

Environment

Has Centre County embraced hybrids?

by Kathleen Bissett

In a scene from NBC's "The Office," a vengeful Andy attempts to pin nemesis Dwight between a bush and his car, with the onlooking staffers in the window above wondering why Dwight does not turn around to the approaching car. A co-worker then points out, "The Prius is silent if he keeps it under 5 miles per hour. He deserves the win." Hybrid cars are integrating into American culture and society, with Centre County grasping the trend.

Price, gas mileage, and conservation dominate the market of opinions regarding hybrid vehicles. A hybrid car is a combination of two elements, an electrical battery and the more standard fuel engine, each used alternatively. When the car is idling or cruising, the battery runs, but when more power is needed, the engine takes over, thus saving precious gasoline money.

"The best car I've ever owned," said State College resident Michele Rupp of her 2008 Prius hybrid.

The general consensus: hybrid owners love their cars.

Greg Wright, another hybrid owner in State College, noted how "awesome" his Prius is, and how ideal it is for "earth-friendly types of people like myself."

For the owners interviewed, reasons for buying the vehicles can be traced to inflated gas prices, as well as environmental consciousness.

Hybrid vehicle batteries charge through "regenerative braking," which means that when the brakes are pressed, electrical energy is produced and stored for the battery, explained Lori Turrusi of State College. She said she is "the perfect hybrid driver," given the stop-and-go traffic of the town.

Kevin Handwerk of Bellefonte bought his 2002 Honda Insight hybrid because of long distance traveling for work. Driving up to 200 miles a day, he needed a car with good gas mileage.

Likewise, Wright bought his Prius due to the long trips he was making between State College and his school in Maryland.

"One hundred and fifty miles and back was too much" for his previous car, he

Weak acceleration, battery life and pricetag don't outweigh hybrid owners' appreciation for improved gas mileage overall.

observed. At an average of 45 miles per gallon highway, the Prius is an "ideal car" for long distance driving.

But Tina Peterson of State College said her 2004 Prius only gets about 30 miles per gallon in the winter.

"Our Toyota dealer told us that fuel efficiency goes down in cold weather," she said, due to increased usage of the heat and defrost. "It becomes a regular car," Peterson noted, which defeats the purpose of owning a hybrid.

Turrusi's 2006 Ford Escape SUV hybrid gets about 30 miles per gallon on the highway, which she said is one reason she switched to a hybrid. She also owns a regular Ford Escape, which gets only 18 miles per gallon highway.

Yet, there are disadvantages that can deter a car buyer from these trendy vehicles.

A main complaint against hybrids is the sometimes hefty price tag. Ranging anywhere from \$22,400 for a Prius to \$74,000 for a Cadillac Escalade hybrid, both new, the cost can be a deterrent, especially at the higher end of the market. Yet, purchasing a used hybrid is a viable option. Such is the case with Turrusi, who bought her Ford Escape hybrid for a haggled price of \$21,000. The current price for a new version of the same hybrid is \$35,000.

Another concern is the battery life of a hybrid. The average life is approximately 100,000 miles, which none of the owners interviewed had even reached. When the battery does need to be replaced, the cost can range from \$5,000 to \$8,000.

In addition, hybrids lack "pick up and go" compared to standard fuel engine cars. Rupp said that her Prius does not accelerate like previous cars she has driven; it "just glides along" when she hits the gas pedal.

"Most people question if it is on or not," she notes.



Photo by Elena Gómez
Greg Wright with his Toyota Prius. Overall, the local response has been positive, with some caveats.

"I've had to change my driving habits" to conform to the Prius, Wright said, pointing to its lack of quick acceleration.

Turrusi's Ford Escape hybrid experiences similar acceleration issues, especially when driving up hills. "Pearl," as she affectionately calls her, "doesn't like the hills," partially due to the "heavy battery in the back."

"You don't want to get in an accident in that thing," said Handwerk of the small and lightweight frame of his Honda Insight.

