

Beachcombers' Alert!™

82 Year Old Bottle; 34,000 Sneakers; Drifting Logs

VOL. 1, No. 2

• SPRING ISSUE 1996 •

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Beachcombers' and Oceanographers' International Association*

Czar's Bottle

by Curtis C. Ebbesmeyer

Time In A Bottle

*"If I could save time in a bottle, ...
I could make the days last forever, ...
Just to spend them with you."*

Words and music by Jim Croce, 1971

Just as NASA launched a probe representing humanity into the universe in the hopes that another civilization might find it, we are dispatching into time bottles with messages. Some will be read centuries from now. Two bottles recently reported by beachcombers, suggest that Alaskan beaches may be receding, uncovering long lost information. The sands encase and the sands recede in decades long rhythms; keep a sharp lookout.

In September 1994, a bottle was found by National Weather Service employee, Jack Endicott, on a beach near Yakutat, Alaska. The bottle contained a message asking the finder to report it to the International Fisheries Commission (IFC), in Seattle, Washington. A 25-cent reward was offered if the information was reported by March 31st, 1935. To investigate ocean currents in the Gulf of Alaska, the IFC conducted a number of drift bottle experiments in the early 1930s. This bottle, #3665, after 61 years was reported to be in excellent condition. Probably, it had been buried for years as had the following bottle from even earlier times.

That winter of 1994-1995, the one which spilled 34,300 hockey gloves from the containership *Hyundai Seattle*, storm waves transported more than the usual quantity of beach sand and gravel. For seven or eight years Strawberry Channel beach on Boswell Bay at Hinchinbrook, Alaska, had been eroding, exposing sands buried for longer than the memories of local beachcombers. Cliffs of black sand, marked the waves' excavations earlier in the winter.

During an interlude between storms, Brooke and Gayle Adkinson walked along the surf, eyeing the beach for fresh flotsam. From the wave-cut scarp protruded an amber-colored bottle bearing no special markings, inside of which they saw a water-

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Update On The *Hyundai Seattle*

by Curtis C. Ebbesmeyer and
W. James Ingraham, Jr.

In the *Beachcombers' Alert* Winter Issue we described the loss of the cargo held in 49 containers after the containership *Hyundai Seattle* caught fire on December 9th, 1994. Because hockey gloves are rarely spilled, there can be little doubt as to the origin of the thousands of gloves reported this year. A few months after the gloves began arriving in numbers, many Avia (later owned by Reebok) brand shoes began to show up. These too were lost from the *Hyundai Seattle* as described below.

Hockey Gloves. We obtained a copy of the shipper's invoice showing the following hockey items held in two of the lost containers: 34,300 gloves; 3,000 shin guards; and 1,500 chest protectors. All totaled 38,800 hockey items fell overboard. During the first half of 1996, we've received reports of thousands of hockey gear found on beaches from near Oregon's southern border, northward to Langara Light Station at the northern end of the Queen Charlotte Islands.

Sneakers. Previous model runs for the hockey gloves and the Nike
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*President, Dr. Curtis C. Ebbesmeyer; graphics and photos, W. James Ingraham, Jr.; newsletter editor, Jim White; Treasurer, Jeffrey M. Cox. Please report finds to: Curtis C. Ebbesmeyer, 6306 21st Ave. NE, Seattle, Washington 98115. Include photographs of yourself and drifters, as well as written descriptions of the associated locations and dates. Please suggest feature stories for the body of water fronting your beach. When you have finished with this newsletter, please recycle it by passing it on to another beachcomber. Become a sentinel beachcomber by cataloging for twenty years, debris found weekly on a mile of beach. Long-term observations are the key to documenting pollution arriving on our shores. Your suggestions for future stories, and ways to improve this newsletter are appreciated. Copyrighted material. All rights reserved.

