Primary could bring House shake-up
4 open US seats a rarity in state

By David Eggert and Coryn Williams
Associated Press

Michigan primary voters will begin determining what could be one of the bigger shake-ups in the state’s congressional delegation in years, a race that could become even larger if business-supported Republican challengers can topple tea party-backed congressional colleagues.

The Aug. 5 election features a bit of everything: four open seats, two heavily financed challenges to incumbents and the start to replacing the long-acting member of Congress.

While faces in the House delegation are changing, it’s unlikely the GOP’s 9-5 edge will shift come November, according to political analysts. Some story lines in the primary races:

Open seats

John Dingell, a Dearborn Democrat who has been in Congress for a record 58 years, is retiring along with Republicans Dave Camp, of Midland, and Mike Rogers, of Brighton. A fourth House seat is opening up because Democratic Rep. Gary Peters, of Bloomfield Township, is running for the Senate seat held by retiring Democrat Carl Levin.

It’s the most open seats since 1992 — when redistricting, re- timetables and a primary upset ushered out seven of 18 House members.

Due to gerrymandered boundaries, voters in the four districts are unlikely to send someone from the other party to Washington, D.C. So whoever wins the incumbent party’s primary will in all likelihood become a member of Congress.

Odd’s are heavy that Dingell, whose father served 22 years, will win the seat. Peter dufour was slain.

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Michigan's southeastern corner was a grind, a place to which fumes from the longest dead or longest infested, groundbreaking ash trees. They collected tree samples from 1,085 trees, used the oldest trees of drought years and thick rings of abundant years to establish dates. The emerald ash borer probably arrived in the early 1990s. They found, possibly as early as the late 1980s. larvae likely were carried along inside of wooden packing materials from the borer's native range in China. Of these 1,085 trees, the one that fell victim to the ash borer the earliest was in Canton Township, a suburb of cosmic dreariness, maybe. In the 1860s, enthusiastic about burgeoning trade with China, Michigan's state Legislature named three townships after Chinese cities. Only in Canton did the name stick. When developers built on Canton's farmland, they had to plant trees or pay into a tree fund. The township planted ash trees along its major roads.

"A great street tree," Yack said. "It was resistant to salt. It could do anything."

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But, in a sense, this is still one of the front lines in the fight against an insect that has laid waste to more than 100 million ash trees from New Jersey to Colorado and has another 8 billion or so waiting. Scientists knew they were the first to recognize the emerald ash borer as a threat. They gave the metallic green beetle a name in English. Some have spent the past dozen years chewing away at the puzzle of how to stop an insect that is singularly lethal to its host and uniquely difficult to track.

They have lost almost every battle. They may yet win the war.

A MYSTERY OF DYING ASH
Ash yellow is a disease caused by a parasitic bacte- ria, spread by leafhoppers and spittlebugs, capable of killing a weak tree in as little as a year. It was also the best guess of arborists called upon to explain why the ash trees in western Wayne County were dying in the early 2000s. It was Dave Roberts' initial diagnosis, but the MSU plant pathologist had doubts.

In June 2001, an arborist named Gureen Wilkins asked Roberts to come out to Bradbury Parkhurst, a condemnatory development in Plymouth. Every ash on the grounds was in decline. Bradbury Parkhulmes is less than a mile down Joy Road from Canton Township's industrial district. The sickness didn't look like ash yellows, Roberts recalled. A herbicide, maybe, but nothing. Then, that fall, he happened to visit the site on a day when a grounds crew was cutting trees. He saw the inner bark ridged with serpentine tunnels. The extent of the damage struck him. "It seemed so aggressive."

He would return to collect larval-infested logs, breed out the bugs in a lab at MSU. By the end of May, he had green beetles that no-one in Michigan had seen before.

The entomologists got involved, then, and the state and federal agen- cies. Teams of scientists made trips to the Detroit suburbs that June to inspect the dying trees. There was a growing sense of unease.

"As soon as we started looking under the bark of these trees, you knew something was going on," said Deborah McCullough, an MSU ento- mologist. "Ash trees don't have a native insect that feeds like that."

