It is quite possible that global oil production may peak this year or in the next few years.

Our current worldview of material abundance and unbridled energy use is unnatural. We are energy gluttons. In his book *The Party's Over: Oil, War and the Fate of Industrial Societies*, Richard Heinberg offers a sobering analysis: he estimates that if each of us in the United States had to meet our current energy needs with human labor, it would take about 150 people working 8 hours a day, seven days a week, 365 days a year. Heinberg's comparison serves to point out just how unnaturally opulent

our current systems are.

The era of cheap and abundant fossil fuels has disconnected us from our natural, human-scale world. This world is slow, cyclical, wet, dry, hot, cold, fecund and alive. Awe-inspiring. Beautiful. Nurturing. Fantastically diverse. Our disconnection from nature, as evidenced by our aggressive wastefulness of our natural resources, has made our wanton destruction of the planet easy; we hardly give it a thought. Advancing to a civilization fueled by natural and continuously renewed energy sources like the sun and wind will require a renewal of our awareness of our inherent connectedness to nature.

These wasteful attitudes cannot continue and, in some ways, it is good that oil is finally running out. Our biggest threat to a healthy future is the myth of the unlimited energy of fusion power. Only by reconnecting with natural, limited and diffuse energy such as solar and wind will we once again become people who belong naturally to our local places, people who celebrate and nurture their local human community and the larger community of life.

## 'Tail-wagging' a key to species identification

by Alice Fuller

If a few birds do it but the majority do not, then why have some species developed a tail-wagging habit? A check of several bird books provided no reason for this mannerism, only assorted descriptions of this activity such as tail-bobbing, pumping or flitting the tail in different field guides. From the birder's viewpoint, tail-wagging serves the useful purpose of helping one identify the several birds with this unique behavior. For instance, one fall at Bald Eagle State Park, a number of birds were seen moving around in some scrubby trees and one was a warbler flicking its tail. It only took a quick look through binoculars to identify it as a palm warbler because of the busy tail.

One fall, along a road near the Russell E. Larson Agricultural Research Center, home of Ag Progress Days, there appeared a large variety of birds. The smaller ones annoyingly disappeared immediately behind dense foliage—with a couple of exceptions. One individual worked along a branch with tail in action and, of course, was a palm warbler. A flycatcher on a conspicuous perch frequently made sallies over the grasses and

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weeds for insects. It was a phoebe, another tail-bobber – a big help in separating it from other small flycatchers.

In spring and fall, flocks of small brownish birds known as American pipits, which belong to a family of birds known as wagtails, often gather along country roads or adjacent fields and usually bob their tails as they stroll along looking for food.

When driving along country roads, one frequently sees a kestrel perched on an overhead wire and sometimes one of these small falcons also flips its tail up and down. That makes four quite different bird species from four different families—warbler, flycatcher, wagtail-pipit and falcon—sharing the same unusual habit.

Especially during fall migration the palm warbler's tail-wagging habit is truly helpful for identification purposes. In spring the habit also helps, but breeding adults can

also be identified by their bright reddish caps and yellow underparts. In early autumn they are simply plain, brownish birds with light breast streaks and yellowish under-tail coverts. Dorothy Bordner's sketch shows how few distinguishing characteristics this warbler has to separate it from immature warblers of several other species. Birders can be grateful for the industrious activity of the bird's tail.

The palm warbler is a late-migrating warbler of the fall months, heading for the southernmost United States or parts of the Caribbean and is a common overwintering bird in Florida. Early ornithologists found it first on a Caribbean island and thought it to be a permanent resident there. In most of the literature, however, this warbler cares little for palm trees—unless, as some books purport, scrub palmettos are considered to be trees. In Florida the palm warbler may be partial to lawns, parks, pastures and golf courses.

Modern-day naturalists probably would have selected a more appropriate name for the palm warbler. One source noted that at one time it was called the "Atwitch-tail." And another reported it was known by such



names as redpoll warbler and little yellow wagtail. *Book of North American Birds* offered this description: "These impatient heralds of spring could well have been called wagtail warblers.... Bog warblers would have made a fine name too, for the birds' long journey northward will usually end at the brushy edge of a spruce bog in Canada."

As the autumn season progresses, it's pleasing to catch a glimpse of this late-migrating member of the warbler family, and one can be especially grateful for the bird's propensity to wag, pump, bob, flit, flick, waggle or twitch its tail. Choose your own preferred description for one small bird's helpful habit.