Log Spill

by Curtis C. Ebbesmeyer

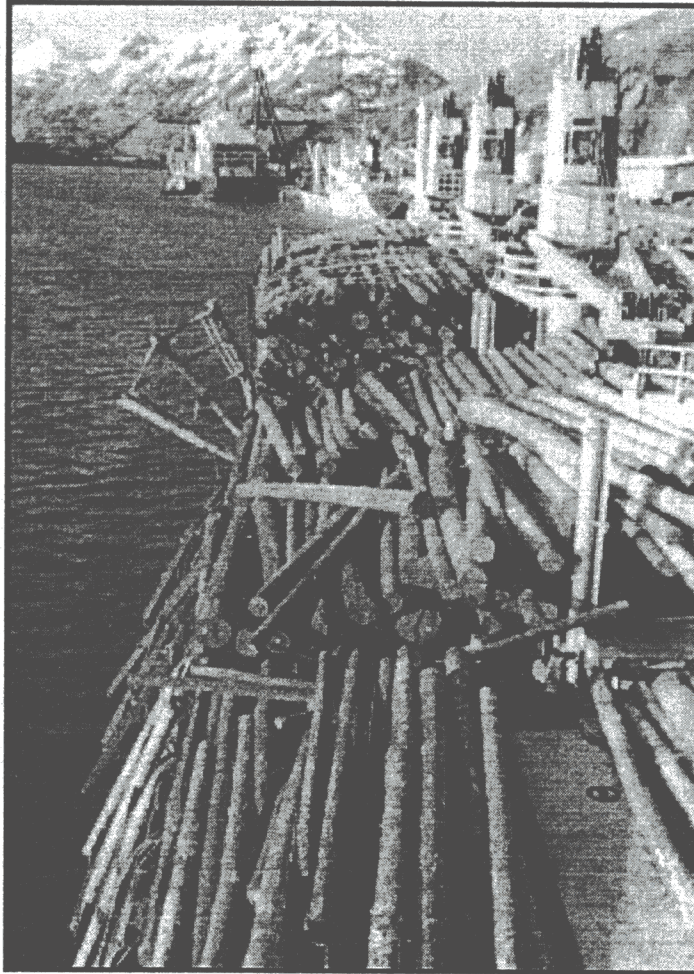
The 550-foot log transport vessel *Ocean Orchid*, owned by the Pacific Lumber and Shipping Company and registered in Panama, spilled approximately 1,100-1,200 peeled Douglas fir logs on February 20th, 1996 at 52°02' north latitude by 148°54' west longitude. Mike Francisco, executive officer aboard the NOAA Research Vessel *Miller Freeman* called Curtis Ebbesmeyer via satellite radiophone to inform him that on February 28th he'd heard radio transmissions pertaining to the spill.

Enroute from Everett Washington, to Matsunaga Japan, the Japanese-owned vessel was heading northwest enroute to Unimak Pass along a northerly great circle route. At the time of the incident they had sustained gale force winds of 60 knots gusting to higher speeds, and a generally following sea of 25-30 feet, what a representative of the shipping company called "boisterous seas."

In the space of few minutes a set of three or four much higher waves, some 35-40 feet in height directed from the stern starboard quarter, struck the vessel. The waves caused the logs lashed on deck to shift, buckling about 15 of the upright steel supports, called stanchions, located on the vessel's port side. A few hours before the rogue waves struck, the all-Filipino crew had gathered in the wheelhouse, wearing their life jackets. They remained there for hours afterward, waiting for the seas to subside sufficiently so as to feel safe again, and to ascertain whether the vessel's list could be corrected. Eventually they steamed into Dutch Harbor for repairs.

Of the 6,000 logs lashed to the deck, about 1,100 washed overboard. Another 8,000 logs stowed below deck did not shift and were undamaged. Therefore, 8% of the total logs on board, or 18% of those lashed on deck, were lost. Bob Storrs visited the *Ocean Orchid* to observe the damage and note if the logs were branded. Stapled on the ends of

many of the logs were plastic tags about 1" by 3-4" which Bob saw in hatch #5. A couple of the tags read AH10043 and AH29179. Each log appears to have been tagged with a different number. Assuming that the staples fastening the tags to the logs will hold during their drift to the coast, beachcombers should be on the



Logs aboard the *Ocean Orchid* (notice the bent log supports)
Photo: Bob Storrs

lookout. Using the 3% rule, reports of some 30 logs are anticipated. Computer simulations with OSCURS (Ocean Surface Current Simulation; see map) suggest that the logs drifted mostly northward. They will probably turn westward so as to drift in the Alaskan Stream, some later returning east in the Gulf of Alaska gyre. Within 2-3 years a few may show up as far south as Oregon and Washington, and Hawaii's windward shores.

A review of other spills puts into perspective the *Ocean Orchid's* mishap. On February 12th, 1978, for example, a barge under tow by the tug *Ocean Master* in heavy weather 20 miles west of Point Sur, California, spilled two million board feet of finished lumber. Within a month the

boards had drifted to beaches along 90 miles of coast comprising most of the threatened California sea otter population, which at the time numbered only 1,800 of the delightful furry creatures.

