

A Rat In Tom's House May Eat Tom's Ice Cream

by Mark J. Rauzon

I learned this charming mnemonic device to spell arithmetic in grammar school. Never did I realize that a rat on an island in the land of ice could create great havoc on seabirds. With the help of a little "higher" math, I began to understand the multiplication abilities of rats. One pair of rats in ten years could theoretically produce (if no predation or diseases existed) 48,319,698,843,030,334,720 offspring (that's 48 quintillion! And a lot of ice cream). That factoid was cold comfort indeed as we headed to the Rat Islands in the Aleutian Islands of Alaska. We were set to determine the effects of rats on North America's pre-eminent seabird colony, Kiska Volcano, a rat-infested lava flow that also supported uncountable millions of seabirds.

Rats exist as far north as Nome and Iceland at 65° N. and South Georgia Island, at 60° S. They are present on about 80% of the world's islands, including 22 Aleutian Islands and other Alaskan Maritime Islands. Indeed, the Rat Islands are named after one island that has supported a population of rats since 1780 when a Japanese ship wrecked and rats swam ashore. It sounds like an unsavory place in name alone, add to it the reputation of the region for wind, fog and rain and a cozy getaway is not what you get.

Like a surgical strike into the heart of the Aleutian wilderness, a rat reconnaissance was set for Kiska, the largest of the Rat Islands in the western Aleutians. Norway rats were introduced during WWII and are in the world's largest auklet colony. After gearing up in

Anchorage, my long time colleague 6 foot 6 inch colleague Art Sowls, a giant with a heart of gold and I fly on an Electra prop plane to Adak, America where the blasting wind near froze my nose. The former high-security military base still requires clearance to be able to land. Now though, the Navy is barely present. We drove by formerly tight security places where the barbed wire fences that protected nuclear weapon bunkers are rusted and creak in the wind. Formerly the area required eyes straight ahead and don't even think about stopping to look for vagrant birds.

The post-cold war, downsizing of military has left Adak a ghost town. Budgets being what they are however, a new set of pre-fab modular units were pre-ordered and built the year before the base was scaled back. A -post-Armageddon neighborhood of ugly cul-de-sacs and plastic building, with nice sun porches, sit on the dun-brown lawns surrounding an abandoned MacDonalds.

As we await the TIGLAX, Aleutian for eagle, a USFWS reasearch vessel, beautifully designed for field work, we visit the wharf to board a confiscated "pirate ship". This one was apprehended for drift net fishing in US waters. Every year several illegal drifnet vessels are arrested in the North Pacific by the U.S. Coast Guard. This one was nabbed about 400 miles south of Adak, had a least 12 dead albatrosses in the nets (and lots of other birds). I don't know if any were Short-Tailed Albatrosses caught, but certainly some are taken this way. Perhaps some of the proceeds from the sale of the

confiscated vessels (or fines) could go toward mitigation like purging Torishima of rats.

Underway on the TIGLAX, the ocean was flat and snow-cone volcanoes studded the horizon. Offshore, bull sperm whales fed on giant squid and Laysan albatross gathered for the left-over scraps. The fox trappers set up camps along the way so we got to see some other country. After a week on a gentle sea voyage, we descended upon Kiska, the site of a WWII battle that went horribly awry. (5000 Japanese had evacuated the island days before the US invaded. A one-way battle ensued and over 300 American soldiers were lost to friendly fire, land mines and weather exposure.) We stormed the boulder beach at Sirius Point on a rare, calm, sunny day in May. The zodiac boat driver is an Ex-Navy Seal, so I'm buoyed by that. Donning Mustang suits of international orange and hip boots, I rode the zodiac in and began to unload the rubber boat full of gear and supplies for a week of camping. Plywood and lumber for the "bomb shelter" tents went in and were carried up the shit-splattered rocks.

The tent platform was nailed together as the radio antennae was erected. Romeo Alpha Tango 007 is our radio call sign. RAT-007 in daily contact with the outside world. The combination of shelter and communications were essential to complete before the Tiglax hurrying away, to unload Buldir team, before the forecasted storm hit. Seems you pay out here for a sunny calm day with a week of fog and gales.

In an hour, the ship is gone and running from the weather to Buldir. We have the rest of the day to prepare ourselves but the swarm's of birds are very distracting. The auklets are awesome spectacle, with 10's of thousands in the air at any one moment as they fly by. "That's nothing," said the captain of the Tiglax, "wait till around 10:30 tonight." Still I am impressed all the more so because the sun was shining on the birds and this is a rare opportunity here at the birthplace of weather-specifically, the Aleutian Low that rules the North Pacific Atmosphere.