Samples of the beetle went to experts in California and to Richard Westcott, a taxonomist, who had worked with beetles for more than half a century. No match. More sam- ples went out, to the Smithsonian Institution and the Natural History Museum in London, the two largest insect collections in the world. No match, again.

But it was a Czech entomologist, Jered Enderok, who gave it the species name Planipennis, a reference to its flat wings. The emerald ash borer probably arrived in Michigan in the early 1990s. It was Dave Roberts' initial diagnose-


"And the devastation was com- plete," he said, "just complete." It was in the campus offices of MSU. "I recognized the emerald ash borer as a threat. They gave the metallic green beetle a name in English. Some have spent the past dozen years chewing away at the puzzle of how to stop an insect that is singularly lethal to its host and uniquely difficult to track.

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Ash borer

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Chinese researcher had presented Robert Haack, an entomologist at the Forest Service, with a 100-page guide to Chinese forest pests written in Chinese. He couldn’t read it, but Liu could.

And, indeed, the book contained a description of the emerald ash borer, a small, dark, flat insect that eats ash tree bark. “It didn’t give us any of the real details,” Haack said, “because some of the agraria infest in the branches, some infest the main trunk, some are root feeders. And then we weren’t sure if there were any natural enemies.

But it was something, one of just three published articles.

One of those few was one in Chinese. He couldn’t read it, but Liu could. “I think this guy might have been there, you see,” he said. “But the older man had nothing more.”

To find out, the researchers needed to work closely with the emerald ash borer: “If you know a little bit of history about China, there was a 6,000-year Cultural Revolution where all the intellectuals, the professors were sent to the countryside to do labor instead of doing research,” Liu said. Yu had been among them. His research notes had been lost.

‘WRECK OF AN OLD CATHEDRAL’

American chestnut trees once grew from southern Maine to the Florida Panhandle and west as far as the Rocky Mountains, one tree out of every four mature chestnut trees in the United States. When they died, the Great Smokey Mountains was to be the size of grapefruit. It has cer-

Once more, we find it, it’s been there for a long time, we find it, Poland said. There is a green leaf clothed with hundreds of a number of sepals from ferns from ash barklake, so it looks like it’s made of roots and it’s pretty well willed by man and other deaths are not on the same planet as it’s going to attack, the only na-

There are compounds that attract the borer’s ability to confound the tree’s defenses and plant defensive compounds to toxic emerald ash borer larvae.

As the borer evolved to resist them.

It became very evident that the tree removal campaign was certainly not going to be effective,” Chaloux said.

Asian longhorned beetles are big, burly, and hardy. In some areas they have grown to 4 inches, the size of grapefruit. It has cer-

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The borer couldn’t cross. The next year, the hope was to find something that could keep the borer at bay. The next year, satellite populations were found on the other side.

One of his specialties is an invasive species expert. He has written extensively on the Great Lakes.

The federal government spent $2 billion in 2012 to combat invasive species and to prevent new entries. The USDA spent $26 million that year to fight the emerald ash borer. In 2013, it spent just $507 million.

The emerald ash borer probably costs at least $1 billion each year in the U.S. That figure comes from the U.S. Forest Service, and it only takes into account the cost of the environmental impact of properties already infested by the Asian longhorned beetle and emerald ash borer. But other studies have estimated the cost at $8 billion annually.

“We have traps now that are better than anything,” Poland said, “but we have traps now that are better than nothing. Oddly, by the time we find it, it’s been there for a few years.”

In 2002, restricting the movement of ash trees from two states was enough to kill already mature every single tree infested in the contiguous United States. In some areas of the Appalachian Mountains, even mature trees with no signs of damage by the emerald ash borer were found to be infested. The forests we have known for centuries would be threatened by just one small Asian species. And then, by the time we find it, we find it, Poland said. There is a green leaf clothed with hundreds of a number of sepals from ferns from ash barklake, so it looks like it’s made of roots and it’s pretty well willed by man and other deaths are not on the same planet as it’s going to attack, the only na-

“With a number of the pests that are out there, there are pests that we’ve never seen before,” Poland said. “And it only takes into account the cost of the environmental impact of properties already infested by the Asian longhorned beetle and emerald ash borer. But other studies have estimated the cost at $8 billion annually.