A very large spill occurred December 18th, 1887 off New York City. Chains bound 27,000 tree trunks into a giant log raft measuring 560 feet long, by 65 feet wide, by 38 feet deep. Nova Scotian lumberjacks had cut the spruce trees destined to be driven as pilings of New York's shipping docks and utilized in foundation work for nearby large buildings.

To place the lumber spills into perspective I converted the lost wood into equivalent volumes expressed in U.S. gallons. The three log spills worked out to be: 400,000 gallons of peeled logs spilled by the *Ocean Orchid* in 1996; 1,250,000 gallons of finished lumber dumped off central California in 1978; and 10,000,000 gallons of tree trunks off New York City in 1887. Placed end to end, these pieces of wood would span 6, 30, and 300 miles, respectively, and 4%, 11%, and 91%, respectively, of the 11,000,000 gallons of oil spilled by the tanker *Exxon Valdez* in 1989.

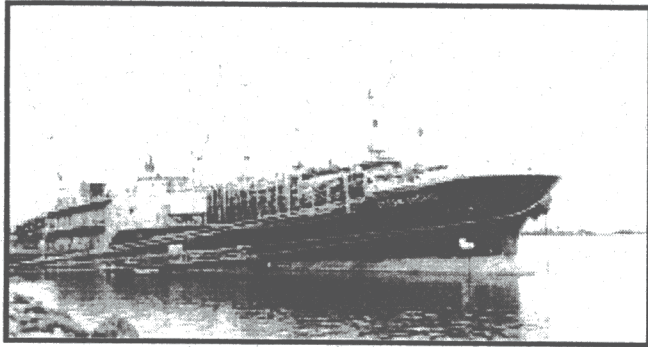
Drifting logs pose hazards to mariners. Peter Bird, 49, for instance, who's listed in the *Guinness Book of Records* as the first person to row single handedly east-to-west across the Pacific Ocean. For that feat Bird left San Francisco in his 32-foot *Hele-On-Britannia*, reaching the Great Barrier Reef after 294 days' rowing. Most recently, Bird departed the Russian port of Vostochny near Vladivostok on March 27th 1996, intending in 200 days to row his cedar-and-fiberglass craft shaped like a fat cigar with a notch in the middle, back to San Francisco. Seventy days later, a German sea captain found Bird's 29-foot, \$50,000 *Sector II* capsized 1,100 miles east of Japan, apparently having been smashed in rough seas by a floating log.

What is the number of logs adrift which will virtually insure a rower hitting one on a single crossing of the North Pacific? Here's a table of the chances of

striking one in given numbers of logs adrift in the entire North Pacific Ocean. Since we cannot know for sure how many logs were adrift at the time one rammed Peter, we must guess the number and infer Peter's odds.

Surveys of drifting debris suggest three million wooden objects spottable from a passing vessel, are drifting in the North Pacific at any one time. Of course, not all of these are of ship-smashing size. So a million logs adrift at any one time may be the right order. I'd guess that the odds of a rower hitting a log or other object which could sink it, are approaching the order of a percent. The incident, however, as reported on the National Public Radio program *All Things Considered*, said the *Sector II's* ramming was a freak accident. And Peter sank where debris sightings reveal an elevated number of wood ob-

jects in the plume of stuff pushed out into the Pacific by the Kuroshio Current. All drift considered, I think the odds are much higher than 'freak' implies.



Ocean Orchid at Dutch Harbor Photo: Bob Storrs

Table 1. Number of Logs & Percent Chance of Being Sunk	
Number of Logs	% Chance
1,000	0.07
100,000	6.4
1,000,000	48.7
10,000,000	99.9

lic objects adrift. Just remember that a single log transport ship carries on the order of 20,000 logs large enough to sink a small boat. Think of such a ship as transporting enough logs, which if spilled and spread over the North Pacific, that one would strike one of each hundred small ships. ■

Drift Of A Drone

A jet propelled drone recently washed ashore south of Cape Flattery at Copalis Beach, Washington. The U.S.