Our camp site is a protected nook above a boulder beach that rises to the crest and descends slightly to a sand flat made of pulverized lava, vegetated in parts with the common beach grass, Elymus. This cove is protected from the sea and most winds by a small lava dike wall. Only the north wind would be a problem. Behind and inland, a cliff towers over the site, jagged with rocks the size and shape of a Ford Explorer's, balanced at temporary rest above on the edge. We're surrounded by two distinct lava flows, one ancient and one contemporary-1965.

The nesting area is bouldery lava, huge and not so huge rocks, covered with lichens, moss, bird doo and grass. When wet, footing is slippery and deep cracks in the rocks made travel very hazardous in earthquake country. To survey the area, we move like cat burglars, each step is a meditation of safety. The boulders require long strides, short mincing steps, on hands and knees. I'm celebrated today because my idea to bring knee pads will be a saving measure. In the

cracks and crevices, Least and Crested Auklets, nest by the millions. Perhaps as many as 5 million Least and Crested Auklets nest in these new and old lava flows.

The Least Auklets is a sparrow-sized, plucky bird that lives on the northern Gulf of Alaska and Bering Sea all year long. In winter it hugs the ice edge. (That it's a relative of the Great Auk, a flightless cousin, demonstrates the extreme size range of the Alcid family). The chattering, chittering, tittering, tattering auklets animate the rocks, Splotchy gray and white, they are like organic protoplasm crowning the lichen-covered basalt. The birds crowd the high points of rocks, bumping off their brethren for the best vantage point. But the Crested Auklet is king of the hill. The uniformly gray musketeers have an orange smile and topknot of plumes. These large auklets outweigh the Least 3 to 1 so they claim the lookout for themselves.

Bald eagles and peregrine falcons flew around the colony hunting for dead and slow birds. On alarm, the auklets sweep in the air as a flock and swirl around the colony as a warm-up exercise for their daily afternoon exodus to the sea. Flocks constantly pass over head, riding the williwaws out to sea on break-neck winds. When gale force winds blast down the mountain slopes, hitting the water and atomizing it into swirling mists, some auklets are driven into the rocks as well as each other.

That same wind threatened to tear the tents from it's stakes. The camp site is periodically wafted with sulfurous fumes, and we are

reminded we're camping under a steaming volcano. ("Where you goin' go when the volcano blow," sings Jimmy Buffet and I worry, yes where indeed?) Don't know, or when the accompanying earthquake sends those Ford Explorer's "Like A RoCK" into camp, or when we go when a tsunami wraps into our cove. Oh well, nature in the raw, demands love and trust.

Rats were all around us, but catch them we couldn't. Imported coconuts along with peanut butter and herring oil was the daily special. The amount of natural food was more attractive to them. It appears the preferred food of the rats in the early spring is the eyeballs and brains of least auklets, plus their delectable eggs. The 100 grams bird never have a chance against the 300 gram rat. The Crested Auklets are about the same size in weight as rats and rarely appear to be eaten unless wind-killed dead are scavenged--but their eggs are still taken.

So with lots of natural food, why eat peanut butter? We were only able to convince one rat into the trap-a pregnant female, lactating with a litter of 10, and 10 more on the way. We also found one cache of 12 dead auklets in a rat lair, behind an insulating curtain of dried grasses. This rat was laying in the winter larder early. Since it's a cool 40-60° all summer, the carcasses stowed away in crevices provide a food source for the rats in fall and winter.

We conducted one experiment to assess rat predation by laying out quail eggs (imported from Mississippi) and seeing the take by rats. In our shore level plots, 30% were taken on the first night. It slowed down as the week went on, and the eggs grew stale. In our elevated plots, predation was low to non-existence, suggesting the rat population was just building up inland. My impression was the rats are coastal, but fresh sign was found at 500 foot on the first plateau. The rat population is well-established in the old and new lava flows, but in limited numbers.

There are so many birds to eat that rat control would be very hard to accomplish. The island is huge and a successful aerial bait drop seems impossible. Anyway, the upshot to this is the idea that since rat control/eradication here is problematic on Kiska, an effort should be directed elsewhere-that is-on Rat Island itself. This island has had Japanese rats since 1780 and is flat, grassy, level, near helo support sites and will be the demo model of this type of effort. Perhaps it's possible in the next 5 years to get it cleared of rats, and change the name to an Aleut one. How about Aliaxsxa-that's the legendary home of the ancestors where the weather was perfect and the people never fought.