BUGS in our backyard

Washougal man, a prolific amateur collector, is an expert on Clark County species

By SUE VORENBERG
Columbian staff writer

The buzzing grew ever louder in the corner of Craig Sondergaard's Washougal study.

He looked up from a table strewn with microscopes and perhaps 100 pinned and dried samples of bugs found in Clark County.

"That small one," he said, pointing to the noisy live insect as it circled the ceiling light. "That's a lesser house fly. Their larvae feed on rotting material, flesh."

In some cases, he added, their larvae have even been found in human stomachs, which could happen if somebody ate food after a fly lay eggs on it.

Gross? Perhaps.

But considering scientific estimates that there's a ratio of at least 200 million insects for every man, woman and child on the planet, it doesn't hurt to know more about these ubiquitous creatures.

Even here in Clark County, there are millions of different insects to investigate — in the forests, rivers, mountains and even in residential backyards. And there's always room for more budding bug collectors to help learn more about them, Sondergaard said.

Common sights

Sondergaard's insect collection includes about 7,000 dried bees, beetles, flies, moths and other insects, and several hundred larval and soft-bodied specimens preserved in liquid in vials.

He gathered his first bugs as a kid in Tacoma, after he became interested in the honey bees he saw in his family's backyard.

"They were all around," Sondergaard said. "My grandmother was a gardener, and I know they could sting, so there was danger involved in collecting them — which was exciting. There are hundreds of different bees just here in the Pacific Northwest — carpenter, mason, leaf cutter."

He counted out about a dozen more before offering to look the rest up in one of the field guides in his book-lined study.

Bees are especially interesting this year, he said, because our oddly cold and damp summer weather has dampened the creatures' pollinating abilities.

They get sluggish in cold weather.

"Some of the pollinators haven't had a chance to do their jobs this year, because of the cold," Sondergaard said. "A lot of the flowering plants are wilting because of that."

Farmers use bees to pollinate flowering fruits and vegetables, such as apples, pears and zucchini in the Northwest.

Unfortunately, pollinating insects like bees are having problems with altering world weather patterns associated with global climate change, said Sondergaard's friend and former

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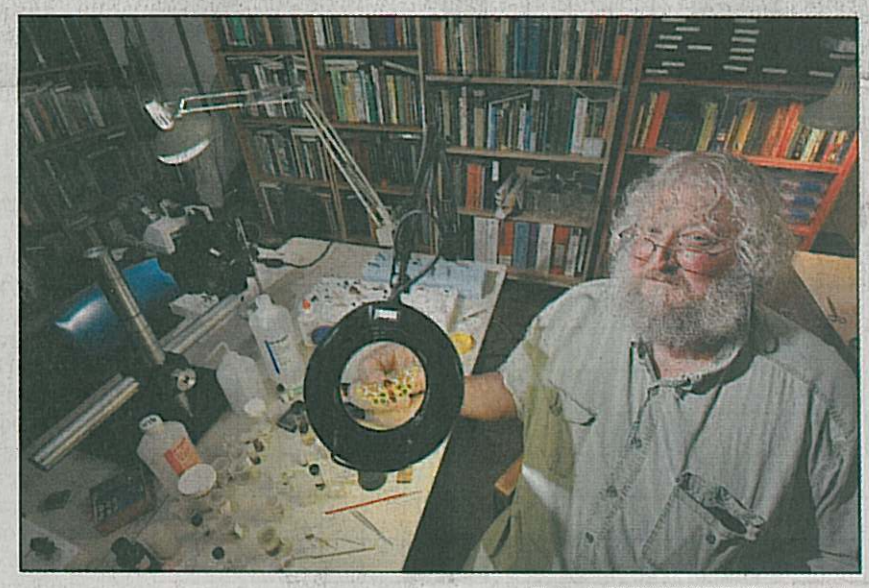
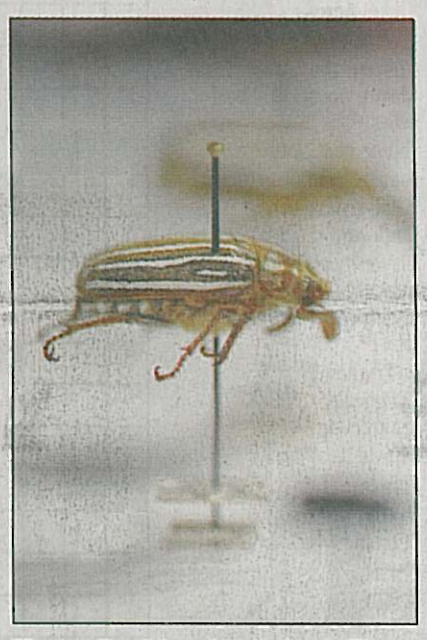