Reactions to these hybrid owners have been mixed, with many people curious about the car more than anything else. Turrusi has heard the question, "How long do you have to plug the battery in?" numerous times, which she laughs at.

"Most people are curious about the new and different technology, but once I show them they are pleasantly surprised," she said.

Likewise, Rupp noted that in order to grasp the full experience of a hybrid, "you need to sit in the car and drive around."

A notable comparison can be made between hybrid car purchases and rising gas prices. When gas prices decline, so does the purchase of these environmentally-friendly cars. Similarly, when gas prices rise in the slightest, so do hybrid sales, according to

Hybrid Car Review.

When Wright bought his Prius in Washington D.C., he received a \$3,000 tax deduction. Handwerk enjoyed a \$2,000 tax deduction when he purchased his hybrid in 2002.

Today, Pennsylvania endorses the Alternative Fuels Incentive Grant Program, which provides a \$500 rebate for those who purchase a hybrid vehicle, smaller than the deduction Handwerk received.

Currently Joel Confer Toyota of State College and Dix Honda of State College offer to "work with the consumer" purchasing a hybrid, but no incentives from Toyota or Honda are available otherwise.

Additionally, the failing economy and lower gas prices have led to a decrease in hybrid sales over the past few months. According to the Hybrid Car Review report, as of December 2009, total hybrid car sales were down 8.2 percent nationally. As a result, 2.8 percent of the market belongs to hybrid sales.

Rupp traded in a Lexus for her Prius, due to high gas prices and far traveling distances. Friends have questioned this trade-in, given the luxuries a Lexus offers.

Yet, Rupp disagreed, saying, "It was a great decision, I love my Prius."

Three native trees deserve a closer look

by Elizabeth Goreham
and Sally McMurry

Trees stay in one place their entire lifetime and yet lead exciting and complex lives. The world comes to them. A broad spectrum of wildlife, birds, moths, insects, mammals, microorganisms need trees for basic necessities: habitat, shade, food, hunting, raw materials and carbon sequestration.

Pennsylvania, named for the almost unbroken abundance of forests when the land was deeded to William Penn in 1681, is home to 108 species of trees. Here the ultimate native plant is a tree.

The state is divided into five major tree areas. Most of Pennsylvania, including Centre County, belongs to the Appalachian Oak Forest, which follows the Appalachian Mountains southward. The most abundant trees in this area are white, red and chestnut oaks. Black birch, black gum, red maple, hickories, tulip tree and white pine are also common in this forest grouping.

Pennsylvania is at the northernmost reach of trees¹ such as the tulip tree and American Holly, which flourish further to the south. The range of northern trees like the Tamarack also reaches into Pennsylvania. The Tamarack tree, also known as the Larch, is a deciduous conifer, shedding its 'soft' needles each year. Millions of years ago the Tamarack grew in the Arctic Circle when that region was warm. During the long dark winter, photosynthesis was impossible; its green needles were thus unnecessary. The Tamarack has kept the habit.

Native trees provide the underpinnings of our natural world whether we live in town or in the country. Trees increase property values too.

By definition, native trees have lived here for centuries, in contrast to foreign trees imported to provide landscaping for humans, which are literally alien—and generally inhospitable—to local wildlife.

Most alien plants and trees have limited ability to sustain local wildlife, and some provide no benefit. Or worse. Fruit from the Bradford pear tree, for example, is toxic to wildlife² whereas native oak trees feed more than 40 species of birds and animals

Although trees don't travel, people and products do, bringing back unwanted microorganisms, bugs, fungi, virus, that have unintended results... Currently the emerald ash borer threatens our ash trees, the Asian long-horned beetle is attacking the sugar maple, a virus in California has caused sudden oak death, and an aphid-like insect called the woolly adelgid is infesting American hemlock trees, jeopardizing their survival.

and over 400 species³ of moths and butterflies, the most of any native plant species! In 1973, a Colorado State University study of habitats where birdwatchers saw the most birds found that the greater the diversity and age of trees and flora in a neighborhood, the more sightings and bird species were reported.