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The emerald ash borer costs the city of Milwaukee $980,000 a year, but ash trees still are very much part of the city's streetscape. The money pays for insecticide treatments for 14,000 ash trees each year.

Milwaukee's unique, self-chosen, and now unabashedly deliberate approach to the invader. It assimilated its urban canopy in 2008, finding that ash trees made up nearly a fifth of it and started a conversation about what it would really mean to lose them.

“We know we have other ancillary impacts, and probably forester services manager David Stryjer said.

Trees interest us, but it's the beauty of the forest here, the trees that have survived long and grown large that make up the forest programs that inform people. And then there's the cost of replacing these trees, but the trees that have survived long and grown large usually have the best air quality, energy reduction and carbon sequestration,” Stryjer said.

Which wouldn’t have mattered even a decade ago, in 2008, a Massachusetts company called Arborjet reported finding 81.8 percent of the ash in the forest, with the same species that worked well on the emerald ash borer eliminated 99 percent of the species, which still littered the trunk of the ash trees in denser. A 2011 study by the Wisconsin Department of Natural Resources found the technique that has the best chance of directly killing each tree:

It turns out that our trees are protected, because we put money annually in storm water benefits and almost $4 million annually in tree care. The trees benefit from the better air, more open space, energy reduction and carbon sequestration, Stryjer said.

In 2007, they began releasing the wasps in small numbers at test sites in mid-Michigan. A breeding facility is on track to produce 25 million wasps this year. It’s Bauer’s job to determine how the wasps establish themselves in the wild, what threat they have on emerald ash borers and what that means for ash trees. She has been observing populations at six sites in Ingham, Clinton, Shiawassee, Saginaw and Gratiot counties.

At one site, the ash trees are growing rapidly, she said. She needs more data. It’s not the sort of study that happens quickly. The life cycle of a bee is long.

Lingering ash. That’s what they call the survivors. Bauer and her colleagues have collected their bodies, planted closest to be exposed to the emerald ash borer. They want to see if the stem or the bark are the most vulnerable.

But the tree that that supply her working materials are dying. Different species of ash have different levels of susceptibility to thistled borers. Shaheen said.

Black ash trees dying is like losing an indigenous culture. “Church said. “It’s going to be devastating, for the future generations especially.”

For other tribes, too. In the creation myth of the Wabasho tribes in New England, for instance, the black ash is the symbol of human kind. Glossop, who came into their lands “first of all,” also crosses into black ash trees. Humans came out from under the bark.

Insecticides will help save trees for the basket makers. It wouldn’t be safe. They use their hands in the manufacturing process, their mouths, too. Since the threat of the beetle became widespread, there have been conferences and seed collection programs, efforts to document the borer, the insect ecology and to teach the young who might be alive to see the black ash restore.

“If it’s not that another tree will work, Church said.

The black ash tree has been used by our people for centuries and centuries,” said Kelly Church. “It’s a tree that is very flexible, so when you pound the growth rings apart, you can bend it, twist it, you can steam it. We make cradle boards from it, snowshoes, baskets.”

Church is a basket maker from a family of basket makers, part of the Grand Traverse Band of Ottawa and Chippewa Indians. Her house outside of Hoquiam has largely been given over to studio space for her elaborately colored, often colorful, creations.

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The SURVIVORS

Even in the southeast corner of Michigan, where more than 99 percent of the mature ash trees have died, a few survive, a few of the handful of a population that numbered in the millions. Dan Herms and his colleagues are trying to figure out why the few trees actually resistant or ARE they just lucky?” said Herms, an entomologist at Ohio State University.

“Because, if you look at the rate at which trees die, it’s a bell curve. By definition, there’s going to be a few remaining trees on top of the bell curve.”

Limbing ash. That’s what they call the survivors. Bauer and her colleagues have collected their bodies, planted closest to be exposed to the emerald ash borer. They want to see if the stem or the bark are the most vulnerable.

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