Photos by TROY WAYRYNEN/The Columbian

Craig Sondergaard holds a tiger moth at his home in Washougal. Sondergaard has collected thousands of insects over the years. He is one of the most impressive amateur naturalists in the county, according to his former Clark College professor, Jim Campbell.



The ten-lined June beetle lives off trees in the Pacific Northwest. The larvae eat roots while the adults tend to forage on leaves. Above left: Tiger moths have vibrant colors and are common in Clark County. They like to feed on weedy plants such as dandelions. Top: Snail- and slug-eating beetles are some of Craig Sondergaard's favorite insects. He likes predators because he finds their behavior fascinating, he said.

TIPS FOR BUG COLLECTORS:

- Pick up a field guide, such as the Peterson Field Guide to Insects or Insects of the Pacific Northwest. Field guides often have information on how to build nets and other collecting equipment.
- When collecting, make sure to write down where a specimen was found, who collected it, what environment it was in and the name of the species.
- If you can't figure out what a specimen is, try contacting the entomology department at a local university, such as Washington State University or Oregon State University.

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professor Jim Campbell, who taught biology at Clark College for 30 years before retiring this May.

"A lot of pollinating insects are disappearing," Campbell said. "Bees in some areas are dying out. In some parts of China, pollination has to be carried out by humans with brushes because air pollution has killed most of the insects. You can imagine the manual labor to do that."

The odd weather has also had a mixed impact on mosquitoes, Campbell said.

They don't like the cold weather, but the river flooding and ample moisture means that more of their eggs will hatch. If it warms up, that means there will be a lot of them around. If it stays cool, they'll be there, but they'll be more sluggish, like the bees, he said.

Impressive collection

Sondergaard's fascination with bugs ranges far beyond the standard bees and mosquitoes flying through Clark County's neighborhoods.

His interest helped him get jobs as a technician for the Ridgefield Wildlife Refuge, the Bureau of Land Management and the Department of Fish and Wildlife. He's currently unemployed, and is still considered an amateur collector and not an entomologist because he doesn't work in academia.

When it comes to bugs, though, Sondergaard's knowledge is far greater than Campbell's, his retired professor admitted.

"He's one of the most impressive collectors and amateur naturalists I've seen," Campbell said of Sondergaard.

What fascinates Sondergaard most about the tiny — and not so tiny — creatures is that there are just so many of them to learn about and categorize.

"It's easy to find something new," he said. "You just grab a net, sweep through the grass and you find all sorts of species that you've never seen before."

Sondergaard's favorites today are predatory black beetles, which are very common in Clark County.

"They're sort of boring to look at," he said. "But there are aspects of their behavior that are unique and not fully understood as yet. They're difficult to identify because they look similar. That adds a challenge to it."

Snail- and slug-eating beetles are particularly fascinating, he said.

The Scaphiotus angusticollis and Cychrus tuberculatus, which are two types of snail-eating beetles in his collection, have large back segments with wide legs that let them straddle and hook on to a snail while the narrower head and front segments burrow into the meat for a meal.