A State College neighbor on McCormick Avenue has a glorious white oak tree in her backyard that is more than 300 years old and 85 feet tall—the last survivor of a line of trees cut down when the land around it became farmland, then streets and houses. Before acorns are first produced a white oak must be 20 years old; acorns are produced abundantly after 50 years of growth.

Although trees don't travel, people and products do, bringing back unwanted microorganisms, bugs, fungi, virus, that have unintended results. In the first half of the 20th century, the American chestnut, elm and flowering dogwood all fell victim to imported problems. Currently the emerald ash borer threatens our ash trees, the Asian long-horned beetle is attacking the sugar maple, a virus in California has caused sudden oak death, and an aphid-like insect called the woolly adelgid is infesting American hemlock trees, jeopardizing their survival.

The hopeful news is that these infestations, discovered early, are the focus of intense scientific study. Penn State is working to develop a natural predator for the long-horned beetle, and a simple but effective treatment plan has been developed for neighborhood hemlocks.

Gardening Recommendations:

What better way to enjoy Central Pennsylvania than through the glorious

trees that have lived here a long time.

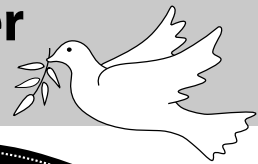
• Hemlock, the stately state tree, deserves special attention. The current Pennsylvania record hemlock is 125 feet tall and 193 inches around the trunk in Cook Forest State Park, Clarion County. Hemlocks commonly live 100 to 200 years and create a special presence. Young trees prefer cool



moist locations and in full sunlight can grow more than one foot per year. Hemlocks provide food and shelter to flying squirrels, porcupines, deer, in addition to chickadees, yellow-bellied sapsuckers, red and white-winged crossbills, special war-

see Native trees, pg. 17

State College Peace Center
www.speacecenter.org



All films at 7:30 PM, State College Municipal Building,
243 South Allen Street, Room 201

February 25:

Why Are We In Afghanistan? (2009) U.S. military action in Afghanistan originated in response to the September 11, 2001 attacks on the World Trade Center and Pentagon. Reasons for the war have become cloudier. This film looks at domestic pressures and geo-strategic interests that keep the U.S. in the region, and the long history of U.S. foreign interventions that forms the broader context for this war. (11 minutes)

View from a Grain of Sand (2006):

The documentary features members of RAWA (Revolutionary Association of Afghan Women) and tells the story of how war, international interference and the rise of religious fundamentalism have stripped afghan women of rights and freedom. (82 minutes)

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Hawk-like kestrels over-winter on wires

by Alice L. Fuller

How lonely the little chap appears as it keeps a constant vigil over the fields which stretch away from both sides of the country road. I see the small hawk sitting on the same stretch of wires each time I whiz by, and I suspect he or she holds a lonely court there most of every day.

The forces that hold the little kestrel in that location are hunger and survival. Because now and then I see a mouse dangling from its talons, I assume that the rodent population must be sufficient for the bird to continue to guard that particular bit of rural real estate.

That solitary bird reminds me of one of my favorite bird poems and one I frequently quote, "Tiny Bird in Wind and Snow" by Joel Peters. It is just as applicable to a small hawk as to a diminutive chickadee or kinglet.

"Hope for no rest, wee feathered life
Balanced on Death's sharpened
knife;
Diurnal, nocturnal,
Autumnal or vernal,
Your quest for food is eternal,
Eternal!"

Many of our country roads are bordered by strings of wires held aloft by an unending line of poles. In spite of these manmade intrusions into their environment, birds have turned them to their own advantage.



Especially in open country they make great observations posts for a variety of bird species, including red-winged blackbirds, meadowlarks and many kinds of sparrows.

