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WEEKEND BREAK

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Coping with migrants on the move

The plant world's annual race begins

By MATT WINTERS
 EO Media Group

If dandelions were hard to grow, we'd pay \$2.49 for a slender package of seeds and hold festivals in their honor. There's often a fine line between what we define as a weed or esteem as a pretty little flower. This distinction is front of mind this time of year as the plant world's annual race begins for real, everything busting out into bud and bloom over the next few weeks.

Writer's Notebook

It would take a lot of willpower to pull off with a straight face, but we just might get away with redefining our luxuriant stands of gorse and Scotch broom as a tourist attraction. Clear your mind of prejudice and it's hard to deny these obnoxious invasive species are spectacular. There must few species anywhere capable of erupting into such solid walls of blossoms — usually a saturated yellow, but in the case of Scotch broom sometimes edging into copper, orange or nearly white. If you didn't know better, you'd think they were the result of a laborious roadside beautification campaign. From our house overlooking the larger Sand Island in Baker Bay, my antiquated Gardner & Co. Glasgow telescope makes the island's outer edges look encircled by an enchanted golden wall, impenetrable by mortal man and woman.

In this region, stands of gorse — coupled with blackberry vines and wild roses — are our briar patches. As in the Old South, where Br'er Rabbit tricked the fox into throwing him into the briar patch and thus provide a means of escape, our local thorn thickets shelter feral bunnies and much other wildlife.

Humans don't like being told where we can't go; maybe this helps explain our enmity to these havens built from flowers and wicked stickers.

Blogger Green Deane recounts the story of an Englishman who woke up in the middle of a gorse patch after a drunken night on the town. He was stuck there more than a day. "I wouldn't advise anybody to go into it (gorse bushes), you know what I mean? At first it seems fun but, before you know it, you're like stuck," he told the BBC after his rescue by a British Royal Air Force helicopter. "Whichever way I turned it seemed to be the wrong one that day." One of his rescuers said, "We've no idea how he got there. He was right in the middle of the gorse. It was like he had been dropped there by a spaceship ..."

Gorse isn't all bad. Both it and Scotch broom have some interesting medicinal qualities. From a pragmatic standpoint, gorse might be the more useful plant. Deane (tinyurl.com/Useful-Gorse) claims it is everything from a flea repellent to a wine ingredient to cattle fodder, once its spines are crushed. Gorse blossoms "have a slight coconut aroma and almond taste," he said, an opinion I am unable to share after trying some earlier this week.

Scotch broom, while lacking thorns, seems more often to endanger people. Its seed pods resemble those of peas, which tempts children and livestock into eating them. A Canadian government website advises, "Scotch broom poisoning results in depressed heart and nervous systems and a consequent sensation of numbness, especially in the feet and hands. In particularly susceptible persons, death can occur from respiratory failure."

Both broom and gorse form dense monocultures, crowding out native species. By being good at converting atmospheric nitrogen into a mineral form accessible to plants, they enhance soil fertility. Ironically, this tends to be bad for native plants, which evolved to grow in poor soils.

Natives and invaders

I'm always on the lookout for column-worthy plants and animals, but out of ignorance often can't tell what is truly weird. Fortunately, peninsula renaissance woman Kathleen Sayce is never more than an email away to answer questions.

For several years, I've been curious about a plant whose green shoots begin to poke through the surface as early as January or February. Sending Sayce a snapshot, I learned it is the native species "sweet coltsfoot, *Petasites frigidus ssp. palmatus*, a very early flowering daisy. There are patches of it in the forest throughout our area. Important early nectar source for many insect species." Investigating further, Wikipedia claims, "The leaf stalks and flower stems (with flowers) are edible, and can be used as



Kathleen Sayce

Gorse has sharp long spines and highly resinous wood; it burns easily, provides nectar for late winter to early spring foraging bees, and habitat for wasps.



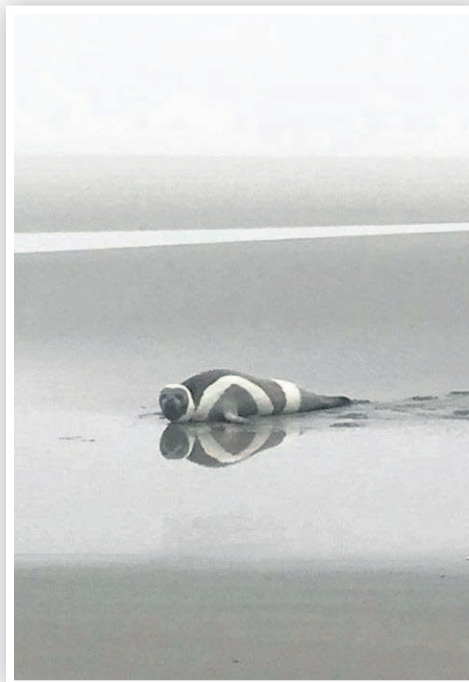
Matt Winters/EO Media Group

Sweet coltsfoot, a native species, is one of spring's early bloomers, providing nourishment to many insects. Native Americans sometimes used a tea made from the plant to combat respiratory ailments.



National Park Service

Brown rats on the West Coast are all descended from migrants that are believed to have arrived with early Russian fur traders. Now dominating their habitat, they fight off all rat newcomers.



National Oceanic and Atmospheric Administration
 A species from the high Arctic, a ribbon seal, was photographed last year near Surfside, Washington.