"You know how muscular snails are," Sondergaard said with an admiring smile. "These beetles kill by capturing and biting their prey. Then they inject pre-digestive enzymes and suck and chew the insides out."

The beetles tend to hang out in moist woods with a lot of deciduous plants. They often rest under rocks or logs.

Another interesting specimen is the Alaus oculatus, or eyed click beetle, a narrow dark-colored insect that has two black ovals on its back that look like eyes.

"Most of the specimens around here are relatively small, under an inch," Sondergaard said. "When a predator attacks, they bend their bodies and click themselves out of the way."

The spots are actually just defensive markings to make predators think the Alaus is looking at them. Its real eyes are much smaller.

"In tropical areas, one species has glowing spots, but the ones in our region don't," Sondergaard said.

On the creepy scale, Sondergaard has a small assortment of ten-lined June beetle specimens, or Polyphylla decemlineata.

The striped, inch-long creatures like to live in forests and eat trees and roots. They also frequently fly into porch lights around Vancouver, he added.

And then there's the cremastocheilus, or anteater scarab beetle — another of his personal favorites.

"It's found in ant nests," Sondergaard said. "It produces a chemical that ants like to feed on — which might be intoxicating to them, although the details aren't really known."

In ant hills, the creatures wander in and settle down over ant eggs. They puncture them and suck out the nutrients.

"The ants don't care though because they're too busy enjoying its secretions," he said.

At one point, when he lived in a different house, he noticed an unusual reaction between these creatures and an unrelated problem he had with book lice, which are creatures that like to feed on the starch in book bindings.

Sondergaard had some live cremastocheilus in a box in the room, and the chemical they secrete apparently is also enticing to the book lice, he said.

"For some reason the book lice just crawled all over them, then died," Sondergaard said. "There were so many covering them that they almost looked fuzzy."

More creepy crawlies

Water bugs can also be exciting and dangerous for bug collectors to study.

In Clark County's rivers and streams, people often come across water scorpions and toe biters, large brownish predatory insects that have piercing mouths and claw-like or mantis-like legs.

"People bring them to me a lot to ask what they are," Sondergaard said. "They fly, too, but they mostly use that just to get from pond to pond. Usually they swim, sink under the water and wait for food."

And yes, they will take a stab at your toe if you let them, he added.

Back on land, moths can make for good collecting and aren't nearly as creepy, Sondergaard said.

The Arctia caja, or tiger moth, for example, has beautiful orange and brown spotted wings, he said. "They feed on weedy species, like dandelions."

This time of year there are also a lot of Western giant crane flies, also called mosquito hawks, around.

They look a lot like huge versions of the disease-carrying blood-suckers, but there's nothing to fear from them, he said.

"In fact, they don't feed at all as adults," Sondergaard said. "They're one of the largest flies out there. And they're somewhat related to mosquitoes, but they don't bite."

Wood wasps are also up there on the creepy side. The long flying creatures use the piercing appendage on their back sides to drill into unhealthy or decaying wood, where they lay eggs. The larvae then feed on the wood once they hatch.

"The ichneumon wasp takes that even further," Sondergaard said. "It's parasitic, and will drill into places where wood wasps lay their eggs and deposit its own eggs on top of them. Their larvae eat the wood wasps when they hatch."

Sondergaard has about a thousand more stories of our region's bugs and their habits, and he loves to talk about them all.

But nothing beats going out and starting your own collection, he said, adding that he's passed his love of insects on to his grandson, who often goes out to gather bugs with him.

Insects might be creepy to some, but for anyone interested in the natural world, they also represent a huge group of creatures that have only been minimally studied.

There's lots of room for exploration, and even the possibility of finding new species, and Sondergaard said he'd be thrilled to see more amateur collectors out roaming Clark County with him.

"It's a fascinating area of natural history for people to get into," Sondergaard said. "It's easy. It's a cheap hobby, and there are always mysteries out there."