But during winter months few birds perch on the wires. Most of the birds that had used the wires in spring, summer and fall have retreated south or to more sheltered places. Exceptions include flocks of starlings that often rest or sun themselves on wires leading to farm buildings, and occasionally a flock of rock doves will desert the tops of silos for nearby wires. Out in the deserted countryside the kestrel is almost the only bird that still continues to use these man-made devices for its own reconnaissance.

The handsome little kestrel was once called sparrow hawk, but now the European name is preferred. The kestrel belongs to the falcon family of raptors and like its kin has pointed wings and a longish tail. With its rufous back and tail, it is both the smallest of native hawks and also the most colorful of the falcons. Both sexes look much alike except that the male has bluish-gray wings. Both males and females sport a pair of sideburns on the side of the head which can be observed in Dorothy's drawing.

Sometimes the kestrel sits with body scrunched together, resigned to facing the

worst of the elements. At other times an individual is seen vigorously wagging or jerking its tail, as though protesting its lot in life. Often this small falcon flies from the wire over the adjacent field, where it hovers with quivering wings and its rufous tail fanned. The hawk probably has spotted the movement of a mouse or shrew in the grass and needs a better vantage point to seek its prey.

During the lushness of the warmer seasons, grasshoppers and other insects, amphibians, reptiles and small mammals provide an easy living for the kestrel. In winter mainly mice and perhaps a careless or ailing bird must suffice.

Over-wintering kestrels are not necessarily restricted to lonely country roads. I read the following intriguing account of a kestrel's choice of location and its hunting techniques in "Book of North American Birds" published by "Reader's Digest": "Commuter traffic on Route 3 is at a standstill eastbound from New Jersey into the Lincoln Tunnel. Westbound traffic, the radio says, is backed up for two miles...But the tiny falcon, poised on a sapling overlooking the highway, is oblivious. Its hungry eyes see nothing but the fresh snow. The stalled vehicles might as well be rocks for all it cares...."

"Suddenly the kestrel's head stops turning. The black falcon eyes study the snow even more intently. Leaning forward, head bobbing with excitement, the bird launches itself with a series of rapid wingbeats.



Ninety feet out, the bird pulls up, hovering like a tiny helicopter over its target. Then it dives, feet first, into the snow. The struggle is short and furious—and one-sided. A hungry kestrel is a consummate mouser. Prey held firmly in its talons, the bird returns to its perch and proceeds to feed. When traffic finally begins to move, the raptor doesn't even notice."

One day before long I may see two kestrels sitting side-by-side indicating courtship has begun and the pair may be ready to seek out suitable nesting cavities such as abandoned woodpecker holes. For a few brief weeks in its life span that kestrel which hangs out down the road from us and seems like a reclusive neighbor won't be quite so forlorn or solitary.

from Native trees, pg. 16

bler species and pine siskin. Although the sap sucking woolly adelgid threatens the future of untreated hemlocks in the wild, annual applications of dormant oil can control the infestation.

• A tulip tree in Centre County grows easily and without much special attention, attracts birds and wildlife, feeds insects especially honey bees, is not endangered by gypsy moths, and is beautiful. Fossils of the tulip tree have been found around since the Cretaceous Period, more than 65 million years ago. A summer drive down my street, under a canopy of shading tulip tree branches, will convince you. The nectar

from small almost unnoticed blooms high up in the tulip tree attracts honeybees.

• Planting a white oak tree is an environmental legacy. They live for centuries. Their acorns are extremely valuable to more than 180 species of birds and mammals because they mature in one growing season and are rich in protein and carbohydrates. Acorns have largely replaced chestnuts as wildlife food when the American chestnut tree, once prolific in Pennsylvania, was wiped out.

The authors used "Trees of Pennsylvania" by Charles Fergus and "Bringing Nature Home" by Douglas Tallamy to assist them in writing this column.

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