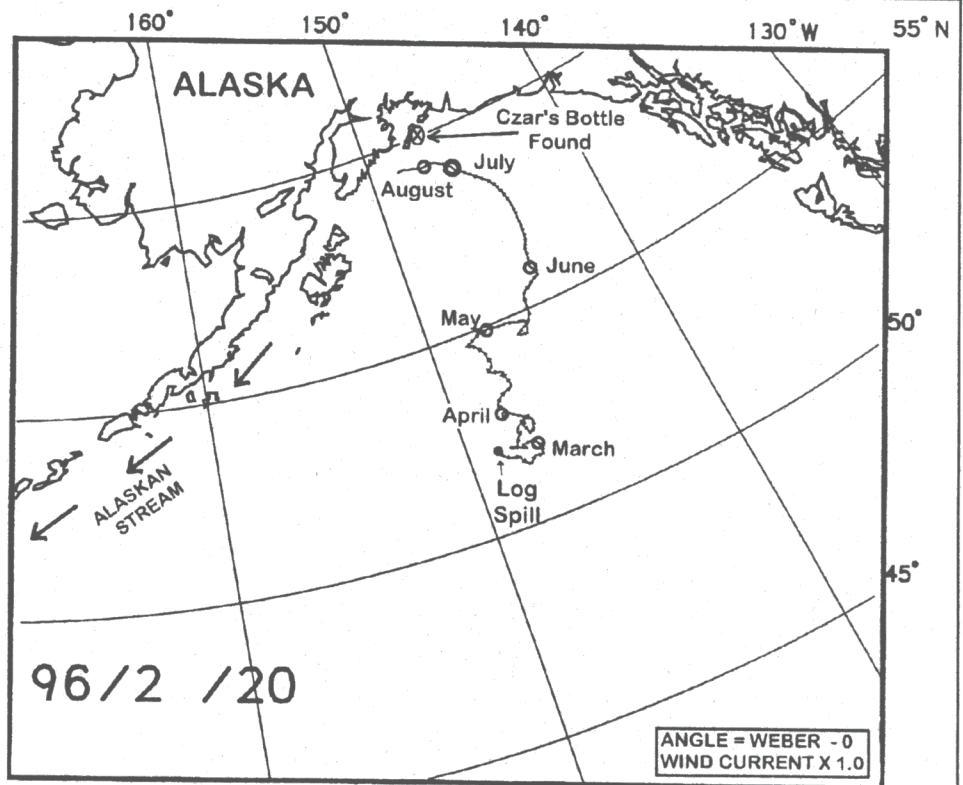
3rd Fleet, based in San Diego, California, had been conducting exercises fifty miles west of Astoria, Oregon. They'd used the jet-propelled drones for target practice.

These drones are sophisticated model jets measuring about eight feet long with a wing span of about six feet fitted atop with a foot-high antenna the shape of a pear. If a drone is not shot down, fleet air traffic controllers guide it so as to splash down near the mother ship. Sailors then lower away and retrieve the surviving drone. Recovered drones are recycled and flown again. However, on March 21st 1996, the weather turned nasty; two of the six-ten drones known to have been used in the exercises could not be recovered in the heavy seas.

Usually they sink after running out of fuel. But two drifted on, one washing ashore a week later near Astoria, Oregon, the other drifting eastward for a month, washing up April 19th, fifty miles to the north at Copalis Beach. It had nearly sunk, floating with only two feet of its nose sticking straight up, weighted downward by the heavy jet engine. After only a month in the spring marine waters the barnacle growth clearly demarked the water line. ■

Figure 1.

Log spill trajectory by W. James Ingraham, Jr. OSCURS model drift for the 1,100 logs lost from the *Ocean Orchid* on February 20th, 1996. Small arrows along the trajectory indicate logs positions each day; the smaller circles show positions on the first of each month (March 1st, April 1st, May 1st, and June 1st). The daily trajectory ends May 31st, 1996, because sea level pressure data beyond that date are not yet available from the U.S. Navy Fleet Numerical Oceanography Center. Using long-term average pressures, the logs' drift has been continued through July 1st (large circle) and August 1st, 1996 (last smaller circle). Because the logs ride very low in the water, a wind factor of 1.0 had been used.



Bottle -

Continued from page 1

logged paper. With tweezers Brooke and Gayle teased open the wet note; three hours later it lay spread out like so many jigsaw puzzle pieces written in Japanese, Russian and English. Though water from between the sands had seeped around the stopper, the quality of the Czarist paper withstood the disintegration of time well enough that essential information could be read: one side showed "Imperial Russian ... thrown 5/18 July 1913, N 54°26', E 141°55'; the other side revealed *Vladivostok ... East Siberia ... The Pacific Hydrographical Expedition.*" The location where the bottle had been thrown overboard was creditable, in the Sea of Okhotsk just north of Sakhalin Island; but who was conducting oceanographic work in this bleak sea years before the Bolshevik Revolution?