How we choose to adapt, accommodate, manage or resist migrations of all kinds will be the defining theme of this century, and likely of many more to come.

a vegetable dish. A salt-substitute can also be made by drying and then burning the leaves. This black, powdery substance will provide a salty taste." Northwest plants gurus Jim Pojar and Andy MacKinnon observed coltsfoot tea was used by some Indians as a treatment for respiratory ailments including tuberculosis.

Walking years ago along the Altoona shoreline across the estuary northeast of Astoria, I encountered a flowering plant which — like the drunken Englishman in the gorse patch — seemed to have been dropped from a spaceship. It was like nothing I've ever seen before or since. But even this experience is, in turns out, not uncommon. We live on the wild frontier when it comes to invaders.

"On the Columbia River, we find new species all the time due to shipping," Sayce

told me. "This makes identification tough, because of not knowing where in the world to look for likely species. (Local botanist) Cathy Maxwell has probably found more than 20 new species here over several decades. I also found a Eurasian wheatgrass on the Willapa River about five years ago, *Thinopyrum ponticum*, tall wheatgrass, very salt tolerant, and widely planted in the Midwest because it can stand up to winter road salt on the verges. We have many, many incoming species here ... And more are coming in all the time, from ships, tires, feet, pets, etc."

It seems it would be possible to organize a scientific "scavenger hunt" here to look for plants badly out of place. Among others, Sayce has found *Valerianella locusta*, commonly called corn salad, a leafy food plant that usually grows mixed in with Eurasian

and African grain fields. One of its folk names is Rapunzel. For reasons too obscure to explain, this may be the origin of the Bothers Grimm tale of the same name. Sayce found it flowering for a time near the Cape Disappointment boat launch. On another occasion, she found a hardy yucca — a desert plant — in the dunes along Discovery Trail near Beard's Hollow in Cape Disappointment State Park. She said it "was quickly identified as having come in on a high storm tide with woody and plastic debris. Someone likely tossed it in the Columbia River well upstream, and it floated down and on to the ocean beach, was tossed up into the dunes and rooted there. I dug it out, of course."

Weird plants trying to carve out new habitats here — sometimes with human aid — aren't a new thing. Some of the witchy-looking old apple trees around Chinook and McGowan are said to date from nearly two centuries ago. On the Oregon side, Sayce noted "Point Adams is an interesting area because there was housing for officers (with gardens) when it was first taken over as a military fort. There are some very interesting trees, shrubs and perennials that have survived from those original plantings. Remnant orchards. Also bulbs."

The Russians are here

Plants aren't the only unauthorized immigrants and refugees here on the Columbia River and West Coast. All our local rats are, most likely, originally from Russia.

One of my favorite science stories (tinyurl.com/Rat-Colonists) of the past half year was written by Carl Zimmer of the New York Times. In it, he describes a novel genetics study of brown rats, *Rattus norvegicus*, looking not just at how these intrepid explorers swept across the planet in the past 300 years, but also at how their behavior may actually protect us today.

Although sometimes called Norway rats, researchers found the species probably originated very long ago in what are now Mongolia and northern China. Different waves of rat migrants eventually ventured into the outside world, these distinct migrations leaving unique genetic traces within the overall brown rat population. There were, for example, apparently three major arrivals of brown rats in Europe. Other exploring parties colonized Siberia and other places, first slowly and then swiftly dominating other common rodent species like black rats and house mice.

"Brown rats in Alaska and along the Pacific Coast of the United States and Canada can trace much of their ancestry to Russia," researchers found, according to Zimmer. "Their ancestors may have stowed away aboard ships that traveled to fur-trapping communities in the New World in the 1700s and early 1800s. ... The brown rats of New York and other eastern American cities trace their ancestry to those in Western Europe. So do brown rats in South America, Africa, New Zealand, and isolated islands scattered across the Atlantic and Pacific."

The really interesting thing is brown rats, once established, are about as anti-immigrant as it gets. Despite all the international and interstate shipping now, rat populations show "very little evidence" of newcomers adding to the existing rat gene pool in cities worldwide.

"The researchers now theorize that the first brown rats to show up in a city rapidly fill it up," Zimmer reported. "Later, when bedraggled latecomers tumble out of ships in the city's ports, the stronger residents rebuff them."

This may mean the olden days may never be repeated when rats are thought to have been culprits responsible for delivering terrifying new diseases like the black plague to seaside cities. We have angry armies of xenophobic rats defending their homes and ours.

Accommodate or resist

The world still can seem very large when you're on an airliner for 12 hours to Europe or 22 to Singapore. In other ways, it's never been smaller, either when it comes to novel species disembarking at the Columbia River estuary, or people setting out from impoverished and war-torn countries in hopes of sanctuary.

Earth's changing climate is dislodging many organisms from old homes. Living here, it seems every year brings news of strange sightings of birds, fish, marine mammals and terrestrial plants popping up far beyond their accustomed ranges.

Exciting as it is to spot things like Arctic ribbon seals, it also is worrisome. Like a comet passing through the asteroid belt and discombobulating giant space rocks that might plummet to earth, disruption of animal and human habitats will have impacts.

How we choose to adapt, accommodate, manage or resist migrations of all kinds will be the defining theme of this century, and likely of many more to come.

Matt Winters is editor and publisher of the Chinook Observer and Coast River Business Journal.