The bottle's message hinted a deep history reaching a century back to the Russo-Japanese War. That war marked the first time in modern history Asians had defeated a European power, forcing Russian emperor Nicholas II to abandon expansionist policies toward the Pacific Ocean. What motivated the bottle's release was Russia's inability to resupply its forces in Manchuria, despite completion of the Trans-Siberian railroad during 1891-1903. To reach the war's front, the Russian Baltic Fleet was forced to sail around Africa, reaching too late the decisive battle of Tsushima Strait between Korea and Japan. Seeking a shorter sea route to Japan, the Imperial Russian Navy began exploring Siberia's ice-choked coastal waters fronting the Arctic Ocean.

For these explorations the Czarist Navy constructed two icebreakers *Taymyr* and *Vaygach* which began in 1910 amongst other operations, oceanographic investigations between Murmansk and Vladivostok. The severe winter of 1912-1913 found the two icebreakers engaged in ice breaking work in Vladivostok Harbor. They departed northward from Vladivostok on July 9th, 1913 working their way along the coast in foggy, rainy weather, sounding foghorns as they made their way into the Sea of Okhotsk. The two icebreakers headed up the inside passage between mainland Asia and Sakhalin Island, intending to head across the Sea of Okhotsk for Petropavlovsk located on the Kamchatka peninsula.

Rounding the northern cape of Sakhalin Island on July 18th, more than a week out of Vladivostok, messages in bottles were thrown overboard.

How had the currents transported the bottle found by Gayle and Brooke, from Sakhalin Island to Cordova, Alaska? The route of the icebreaker itself held some clues. Starting late in the season, she gained an assist from the local current, hugging the coast up through the Gulf of Tatar, thereby avoiding the strong southward current flowing along the eastern shores of Sakhalin Island (keep your eye out for news of oil fields located in the vicinity of Sakhalin Island and the Sea of Okhotsk).

After the *Taymyr* dispatched it, the bottle traveled rapidly (roughly 15 miles per day) southward in the fast current. By year's end 1913 the Czar's bottle had escaped being frozen which is the fate of most of the Sea of Okhotsk's surface waters. Somewhere to the south of the Kuril Islands, probably off Hokkaido, presently Japan's northernmost major island, the bottle began heading eastward, two to three years later arriving off the coast of the Queen Charlotte Islands. There it turned left, being swept into the Gulf of Alaska Gyre. When it arrived at Cordova the waves buried it in the sands, sometime around 1917.

Thus Brooke and Gayle Adkinson found a bottle which had been released before WWI while a Czar yet ruled Russia. During WWI currents carried it across the Pacific Ocean to be buried in Alaska. WWII, and the Korean and Vietnam conflicts passed while the bottle lay buried in the beach. Finally, 82 years later, in conditions which would have shocked the Czar, waves eroded the beach, uncovering the bottle. How many more, yet older bottles remain buried in Alaska's sands? ■

Hyundai Seattle -

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shoes lost overboard in 1990 used current factors of 1.4 and 1.2 respectively, the higher the factor the faster the winds push on the drifting object. The wind factors indicate that a waterlogged shoe floats with less windage than hockey glove. Therefore, it appeared that the gloves should have been blown ahead of other drifting objects lost from the *Hyundai Seattle* such as the footwear listed in other lost containers.

Applying the Nike sneaker wind factor to the Avia shoes, OSCURS predicted the Avia's arriving months earlier than beachcombers' reports. Sure enough, the sneakers began arriving about the time of the recent *Beachcombers Fair* held in Ocean Shores, Washington, during the first weekend of March. By May hundreds of sneakers began arriving. Despite more than a year of immersion in sea water, they remain quite wearable.

Steve McLeod, Cannon Beach, Oregon, is matching pairs as he did for the Nikes a few years ago, since Reebok, like Nike forgot to tie the shoe laces together. ■

Acknowledgements. Thanks to Brooke and Gayle Adkinson for reporting their bottle; Jim Ingraham for programming OSCURS; Michael Francisco and Bob Storrs for reporting and investigating, respectively, the *Ocean Orchid*; and the many beachcombers for reporting gloves and shoes.

Your Stories & Letters to the Editor are always welcome. Please include a photograph if available!

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